Assured Automation’s 150F and 300F series ANSI flanged ball valves offer a unique design that is ideal for process and petrochemical applications. Fire-safe models are available with graphite stem packing and body seal.

A variety of actuators are available along with a full range of accessory items including limit switches, solenoid valves, modulating positioners, and manual override devices. Complete assemblies are built from stock, and tested in our ISO certified shop prior to shipping.

**FEATURES**

- Floating ball with protected seat design
- O-Ring backed seat
- Fire-Safe designed to API 607-4 & 5 certified (with proper seat and seal selection)
- Spiral wound graphite body gasket with secondary metal to metal seal
- Open and close locking device for position safety lockout
- O-Ring reinforced stem packing
- ISO 5211 actuator mounting pad
- Live-loaded stem design
- Anti-static grounding device
- Secondary containment option
- Double-D (flatted) stem provides ball position indication

**TYPICAL APPLICATIONS**

- Refineries
- Petrochemical
- Chemical Process Equipment
- Process Control Applications
- Water and Waste applications
- Pipeline applications

**ACCESSORIES**

- Limit switches
- Solenoid valves
- Positioners

**SPECIALTY VALVE OPTIONS**

- Fire-safe (Fire Tested to API 607-4 & 5)
  Optional Graphite seals must be used
- Cryogenic stem extensions
- Fusible link spring packs for Thermal Shutdown
- V-port ball profiles for Flow Control

**END CONNECTIONS**

- 150# ANSI Flanged: 1/2” to 12”
- 300# ANSI Flanged: 1/2” to 12”

**PRESSURE RATING**

- 150# ANSI Flanged: 275 PSIG
- 300# ANSI Flanged: 700 PSIG

**TEMPERATURE RANGE**

- -20°F to 475°F

**MATERIALS**

- **Body:** Carbon steel ASTM A216 WCB or Stainless Steel ASTM A351 CF8M
- **Stem and Ball:** 316SS
- **Seats:** TFM or 50/50 (50% TFE / 50% SS)
- **Stem Packing:** TFM or Graphite
- **Body Gasket:** Graphite

Contact us for the most recent product and technical information. Visit our website assuredautomation.com.
## FEATURES AND BENEFITS

<table>
<thead>
<tr>
<th>Item</th>
<th>Name</th>
<th>Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Raised Face Flange (to ANSI B16.5)</td>
<td>Concentrates pressure for a reliable seal at higher pressures</td>
</tr>
<tr>
<td>2</td>
<td>Pocketed and Recessed Seats</td>
<td>Along with a secondary metal backup seal, this design prevents seat deformation.</td>
</tr>
<tr>
<td>3</td>
<td>ISO 5211 Actuator Pad</td>
<td>4 bolt mounting pattern to ISO 5211; Eliminates torsional stress; Actuator can be removed while valve is under full pressure.</td>
</tr>
<tr>
<td>4</td>
<td>Recessed Groove</td>
<td>Enables top flange to be adapted with a secondary containment bonnet for fugitive emission, cryogenic service and other hazardous applications</td>
</tr>
<tr>
<td>5</td>
<td>Stop Housing</td>
<td>Separates valve stop from packing gland to eliminate stop plate impact on the packing gland</td>
</tr>
<tr>
<td>6</td>
<td>Travel Stop &amp; Locking Device</td>
<td>Can be used to lock valve in open or closed position.</td>
</tr>
<tr>
<td>7</td>
<td>NAMUR Stem Slot</td>
<td>2.5” to 8” valve stems feature a NAMUR stem slot for ease of limit switch mounting</td>
</tr>
<tr>
<td>8</td>
<td>“Double-D” Stem Design</td>
<td>Parallel flat stem head for positive ball position indication</td>
</tr>
<tr>
<td>9</td>
<td>2-piece Packing Gland</td>
<td>2-piece design of diamond shaped packing gland prevents side loading due to uneven adjustment</td>
</tr>
<tr>
<td>10</td>
<td>V-Ring Stem Packing</td>
<td>V-Ring style packing rings form a rigid, high-cycle stem seal</td>
</tr>
<tr>
<td>11</td>
<td>Secondary O-ring</td>
<td>O-Ring serves as second barrier for stem leakage</td>
</tr>
<tr>
<td>12</td>
<td>Anti-Static Device</td>
<td>Grounding anti-static devices at two locations enable electric continuity to prevent static electric spark</td>
</tr>
<tr>
<td>13</td>
<td>Tapered Thrust Bearing</td>
<td>Provides for an excellent long life bearing support</td>
</tr>
<tr>
<td>14</td>
<td>Investment Cast Body</td>
<td>Up to 6”, bodies are precision investment cast, Shell/Wall to ANSI B16.34</td>
</tr>
<tr>
<td>15</td>
<td>Fully Encapsulated Graphite Gaskets</td>
<td>Isolate media from atmosphere</td>
</tr>
<tr>
<td>16</td>
<td>Encapsulated Seat O-ring</td>
<td>O-Ring encapsulated in the back of the seat, a unique “flex-load” energized seat design</td>
</tr>
<tr>
<td>17</td>
<td>Nuts and Bolts</td>
<td>All made of high strength steel to ensure body structural strength and sealing integrity</td>
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</tbody>
</table>
150F/300F ANSI Flanged Full Port Ball Valves

MATERIALS OF CONSTRUCTION

1/2” to 2”

2 1/2” to 12”

Note: Red items are included in the seal replacement kits.

<table>
<thead>
<tr>
<th>Item</th>
<th>Name</th>
<th>Carbon Steel</th>
<th>Stainless Steel</th>
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<tbody>
<tr>
<td>1</td>
<td>Valve Body</td>
<td>ASTM A216 WCB</td>
<td>ASTM A351 CF8M</td>
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<tr>
<td>2</td>
<td>End Cap</td>
<td>ASTM A216 WCB</td>
<td>ASTM A351 CF8M</td>
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<tr>
<td>3</td>
<td>Stem</td>
<td>SS316 / SS304</td>
<td>SS316</td>
</tr>
<tr>
<td>4</td>
<td>Packing Follower</td>
<td>SS304</td>
<td>SS304</td>
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<td>5</td>
<td>Bellville Washer</td>
<td>SS301</td>
<td>SS301</td>
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<tr>
<td>6</td>
<td>Lock Washer</td>
<td>SS304</td>
<td>SS304</td>
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<tr>
<td>7</td>
<td>Ball</td>
<td>SS316 / SS304</td>
<td>SS316</td>
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<td>8</td>
<td>Seat</td>
<td>TFM or 50/50</td>
<td>TFM or 50/50</td>
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<td>9</td>
<td>Body Gasket</td>
<td>Graphite</td>
<td>Graphite</td>
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<td>10</td>
<td>Stem Packing</td>
<td>TFM or Graphite</td>
<td>TFM or Graphite</td>
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<tr>
<td>11</td>
<td>Packing Protector</td>
<td>50%PTFE+SS316</td>
<td>50%PTFE+SS316</td>
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<td>12</td>
<td>Thrust Washer</td>
<td>25%Carbon+TFM</td>
<td>25%Carbon+TFM</td>
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<td>13</td>
<td>Anti-Static Devices</td>
<td>SS304</td>
<td>SS304</td>
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<tr>
<td>14</td>
<td>Valve Travel Stop</td>
<td>SS304</td>
<td>SS304</td>
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<td>15</td>
<td>Manual Handle</td>
<td>SS304</td>
<td>SS304</td>
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<tr>
<td>16</td>
<td>Locking Device</td>
<td>SS304</td>
<td>SS304</td>
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<tr>
<td>17</td>
<td>Handle Sleeve</td>
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<td>18</td>
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<td>Body Stud</td>
<td>ASTM A193 B7</td>
<td>ASTM A193 B8</td>
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<td>Body Nut</td>
<td>ASTM A194 2H</td>
<td>ASTM A194 Gr.8</td>
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<td>SS304</td>
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<tr>
<td>22</td>
<td>O-ring</td>
<td>Viton®</td>
<td>Viton®</td>
</tr>
<tr>
<td>23</td>
<td>Seat O-ring</td>
<td>Viton®</td>
<td>Viton®</td>
</tr>
</tbody>
</table>

Viton® is a registered trademark of the DuPont Company

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150F/300F ANSI Flanged Full Port Ball Valves

PRESSURE/TEMPERATURE CURVE

Class 300 Carbon Steel
Class 300 SS
Class 150 Carbon Steel
Class 150 SS

seal materials represented by gray lines are special order. Contact factory for information.

SPECIALTY MODELS

V-Port Ball Profiles for Flow Control
(see our V series)

Stem Extensions for Cryogenic Applications
(call for details)

Containment Bonnet for Fugitive Emissions
(call for details)
150F/300F ANSI Flanged Full Port Ball Valves

ACTUATORS AVAILABLE
A full range of actuators are available to choose from. All sizing is done by Assured Automation to make selecting your assembly easy. Any accessories ordered with the actuator will be installed and tested by our ISO certified facility.

Pneumatic

**P Series** Dual Scotch Yoke

- Spring Return: fail open or closed
- Double Acting: fail in place

(see P series web page)

**F Series** Dual Rack and Pinion

- Spring Return: fail open or closed
- Double Acting: fail in place

(see F series web page)

**Accessories**
- NAMUR direct mount solenoid valves
- Variety of limit switches
- Modulating positioners
- 1/4” NPT x 1/4” tube push fittings
- 1/4” NPT x 1/4” compression fittings
- SS and poly tubing

Electric

**Weatherproof** (NEMA 4/4X)

**S4 Series** Universal Voltage

- 24 to 220 VAC/DC
  - Modulating or On/Off
  - Heater and thermostat come standard
  - Battery fail safe optional
  - 2 end of travel switches (open and closed)

(see S4 series web page)

**K4 Series** Worm Gear

- 120 VAC
  - Modulating or On/Off
  - High duty cycle
  - 2 end of travel switches (open and closed)

(see K4 series web page)

**B7 Series** Heavy Duty

- 120 VAC
  - Modulating or On/Off
  - Heater and thermostat come standard
  - 2 end of travel switches (open and closed)

(see B7 series web page)

**Manual**

**Lockable Lever**

**Geared Handwheel**

**Accessories**
- Cryogenic stem extensions
- Chain wheels for geared handwheels
- Limit switches

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**150F/300F** ANSI Flanged Full Port Ball Valves

### DIMENSIONS 150F Valve Bodies

**1/2” to 2”**

**2 1/2” to 12”**

Dimensions in inches

<table>
<thead>
<tr>
<th>Line Size</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>ØD Bolt Hole</th>
<th>ØE Port</th>
<th>ØF Bolt Circle</th>
<th>ØG Flange</th>
<th># of Bolts</th>
<th>ISO 5211</th>
<th>CV (gpm)</th>
<th>Torque (in-lb.)</th>
<th>Weight (lbs.)</th>
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</thead>
<tbody>
<tr>
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<td>1.54</td>
<td>0.62</td>
<td>0.59</td>
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<td>F10</td>
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<td>F10</td>
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</tbody>
</table>

Visit our Web Site for CAD Models and dimension drawings of complete valve assemblies including accessories. Our easy to use configurators allow complete assembly specification with help screens for most selections. Once your assembly is complete, simply click the CAD icon.

assuredautomation.com
## DIMENSIONS 300F Valve Bodies

### 1/2” to 2”

<table>
<thead>
<tr>
<th>Line Size</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>ØD Bolt Hole</th>
<th>ØE Port</th>
<th>ØF Bolt Circle</th>
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<th># of Bolts</th>
<th>ISO 5211</th>
<th>Cv (gpm)</th>
<th>Torque (in-lb.)</th>
<th>Weight (lbs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2”</td>
<td>5.50</td>
<td>1.79</td>
<td>1.54</td>
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<td>0.59</td>
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<tr>
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<tr>
<td>1 1/4”</td>
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<td>call</td>
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</tbody>
</table>

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assuredautomation.com
**150F/300F ANSI Flanged Full Port Ball Valves**

**ORDERING INFORMATION**

<table>
<thead>
<tr>
<th>Size</th>
<th>Flange Class</th>
<th>Stem &amp; Body Seal Material</th>
<th>Body Material</th>
<th>Seat Material</th>
<th>Actuator</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>150F</td>
<td></td>
<td></td>
<td></td>
<td>P8SC ...</td>
</tr>
</tbody>
</table>

**VALVE BODY**

Size:
- C = 1/2”
- D = 3/4”
- E = 1”
- G = 1 1/2”
- H = 2”

ANSI Flange Class (to ANSI B16.5):
- **150F** = ANSI Class 150#
- **300F** = ANSI Class 300#

Stem Packing:
- (omit) = TFM
- G = Graphite

Body Material:
- C = Carbon Steel
- S = Stainless Steel

Seat Material:
- F = TFM
- S = 50/50 (50% SS and 50% TFE)

**ACTUATOR**

**Pneumatic Actuators**

Series:
- P = P series Dual Scotch Yoke
- F = F series Dual Rack & Pinion

Supply Air Pressure:
- 6 = 60psi
- 8 = 80psi

Function:
- S = spring return
- D = double acting

Fail Safe Position:
- C = fail to CLOSED
- O = fail to OPEN
- omit for direct acting

**Electric Actuators**

Series:
- K4 = weatherproof; worm gear
- S4UV = weatherproof; universal voltage
- B7 = explosion proof

Voltage:
- A = 120VAC
- B = 24VDC
- F = 12VDC (omit for S4UV)

**Manual Operators**

Type:
- M = basic lever with locking device
- G = geared hand wheel
150F/300F ANSI Flanged Full Port Ball Valves

ACCESSORIES  Visit our web site or call for details

Solenoid Valves
NAMUR solenoid valves for direct mount to the actuator. Various coil and connector options are available including weatherproof, explosion proof, corded, NPT conduit, and cable gland.

3-way
for spring return models

3/4-way for double acting models

Solenoid valve web page

Limit Switches (valve position indicators)
Used to communicate the position of the valve to a PLC, HMI, or simple remote indicator lamp. Various switch technologies are available. All include a local visual indicator as well.

UA/UB Series
Solid state proximity switches; 1 for Open, 1 for Closed

YF Series
SPDT mechanical switches; 1 for Open, 1 for Closed

YE, YH, YO Series
SPDT mechanical switches; 1 for Open, 1 for Closed

Other limit switches are available Limit switch web page

Modulating Positioners
Add modulating control to either of our pneumatic actuator series. These positioners mount to the top of the actuator using the NAMUR standard mounting hole and stem pattern.

Pneumatic
0-15 psi control signal

Electro-pneumatic
4-20mA or 0-10VDC control signal

With feedback unit
4-20mA or 0-10VDC feedback signal

Positioner web page

Contact us for the most recent product and technical information. Visit our website assuredautomation.com.