### Series 84

**3-Piece Standard Port**

<table>
<thead>
<tr>
<th>Size:</th>
<th>1/4” to 4”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material:</td>
<td>316 Stainless Steel, Carbon Steel, Alloy 20, Hastelloy C, Monel, Brass</td>
</tr>
<tr>
<td>Ends:</td>
<td>NPT, SW, BW, BSPT, 150#, 300#, 600#, Flanged</td>
</tr>
<tr>
<td>Pressure:</td>
<td>Vacuum to 3000 PSI*</td>
</tr>
<tr>
<td>Temperature:</td>
<td>-50° to 600° F*</td>
</tr>
</tbody>
</table>

- ASME B16.34 Design
- NACE MR0175 Compliant
- Bottom Entry Live Loaded Stem
- High Cycle Stem Packing
- Encapsulated Body Bolts
- Variety of Seats and Seals
- Integral Mounting Pad
- Lockable, Lever, Extended or Oval Handle
- Floating Ball Design
- Encapsulated Body Seal
- Weldable in line without disassembly of ends

* Size limitations

### Series 99

**3-Piece Full Port**

<table>
<thead>
<tr>
<th>Size:</th>
<th>1/4” to 3”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material:</td>
<td>316 Stainless Steel, Carbon Steel, Alloy 20, Hastelloy C, Monel, Brass</td>
</tr>
<tr>
<td>Ends:</td>
<td>NPT, SW, BW, BSPT, 150#, 300#, 600#, Flanged</td>
</tr>
<tr>
<td>Pressure:</td>
<td>Vacuum to 3000 PSI*</td>
</tr>
<tr>
<td>Temperature:</td>
<td>-50° to 600° F*</td>
</tr>
</tbody>
</table>

- ASME B16.34 Design
- NACE MR0175 Compliant
- Bottom Entry Live Loaded Stem
- High Cycle Stem Packing
- Encapsulated Body Bolts
- Variety of Seats and Seals
- Integral Mounting Pad
- Lockable, Lever, Extended or Oval Handle
- Encapsulated Body Seals
- Weldable in line without disassembly of ends

* Size limitations

### Series 60

**3-Piece High Pressure**

<table>
<thead>
<tr>
<th>Port:</th>
<th>Full Port Schedule 160</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size:</td>
<td>1/4” to 2”</td>
</tr>
<tr>
<td>Material:</td>
<td>316 Stainless Steel, Carbon Steel</td>
</tr>
<tr>
<td>Ends:</td>
<td>NPT, SW, SAE, BW, BSPT, Flanged</td>
</tr>
<tr>
<td>Pressure:</td>
<td>Vacuum to 6000 PSI</td>
</tr>
<tr>
<td>Temperature:</td>
<td>-50° to 600° F</td>
</tr>
</tbody>
</table>

- ASME B16.34 Class 2500 Design
- NACE MR0175 Compliant
- Bottom Entry Live Loaded Stem
- High Cycle Stem Packing
- Encapsulated Body Bolts
- Variety of Seats and Seals
- Integral Mounting Pad
- Lockable, Lever, Extended or Oval Handle
- Encapsulated Body Seals

### Series V84

**Control Valve**

<table>
<thead>
<tr>
<th>Port:</th>
<th>V15°, V30°, V60° (Special Configurations Also Available)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size:</td>
<td>1/4” to 4”</td>
</tr>
<tr>
<td>Material:</td>
<td>316 Stainless Steel, Carbon Steel, Alloy 20, Hastelloy C, Monel</td>
</tr>
<tr>
<td>Ends:</td>
<td>NPT, SW, BW, BSPT, 150#, 300#, 600#, Flanged</td>
</tr>
<tr>
<td>Pressure:</td>
<td>Vacuum to 3000 PSI*</td>
</tr>
<tr>
<td>Temperature:</td>
<td>-50° to 600° F*</td>
</tr>
</tbody>
</table>

- 3-Piece Design
- Bottom Entry Live Loaded Stem
- High Cycle Stem Packing
- Encapsulated Body Bolts
- Variety of Seats and Seals
- “No Play” Coupling
- Integral Mounting Pad
- Metal Seats available for Slurry and High Temperatures Applications
- Weldable in line without disassembly of ends

* Size limitations
**Series 88**

**High Purity BPE Compliant Full Port Tube Ball Valve**

- **Port:** Full Port
- **Size:** 1/2” to 4”
- **Material:** 316L Stainless Steel, Alloy 20, Hastelloy C
- **Ends:** CE (Clamp Ends), BW, SW, BTE (Extended Buttweld Tube)
- **Pressure:** 1480 PSI
- **Temperature:** 450° F

- ASME/BPE - 2009 Compliant
- 3-Piece Design
- High Cycle Stem Design
- Encapsulated Body Bolts
- Variety of Seats, Seals and Aseptic end Connections
- Integral ISO Mounting Handle
- Lockable, Lever, Extended or Oval Handle
- All Wetted Parts Polished To 14-18 RA
- Optional 8-10 RA Electropolish
- Optional Purge Ports Available

**Series 66**

**High Purity Full Port Tube Ball Valve**

- **Port:** Full Port
- **Size:** 1/2” to 4”
- **Material:** 316L Stainless Steel
- **Ends:** CE (Clamp Ends), BTE (Extended Buttweld Tube)
- **Pressure:** 1480 PSI
- **Temperature:** 450° F

- 3-Piece Design
- High Cycle Stem Packing
- Encapsulated Body Bolts
- Variety of Seats and Seals
- Integral ISO Mounting Handle
- Lockable, Lever, Extended or Oval Handle
- Hygienic Seating Design
- Blow Out Proof Stem

**Series N66**

**Economy 3-Piece Full Port Tube Ball Valve**

- **Port:** Full Port
- **Size:** 1/2” to 2”
- **Material:** 316 Stainless Steel
- **Ends:** BW, CE (Clamp End), BWE (Buttweld Extended)
- **Pressure:** 1000 PSI
- **Temperature:** 450° F

- ASTM A351 316
- 3-Piece Design
- High Cycle Stem Design
- Integral ISO 5211 Mounting Pad
- Lockable Handle Lever or Oval Handle
- Hygienic Seating Design
- Live Loaded Stem Packing
- Blow Out Proof Stem
- Silicon Free (Option)

**Series 15**

**Sanitary Clamp End Butterfly Valve**

- **Size:** 1” to 4”
- **Material:** 304 Stainless Steel
- **Ends:** CE (Clamp End)
- **Pressure:** 145 PSI
- **Temperature:** 230° F

- Bi-Directional
- Designed for Sanitary Applications
- Pull 4-Position or 12 Position Handle
- Pneumatic or Electric Automation Available
### Series FS
- **Port:** Standard or Full Port
- **Size:**
  - 3-Piece: 1/2” to 2-1/2”
  - Flanged: 1/2” to 12”
- **Material:** 316 Stainless Steel, Carbon Steel, Alloy 20, Hastelloy C, Monel
- **Ends:** NPT, SW, BW, BSPT, 150#, 300#, 600# Flanged
- **Temperature:** -50° to 550° F
- **Features:**
  - Fire Safe API 607 4th Edition
  - ASME B 16.34 Design
  - Bottom Entry Live Loaded Stem
  - Integral Mounting Pad
  - Lockable, Lever, Extended or Oval Handle

### Series W84, W99, W50
- **Port:** Standard or Full Port
- **Size:**
  - 3-Piece: 1/2” to 4”
  - Flanged: 1/2” to 12”
- **Material:** 316 Stainless Steel, Carbon Steel, Alloy 20, Hastelloy C
- **Ends:** NPT, SW, BW, BSPT, 150#, 300#, 600# Flanged
- **Pressure:** 500 PSI - Maximum Working Steam Pressure
- **Temperature:** 600° F for Thermal Fluids
- **Features:**
  - Live Loaded Stem
  - Integral Mounting Pad
  - NOVA, Peak, or Vespel Seats
  - Encapsulated Grafoil Seals
  - Lockable, Lever, Extended or Oval Handle
  - Stainless Steel 17-4PH Stem
  - Gear Operator (Optional)
  - Scraper Seat

### Series M
- **Port:** Standard or Full Port
- **Size:**
  - 3-Piece: 1/2” to 4”
  - Flanged: 1/2” to 12”
- **Material:** 316 Stainless Steel, Carbon Steel
- **Ends:** NPT, SW, BW, Carbon Steel
- **Pressure:** 1480 PSI Max
- **Temperature:** 1000° F Max
- **Features:**
  - Seat Leakage Rate to FCI 70-2, Class V
  - Integral Mounting Pad
  - Lockable, Lever, Extended or Oval Handle
  - Stainless Steel 17-4PH Stem
  - Gear Operator (Optional)
  - Scraper Seat

### Series FB
- **Port:** Standard or Full Port
- **Size:** 1/4” to 4” for Tube and Pipe
- **Material:** 316 Stainless Steel, Alloy 20, Hastelloy C
- **Ends:** NPT, SW, BW, BSPT, CE (clamp ends), BTE (Butt Weld Extended Ends), 150#, 300#, 600# Flanged
- **Temperature:** -50° to 600° F
- **Features:**
  - Fully Encapsulated Body Bolts
  - Variety of End Configurations
  - Choice of Seats and Seals
  - Integral Mounting Pad
  - Lockable, Lever, Extended or Oval Handle
  - Angle Engineered Design for Automation
  - Flush Pad Made From Solid Bar
  - Purge Ports (Optional)
### SERIES CL

**CHLORINE BALL VALVE**

- Port: Standard or Full Port
- Size: 3-Piece: 1/2” to 2”
  - Flanged: 1/2” to 4”
- Material: Carbon Steel with Hastelloy C or Monel Trim
- Ends: NPT, SW, BW, BSPT, 150#, 300#, 600# Flanged
- • Chlorine Institute Pamphlet #6 Compliant
- • Bottom Entry Live Loaded Stem
- • High Cycle
- • Encapsulated Body Bolts
- • Integral Mounting Pad
- • Lockable, Lever, Extended or Oval Handle

### SERIES C

**CRYOGENIC BALL VALVE**

- Port: Standard or Full Port
- Size: 3-Piece: 1/2” to 4”
  - Flanged: 1/2” to 4”
- Material: 316 Stainless Steel
- Ends: NPT, SW, BW, BSPT, 150#, 300#, 600# Flanged
- • Valve Meets Test Specifications Of BS 6364 For Cryogenic Valves
- • ANSI B16.34
- • Live Load Stem Packing
- • Fully Encapsulated Body Seals
- • Integral ISO 5211 Mounting Pad
- • Lockable, Lever, Extended or Oval Handle

### SERIES 86

**3 PIECE TUBE & INSTRUMENTATION BALL VALVE**

- Size: 1/4” to 1”
- Material: 316 Stainless Steel
- Ends: Compression x Compression, NPT x Compression, SW x Compression
- Pressure: 3000 PSI*
- Temperature: -50° to 600° F*
- • 3 Piece Design
- • Encapsulated Body Bolts
- • Variety of Seats
- • Integral ISO Mounting Pad
- • Lockable, Lever, Extended or Oval Handle
- • Live Loaded Stem / High Cycle Stem Seal
- • Floating Ball Design

### SERIES 17

**BUTTERFLY VALVE**

- Size: 2”- 12” rating up to 200 PSI
  - 14”- 48” rating up to 150 PSI
- Body Material: Ductile Iron / Cast Iron
- Disc Material: 316 Stainless Steel, Ductile Iron Nickel Plated, Aluminum Bronze, Ductile Iron Nylon Coated, Monel
- Seat: BUNA-N, EPDM, EPDM Food Grade, Viton
- Connections: Lug or Wafer
- Temperature: -30° to 275° F
- • MSS SP - 67 and API 609 Compliant
- • MSS SP - 25 Marking
- • Self-lubricated Bushings Eliminate Side Loading
- • Blowout Proof Shaft
- • One-Piece Wafer and Lug Body, Epoxy Painted Offering Excellent Protection Against Abrasion and Corrosion
- • Valves Available with Undercut Discs to 50 PSI
- • ISO 5211 Mounting Pad
- • Bidirectional or Dead End Service
- • Phenolic Backed Cartridge Seat

* Size limitations
**Series 77**

**3-Way and 4-Way Ball Valve**

- **Size:** Full Port 1/4” to 6”
  Standard Port 8”
- **Material:** 316 Stainless Steel, Carbon Steel, Alloy 20, Hastelloy C
- **Ends:** NPT, SW, BW, RF Flange, Tri-Clamp Ends, Extended Butt Weld, Short Butt Weld
- **Pressure:** 600 PSI
- **Temperature:** 450° F
- **Specifications:**
  - ASME B16.5
  - ASME B16.11
  - 4-Seat Design
  - Double Stem Seals; Stem Design
  - Multiple End Connections
  - Lockable Handles, Lever or Oval Handle
  - Full Port Design
  - Trunnion-Supported Ball for 2” and up
  - ISO 5211 Mounting Pad
  - T, L, and Double L Balls
  - 14 Different Flow Plans
  - Direct Mount Design
  - Live Loaded Stem Packing
  - Blowout Proof Stem

**Series 76**

**3-Way Ball Valve**

- **Size:** 1/4” to 2”
- **Material:** 316 Stainless Steel
- **Ends:** NPT, SW
- **Pressure:** 1000 PSI
- **Temperature:** 450° F
- **Specifications:**
  - Threaded Ends to B16.11
  - ISO 5211 Mounting Pad
  - TFM Seats
  - 4- Seat Design
  - 10 Different Flow Patterns
  - Direct Mount Design
  - Lockable, Lever, Extended or Oval Handle
  - Available in Threaded or Socket-Weld End
  - Live Loaded Stem Packing
  - Blowout Proof Stem
  - L or T Ball Configuration

**Series D84,D88,D86**

**3-Piece Diverter Bottom Entry Ball Valves**

- **Port:** Standard or Full Port
- **Size:** 1/4” to 4”
- **Material:** 316 Stainless Steel, Carbon Steel, Alloy 20
- **Ends:** NPT, SW, BW, BSPT
- **Pressure:** 1480 PSI
- **Temperature:** 600° F
- **Specifications:**
  - 3-Piece Diverter Design
  - Bottom Entry
  - Live Loaded Stem - High Cycle Steam Seal
  - Lockable Handle, Lever or Oval Handle
  - Encapsulated Body Bolts

**Series D88**

**High Purity Diverter Valve Bottom or Side Entry**

- **Port:** Full Port
- **Size:** 1/2” to 4”
- **Material:** 316L Stainless Steel
- **Ends:** CE, BW, BTE (Buttweld Tube Extended)
- **Pressure:** 1480 PSI
- **Temperature:** 450° F
- **Specifications:**
  - ASME/BPE - 2009 Compliant
  - 3-Piece Design
  - High Cycle Stem Design
  - Encapsulated Body Bolts
  - Variety of Seats, Seals and Aseptic end Connections
  - Integral Mounting Pad
  - Lockable, Lever, Extended or Oval Handle
  - All Wetted Parts Polished To 14-18 RA
  - Optional 8-10 RA Electro polish
  - Optional Purge Ports Available
### Series 49 Flanged Full Port Ball Valve

<table>
<thead>
<tr>
<th>Port:</th>
<th>Full Port</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size:</td>
<td>1/2” to 6”</td>
</tr>
<tr>
<td>Material:</td>
<td>316 Stainless Steel &amp; Carbon Steel</td>
</tr>
<tr>
<td>Ends:</td>
<td>150# Flange</td>
</tr>
<tr>
<td>Pressure:</td>
<td>275 PSI</td>
</tr>
<tr>
<td>Temperature:</td>
<td>500° F</td>
</tr>
</tbody>
</table>

- ASME B 16.34
- ASME B 16.5
- Blowout Proof Stem
- Lockable, Lever Handle
- RTFE Seats
- PTFE Stem Packing

### Series 50 Flanged 2 Piece Full Port Ball Valve

<table>
<thead>
<tr>
<th>Port:</th>
<th>Full Port</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size:</td>
<td>1/2” to 12”</td>
</tr>
<tr>
<td>Material:</td>
<td>316 Stainless Steel, Carbon Steel, Alloy 20, Hastelloy C, Monel</td>
</tr>
<tr>
<td>Ends:</td>
<td>150#, 300#, 600# Flange</td>
</tr>
<tr>
<td>Pressure:</td>
<td>1480 PSI</td>
</tr>
<tr>
<td>Temperature:</td>
<td>600° F</td>
</tr>
</tbody>
</table>

- ASME B 16.34
- ASME B 16.5
- NACE MR0175 Compliant
- Blowout Proof Stem
- Bottom Entry Line Loaded Stem
- Integral Mounting Pad
- Variety of Seats and Seals
- Lockable, Lever, Extended or Oval Handle

### Series 54 Flanged Standard Port Ball Valve

<table>
<thead>
<tr>
<th>Port:</th>
<th>Standard Port</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size:</td>
<td>1” to 8”</td>
</tr>
<tr>
<td>Material:</td>
<td>316 Stainless Steel, Carbon Steel, Alloy 20, Hastelloy C, Monel</td>
</tr>
<tr>
<td>Ends:</td>
<td>150#, 300# Flange</td>
</tr>
<tr>
<td>Pressure:</td>
<td>740 PSI</td>
</tr>
<tr>
<td>Temperature:</td>
<td>550° F</td>
</tr>
</tbody>
</table>

- ASME B 16.34
- ASME B 16.5
- NACE MR0175 Compliant
- Blowout Proof Stem
- Bottom Entry Line Loaded Stem
- Integral Mounting Pad
- Variety of Seats and Seals
- Lockable, Lever, Extended or Oval Handle
### Series 58

**1-Piece Reduced Port Ball Valve**

<table>
<thead>
<tr>
<th>Port</th>
<th>Reduced Port</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size</td>
<td>1/4” to 2”</td>
</tr>
<tr>
<td>Material</td>
<td>316 Stainless Steel</td>
</tr>
<tr>
<td>Ends</td>
<td>NPT</td>
</tr>
<tr>
<td>Pressure</td>
<td>800 PSI</td>
</tr>
<tr>
<td>Temperature</td>
<td>450° F</td>
</tr>
</tbody>
</table>

- Uni-body Design
- Blowout Proof Stem
- Lockable Handle, Lever or Oval Handle
- RTFE Seats
- Threaded Ends

### Series 58B7

**1-Piece Standard Port Ball Valve**

<table>
<thead>
<tr>
<th>Port</th>
<th>Reduced Port</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size</td>
<td>1/4” to 2”</td>
</tr>
<tr>
<td>Material</td>
<td>Carbon Steel</td>
</tr>
<tr>
<td>Ends</td>
<td>NPT</td>
</tr>
<tr>
<td>Pressure</td>
<td>2000 PSI</td>
</tr>
<tr>
<td>Temperature</td>
<td>450° F</td>
</tr>
</tbody>
</table>

- ASTM A108
- Nace MR0175 Compliant
- Uni-body Design
- RTFE Seats
- 150 lb. WSP
- Stainless Steel Trim
- Blowout Proof Stem
- Lockable Handle

### Series 50M

**2-Piece Full Port 1000 PSI Ball Valve**

<table>
<thead>
<tr>
<th>Port</th>
<th>Full Port</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size</td>
<td>1/4” to 3”</td>
</tr>
<tr>
<td>Material</td>
<td>316 Stainless Steel</td>
</tr>
<tr>
<td>Ends</td>
<td>NPT</td>
</tr>
<tr>
<td>Pressure</td>
<td>1000 PSI</td>
</tr>
<tr>
<td>Temperature</td>
<td>450° F</td>
</tr>
</tbody>
</table>

- Blowout Proof Stem
- Lockable, Lever, Extended or Oval Handle
- RTFE Seats
- Latch Lock Handle
- 150 lb. Steam Ratings (Saturated) with RTFE Seats

### Series 5457

**2-Piece Standard 2000 Port Ball Valve**

<table>
<thead>
<tr>
<th>Port</th>
<th>Standard port</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size</td>
<td>1/4” to 2”</td>
</tr>
<tr>
<td>Material</td>
<td>316 Stainless Steel, Carbon Steel</td>
</tr>
<tr>
<td>Ends</td>
<td>NPT</td>
</tr>
<tr>
<td>Pressure</td>
<td>2000 PSI</td>
</tr>
<tr>
<td>Temperature</td>
<td>500° F</td>
</tr>
</tbody>
</table>

- Blowout Proof Stem
- Lockable Handle Lever or Oval Handle
- RTFE Seats
- Optional Nova Seats for up to 500° F
- 150 lb. Steam Ratings (Saturated) with RTFE Seats
# Series 50B - 2-Piece Full Port 2000 PSI Seal Weld Ball Valve

<table>
<thead>
<tr>
<th>Port: Full Port</th>
<th><strong>Features:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Size: 1/4” to 3”</td>
<td>- NACE MR0175 Compliant</td>
</tr>
<tr>
<td>Material: 316 Stainless Steel, Carbon Steel</td>
<td>- Blowout Proof Stem</td>
</tr>
<tr>
<td>Ends: NPT</td>
<td>- Lockable, Lever, Extended or Oval Handle</td>
</tr>
<tr>
<td>Pressure: 2000 PSI (1/4” - 2”)</td>
<td>- Full Port</td>
</tr>
<tr>
<td></td>
<td>- RTFE Seats</td>
</tr>
<tr>
<td></td>
<td>- Seal Weld</td>
</tr>
<tr>
<td>Temperature: 450° F</td>
<td></td>
</tr>
</tbody>
</table>

# Series 50C - 2-Piece 3000 PSI Seal Weld Ball Valve

<table>
<thead>
<tr>
<th>Size: 1/4” to 3”</th>
<th><strong>Features:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Material: 316 Stainless Steel, Carbon Steel</td>
<td>- API 608</td>
</tr>
<tr>
<td>Ends: NPT</td>
<td>- NACE MR0175 Compliant</td>
</tr>
<tr>
<td>Pressure: 3000 PSI</td>
<td>- Anti Static Device</td>
</tr>
<tr>
<td>Temperature: 500° F</td>
<td>- Threaded Ends</td>
</tr>
<tr>
<td></td>
<td>- Lockable, Lever, Extended or Oval Handle</td>
</tr>
<tr>
<td></td>
<td>- Mounting Pad</td>
</tr>
<tr>
<td></td>
<td>- Live Loaded Stem</td>
</tr>
<tr>
<td></td>
<td>- Blowout Proof Stem</td>
</tr>
<tr>
<td></td>
<td>- Delrin Seats</td>
</tr>
<tr>
<td></td>
<td>- Seal Weld</td>
</tr>
</tbody>
</table>

# Series 50F - 2-Piece 6000 PSI Seal Weld Ball Valve

<table>
<thead>
<tr>
<th>Size: 1/4” to 2”</th>
<th><strong>Features:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Material: 316 Stainless Steel, Carbon Steel</td>
<td>- API 608</td>
</tr>
<tr>
<td>Ends: NPT</td>
<td>- NACE MR0175 Compliant</td>
</tr>
<tr>
<td>Pressure: 6000 PSI</td>
<td>- Anti Static Device</td>
</tr>
<tr>
<td>Temperature: 500° F</td>
<td>- Threaded Ends</td>
</tr>
<tr>
<td></td>
<td>- Lockable, Lever, Extended or Oval Handle</td>
</tr>
<tr>
<td></td>
<td>- Mounting Pad</td>
</tr>
<tr>
<td></td>
<td>- Live Loaded Stem</td>
</tr>
<tr>
<td></td>
<td>- Blowout Proof Stem</td>
</tr>
<tr>
<td></td>
<td>- Delrin Seats</td>
</tr>
<tr>
<td></td>
<td>- Seal Weld</td>
</tr>
</tbody>
</table>
### Series 10
**2-Piece Brass Ball Valve**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Port</td>
<td>Full Port</td>
</tr>
<tr>
<td>Size</td>
<td>1/4” to 4”</td>
</tr>
<tr>
<td>Material</td>
<td>Brass</td>
</tr>
<tr>
<td>Ends</td>
<td>NPT</td>
</tr>
<tr>
<td>Pressure</td>
<td>600 PSI</td>
</tr>
<tr>
<td>Temperature</td>
<td>450° F</td>
</tr>
<tr>
<td>Characteristics</td>
<td>Blowout Proof Stem</td>
</tr>
<tr>
<td></td>
<td>Lockable Handle, Lever or Oval &amp; Handle</td>
</tr>
<tr>
<td></td>
<td>RTFE Seats</td>
</tr>
<tr>
<td></td>
<td>Threaded Ends</td>
</tr>
</tbody>
</table>
### Series 302

**200 PSI Gate Valve**

- **Size:** 1/4” to 3”
- **Material:** 316 Stainless Steel
- **Ends:** NPT, SW
- **Pressure:** 200 PSI
- **Temperature:** 350° F
- **Features:**
  - Threaded and Socket Weld Ends
  - Inside Screw and Screwed Bonnet
  - Non-Rising Stem
  - Screwed Cap
  - Integral Seat
  - Solid Wedge Disc

### Series 402

**200 PSI Globe Valve**

- **Size:** 1/2” to 2”
- **Material:** 316 Stainless Steel
- **Ends:** NPT, SW
- **Pressure:** 200 PSI
- **Temperature:** 350° F
- **Features:**
  - Threaded and Socket Weld Ends
  - Inside Screw and Screwed Bonnet
  - Rising Stem
  - Screwed Cap
  - Integral Seat

### Series 202

**200 PSI Swing Check Valve**

- **Size:** 1/4” to 3”
- **Material:** 316 Stainless Steel
- **Ends:** NPT, SW
- **Pressure:** 200 PSI
- **Temperature:** 350° F
- **Features:**
  - Threaded and Socket Weld Ends
  - Screwed Cap
  - Integral Seat
### Series 34
**Class 800 / 1500 Gate Valve**

- **Size:** 1/4” to 2”
- **Material:** 316L Stainless Steel, Carbon Steel
- ** Ends:** NPT, SW, BW
- • ASTM A182/F316L
- • ASTM A105
- • API 602
- • NACE MR01075 Compliant
- • Bolted Bonnet

### Series 44
**Class 800 / 1500 Globe Valve**

- **Size:** 1/4” to 2”
- **Material:** 316L Stainless Steel, Carbon Steel
- ** Ends:** NPT, SW, BW
- • ASTM A182/F316L
- • ASTM A105
- • API 602
- • NACE MR01075 Compliant
- • Bolted Bonnet

### Series 24
**Class 800 / 1500 Piston Check Valve**

- **Size:** 1/4” to 2”
- **Material:** 316L Stainless Steel, Carbon Steel
- ** Ends:** NPT, SW, BW
- • ASTM A182/F316L
- • ASTM A105
- • ASME B 16.34
- • NACE MR0175 Compliant
- • Bolted Bonnet

### Series 24834SC
**Class 800 / 1500 Swing Check Valve**

- **Size:** 1/4” to 2”
- **Material:** Carbon Steel
- ** Ends:** NPT, SW, BW
- • ASTM A105
- • ASME B 16.34
- • NACE MR0175 Compliant
- • Bolted Bonnet
**Series 35**  
**Flanged and Butt Weld Gate Valve**  
- **Size:** 1/2” to 48”*  
- **Material:** 316 Stainless Steel, Cast Steel, Alloy 20  
- **Ends:** 150#, 300#, 600# Flanged or Butt Weld Ends  

- API 600  
- API 603  
- ASME B16.10  
- ASME B 16.5  
- Outside Screw and Yoke  
- Bolted Bonnet  
- Flexible Wedge, Fully Guide  
- Integral Seats  
- Rising Stem and Non-Rising Hand wheel  
- Available with Gear Operator  
- Renewable Seat Rings  
- Cast Steel Complies with NACE MR0175

**Series 45**  
**Flanged and Butt Weld Globe Valve**  
- **Size:** 1/2” to 16”*  
- **Material:** 316 Stainless Steel, Cast Steel, Alloy 20  
- **Ends:** 150#, 300#, 600# Flanged or Butt Weld Ends  

- ASME B16.34  
- ASME B16.10  
- ASME B16.5  
- Outside Screw and Yoke  
- Bolted Bonnet  
- Rising Stem and Hand wheel  
- Yoke Integral with bonnet  
- Integral Seat and Back Seat  
- Available with Gear Operator  
- Cast Steel Complies with NACE MR0175

**Series 25**  
**Flanged and Butt Weld Swing Check Valve**  
- **Size:** 1/2” to 48”*  
- **Material:** 316 Stainless Steel, Cast Steel, Alloy 20  
- **Ends:** 150#, 300#, 600# Flanged or Butt Weld Ends  

- ASME B16.34  
- ASME B16.10  
- ASME B16.5  
- Bolted Cover  
- Swing Type  
- For Horizontal or Vertical Lines  
- Integral Seats  
- Renewable Seat Rings  
- Cast Steel Complies with NACE MR0175

* Depending on Material and Connection
**Series 12**

<table>
<thead>
<tr>
<th>Port: Full Port</th>
<th>2-Piece Direct Mount Ball Valve</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size: 1/4” to 4”</td>
<td>- Heavy Duty Stem</td>
</tr>
<tr>
<td>Material: 316 Stainless Steel, Carbon Steel</td>
<td>- Integral ISO 5211 Direct Mounting Pad</td>
</tr>
<tr>
<td>Ends: NPT, BSPT</td>
<td>- For Pneumatic or Electric Actuators</td>
</tr>
<tr>
<td>Pressure: 2000 PSI</td>
<td>- Live Loaded Stem with 4 Belleville Washers</td>
</tr>
<tr>
<td>Temperature: 500° F</td>
<td>- In Service Adjustable Stem Packing Patent No. 6,446,935 B1</td>
</tr>
<tr>
<td></td>
<td>- Compact Dependable Automated Assemblies</td>
</tr>
<tr>
<td></td>
<td>- Lockable Handle, Lever or Oval (Upon request)</td>
</tr>
</tbody>
</table>

**Series 13**

<table>
<thead>
<tr>
<th>Port: Full Port</th>
<th>3-Piece Direct Mount Ball Valve</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size: 1/4” to 4”</td>
<td>- Integral ISO 5211 Direct Mounting Pad</td>
</tr>
<tr>
<td>Material: 316 Stainless Steel, Carbon Steel</td>
<td>- Uses Pneumatic or Electric Actuators</td>
</tr>
<tr>
<td>Ends: NPT, SW, BW</td>
<td>- In Service Adjustable Stem Packing Patent No. 6,446,935 B1</td>
</tr>
<tr>
<td>Pressure: 1000 PSI</td>
<td>- Compact Dependable Automated Assemblies</td>
</tr>
<tr>
<td>Temperature: 450° F</td>
<td>- Live Loaded Stem with 4 Belleville Washers</td>
</tr>
<tr>
<td></td>
<td>- Lockable Handle, Lever or Oval (Upon Request)</td>
</tr>
</tbody>
</table>

**Series 14**

<table>
<thead>
<tr>
<th>Port: Full Port</th>
<th>2-Piece Brass Direct Mount Ball Valve</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size: 1/4” to 2”</td>
<td>- In Service Adjustable Stem Packing Patent No. 6,446,935 B1</td>
</tr>
<tr>
<td>Material: Brass</td>
<td>- Integral ISO 5211 Direct Mounting Pad</td>
</tr>
<tr>
<td>Ends: NPT</td>
<td>- Uses Pneumatic or Electric Actuators</td>
</tr>
<tr>
<td>Pressure: 600 PSI</td>
<td>- Available with Manual Handle</td>
</tr>
<tr>
<td>Temperature: 425° F</td>
<td>- Blow-Out Proof Stem</td>
</tr>
</tbody>
</table>

**Gear Operator**

- Nine Sizes
- From 1504 - 26400 In/ lb.
- Fits Series 17 Butterfly Valves
- ISO Bolt Circles
- Cast Iron Body
- Visual Position Indicator
- Can Be Fitted for Chainwheels, other handwheels, or limit switches
**PNEUMATIC ACTUATOR**

- Traditional Two - piston, rack and pinion design
- Available in Double Acting and Spring Return configurations
- Hard Anodized Aluminum body, Rugged Polyester coated body, with Epoxy Coated End Caps, with optional Nickel Infused coating for sanitary applications
- Standard Temperature Range with Buna O’Rings: -4F to 180F
- Kits for low temp (-40F to 80F) and high temperature (+5F – 300F)
- Industry Standard ISO 5211 drilling and NAMUR patterns
- Bi-Directional Travel Stops for +/- 5° adjustment for precise control
- Pinion is specially designed to accept butterfly valve shafts
- With Inserts that allows for Direct Mounting capabilities to Butterfly Valves that have Square, Double D, or Keyed shaft designs
- Mounting plates available, allows for mounting to different industry standard bolt circles

**SERIES SPN II**

**SERIES 4x4**

- Unique Four - piston, rack and pinion design
- Anodized Interior and Exterior aluminum body, Polyurethane painted body, and Epoxy coated end caps
- With Industry Standard ISO 5211 drilling and NAMUR
- Multi-Function Visual Indicator can be used for Three – Way indication
- Bi-Directional Travel Stops for +/- 5° adjustment for precise control
- Available in Double Acting and Spring Return configurations
- Nested spring sets, with appropriate centering rings on piston face and end caps
- Four Pistons allow for shorter travel and faster response times
- Reduced size means less air consumption, reducing costs with quicker response
- Generates more torque for reduced cost, size and air consumption
- Pinion is supported by four pistons; as a result, piston side load is minimized

**LIMIT SWITCH**

- Rugged powder coated aluminum enclosure
- UL / CE rated enclosure
- UL / CSA / CE rated switch elements
- NEMA 4 / 4X and NEMA 7/9 enclosures
- Shatterproof dome
- Four different NAMUR brackets available to allow mounting on many actuator combinations
- Cams and bearings on shaft are splined to allow quick adjustment and protected against the effects of vibration
- Mechanical and proximity switch elements available
- Printed circuit board allows for quick, safe and easy wiring
- Also has solenoid termination inside enclosure which eliminates extra cost

**SOLENOIDS**

- NAMUR style for mounting directly on actuator body
- Minimizes connections and reduces overall size
- NEMA 4 and NEMA 7/9 coil arrangements
- ATEX and Intrinsically Safe available
- Corrosion resistant body material
- High Flow with Fast Response
- Easily converted from Double Acting (5/2) applications to Spring Return (3/2)
- Manual override standard
- Many voltages available: 12VDC, 24VDC, 24VAC, 120VAC, 240VAC
  European voltages available 110VAC, 220VAC
- ½” Conduit DIN connection standard
- UL / CSA rated coils and assembly