### Series 10 2-Piece Full Port 600 PSI Brass Ball Valve

- **Size Range:** 1/4" - 4"
- **Body Material:** Forged Brass
- **Seat Material:** PTFE
- **Ends:** Threaded
- **Max Pressure:** 600 CWP
- **Max Temp:** 400° F

- ANSI/ASME B16.11
- Bottom Entry, Blowout Proof Stem Design
- Lockable Lever Handle

**OPTIONS:**
- Lockable Oval Handle

### Series 58 1-Piece Uni-Body Reduced Port 800 PSI Ball Valve

- **Size Range:** 1/4" - 2"
- **Body Material:** 316 Stainless Steel
- **Seat Material:** PTFE
- **Ends:** Threaded
- **Max Pressure:** 800 CWP
- **Max Temp:** 400° F

- ANSI/ASME B16.11
- ANSI/ASME B16.34
- Bottom Entry, Blowout Proof Stem Design
- Lockable Lever Handle

**OPTIONS:**
- Lockable Oval Handle

### Series 58B7 1-Piece Uni-Body Reduced Port 2000 PSI Ball Valve

- **Size Range:** 1/4" - 2"
- **Body Material:** Carbon Steel
- **Seat Material:** RTFE
- **Ends:** Threaded
- **Max Pressure:** 2000 CWP
- **Max Temp:** 450° F

- ANSI/ASME B16.11
- ASTM A108
- NACE MR0175: 2002
- Bottom Entry, Blowout Proof Stem Design
- Lockable Lever Handle
### Economy 3-Piece Full Port 1000 PSI Ball Valve
**Series 3903**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Size Range:</strong></td>
<td>1/4” - 2”</td>
</tr>
<tr>
<td><strong>Body Materials:</strong></td>
<td>316 Stainless Steel, Carbon Steel</td>
</tr>
<tr>
<td><strong>Seat Material:</strong></td>
<td>RTFE</td>
</tr>
<tr>
<td><strong>Ends:</strong></td>
<td>Threaded, Socket Weld</td>
</tr>
<tr>
<td><strong>Max Pressure:</strong></td>
<td>1000 CWP</td>
</tr>
<tr>
<td><strong>Max Temp:</strong></td>
<td>450° F</td>
</tr>
</tbody>
</table>

- ANSI/ASME B16.11
- ANSI/ASME B16.34 - Shell & Seat Pressure Test
- Bottom Entry, Blowout Proof Stem Design
- Lockable Lever Handle

**OPTIONS:**
- Lockable Oval Handle
- Non-Locking Stem Extension

### Economy 3-Piece Full Port Ball Valve
**Series 5303**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Size Range:</strong></td>
<td>1/4” - 4”</td>
</tr>
<tr>
<td><strong>Body Materials:</strong></td>
<td>316 Stainless Steel, Carbon Steel</td>
</tr>
<tr>
<td><strong>Seat Material:</strong></td>
<td>RTFE</td>
</tr>
<tr>
<td><strong>Ends:</strong></td>
<td>Threaded, Socket Weld, Butt Weld</td>
</tr>
<tr>
<td><strong>Max Pressure:</strong></td>
<td>1000 CWP 1/4” - 2” 600 CWP 2 1/2” - 4”</td>
</tr>
<tr>
<td><strong>Max Temp:</strong></td>
<td>450° F</td>
</tr>
</tbody>
</table>

- ANSI/ASME B16.11
- ANSI/ASME B16.25
- ANSI/ASME B16.34 - Shell & Seat Pressure Test
- Integral Mounting Pad
- Bottom Entry, Blowout Proof Stem Design
- Lockable Lever Handle

**OPTIONS:**
- Lockable Oval Handle
- Non-Locking Stem Extension

### 2-Piece Standard Port 2000 PSI Ball Valve
**Series 5457**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Size Range:</strong></td>
<td>1/4” - 2”</td>
</tr>
<tr>
<td><strong>Body Materials:</strong></td>
<td>316 Stainless Steel, Carbon Steel</td>
</tr>
<tr>
<td><strong>Seat Material:</strong></td>
<td>RTFE, Nova</td>
</tr>
<tr>
<td><strong>Ends:</strong></td>
<td>Threaded</td>
</tr>
<tr>
<td><strong>Max Pressure:</strong></td>
<td>2000 CWP 1/4” - 1”* 1500 CWP 1 1/4” - 2”*</td>
</tr>
<tr>
<td><strong>Max Temp:</strong></td>
<td>500° F*</td>
</tr>
</tbody>
</table>

- ANSI/ASME B16.11
- ANSI/ASME B16.34
- Bottom Entry, Blowout Proof Stem Design
- Lockable Lever Handle

**OPTIONS:**
- Lockable Oval Handle
- Spring Return Handle
- Non-Locking Stem Extension

* Dependent on Size, Body, Seat Material & Valve Design.
### Series 50M 2-Piece Full Port 1000 PSI Ball Valve

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size Range</td>
<td>1/4” - 3”</td>
</tr>
<tr>
<td>Body Material</td>
<td>316 Stainless Steel</td>
</tr>
<tr>
<td>Seat Material</td>
<td>RTFE</td>
</tr>
<tr>
<td>Ends</td>
<td>Threaded</td>
</tr>
<tr>
<td>Max Pressure</td>
<td>1000 CWP</td>
</tr>
<tr>
<td>Max Temp</td>
<td>450°F</td>
</tr>
</tbody>
</table>

- ANSI/ASME B16.11
- ANSI/ASME B16.34
- Bottom Entry, Blowout Proof Stem Design
- Lockable Lever Handle

**OPTIONS:**
- Lockable Oval Handle
- Non-Locking Stem Extension

---

### Series 50B 2-Piece Full Port 2000/1500 PSI Seal Weld Ball Valve

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size Range</td>
<td>1/4” to 3”</td>
</tr>
<tr>
<td>Body Materials</td>
<td>316 Stainless Steel, Carbon Steel</td>
</tr>
<tr>
<td>Seat Material</td>
<td>RTFE</td>
</tr>
<tr>
<td>Ends</td>
<td>Threaded</td>
</tr>
<tr>
<td>Max Pressure</td>
<td>2000 CWP (1/4” - 2&quot;)</td>
</tr>
<tr>
<td></td>
<td>1500 CWP (2 1/2” - 3&quot;)</td>
</tr>
<tr>
<td></td>
<td>150 WSP</td>
</tr>
<tr>
<td>Max Temp</td>
<td>450°F</td>
</tr>
</tbody>
</table>

- ANSI/ASME B16.10
- ANSI/ASME B16.34 - Shell & Seat Pressure Test
- NACE MR0175: 2002
- Bottom Entry, Blowout Proof Stem Design
- Lockable Lever Handle

**OPTIONS:**
- Lockable Oval Handle
- Non-Locking Stem Extension

---

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

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size Range</td>
<td>1/4” to 3”</td>
</tr>
<tr>
<td>Body Materials</td>
<td>316 Stainless Steel, Carbon Steel</td>
</tr>
<tr>
<td>Seat Materials</td>
<td>Delrin® (NPT), PEEK (SW)</td>
</tr>
<tr>
<td>Ends</td>
<td>Threaded &amp; Socket Weld</td>
</tr>
<tr>
<td>Max Pressure</td>
<td>3000 CWP</td>
</tr>
<tr>
<td>Max Temp</td>
<td>500°F PEEK Seats</td>
</tr>
<tr>
<td></td>
<td>180°F Delrin Seats</td>
</tr>
</tbody>
</table>

- ANSI/ASME B16.11
- ANSI/ASME B16.34 - Shell & Seat Pressure Test
- NACE MR0175: 2002
- ISO 5211 Integral Mounting Pad
- Blowout Proof Stem Design
- Anti-Static Device
- Live-Loaded Stem Seal
- Lockable Lever Handle

---

TFM® is a registered trademark of Dyneon • Delrin® is a registered trademark of Dupont • Kel-F® is a registered trademark of 3M
### 2-Piece Full Port 6000 PSI Seal Weld Ball Valve **Series 50F**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size Range</td>
<td>1/4” to 2”</td>
</tr>
<tr>
<td>Body Materials</td>
<td>316 Stainless Steel, Carbon Steel</td>
</tr>
<tr>
<td>Seat Materials</td>
<td>Delrin®</td>
</tr>
<tr>
<td>Ends</td>
<td>Threaded</td>
</tr>
<tr>
<td>Max Pressure</td>
<td>6000 CWP</td>
</tr>
<tr>
<td>Max Temp</td>
<td>180° F</td>
</tr>
</tbody>
</table>

- ANSI/ASME B16.11
- ANSI/ASME B16.34 - Shell & Seat Pressure Test
- NACE MR0175: 2002
- ISO 5211 Integral Mounting Pad
- Blowout Proof Stem Design
- Anti-Static Device
- Live-Loaded Stem Seal
- Lockable Lever Handle

---

### Flanged 2-Pc Full Port/1-Pc Standard Port Ball Valve **Series 50/54 & FS50/FS54**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size Range</td>
<td>50 Series: 1/2” - 8”</td>
</tr>
<tr>
<td></td>
<td>54 Series: 1 1/2” - 8”</td>
</tr>
<tr>
<td></td>
<td>FS50 Series: 1/2” - 12”</td>
</tr>
<tr>
<td></td>
<td>FS54 Series: 1 1/2” - 4”</td>
</tr>
<tr>
<td>Body Materials</td>
<td>316 Stainless Steel, Carbon Steel</td>
</tr>
<tr>
<td>Seat Materials</td>
<td>TFM®, RTFE</td>
</tr>
<tr>
<td>Ends</td>
<td>150#, 300# &amp; 600# Flanged</td>
</tr>
<tr>
<td>Max Pressure</td>
<td>1480 PSI*</td>
</tr>
<tr>
<td>Max Temp</td>
<td>500° F*</td>
</tr>
</tbody>
</table>

- ANSI/ASME B16.34
- ANSI/ASME B16.5
- ANSI/ASME B16.10
- API 607 4th Edition (FS Series)
- NACE MR0175: 2002
- ISO 5211 Integral Mounting Pad
- Blowout Proof Stem Design
- Anti-Static Configuration
- Live-Loaded Stem Seal
- Lockable Lever Handle
- Optional Lockable Stem Extension

*Dependent on Size, Body, Seat Material & Valve Design.

---

### Butterfly Valve **Series 17**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size Range</td>
<td>2” - 48”</td>
</tr>
<tr>
<td>Body Materials</td>
<td>Ductile Iron</td>
</tr>
<tr>
<td>Disc Materials</td>
<td>316 Stainless Steel</td>
</tr>
<tr>
<td>Seat Materials</td>
<td>Buna-N, EPDM</td>
</tr>
<tr>
<td>Connections</td>
<td>Lug or Wafer</td>
</tr>
<tr>
<td>Max Pressure</td>
<td>2” - 12” rated to 200 PSI*</td>
</tr>
<tr>
<td></td>
<td>14” - 48” rated to 150 PSI*</td>
</tr>
<tr>
<td>Max Temp</td>
<td>275° F*</td>
</tr>
</tbody>
</table>

- API 609
- MSS SP-67
- MSS SP-25 Markings
- ISO 5211 Integral Mounting Pad
- Pinless Disc & Stem Design
- One Piece, Epoxy Painted Wafer & Lug Body
- Bidirectional
- Lug is Suitable for Dead-End Service

*Dependent on Size, Body, Seat Material & Valve Design.
### Series 84/99 & FS84/FS99 3-Piece Standard/Full Port Ball Valve

<table>
<thead>
<tr>
<th>Size Range</th>
<th>1/4” to 4” 84</th>
<th>1/4” to 2-1/2” FS84</th>
<th>1/4” to 3” 99</th>
<th>1/4” to 2” FS99</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body Materials</td>
<td>316 Stainless Steel, Carbon Steel, Alloy 20, Hastelloy C</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>84/99</td>
<td>PTFE, TFM®, RTFE, Nova, Delrin®, UHMWPE, Virgin Peek</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seat Materials</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FS84/FS99</td>
<td>PTFE, TFM®, RTFE, Nova</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seat Materials</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ends</td>
<td>Threaded, Socket Weld, Butt Weld &amp; Flanged End Options</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max Pressure</td>
<td>Vacuum to 1480 PSI*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max Temp</td>
<td>-50° to 600° F*</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Dependent on Size, Body, Seat Material & Valve Design.  
**Dependent on Seat Material.  

### Series 80/89 & FS80/FS89 3-Piece Standard/Full Port Ball Valve

<table>
<thead>
<tr>
<th>Size Range</th>
<th>1/4” to 4” 80/FS80</th>
<th>1/4” to 3” 89/FS89</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body Materials</td>
<td>316 Stainless Steel, Carbon Steel, Alloy 20, SMO 254®</td>
<td></td>
</tr>
<tr>
<td>80/89</td>
<td>PTFE, TFM®, RTFE, Nova, Super Nova, Delrin®, Virgin Peek</td>
<td></td>
</tr>
<tr>
<td>Seat Materials</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FS84/FS99</td>
<td>PTFE, TFM®, RTFE, Nova, Super Nova</td>
<td></td>
</tr>
<tr>
<td>Seat Materials</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ends</td>
<td>Threaded, Socket Weld &amp; Butt Weld</td>
<td></td>
</tr>
<tr>
<td>Max Pressure</td>
<td>Vacuum to 1970 PSI*</td>
<td></td>
</tr>
<tr>
<td>Max Temp</td>
<td>-50° to 600° F*</td>
<td></td>
</tr>
</tbody>
</table>

* Dependent on Size, Body, Seat Material & Valve Design.  
**Dependent on Seat Material.
### 3-Piece Standard/Full Port Ball Valve  
*Series HP80/HP89*

| Size Range         | 1/4” to 2-1/2” HP80  
|                   | 1/4” to 2” HP89     |
| Body Materials     | 316 Stainless Steel, Carbon Steel |
| Seat Materials     | Delrin®, Virgin Peek |
| Ends               | Threaded, Socket Weld |
| Max Pressure       | Vacuum to 3000 PSI* |
| Max Temp           | -50° to 600° F*     |

* Dependent on Size, Body, Seat Material & Valve Design.  
**Dependent on Seat Material.

### Flanged 2-Pc Full Port/1-Pc Std Port Ball Valve  
*Series 70/74 & FS70/FS74*

#### API 608

| Size Range         | 1/2” to 4” - 70/FS70  
|                   | 1” to 4” - 74/FS74  |
| Body Materials     | 316 Stainless Steel, Carbon Steel, Alloy 20  
| Seat Materials     | PTFE, TFM®, RTFE, Nova, Super Nova, Virgin PEEK  
| Ends               | 150#, 300# Flanged  |
| Max Pressure       | 740 PSI*             |
| Max Temp           | 600° F*              |

* Dependent on Size, Body, Seat Material & Valve Design.

### Lug & Wafer, Uni-Body Design Full Port Ball Valve  
*Series 40*

| Size Range         | 1/2” - 8”       |
| Body Materials     | 316 Stainless Steel, Carbon Steel |
| Seat Materials     | TFM®, RTFE      |
| Ends               | 150# Flanged    |
| Max Pressure       | 285 PSI         |
| Max Temp           | 500° F*         |

* Dependent on Size, Body, Seat Material & Valve Design.
**Series 60** 3-Piece High pressure Ball Valve Standard Port

- **Size Range:** 1/4” - 2”
- **Body Materials:** 316 Stainless Steel, Carbon Steel
- **Seat Materials:** Delrin®, PEEK
- **Ends:** Threaded, Socket Weld, Butt Weld Sch. 160 & Flanged End Options
- **Max Pressure:** Vacuum to 6000 PSI*
- **Max Temp:** -50° to 600° F*

* Dependent on Size, Body, Seat Material & Valve Design.

**Series M80/89 M70/74** Metal Seated Standard/Full Port Ball Valves

- **Size Range:**
  - 3-Piece: 1/4” to 4” (3” M89)
  - Flanged: 1/2” to 4” (Larger Sizes POA)
- **Body Materials:** 316 Stainless Steel, Alloy 20, Carbon Steel
- **Seat Materials:** Stainless Steel, Stellite 6 Coated
- **Ends:** Threaded, Socket Weld, Butt Weld 150#, 300# Flanged
- **Max Pressure:** 1970 PSI Max
- **Max Temp:** 1000° F Max

* Dependent on Size, Body, Seat Material & Valve Design.

**Series C80/C89 C70/C74** Cryogenic Standard/Full Port Ball Valve

- **Size Range:** 3-Piece: 1/4” - 4” (3” C89)
- **Body Material:** 316 Stainless Steel
- **Seat Materials:** PCTFE (Kel-F®), PTFE, TFM®, RTFE, Nova
- **Ends:** Threaded, Socket Weld, Butt Weld, 150# & 300# Flanged
- **Max Pressure:** 1480 PSI*
- **Max Temp:** -400° F*

* Dependent on Size, Body, Seat Material & Valve Design.
### 3-Piece V-Port Control Valve *Series V84*

- **Port:** 15° V, 30° V or 60° V (Special Configurations Available)
- **Size Range:** 1/4” - 4”
- **Body Materials:** 316 Stainless Steel, Carbon Steel
- **Seat Materials:** PTFE, TFM®, RTFE, Nova, Delrin®, Virgin PEEK
- **Ends:** Threaded, Socket Weld, Butt Weld & Flanged
- **Max Pressure:** Vacuum to 1480 PSI*
- **Max Temp:** -50° to 600° F*

*Dependent on Size, Body, Seat Material & Valve Design. **Dependent on Seat Material.

### 3 Piece Steam and Thermal Fluid Ball Valves *Series W84/W99*

- **Size Range:** 1/2” - 4” (3” W99)
- **Body Materials:** 316 Stainless Steel, Carbon Steel
- **Seat Materials:** Nova, Virgin Peek
- **Ends:** Threaded, Socket Weld & Butt Weld
- **Max Pressure:** 500 PSI - Maximum Working Steam Pressure*
- **Max Temp:** 600° F for Thermal Fluids*

*Dependent on Size, Body, Seat Material & Valve Design. **Dependent on Seat Material.

### 3-Piece Chlorine Standard/Full Port Ball Valve *Series CL*

- **Size Range:** 1/4” - 4” (3” CL99)
- **Body Material:** Carbon Steel
- **Seat Materials:** PTFE, TFM®, RTFE, Nova, Super Nova, Delrin®, Virgin PEEK
- **Ends:** Threaded, Socket Weld, Butt Weld, 150#, 300#, 600#, Flanged
- **Max Pressure:** 1480 PSI*
- **Max Temp:** 550° F*

*Dependent on Size, Body, Seat Material & Valve Design. **Dependent on Seat Material.
Series D84 3-Piece Standard Port Diverter Ball Valve

Size Range: 1/2” - 4”
Body Materials: 316 Stainless Steel, Carbon Steel
Seat Materials: PTFE, TFM®, RTFE, Nova, Delrin®, PEEK
Ends: Threaded, Socket Weld & Butt Weld
Max Pressure: 1480 PSI*
Max Temp: 600° F*

* Dependent on Size, Body, Seat Material & Valve Design.

Series D88 3-Piece High Purity Full Port Tube Diverter Ball Valve

Size Range: 1/2” - 4”
Body Material: 316L Stainless Steel
Seat Materials: PTFE, TFM®, RTFE, PTFE Cavity Filler
Ends: Clamp, Butt Weld Tube Extended, Butt Weld Tube Short
Max Pressure: 1200 PSI*
Max Temp: 500° F*

* Dependent on Size, Body, Seat Material & Valve Design.

Series D54 Flanged 1-Piece Standard Port Ball Valve

Size Range: 1” - 8”
Body Materials: 316 Stainless Steel, Carbon Steel
Seat Materials: TFM®, PTFE, Nova
Ends: 150# Flanged
Max Pressure: 285 PSI
Max Temp: 500° F*

* Dependent on Size, Body, Seat Material & Valve Design.
3 & 4 Way Sanitary Full Port Tube Ball Valve  
**Series 75**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Size Range:</strong></td>
<td>1/2” to 2”, 3”</td>
</tr>
<tr>
<td><strong>Body Material:</strong></td>
<td>316 Stainless Steel</td>
</tr>
<tr>
<td><strong>Seat Materials:</strong></td>
<td>TFM®, TFM® Cavity Fillers</td>
</tr>
<tr>
<td><strong>Ends:</strong></td>
<td>Clamp</td>
</tr>
<tr>
<td><strong>Max Pressure:</strong></td>
<td>1000 CWP 1/2” - 2”*</td>
</tr>
<tr>
<td></td>
<td>800 CWP 3”**</td>
</tr>
<tr>
<td><strong>Max Temp:</strong></td>
<td>-50° to 500° F*</td>
</tr>
</tbody>
</table>

* Dependent on Size, Body, Seat Material & Valve Design.

- 4 Seat Design
- Direct Mount ISO 5211 Integral Mounting Pad
- Blowout Proof Stem Design
- Live-Loaded Stem Seal
- 12 Different Flow Configurations
- “L”, or “T” Port Solid Ball
- Ball & Ends Polished to 20 Ra
- Lockable Lever Handle

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**3-Way Full Port Ball Valve  
Series 76**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Size Range:</strong></td>
<td>1/4” - 2”</td>
</tr>
<tr>
<td><strong>Body Material:</strong></td>
<td>316 Stainless Steel</td>
</tr>
<tr>
<td><strong>Seat Materials:</strong></td>
<td>PTFE, TFM®</td>
</tr>
<tr>
<td><strong>Ends:</strong></td>
<td>Threaded</td>
</tr>
<tr>
<td><strong>Max Pressure:</strong></td>
<td>1000 CWP</td>
</tr>
<tr>
<td><strong>Max Temp:</strong></td>
<td>450° F</td>
</tr>
</tbody>
</table>

- ANSI/ASME B16.11
- 4 Seat Design
- Direct Mount ISO 5211 Integral Mounting Pad
- Blowout Proof Stem Design
- Live-Loaded Stem Seal
- 10 Different Flow Configurations
- “L”, or “T” Port Solid Ball
- Lockable Lever Handle

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**3-Way and 4-Way Full port Ball Valve  
Series 77**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Size Range:</strong></td>
<td>1/4” - 4”</td>
</tr>
<tr>
<td><strong>Body Material:</strong></td>
<td>316 Stainless Steel</td>
</tr>
<tr>
<td><strong>Seat Materials:</strong></td>
<td>TFM®, TFM® Cavity Filler</td>
</tr>
<tr>
<td><strong>Ends:</strong></td>
<td>Threaded, Socket Weld, Butt Weld, 150#, 300# Flanged</td>
</tr>
<tr>
<td><strong>Max Pressure:</strong></td>
<td>600 CWP</td>
</tr>
<tr>
<td><strong>Max Temp:</strong></td>
<td>500° F</td>
</tr>
</tbody>
</table>

- ANSI/ASME B16.5
- ANSI/ASME B16.11
- ANSI/ASME B16.25
- 4 Seat Design
- Direct Mount ISO 5211 Integral Mounting Pad
- Blowout Proof Stem Design
- Live-Loaded Stem Seal
- 14 Different Flow Configurations
- “L”, “T” or “LL” Port Solid Ball
- Lockable Lever Handle

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TFM® is a registered trademark of Dyneon • Delrin® is a registered trademark of Dupont • Kel-F® is a registered trademark of 3M
### Series N66 3-Piece Economy 3-Piece Full Port Tube Ball Valve

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size Range</td>
<td>1/2” - 4”</td>
</tr>
<tr>
<td>Body Material</td>
<td>316 Stainless Steel</td>
</tr>
<tr>
<td>Seat Materials</td>
<td>TFM®, PTFE Cavity Fillers</td>
</tr>
<tr>
<td>Ends</td>
<td>Clamp, Butt Weld Tube Extended, Butt Weld Tube Short</td>
</tr>
<tr>
<td>Max Pressure</td>
<td>1000 CWP 1/2” - 2”*</td>
</tr>
<tr>
<td></td>
<td>600 CWP 2 1/2” - 4”*</td>
</tr>
<tr>
<td>Max Temp</td>
<td>450° F*</td>
</tr>
</tbody>
</table>

* Dependent on Size, Body, Seat Material & Valve Design.

### Series 66 3-Piece High Purity Full Port Tube Ball Valve

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size Range</td>
<td>1/2” - 4”</td>
</tr>
<tr>
<td>Body Material</td>
<td>316L Stainless Steel</td>
</tr>
<tr>
<td>Seat Materials</td>
<td>PTFE, TFM®, RTFE, PTFE Cavity Fillers</td>
</tr>
<tr>
<td>Ends</td>
<td>Clamp, Butt Weld Tube Extended, Butt Weld Tube Short</td>
</tr>
<tr>
<td>Max Pressure</td>
<td>1200 PSI*</td>
</tr>
<tr>
<td>Max Temp</td>
<td>500° F*</td>
</tr>
</tbody>
</table>

* Dependent on Size, Body, Seat Material & Valve Design.

### Series 88 3-Piece High Purity BPE Compliant Full Port Tube Ball Valve

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size Range</td>
<td>1/4” - 4”</td>
</tr>
<tr>
<td>Body Material</td>
<td>316L Stainless Steel</td>
</tr>
<tr>
<td>Seat Materials</td>
<td>PTFE, TFM®, RTFE, PTFE Cavity Fillers</td>
</tr>
<tr>
<td>Ends</td>
<td>Clamp, Butt Weld Tube Extended, Butt Weld Tube Short</td>
</tr>
<tr>
<td>Max Pressure</td>
<td>1200 PSI*</td>
</tr>
<tr>
<td>Max Temp</td>
<td>500° F*</td>
</tr>
</tbody>
</table>

* Dependent on Size, Body, Seat Material & Valve Design.

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3-Piece Instrumentation Ball Valve **Series 86**

- Size Range: 1/4” - 1”
- Body Material: 316L Stainless Steel
- Seat Materials: PTFE, TFM®, RTFE, PTFE Cavity Filler
- Ends: Instrumentation, Threaded
- Max Pressure: 1200 PSI*
- Max Temp: 500° F*

* Dependent on Size, Body, Seat Material & Valve Design.

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Flush Bottom Tank  Standard/Full Port Ball Valves **Series FB**

- Size Range: 1/4” - 4”
  (3” 99/89 Series)
- Body Materials: 316L Stainless Steel
- Ends: Threaded, Socket Weld & Butt Weld, Clamp, Extended Butt Weld, 150#, 300# Flanged
- Max Pressure: 1480 PSI*
- Max Temp: -50° to 600° F*

* Dependent on Size, Body, Seat Material & Valve Design.

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### Series 11 2-Piece Full Port Direct Mount Ball Valve

- **Size Range:** 1/4" - 2"
- **Body Material:** 316 Stainless Steel
- **Seat Material:** TFM®
- **Ends:** Threaded
- **Max Pressure:** 1000 CWP
- **Max Temp:** 450° F
- **Features:**
  - ANSI/ASME B16.11
  - ANSI/ASME B16.34
  - Direct Mount ISO 5211 Integral Mounting Pad
  - Blowout Proof Stem Design
  - Live-Loaded Stem Seal
  - Lockable Lever Handle
  - Low Profile, Space Saving, Dependable Automated Assemblies

Pictured with 4x4 Actuator

### Series 12 DIR-ACT™ 2-Piece Full Port Direct Mount Ball Valve

- **Size Range:** 1/4" - 2"
- **Body Materials:** 316 Stainless Steel, Carbon Steel
- **Seat Material:** TFM®
- **Ends:** Threaded
- **Max Pressure:** 1500 CWP
- **Max Temp:** 450° F
- **Features:**
  - ANSI/ASME B16.11
  - ANSI/ASME B16.34
  - Direct Mount ISO 5211 Integral Mounting Pad
  - Patented System Allows Adjustment of Stem Packing Nut with Actuator in Place (U.S. Patent No. 6,446935 B1)
  - Blowout Proof Stem Design
  - Live-Loaded Stem Seal
  - Low Profile, Space Saving, Dependable Automated Assemblies
  - Lockable Lever Handle

Pictured with SPNII Actuator

### Series 13 DIR-ACT™ 3-Piece Full Port Direct Mount Ball Valve

- **Size Range:** 1/4" - 4"
- **Material:** 316 Stainless Steel
- **Seat Materials:** TFM®, RTFE
- **Ends:** Threaded, Socket Weld, Butt Weld
- **Max Pressure:** 1000 CWP 1/4" - 2" 600 CWP 2 1/2" - 4"
- **Max Temp:** 450° F
- **Features:**
  - ANSI/ASME B16.11
  - ANSI/ASME B16.25
  - ANSI/ASME B16.34
  - Direct Mount ISO 5211 Integral Mounting Pad
  - Patented System Allows Adjustment of Stem Packing Nut with Actuator in Place (U.S. Patent No. 6,446935 B1)
  - Blowout Proof Stem Design
  - Live-Loaded Stem Seal
  - Low Profile, Space Saving, Dependable Automated Assemblies
  - Lockable Lever Handle

Pictured with SEA Actuator
Pneumatic Actuator **Series SPN II**

- Traditional Two-piston rack and pinion design
- Available in Double Acting and Spring Return configurations
- Anodized Hardening & Epoxy Coated Body and Epoxy Coated End Caps, Optional Nickel Infused Coating for Sanitary Applications.
- Standard Temperature Range with Buna O-Rings: -4°F to 180°F
- EPDM Kits for Temperatures from -40°F to 300°F
- Industry Standard ISO 5211 drilling and NAMUR patterns
- Bi-Directional Travel Stops for ±5° adjustment for precise control
- Pinion is specially designed with inserts that allows for Direct Mounting capabilities to Butterfly Valves that have Square, Double D, or Keyed shaft designs
- Adapter plates available, allows for mounting to different industry standard bolt circles

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4 Piston Pneumatic Actuator **Series 4x4**

- Unique Four-piston rack and pinion design
- Anodized Interior and Exterior aluminum body with Epoxy Coated End Caps
- Industry Standard ISO 5211 drilling and NAMUR patterns
- 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

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Electric Actuator **SEA**

- Enclosures Include: IP67 & NEMA 4X
- Enclosure Material: Dry Powder Coating Aluminum Alloy
- Motor: Standard extended duty cycle induction motor F insulation class for all models, Built-In Thermal Protection (275°F) prevents motor burning out, standard 120VAC, 30% duty cycle - various options available
- Position Indicator: All models except SEA-1 have continuous mechanical position indicator on the top of the actuator cover
- Manual Override: Non-clutch design, can be operated without any lever, clutch or brake upon power outage
- Gear Train: Lubricated, high alloy steel gear trains provide self-locking function to avoid back drive
- Working Conditions: -22°F to 149°F / Humidity 30% - 95%
- Certifications: CE / CSA (conforming to the test standard for outdoor use)
- Various Options: Heaters, additional limit switches, various voltages, thermostats, 75% duty rating, and more.
Series SL 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
- Various NAMUR brackets available
- Cam and bearings on shaft are splined to allow quick adjustment and protect against the effects of vibration
- Mechanical or proximity switch elements available
- Printed circuit board allows for quick, safe and easy wiring
- Solenoid terminations inside enclosure eliminates extra cost

Series SX Solenoids

- Aluminum Body
- NBR Seats
- Manual Override
- High Flow: 1.8 CV
- 1/2" Conduit Connection to Coil
- 1/4" Port Size
- Changeable between Double Acting and Spring Return
- Coils are rated by CSA/UL
- Same Body accepts NEMA 4, NEMA 7, and ATEX Coils
- Voltage Options Available Upon Request

Series SG Gear Operator

- Nine Sizes
- From 1,500 - 35,400 In/lb.
- ISO 5211 Bolt Circle
- Cast Iron Body
- Visual Position Indicator
200 PSI Gate Valve  **Series 302**

- **Size Range:** 1/4” - 2”
- **Body Material:** 316 Stainless Steel
- **Ends:** Threaded, Socket Weld
- **Max Pressure:** 200 WOG
- **Max Temp:** 350° F
  - Hydrostatic Shell Test at 300 PSI
  - Hydrostatic Seat Test at 220 PSI
  - Screwed Bonnet
  - Non-Rising Stem
  - Solid Wedge Disc
  - Integral Seat

200 PSI Globe Valve  **Series 402**

- **Size Range:** 1/2” - 2”
- **Body Material:** 316 Stainless Steel
- **Ends:** Threaded, Socket Weld
- **Max Pressure:** 200 CWP
- **Max Temp:** 350° F
  - Hydrostatic Shell Test at 300 PSI
  - Hydrostatic Seat Test at 220 PSI
  - Screwed Bonnet
  - Non-Rising Stem
  - Solid Wedge Disc

200 PSI Swing Check Valve  **Series 202**

- **Size Range:** 1/4” - 3”
- **Body Material:** 316 Stainless Steel
- **Ends:** Threaded, Socket Weld
- **Max Pressure:** 200 CWP
- **Max Temp:** 350° F
  - Hydrostatic Shell Test at 300 PSI
  - Screwed Cap
Series 34  Class 800 Forged Gate Valve

Size Range: 1/4” - 2”
Body Materials: Forged Stainless Steel (316L), Forged Steel
Trim Material(s):
  Forged Steel: Trim #8
  Seat: A276-410 + H/F STL
  Disc: A276-410
  Back Seat: A105
  Stem: A276-410
  Forged Stainless Steel: Trim #12
  Seat: A276 316 + STL
  Disc: A276 316
  Back Seat: A182-F316
  Stem: A276 316
Gasket Material(s):
  Forged Stainless Steel: 316 + Graphite
  Forged Steel: 304 + Graphite
Ends: Threaded, Socket Weld
Max Pressure: 1975 PSI A105/1600 PSI A182
Max Temp: 850° F A182/800° F A105

Series 44  Class 800 Forged Globe Valve

Size Range: 1/4” - 2”
Body Materials: Forged Stainless Steel (316L), Forged Steel
Trim Material(s):
  Forged Steel: Trim #8
  Seat: A105 + H/F STL
  Disc: A276-410
  Back Seat: A105
  Stem: A276-410
  Forged Stainless Steel: Trim #12
  Seat: A182 F316 + STL
  Disc: A276 316
  Back Seat: A182-F316
  Stem: A276 316
Gasket Material(s):
  Forged Stainless Steel: 316 + Graphite
  Forged Steel: 304 + Graphite
Ends: Threaded, Socket Weld
Max Pressure: 1975 PSI A105/1600 PSI A182
Max Temp: 850° F A182/800° F A105

Series 24, 24-SC  Class 800 Forged Piston Check & Swing Check Valves

Size Range: 1/4” - 2”
Body Materials: Forged Stainless Steel (316L), Forged Steel
Trim Material(s):
  Forged Steel: Trim #8
  Seat: A105 + H/F STL
  Disc: A276-410
  Forged Stainless Steel: Trim #12
  Seat: A182 F316 + STL
  Disc: A276 316
Gasket Material(s):
  Forged Stainless Steel: 316 + Graphite
  Forged Steel: 304 + Graphite
Ends: Threaded, Socket Weld
Max Pressure: 1975 PSI A105/1600 PSI A182
Max Temp: 850° F A182/800° F A105

• ANSI/ASME Class 800
• ANSI/ASME B16.11
• ANSI/ASME B1.20.1
• API 598
• API 602 9th Edition
• NACE MR0175: 2002
• Bolted Bonnet
• Rising Stem
# Flanged Gate Valve Series 35

| Size Range: | 1/4” - 24” |
| Body Materials: | 316 Stainless Steel, Carbon Steel |
| Trim Material(s): | Stainless Steel: Trim #10 |
| | Seat: A351 CF8M |
| | Disc: A351 CF8M |
| | Back Seat: A351 CF8M |
| | Stem: A182 F316 |
| Cast Steel: Trim #8 |
| | Seat: A105 + H/F STL |
| | Disc: WCB + H/F 410 |
| | Back Seat: A276-410 |
| | Stem: A182-F6a |
| Gasket Material(s): | Stainless Steel: 316 + Graphite |
| | Cast Steel: 304 + Graphite |
| Ends: | 150#, 300#, 600# Flanged |
| Max Pressure: | 1480 PSI* |
| Max Temp: | 1000° F* |

* Dependent on ANSI Class Rating

# Flanged Globe Valve Series 45

| Size Range: | 1/2” to 16” (12” 45614) |
| Body Materials: | 316 Stainless Steel, Carbon Steel |
| Trim Material(s): | Stainless Steel: Trim #10 |
| | Seat: A351 CF8M |
| | Disc: A351 CF8M |
| | Back Seat: A351 CF8M |
| | Stem: A182 F316 |
| Cast Steel: Trim #8 |
| | Seat: A105 + H/F STL |
| | Disc: WCB + H/F 410 |
| | Back Seat: A276-410 |
| | Stem: A182-F6a |
| Gasket Material(s): | Stainless Steel: 316 + Graphite |
| | Cast Steel: 304 + Graphite |
| Ends: | 150#, 300#, 600# Flanged |
| Max Pressure: | 1480 PSI* |
| Max Temp: | 1000° F |

* Dependent on ANSI Class Rating

# Flanged Swing Check Valve Series 25

| Size Range: | 1/2” to 24” |
| Body Materials: | 316 Stainless Steel, Carbon Steel |
| Trim Material(s): | Stainless Steel: Trim #10 |
| | Seat: A351 CF8M |
| | Disc: A351 CF8M |
| Cast Steel: Trim #8 |
| | Seat: A105 + H/F STL |
| | Disc: A105 + H/F 410 (2”-14”) |
| | Disc: WCB + H/F 410 (16” & Larger) |
| Gasket Material(s): | Stainless Steel: 316 + Graphite |
| | Cast Steel: 304 + Graphite |
| Ends: | 150#, 300#, 600# Flanged |
| Max Pressure: | 1480 PSI* |
| Max Temp: | 1000° F |

* Dependent on ANSI Class Rating