



Anti-static electrical continuity between ball, stem, and body.

Locking washer

Blow-out proof stem.

**Live loaded** packing assures reliable performance for the life of the valve.

Only Xomox
Process Ball
Valves embody
all the quality,
performance,
value, and
safety features
required in
process
applications.

#### The basics:

Xomox Process Ball Valves are available in the following configurations:

- One-piece flanged.
- Two-piece flanged.
- Three-piece screwed, socket-weld, and butt-weld ends.
- Sizes ½ through 8 inches.
- ANSI Class pressure ratings of 150, 300, and 600.
- Xomox Ball Valves provide tight shutoff from vacuum through rated pressure at temperatures from -20°F to 450°F.

Innovative engineering and the precision machined ball assure lower operating torque and more economical actuation.

Seat wear is reduced and

operating life is greatly extended.
316 stainless steel balls are
standard in all valves.

The compact two-piece body meets end-to-end requirements of ASME/ANSI B16.10.

of Xomox Corporation.

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\$2<sup>TM</sup> and XRP<sup>TM</sup> are trademarks

The integral **ISO 5211** actuator mounting pad assures easy, low cost automation.

With optional graphite stem packing, the valve is fire tested to **API-607**, **4th Edition**.

For inventory economy and convenience, one-piece and two-piece valves have interchangeable internal parts.

The patented **\$2™** sealing system assures superior stem sealing.

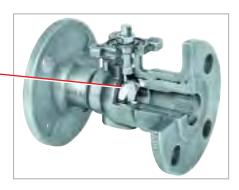
Dual body gaskets are standard on 1-piece and 2-piece Xomox Process Ball Valves. This includes a PTFE chemically inert seal and a secondary FT graphite seal (Patent No. 6,837,482 on 2-piece valves).

Standard Chemically Modified PTFE (CMP) seat material reduces the need for multiple seat options.

Compared to PTFE, CMP provides superior mechanical and thermal characteristics. CMP is more resistant to chemicals and cold flow. Other seal materials are available upon request.

Large port openings maximize **Cv factors**, increasing flow rates and minimizing pressure loss.

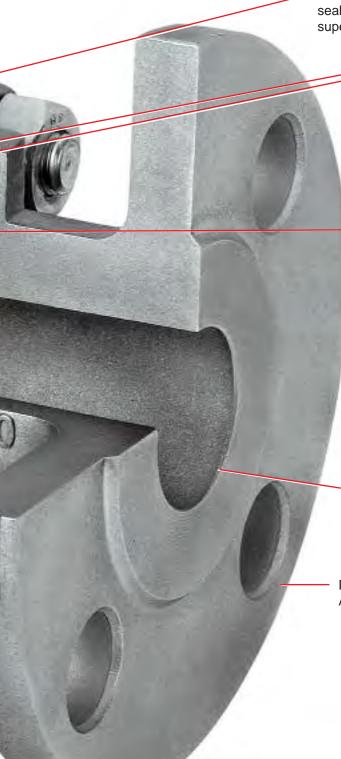
Development of casting is to ASTM E-446 Level II standards.



Above: The compact one-piece valve meets ASME/ANSI B16.10 specifications.



Above: The compact three-piece valve body design allows for disassembly and maintenance without removing the valve from the line.\*





Live loaded

primary **\$2** 

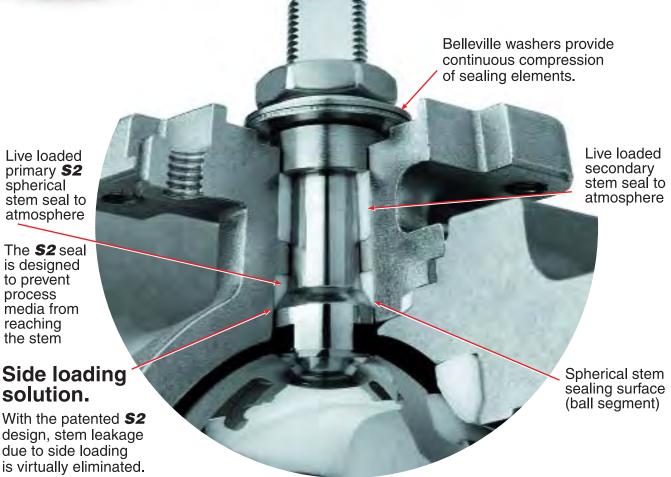
stem seal to atmosphere

The **\$2** seal is designed to prevent process media from reaching the stem

solution.

spherical

Xomox's exclusive **\$2™** stem seal system provides superior fugitive emissions control in process applications.



#### Media-free stem.

The primary spherical **\$2** stem seal eliminates media build-up on the stem. This prevents stem binding and torque increase. The secondary stem seal is not exposed to the process media.

## Maintenance-free operation.

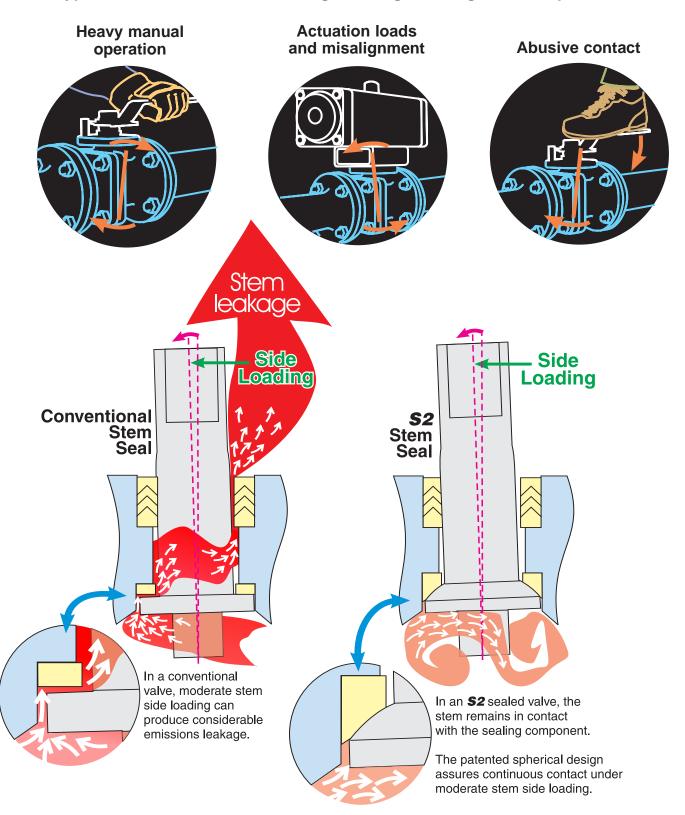
The spherical \$2 stem sealing system automatically adjusts to compensate for wear, temperature and pressure fluctuations.

## Exceptional performance.

Documented performance, under actual service conditions, of more than 3-million cycles without measurable stem leakage.

# The patented **\$2™** stem seal stops normal side loading stem leakage.

Typical causes of stem side loading resulting in leakage to atmosphere:

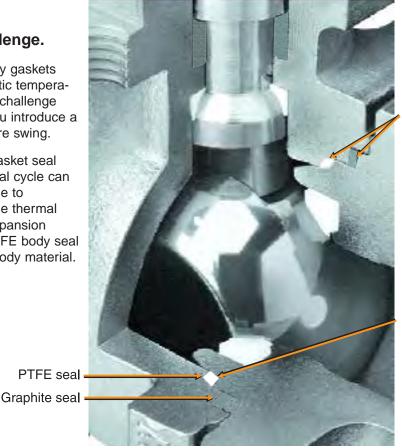


# Xomox meets the thermal challenge with the most effective body seal available

# The thermal cycling challenge.

Most PTFE body gaskets work well at static temperatures. The real challenge comes when you introduce a wide temperature swing.

In a standard gasket seal design, a thermal cycle can cause a leak due to differences in the thermal coefficient of expansion between the PTFE body seal and the metal body material.



Dual body gaskets are standard on 1-piece and 2-piece Xomox Process Ball Valves. This includes a PTFE chemically inert seal and a secondary FT graphite seal (patent-pending on 2-piece valves).

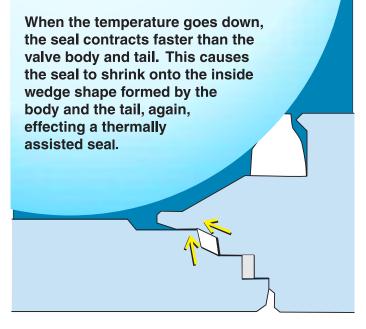
Compression of the two body joint gaskets is precisely controlled to prevent cold flow and distortion. The gasket seal is uniform and secure.

# Thermally assisted sealing.

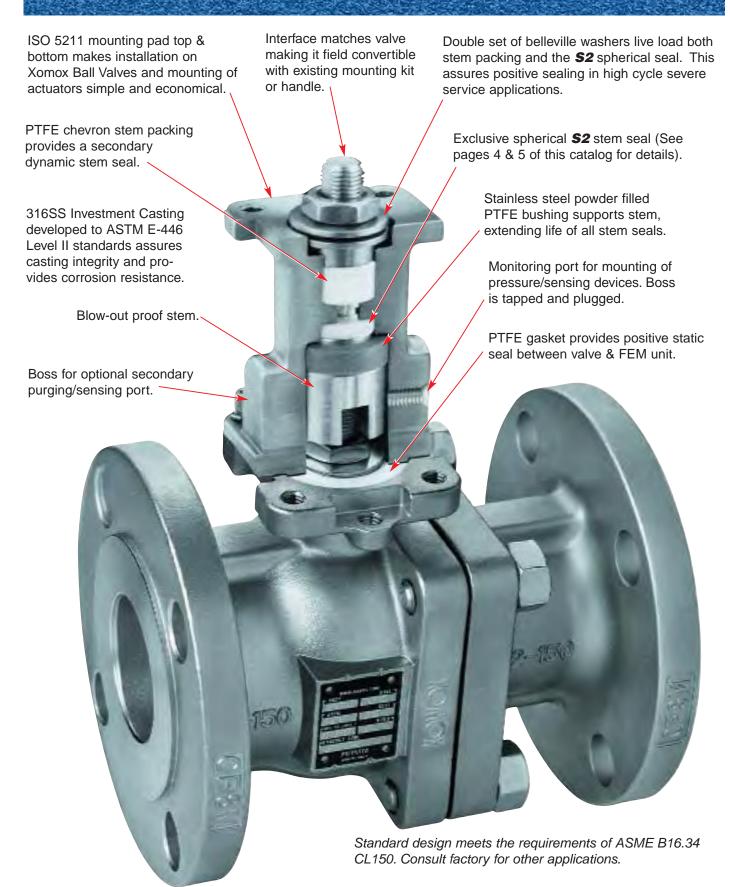
Xomox's diamond shaped, thermally assisted PTFE body seal, will seal at all temperatures in its design range, even during thermal cycling.

To enhance the seal, this unique design takes advantage of the differences in the rates of thermal expansion between the PTFE and the metal to enhance the seal.

When the valve temperature goes up, the seal expands and is forced into the outside wedge formed by the body and the tail effecting a thermally assisted seal.



# Fugitive Emissions Module

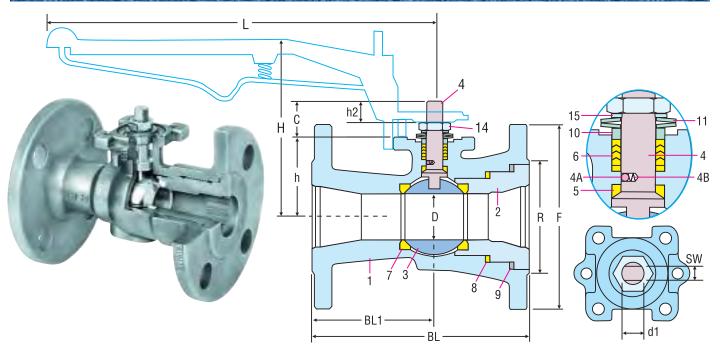


# Sample Xomox Process Ball Valve Specifications

Sizes    'k" - 4" Class 150 Full Port Carbon / Stainless Trim   Stainless Firm					
Tail ASTM A216, WCB ASTM A351, CF8M  Pressure-Temperature Rating 285 psig 100°F 100 psig 480°F 275 psig 100°F  Size Range 1/4" - 4" 6" - 8"  End Connections Flanged ASME 16.5, Class 150, raised face  Seat CMP (Chemically modified PTFE) CMP (Chemically modified PTFE)  Stem Seal PTFE \$2 stem seal CMP \$2 stem seal  Primary Body Gasket PTFE diamond shaped, thermally assisted  Secondary Body Gasket Grafoil Grafoil  Ball 316SS 316SS  Stem 316SS Blowout proof 316SS Blowout proof  Stem Packing PTFE live loaded PTFE live loaded  Studs ASTM A193, B7M ASTM A193, B8M  Nuts ASTM A194, 2HM ASTM A194, 8MA  Operator Selection Corporation Some ASME 16.34  Design 2-piece, full bore 2-piece, full bore  Manufacturer Xomox Corporation Xomox Corporation	Sizes				
Pressure-Temperature Rating  285 psig 100°F 100 psig 480°F  Size Range  1/-" - 4"  6" - 8"  Flanged ASME 16.5, Class 150, raised face  Seat  CMP (Chemically modified PTFE) Stem Seal  PTFE \$2 stem seal  PTFE diamond shaped, thermally assisted  Secondary Body Gasket  Grafoil  Ball  316SS  Stem  316SS Blowout proof  Stem Packing  PTFE live loaded  Studs  ASTM A193, B7M  ASTM A193, B8M  Nuts  Operator  References  ASME / ANSI B16.10, ASME B16.34  Design  Manufacturer  275 psig 100°F  26" - 8"  6" - 8"  Flanged ASME 16.5, Class 150, raised face  CMP (Chemically modified PTFE)  CMP (Chemically modified PTE)	Body	ASTM A216, WCB	ASTM A351, CF8M		
Size Range  1/2" - 4"  Flanged ASME 16.5, Class 150, raised face  Seat  CMP (Chemically modified PTFE)  Stem Seal  PTFE \$2 stem seal  PTFE diamond shaped, thermally assisted  Secondary Body Gasket  Grafoil  Ball  316SS  Stem  316SS Blowout proof  Stem Packing  Studs  ASTM A193, B7M  ASTM A194, 2HM  Operator  References  Manufacturer  Nomox Corporation  100 psig 480°F  275 psig 100 P  6" - 8"  Flanged ASME 16.5, Class 150, raised face  CMP (Chemically modified PTFE)  CMP (Chemically modified PTE)  CMP (Chemically mod	Tail	ASTM A216, WCB	ASTM A351, CF8M		
End Connections  Flanged ASME 16.5, Class 150, raised face  Seat  CMP (Chemically modified PTFE)  Stem Seal  Primary Body Gasket  Secondary Body Gasket  Ball  Bal	Pressure-Temperature Rating	285 psig 100°F 100 psig 480°F	275 psig 100°F		
Class 150, raised face  Seat  CMP (Chemically modified PTFE)  Stem Seal  PTFE \$2\$ stem seal  Primary Body Gasket  Secondary Body Gasket  Ball  Ball  Stem Seal  Stem Seal  Secondary Body Gasket  Ball  Stem Seal  Secondary Body Gasket  Secondary Body Gasket  Ball  Stem Seal  Stem Seal  Stem Seal  PTFE diamond shaped, thermally assisted  Secondary Body Gasket  Grafoil  Ball  S16SS  Stem  S16SS  Stem  S16SS Blowout proof  Stem Packing  Studs  ASTM A193, B7M  ASTM A193, B8M  Nuts  ASTM A194, 2HM  Operator  SS latching / locking lever  References  ASME / ANSI B16.10, ASME B16.34  Design  Z-piece, full bore  Manufacturer  Xomox Corporation  Xomox Corporation	Size Range	1/2" - 4"	6" - 8"		
Stem Seal PTFE \$2 stem seal PTFE diamond shaped, thermally assisted Secondary Body Gasket Grafoil Ball Stem Stem Stem Stem Stem Stem Stem Stem	End Connections				
Primary Body Gasket  Secondary Body Gasket  Grafoil  Ball  Ball  316SS  Stem  316SS Blowout proof  Stem Packing  PTFE live loaded  ASTM A193, B7M  ASTM A194, 2HM  Operator  References  ASME / ANSI B16.10, ASME B16.34  Design  Manufacturer  PTFE diamond shaped, thermally assisted  Grafoil  Grafoil  316SS  316SS  316SS  316SS Blowout proof  316SS Blowout proof  ASTS Blowout proof  ASTS Blowout proof  ASTS Blowout proof  ASTS Blowout proof  ASTM A193, B7M  ASTM A193, B8M  ASTM A194, 2HM  ASTM A194, 8MA  ASTM A194, 8MA  SS latching / locking lever  Gear operator  ASME / ANSI B16.10, ASME B16.34  ASME / ANSI B16.10, ASME B16.34  Z-piece, full bore  Xomox Corporation  Xomox Corporation	Seat	CMP (Chemically modified PTFE)	CMP (Chemically modified PTFE)		
Secondary Body Gasket  Grafoil  Ball  316SS  Stem  316SS Blowout proof  Stem Packing  PTFE live loaded  Studs  ASTM A193, B7M  ASTM A194, 2HM  Operator  References  ASME / ANSI B16.10, ASME B16.34  Design  Manufacturer  Manufacturer  Manufacturer  Merical Asket  Grafoil  Grafoil  316SS  316SS  316SS  316SS  ASTM A19S  ASME / ANSI B16.10, ASME B16.34  ASME / ANSI B16.10  Xomox Corporation  Xomox Corporation	Stem Seal	PTFE <b>\$2</b> stem seal	CMP <b>\$2</b> stem seal		
Ball 316SS 316SS Blowout proof 316SS Blowout proof Stem Packing PTFE live loaded PTFE live loaded Studs ASTM A193, B7M ASTM A193, B8M Nuts ASTM A194, 2HM ASTM A194, 8MA Operator SS latching / locking lever Gear operator References ASME / ANSI B16.10, ASME B16.34 ASME / ANSI B16.10, ASME B16.34 Design 2-piece, full bore 2-piece, full bore Manufacturer Xomox Corporation Xomox Corporation	Primary Body Gasket				
Stem Packing PTFE live loaded ASTM A193, B7M ASTM A193, B8M ASTM A194, 2HM ASTM A194, 8MA Operator SS latching / locking lever Gear operator References ASME / ANSI B16.10, ASME B16.34 ASME / ANSI B16.10, ASME B16.34 Design 2-piece, full bore 2-piece, full bore Manufacturer Xomox Corporation Xomox Corporation	Secondary Body Gasket	Grafoil	Grafoil		
Stem Packing PTFE live loaded PTFE live loaded Studs ASTM A193, B7M ASTM A193, B8M Nuts ASTM A194, 2HM ASTM A194, 8MA Operator SS latching / locking lever Gear operator References ASME / ANSI B16.10, ASME B16.34 ASME / ANSI B16.10, ASME B16.34 Design 2-piece, full bore 2-piece, full bore Manufacturer Xomox Corporation Xomox Corporation	Ball	316SS	316SS		
Studs ASTM A193, B7M ASTM A193, B8M  Nuts ASTM A194, 2HM ASTM A194, 8MA  Operator SS latching / locking lever Gear operator  References ASME / ANSI B16.10, ASME B16.34 ASME / ANSI B16.10, ASME B16.34  Design 2-piece, full bore 2-piece, full bore  Manufacturer Xomox Corporation Xomox Corporation	Stem	316SS Blowout proof	316SS Blowout proof		
NutsASTM A194, 2HMASTM A194, 8MAOperatorSS latching / locking leverGear operatorReferencesASME / ANSI B16.10, ASME B16.34ASME / ANSI B16.10, ASME B16.34Design2-piece, full bore2-piece, full boreManufacturerXomox CorporationXomox Corporation	Stem Packing	PTFE live loaded	PTFE live loaded		
Operator SS latching / locking lever Gear operator References ASME / ANSI B16.10, ASME B16.34 ASME / ANSI B16.10, ASME B16.34 Design 2-piece, full bore 2-piece, full bore Manufacturer Xomox Corporation Xomox Corporation	Studs	ASTM A193, B7M	ASTM A193, B8M		
References ASME / ANSI B16.10, ASME B16.34 ASME / ANSI B16.10, ASME B16.34 Design 2-piece, full bore 2-piece, full bore Xomox Corporation Xomox Corporation	Nuts	ASTM A194, 2HM	ASTM A194, 8MA		
Design 2-piece, full bore 2-piece, full bore  Manufacturer Xomox Corporation Xomox Corporation	Operator	SS latching / locking lever	Gear operator		
Manufacturer Xomox Corporation Xomox Corporation	References	ASME / ANSI B16.10, ASME B16.34	ASME / ANSI B16.10, ASME B16.34		
	Design	2-piece, full bore	2-piece, full bore		
Figure Number 521F-266-TAP16-LL 521F-666-TAP16-G	Manufacturer	Xomox Corporation	Xomox Corporation		
	Figure Number	521F-266-TAP16-LL	521F-666-TAP16-G		



# One-Piece Body / ANSI B16.34 / Class 150 & 300



# Reduced Port <sup>3</sup>/<sub>4</sub> to 4 inch

End-to-end dimensions: ASME / ANSI B16.10 Short Pattern

Xomox Figure Numbers: Class 150 - **511R** Class 300 - **513R**  The exclusive, patented **\$2** stem design is:

- Blow-out proof
- Fire-tested
- Highly resistant to side-loading leakage.

		e Dia. -)		Flange Holes	Dia. of Bolt I	Flange Holes	Dia. of Flange Bolt Circle		
Size	CI. 150	CI. 300	CI. 150	CI. 300	CI. 150	CI. 300	Cl. 150	CI. 300	
3/4	3.88	4.62	4.00	4.00	0.62	0.75	2.75	3.25	
1	4.25	4.88	4.00	4.00	0.62	0.75	3.12	3.50	
11/2	5.00	6.12	4.00	4.00	0.62	0.88	3.88	4.50	
2	6.00	6.50	4.00	8.00	0.75	0.75	4.75	5.00	
3	7.50	8.25	4.00	8.00	0.75	0.88	6.00	6.62	
4	9.00	10.00	8.00	8.00	0.75	0.88	7.50	7.88	

## **Parts & Materials**

No.	Part Description	Carbon	Stainless			
1	Body	ASTM A216. WCB	ASTM A351. CF8M			
2	Tail	ASTM A216. WCB	ASTM A351. CF8M			
3	Ball	316SS	316SS			
4	Stem	316SS	316SS			
4A	Anti-Static Ball	316SS	316SS			
4B	Anti-Static Spring	316SS	316SS			
5	S2 Stem Seal Ring	PTFE	PTFE			
	Packing Set	PTFE	PTFE			
6	Fire Tested Packing Set	Graphite	Graphite			
7	Soft Seat Seal Ring	СМР	СМР			
8	Body Gasket - Inner Seal	PTFE	PTFE			
9	Body Gasket - Outer Seal	GRAPHITE	GRAPHITE			
10	Gland	316SS	316SS			
11	Spring Washer	SST	SST			
14	Stem Nut	ASTM A194. 8MA	ASTM A194. 8MA			
15	Locking Washer	304SS	304SS			

	D Flow	Face-to	o-Face										Raised Face	IS0	ISO Bolt Size Metric	ISO Bolt	Wei (pou	
Size	Dia.	CI. 150	CI. 300	CI. 150	CI. 300	h	h2	Н	L	С	SW	d1	Dia.(R)		Size Metric	Circle	CI.150	CI.300
3/4	.50	4.62	6.00	2.35	3.74	1.54	0.43	4.88	5.75	0.75	.248	0.38	1.69	F04	M5xP.8	1.65	5	8
1	.75	5.00	6.50	2.62	4.12	1.77	0.35	5.13	5.75	0.63	.248	0.38	2.00	F04	M5xP.8	1.65	7	10
11/2	1.25	6.50	7.50	3.84	4.84	2.19	0.59	5.50	6.93	0.91	.315	0.44	2.88	F05	M6xP1	1.97	18	24
2	1.50	7.00	8.50	3.93	5.43	2.60	0.70	5.63	10.88	1.07	.374	0.63	3.62	F07	M8xP1.25	2.76	19	25
3	2.50	8.00	11.12	4.04	7.16	3.64	1.00	8.50	12.40	1.74	.669	0.88	5.00	F10	M10xP1.5	4.02	40	54
4	3.00	9.00	12.00	4.93	7.93	4.02	1.00	8.88	12.40	1.74	.669	0.88	6.19	F10	M10xP1.5	4.02	58	81

# Two-Piece Body / B16.34 / ANSI Class 150 & 300

# Reduced Port 6 & 8 inch

End-to-end dimensions: ASME / ANSI B16.10 Short Pattern

Xomox Figure Numbers: Class 150 - **521R** Class 300 - **523R** 

The exclusive, patented S2 stem design is:

- Blow-out proof
- Fire-tested

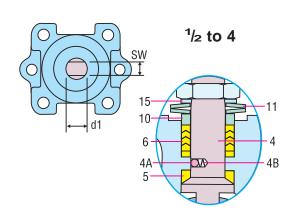
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 Highly resistant to side-loading leakage.

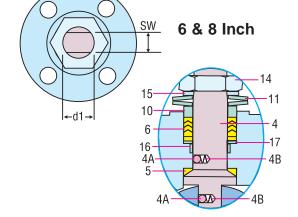
# Full Port 1/2 to 8 inch

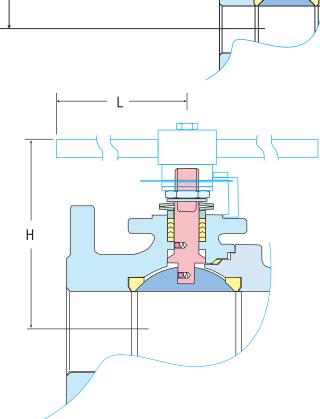
End-to-end dimensions: ASME / ANSI B16.10 Long Pattern

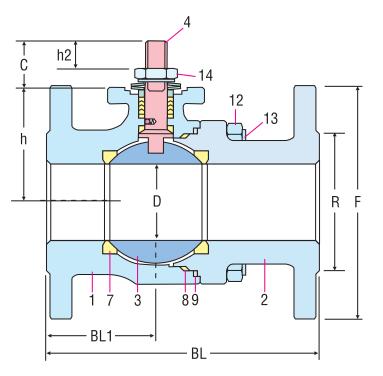
Xomox Figure Numbers: Class 150 - **521F** Class 300 - **523F** 











## **Reduced Port**

Size	D Flow Dia.	Dim			BL.1 Cl. 300	h	h2	Н	L	С	SW	d1	Raised Face Dia. (R)	ISO Flange	ISO Bolt Size Metric	ISO Bolt Circle	(pou	ight Inds) Cl. 300
6	4.00 6.00	10.50 11.50	15.88 16.50	4.88 5.51	7.28 7.28	5.91 7.87	1.41 1.94	-	18.70 23.62		1.063 1.417	1.42 1.89	8.50 10.62	F12	M12x1.75 M16x2.0	4.92 5.51	114 200	181 313

### **Full Port**

Size	D Flow Dia.	Face-to Dim Cl. 150		Dim. Cl. 150	BL1 Cl. 300	h	h2	Н	L		SW C	I. <b>80</b> 0	Raised Face Dia. (R)	ISO Flange	ISO Bolt Size Metric	ISO Bolt Circle		ight Inds)
1/2	.50	4.25	5.50	1.82	2.30	1.54	0.43	4.88	5.75	0.74	.248	0.38	1.38	F04	M5xP.8	1.65	5	6
3/4	.75	4.62	6.00	1.92	2.41	1.77	0.35	5.13	5.75	0.63	.248	0.38	1.69	F04	M5xP.8	1.65	5	9
1	1.00	5.00	6.50	1.91	2.69	2.03	0.61	5.50	6.93	0.93	.315	0.44	2.00	F05	M6xP1.0	1.97	8	13
11/2	1.50	6.50	7.50	2.20	3.27	2.58	0.70	5.63	10.88	1.09	.374	0.63	2.88	F07	M8xP1.25	2.76	14	22
2	2.00	7.00	8.50	2.76	3.03	2.95	0.70	6.00	10.88	1.07	.374	0.63	3.62	F07	M8xP1.25	2.76	21	30
3	3.00	8.00	11.12	3.83	4.98	4.02	1.00	8.88	12.40	1.74	.669	0.88	5.00	F10	M10xP1.5	4.02	47	69
4	4.00	9.00	12.00	3.62	5.12	4.82	1.44	9.63	20.31	2.44	.669	1.13	6.19	F10	M10xP1.5	4.02	76	88
Size	D Flow Dia.		to-Face n. BL Cl. 300	Dim Cl. 150	i. BL1 Cl. 300	h	h2	Н	L	С	SW	d1	Raised Face Dia.(R)	ISO Flange	ISO Bolt Size Metric	ISO Bolt Circle	Wei (pou Cl. 150	
6	6.00	15.50	15.88	7.28	8.46	7.87	1.94	13.60	23.62	3.78	1.417	1.89	8.50	F14	M16x2.0	5.51	193	267
8	8.00	18.00	19.75	7.28	9.37	10.04	2.00	-	-	4.13	1.811	2.36	10.62	F16	M20x2.5	6.50	371	517

# Flange Data

			e Dia. ⁻)		Flange Holes		Flange Holes	Dia. of Flange Bolt Circle		
	Size	CI. 150	CI. 300	CI. 150	CI. 300	Cl. 150	CI. 300	CI. 150	CI. 300	
I	1/2	3.50	3.75	4	4	0.62	0.62	2.38	2.62	
	3/4	3.88	4.62	4	4	0.62	0.75	2.75	3.25	
ı	1	4.25	4.88	4	4	0.62	0.75	3.12	3.50	
	11/2	5.00	6.12	4	4	0.62	0.88	3.88	4.50	
١	2	6.00	6.50	4	8	0.75	0.75	4.75	5.00	
ı	3	7.50	8.25	4	8	0.75	0.88	6.00	6.62	
١	4	9.00	10.00	8	8	0.75	0.88	7.50	7.88	
ı	6	11.00	12.50	8	12	0.88	0.88	9.50	10.62	
l	8	13.50	15.00	8	12	0.88	1.00	11.75	13.00	

# Parts For 6 & 8 Inch Valves Only

No.	Part Description	Carbon	Stainless
5	<b>\$2</b> Stem Seal Ring	CMP	CMP
16	Bearing, Stem	25% Glass Filled PTFE	25% Glass Filled PTFE
10	Fire Tested Bearing, Stem	Nickel Plated SST Bearing	Nickel Plated SST Bearing
17	Anti-Extrusion Ring	316SS	316SS

## **Parts & Materials**

No.	Part Description	Carbon	Stainless			
1	Body	ASTM A216. WCB	ASTM A351. CF8M			
2	Tail	ASTM A216. WCB	ASTM A351. CF8M			
3	Ball	316SS	316SS			
4	Stem	316SS	316SS			
4A	Anti-Static Ball	316SS	316SS			
4B	Anti-Static Spring	316SS	316SS			
5	S2 Stem Seal Ring	PTFE	PTFE			
	Packing Set	PTFE	PTFE			
6	Fire Tested Packing Set	Graphite	Graphite			
7	Soft Seat Seal Ring	СМР	СМР			
8	Body Gasket - Inner Seal	PTFE	PTFE			
9	Body Gasket - Outer Seal	GRAPHITE	GRAPHITE			
10	Gland	316SS	316SS			
11	Spring Washer	SST	SST			
12	Nut	ASTM A194. 2HM	ASTM A194. 8M			
13	Stud	ASTM A193. B7M	ASTM A193. B8M			
14	Stem Nut	ASTM A194. 8M	ASTM A194. 8M			
15	Locking Washer	304SS	304SS			

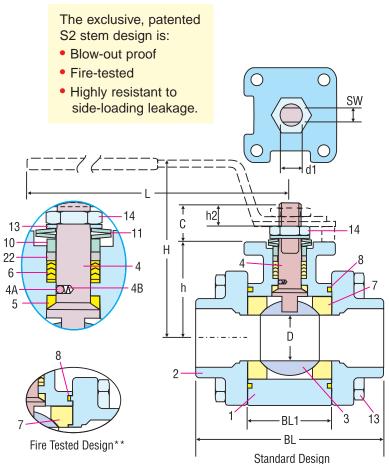
# Three-Piece Body / ANSI B16.34 / Class 150, 300 & 600

# Reduced Port <sup>3</sup>/<sub>4</sub> to 2 inch

Xomox Figure Numbers: Class 600 - **536R** 

# Full Port 1/2 to 2 inch

Xomox Figure Numbers: Class 600: ½"- 1½" - **536F** Class 300: 2" - **533F** 



# Reduced Port

Size	D Flow Dia.	С	h2	L	SW	d1	Н	h	Face To Face BL	BL1	ISO 5211	ISO Bolt Size	Wt. Ibs.
3/4	.59	.67	.35	5.31	.25	.38	3.31	1.52	2.82	.99	F04	M5xP.8	1.90
1	.79	.67	.35	5.31	.25	.38	3.46	1.65	3.80	1.27	F04	M5xP.8	3.26
11/2	1.26	.79	.47	6.50	.31	.44	3.98	2.19	4.61	1.94	F05	M6xP1.0	6.08
2	1.57	.92	.55	7.87	.37	.63	4.61	2.58	5.08	2.25	F07	M8xP1.25	8.82

#### **Full Port**

Size	D Flow Dia.	С	h2	L	SW	d1	Н	h	Face To Face BL	BL1	ISO 5211	ISO Bolt Size	Wt. Ibs.
1/2	.59	.67	.35	5.31	.25	.38	3.31	1.52	2.82	.99	F04	M5	2.20
3/4	.79	.67	.35	5.31	.25	.38	3.46	1.65	3.80	1.27	F04	M5	3.31
1	.98	.79	.47	6.50	.31	.44	3.86	2.03	4.29	1.67	F05	M6	4.45
11/2	1.50	.92	.55	7.87	.37	.63	4.61	2.58	5.08	2.25	F07	M8	9.08
2	2.00	.92	.51	7.87	.37	.63	4.61	2.93	5.59	2.81	F07	M8	14.93



The three piece body is designed for easy in-line maintenance.\*

#### **Parts & Materials**

No.	Part	Carbon	Stainless
	Description	Jul 2011	014
1	Body	ASTM A216 WCB	ASTM A351 CF8M
2	End Caps	ASTM A216 WCB	ASTM A351 CF8M
3	Ball	316SS	316SS
4	Stem	316SS	316SS
4A	Anti-Static Ball	316SS	316SS
4B	Anti-Static Spring	316SS	316SS
5	S2 Stem Seal Ring	PTFE	PTFE
6	Packing Set	PTFE <b>Graphite**</b>	PTFE <b>Graphite**</b>
7	Soft Seat Seal Ring	CMP	СМР
8	Body Gasket	PTFE <b>Graphite**</b>	PTFE <b>Graphite**</b>
10	Gland	316SS	316SS
11	Spring Washer	SST	SST
13	Bolt (Body Joint)	ASTM A193 B7M	ASTM A193 B8M
14	Stem Nut	ASTM A194 Gr8	ASTM A194 Gr8
15	Locking Washer	304SS	304SS
22	Thrust Washer	50% TFE 50% SST	50% TFE 50% SST

\*\* Fire tested valves

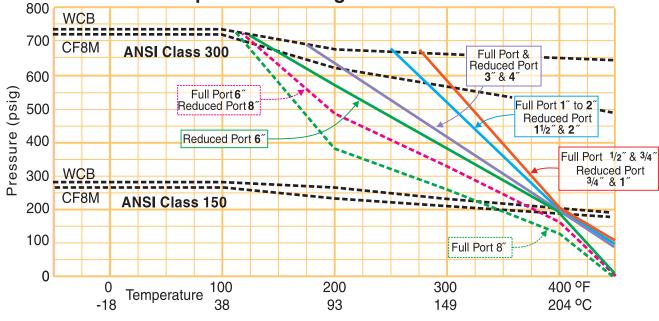
<sup>\*</sup> Non FT valves only.

### Actuator Sizing Torques Torques in IN-LBS

Valve Size		Maximum Differential Pressure, psi Seat Material: CMP									
Reduced Port	Full Port	0-100	200	285	400	500	600	740	1000	1200	1480
3/4	1/2	45	45	45	45	45	47	50	53	56	60
1	3/4	60	60	60	60	66	73	80	83	86	90
	1	90	90	90	90	96	103	110	116	123	130
11/2		130	130	130	130	142	155	170	185	200	220
2	11/2	225	225	225	225	240	265	290	325	360	400
	2	380	380	380	400	425	450	480	-	-	-
3		500	500	500	550	610	675	750	-	-	-
4	3	750	750	750	890	1,050	1,250	1,480	-	-	-
	4	1,980	1,980	1,980	2,175	2,400	2,650	2,950	-	-	-
6		2,175	2,175	2,175	2,450	2,775	3,150	3,600	-	-	-
8	6	4,475	4,475	4,475	5,100	5,800	6,600	7,550	-	-	-
	8	9,550	9,550	9,550	10,450	11,400	12,450	13,625	-	-	-

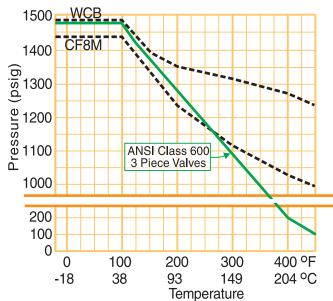
Note: Torques are for clean and clear fluids.

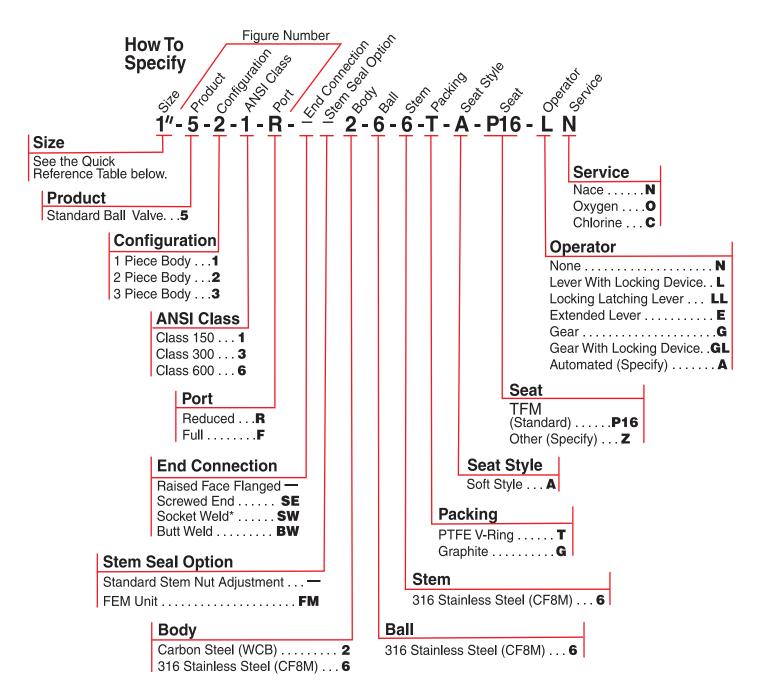
# **Pressure/Temperature Ratings - CMP Seat**



## **Cv Factors**

Valve Size	Classes 150 & 300 Full Port	Classes 150 & 300 Reduced Port	Class 600 <b>Full</b> <b>Port</b>	Class 600 <b>Reduced</b> <b>Port</b>
1/2	30	-	25	-
3/4	51	16	50	19
1	95	35	80	42
11/4	-	-	150	60
11/2	255	105	240	125
2	440	120	460	165
3	1,240	380	-	-
4	2,150	650	-	-
6	5,500	1,650	-	-
8	9,950	1,950	-	-





\*Schedule 40 only.

Consult factory for alternate materials.

Body	Port	ANSI								Enclosed		Tufline
Configuration		Pressure Class	1/2	3/4	1	11/2	2	3	4	6	8	Figure Number
1-Piece	Reduced	150		•	•	•	•	•	•			511R
Flanged		300		•	•	•	•	•	•			513R
	Full	150	•	•	•	•	•	•	•	•	•	521F
2-Piece		300	•	•	•	•	•	•	•	•	•	523F
Flanged	Reduced	150								•	•	521R
		300								•	•	523R
3-Piece	- "	300					•					533F
Screwed End Socket Weld End	Full	600	•	•	•	•						536F
Butt Weld End	Reduced	600	•	•	•	•						536R



# Xomox & Matryx<sup>®</sup> Actuators.

Tufline Valves are available as part of a complete valve package.

Actuators are available in three models:

- Double acting vane
- Rack & pinion spring return
- Electric

Tufline automated valve packages assure you of single-source responsibility for flow control equipment.

With Tufline valves, Matryx and Xomox actuators, Xomox control accessories, and Tufline problem solving expertise, you are assured of valve packages that will provide optimum performance in your application.

Comprehensive side-by-side testing confirms that the Matryx and Xomox rack and pinion actuators provide longer service life with more consistent torque.

Solid performance data means processors can size actuators with more of a confidence factor and less of a "fudge-factor". Initial cost, repair costs, replacement costs, and costly downtime can all be reduced.

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Xomox XRP™ Actuators

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able service condition.

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