



## 150F/300F

## ANSI Flanged Full Port Ball Valves



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.

### 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

[see Pressure/Temperature Curve](#)

### TEMPERATURE RANGE

-20°F to 475°F

[see Pressure/Temperature Curve](#)

### 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

[see page 3 for complete material details](#)

### 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

[see page 2 for feature details](#)

### ACTUATORS

- Full range of actuators including manual, pneumatic, and electric

[see page 5 for actuator details](#)

### TYPICAL APPLICATIONS

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

### ACCESSORIES

- **Limit switches**
- **Solenoid valves**
- **Positioners**

[see page 8 for accessory details](#)

### 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

[see page 4](#)



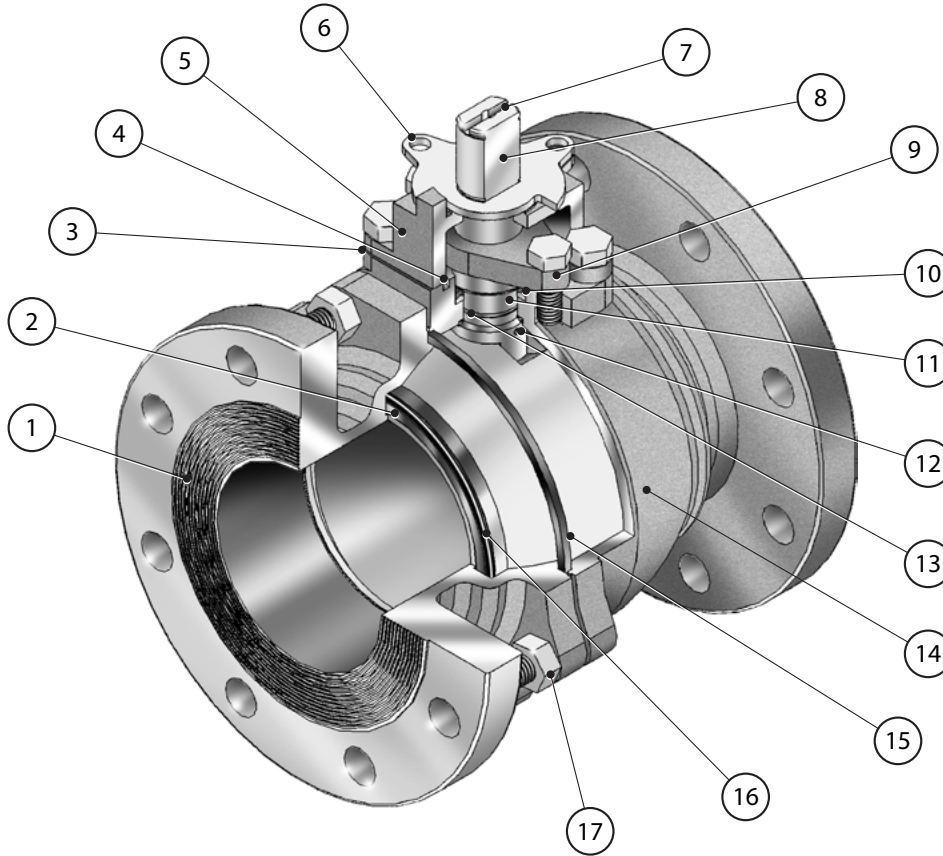


## 150F/300F



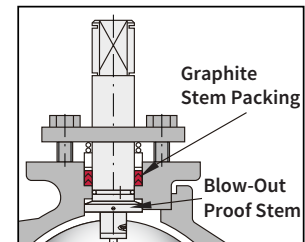
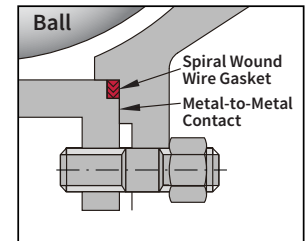
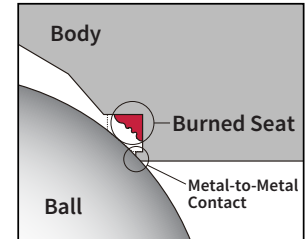
## ANSI Flanged Full Port Ball Valves

### FEATURES AND BENEFITS



### Fire Safe: API607-4 & 5 Certified

Optional GRAPHITE stem packing must be selected



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



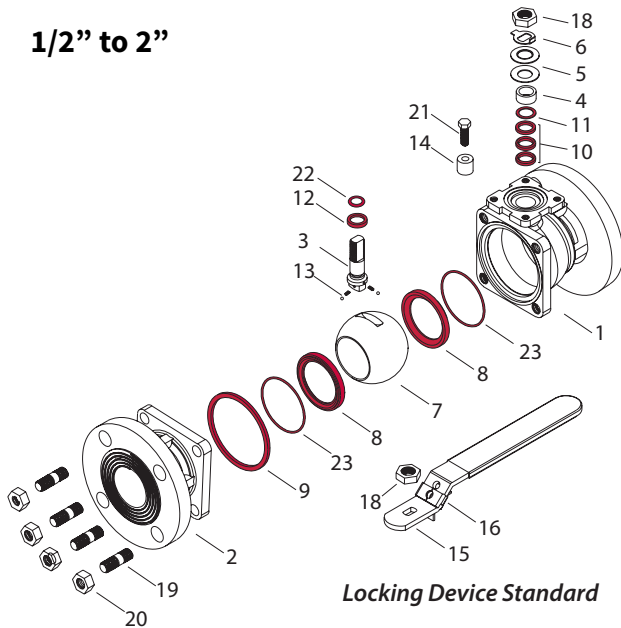
## 150F/300F



## ANSI Flanged Full Port Ball Valves

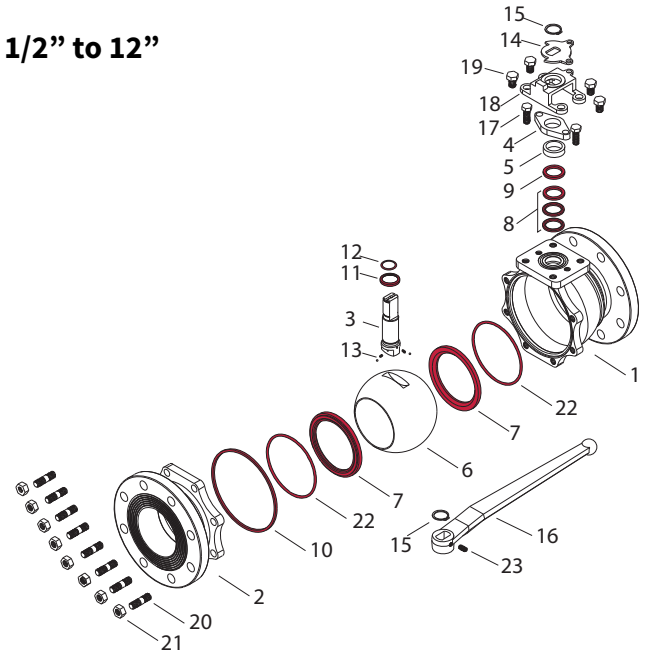
### MATERIALS OF CONSTRUCTION

#### 1/2" to 2"



Locking Device Standard

#### 2 1/2" to 12"



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

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

Item	Name	Carbon Steel	Stainless Steel
1	Valve Body	ASTM A216 WCB	ASTM A351 CF8M
2	End Cap	ASTM A216 WCB	ASTM A351 CF8M
3	Stem	SS316 / SS304	SS316
4	Packing Gland	ASTM A351 CF8M	ASTM A351 CF8M
5	Packing Follower	SS304	SS304
6	Ball	SS316 / SS304	SS316
7	Seat	TFM or 50/50	TFM or 50/50
8	Stem Packing	TFM or Graphite	TFM or Graphite
9	Packing Protector	50%PTFE+SS316	50%PTFE+SS316
10	Body Gasket	Graphite	Graphite
11	Thrust Washer	25%Carbon+TFM	25%Carbon+TFM
12	O-ring	Viton®	Viton®
13	Anti-Static Devices	SS304	SS304
14	Valve Travel Stop	Steel	SS304
15	Snap Ring	Plated Steel	Plated Steel
16	Manual Handle	Ductile Iron	Ductile Iron
17	Gland Bolt	Steel	SS304
18	Stop Housing	SS304	SS304
19	Housing Bolt	SS304	SS304
20	Body Stud	ASTM A193 B7	ASTM A193 B8
21	Body Nut	ASTM A194 2H	ASTM A194 Gr.8
22	Seat O-ring	Viton®	Viton®
23	Set Screw	Steel	Steel

Viton® is a registered trademark of the DuPont Company

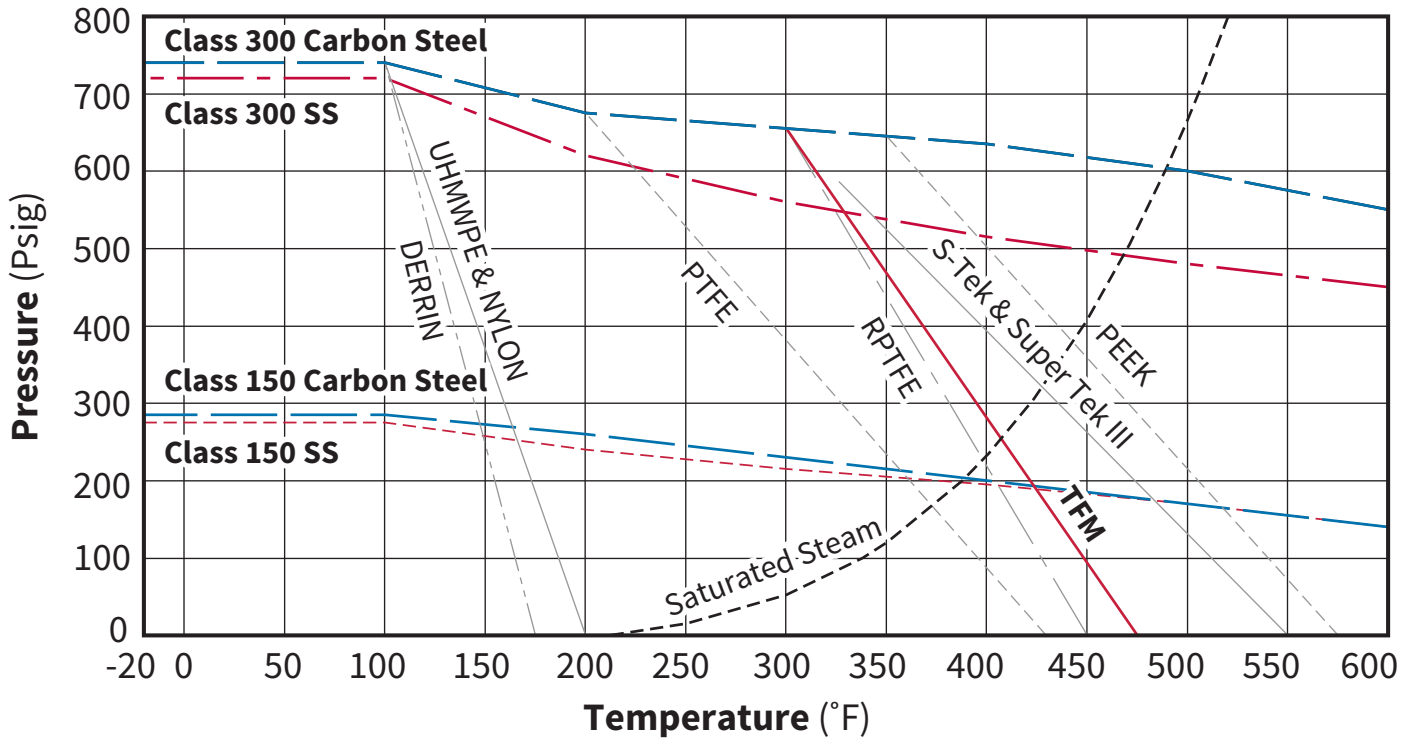


## 150F/300F



## ANSI Flanged Full Port Ball Valves

### PRESSURE/TEMPERATURE CURVE



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

### SPECIALTY MODELS

#### V-Port Ball Profiles for Flow Control

[\(see our V series\)](#)



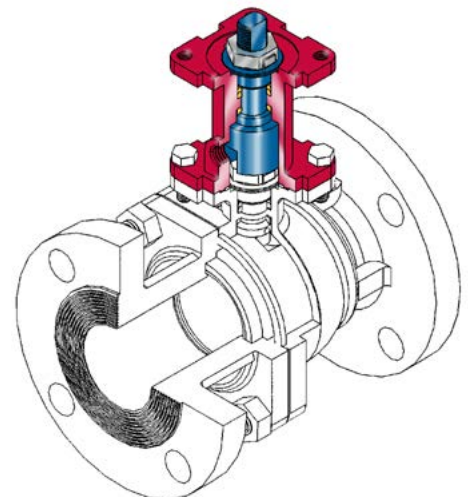
#### Stem Extensions for Cryogenic Applications

*(call for details)*



#### Containment Bonnet for Fugitive Emissions

*(call for details)*





## 150F/300F



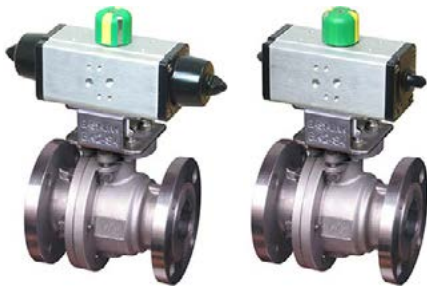
## ANSI Flanged Full Port Ball Valves

### 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)

[\(see K4 series web page\)](#)

#### Explosion Proof (NEMA 7)

##### 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



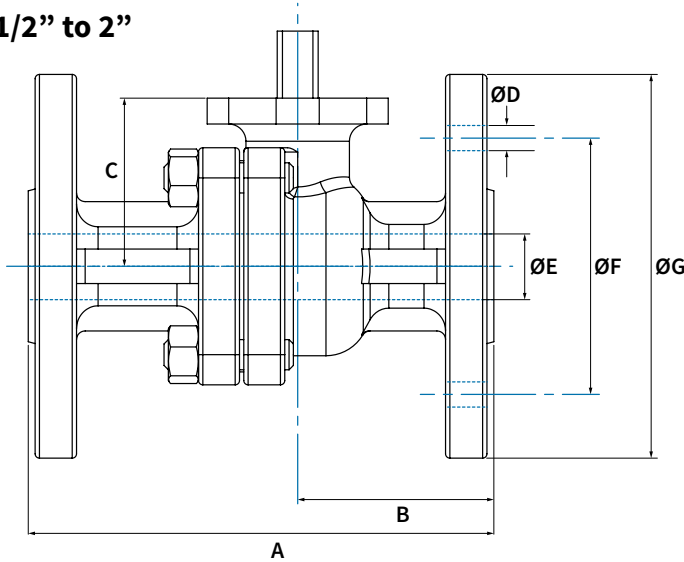
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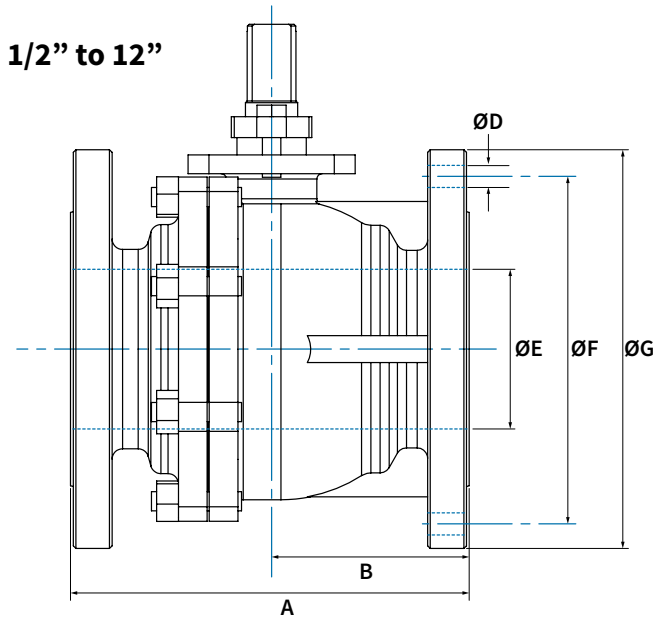
## ANSI Flanged Full Port Ball Valves

### DIMENSIONS 150F Valve Bodies

1/2" to 2"



2 1/2" to 12"



Dimensions in inches

Line Size	A	B	C	ØD Bolt Hole	ØE Port	ØF Bolt Circle	ØG Flange	# of Bolts	ISO 5211	C <sub>v</sub> (gpm)	Torque (in.-lb.)	Weight (lbs.)
1/2"	4.25	1.79	1.54	0.62	0.59	2.38	3.50	4	F04	17	62	4
3/4"	4.62	2.01	1.70	0.62	0.79	2.75	3.88	4	F04	43	90	5
1"	5.00	2.13	2.06	0.62	0.98	3.12	4.25	4	F05	74	100	7.5
1 1/4"	5.50	2.45	2.35	0.62	1.26	3.50	4.62	4	F05	192	140	13.5
1 1/2"	6.50	2.76	2.65	0.62	1.50	3.88	5.00	4	F07	290	270	14.5
2"	7.00	3.07	2.90	0.62	1.97	4.75	6.00	4	F07	410	360	21
2 1/2"	7.50	3.08	3.39	0.75	2.56	5.50	7.00	4	F10	780	620	33.5
3"	8.00	3.74	3.67	0.75	3.00	6.00	7.50	4	F10	1,120	800	42.5
4"	9.00	4.47	4.40	0.75	4.00	7.50	9.00	8	F10	1,825	1,700	62
6"	15.50	7.62	7.20	0.88	5.98	9.50	11.00	8	call	4,700	4,600	165
8"	18.00	8.35	7.60	0.88	7.87	11.75	13.50	8	call	10,100	9,900	262
10"	21.00	10.50	9.88	1.00	9.84	14.25	16.00	12	call	17,500	17,000	468
12"	24.00	12.00	11.50	1.00	11.80	17.00	19.00	12	call	22,400	23,000	714

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.**

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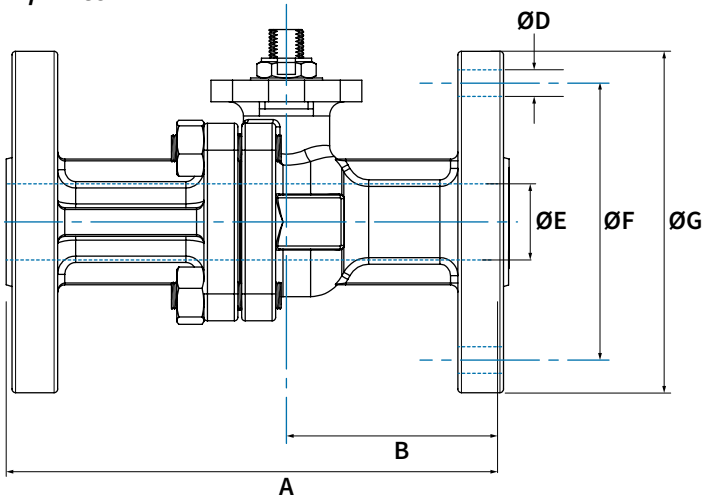
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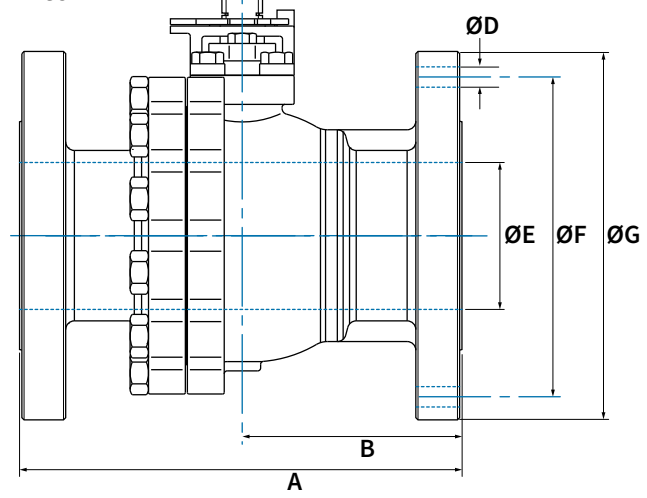
## ANSI Flanged Full Port Ball Valves

### DIMENSIONS 300F Valve Bodies

1/2" to 2"



2 1/2" to 12"



Dimensions in inches

Line Size	A	B	C	ØD Bolt Hole	ØE Port	ØF Bolt Circle	ØG Flange	# of Bolts	ISO 5211	C <sub>v</sub> (gpm)	Torque (in-lb.)	Weight (lbs.)
1/2"	5.50	1.79	1.54	0.62	0.59	2.62	3.75	4	F04	17	65	5
3/4"	6.00	2.01	1.70	0.75	0.79	3.25	4.62	4	F04	43	95	7
1"	6.50	2.13	2.06	0.75	0.98	3.50	4.88	4	F05	74	105	10
1 1/4"	7.00	2.45	2.35	0.75	1.26	3.88	5.25	4	F05	192	252	call
1 1/2"	7.50	2.76	2.65	0.88	1.50	4.50	6.12	4	F07	290	284	19
2"	8.50	3.07	2.90	0.75	1.97	5.00	6.50	8	F07	410	378	25
2 1/2"	9.50	3.08	3.39	0.88	2.56	5.88	7.50	8	F10	780	651	42
3"	11.12	3.74	3.67	0.88	3.00	6.62	8.25	8	F10	1,120	840	60
4"	12.00	4.47	4.40	0.88	4.00	7.88	10.00	8	F10	1,825	1,785	93
6"	15.88	7.62	7.20	0.88	5.98	10.62	12.50	12	call	4,700	4,830	221
8"	19.75	8.35	7.60	1.00	7.87	13.00	15.00	12	call	10,100	10,395	371
10"	22.38	10.50	9.88	1.12	9.84	15.25	17.50	16	call	17,500	17,850	576
12"	25.50	12.00	11.50	1.25	11.80	17.75	20.50	16	call	22,400	24,150	call

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## 150F/300F



## ANSI Flanged Full Port Ball Valves

### ORDERING INFORMATION

#### VALVE BODY

Size: \_\_\_\_\_

- |                   |               |
|-------------------|---------------|
| <b>C</b> = 1/2"   | <b>J</b> = 3" |
| <b>D</b> = 3/4"   | <b>K</b> = 4" |
| <b>E</b> = 1"     | <b>M</b> = 6" |
| <b>G</b> = 1 1/2" | <b>N</b> = 8" |
| <b>H</b> = 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

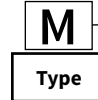
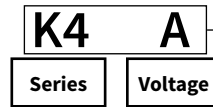
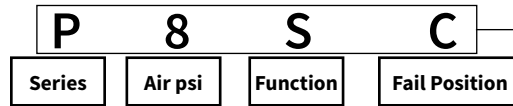
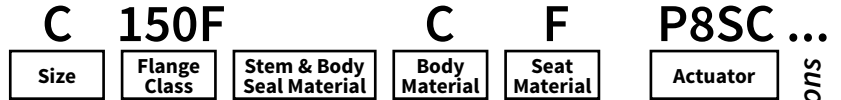
Voltage: \_\_\_\_\_

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

##### Manual Operators

Type: \_\_\_\_\_

- M** = basic lever with locking device
- G** = geared hand wheel



Note: only one actuator may be chosen

Code continues to specify additional accessories and options

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With Instant Pricing and you can Buy Now





## 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**  
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](#)