

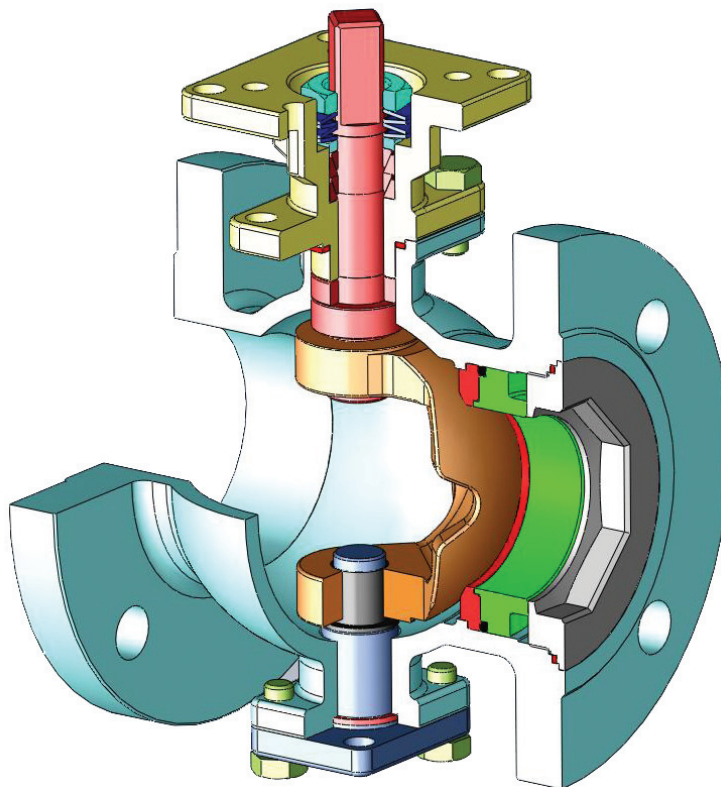
DM9900 Series

Segmented V-Port Control Valve

Direct mount, Live Loaded Packing • Interchangeable Metal and Soft seats

DESIGN FEATURES

- Size Range 1-1/2" - 30"
- ISO 5211 Direct Mount Design
- ANSI Class 150, 300, 600, 900
- Flanged and flangeless versions available
- Live Loaded Packing
- Protected Bearings, Top & Bottom
- Easy Installation and Versatility
- Standard ISA 75.04 face-to-face;
Option: ANSI B16.10 short pattern
- Extremely low actuator torque
- Reduced trim option
- WCB, 316SS, 317SS, and other alloy materials
- Soft seated and metal seated
- Patents Pending



ORDERING SCHEMATIC

Series	Body	Trim	Port	Packing	Seat	End Connections																																																						
DM 99	<table><tr><td>2</td><td>WCB</td></tr><tr><td>3</td><td>316SS</td></tr><tr><td>4</td><td>Alloy 20</td></tr><tr><td>6</td><td>317SS</td></tr><tr><td>7</td><td>Hastelloy C</td></tr><tr><td>9</td><td>Duplex</td></tr></table>	2	WCB	3	316SS	4	Alloy 20	6	317SS	7	Hastelloy C	9	Duplex	<table><tr><td>3</td><td>316SS</td></tr><tr><td>4</td><td>Alloy 20</td></tr><tr><td>6</td><td>317SS</td></tr><tr><td>7</td><td>Hastelloy C</td></tr><tr><td>9</td><td>Duplex</td></tr></table>	3	316SS	4	Alloy 20	6	317SS	7	Hastelloy C	9	Duplex	<table><tr><td>F</td><td>Full Port</td></tr><tr><td>R</td><td>Red. Port</td></tr></table>	F	Full Port	R	Red. Port	<table><tr><td>G</td><td>Graphoil</td></tr><tr><td>TM</td><td>TFM 1600</td></tr><tr><td>TC</td><td>TFM 4215</td></tr></table>	G	Graphoil	TM	TFM 1600	TC	TFM 4215	<table><tr><td>M</td><td>Metal</td></tr><tr><td>TM</td><td>TFM 1600</td></tr><tr><td>TC</td><td>TFM 4215</td></tr></table>	M	Metal	TM	TFM 1600	TC	TFM 4215	<table><tr><td>F1</td><td>ANSI 150</td></tr><tr><td></td><td>(ISA 75.04 f to f)*</td></tr><tr><td>F3</td><td>ANSI 300</td></tr><tr><td></td><td>(ISA 75.04 f to f)*</td></tr><tr><td>F6</td><td>ANSI 600</td></tr><tr><td></td><td>(ISA 75.04 f to f)*</td></tr><tr><td>F9</td><td>ANSI 900</td></tr><tr><td></td><td>(ANSI B16.10)</td></tr></table>	F1	ANSI 150		(ISA 75.04 f to f)*	F3	ANSI 300		(ISA 75.04 f to f)*	F6	ANSI 600		(ISA 75.04 f to f)*	F9	ANSI 900		(ANSI B16.10)
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The Right Valve • The Right Application • Right now!



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DESCRIPTION

The segmented V-port ball control valve provides excellent modulating control with obstruction free design.

The uni-body construction provides increased structural integrity and minimized leaks through body joints.

The specially designed compound V opening provides precise equal percentage flow control with small incremental opening in the lower end of the valve rotation and high flow capacity in the upper end. The nearly wide open at full open, along with recessed bearings, virtually eliminates plugging/clogging of the valve.



OPERATION

The valve can be direct mounted (no mounting bracket or coupling) to:

- J-Flow's JFD spring & diaphragm actuators,
- J-Flow's JFC rack & pinion actuators, or
- J-Flow's JFE electric actuators

They can be controlled with a variety of J-Flow positioners:

- Pneumatic
- Electro-pneumatic
- Digital smart

There are two actuator mounting options.

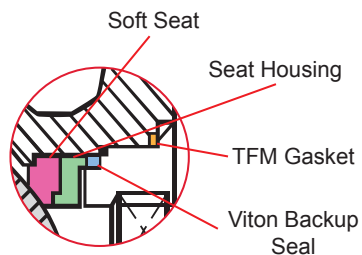
- The standard connection is direct mount compatible with any ISO 5211 standard actuator. Optional splined connection for the installation of diaphragm actuators with DSY-DSZ conversions.

DESIGN AND CONSTRUCTION

The valve's design allows control of the most fluids used in many industries. The valve is suitable for fibers, particles in suspension, dirty, clean, viscous, and corrosive fluids, gas, steam, and especially pulp and paper applications.

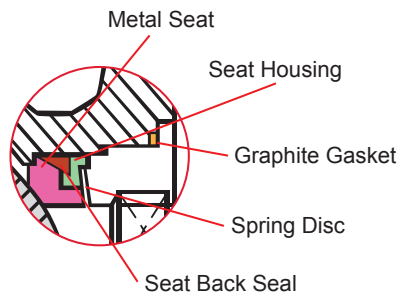
The valve can be supplied with a variety of actuators, positioners, limit switches/transmitters, or other topworks accessories.





STANDARD SEATS

TFM, Suitable to temperatures of 500 °F for general services where ANSI Class VI shut off is required to comply with ANSI/FCI 70-2 (see graph below).



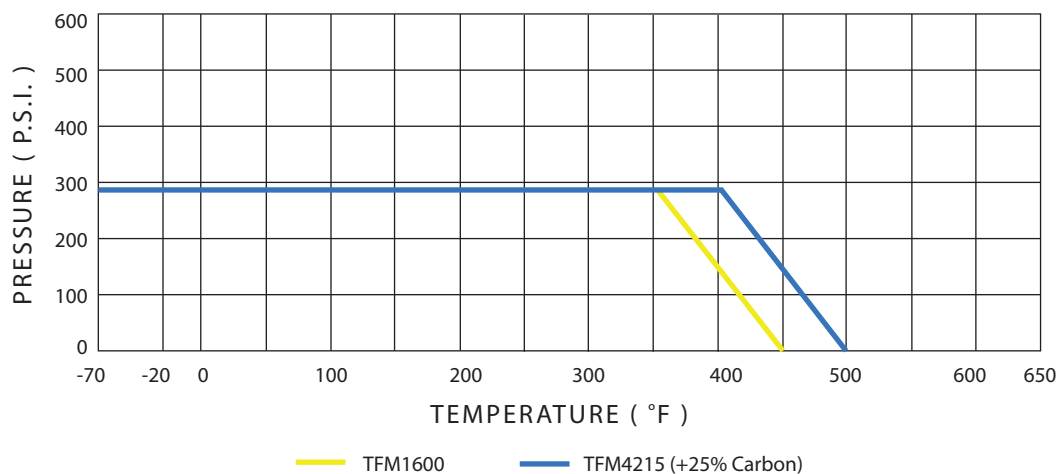
METAL-TO-METAL CONTACT SEATS

Suitable for erosive services, fibers, chemical fluids with suspended solids, and high temperature applications.

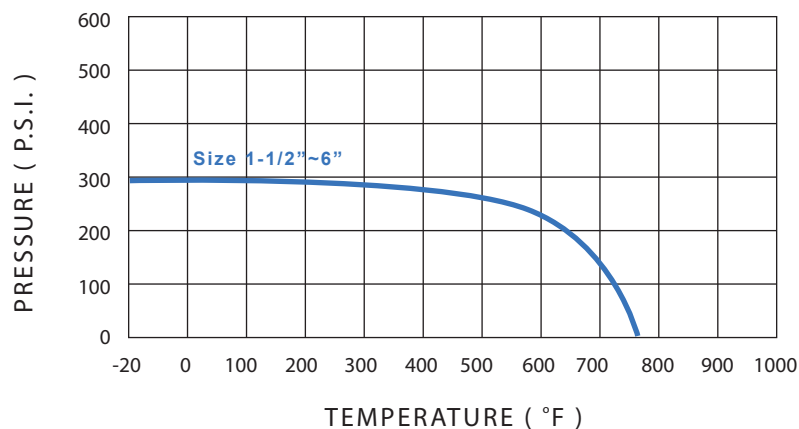
Metal seat with hardened stellite contact surface and 316 stainless steel segmented ball with tungsten carbide coating ANSI class IV shut off.

PRESSURE TEMPERATURE CHARTS

ANSI 150 Soft Seat



ANSI 150 Metal Seat

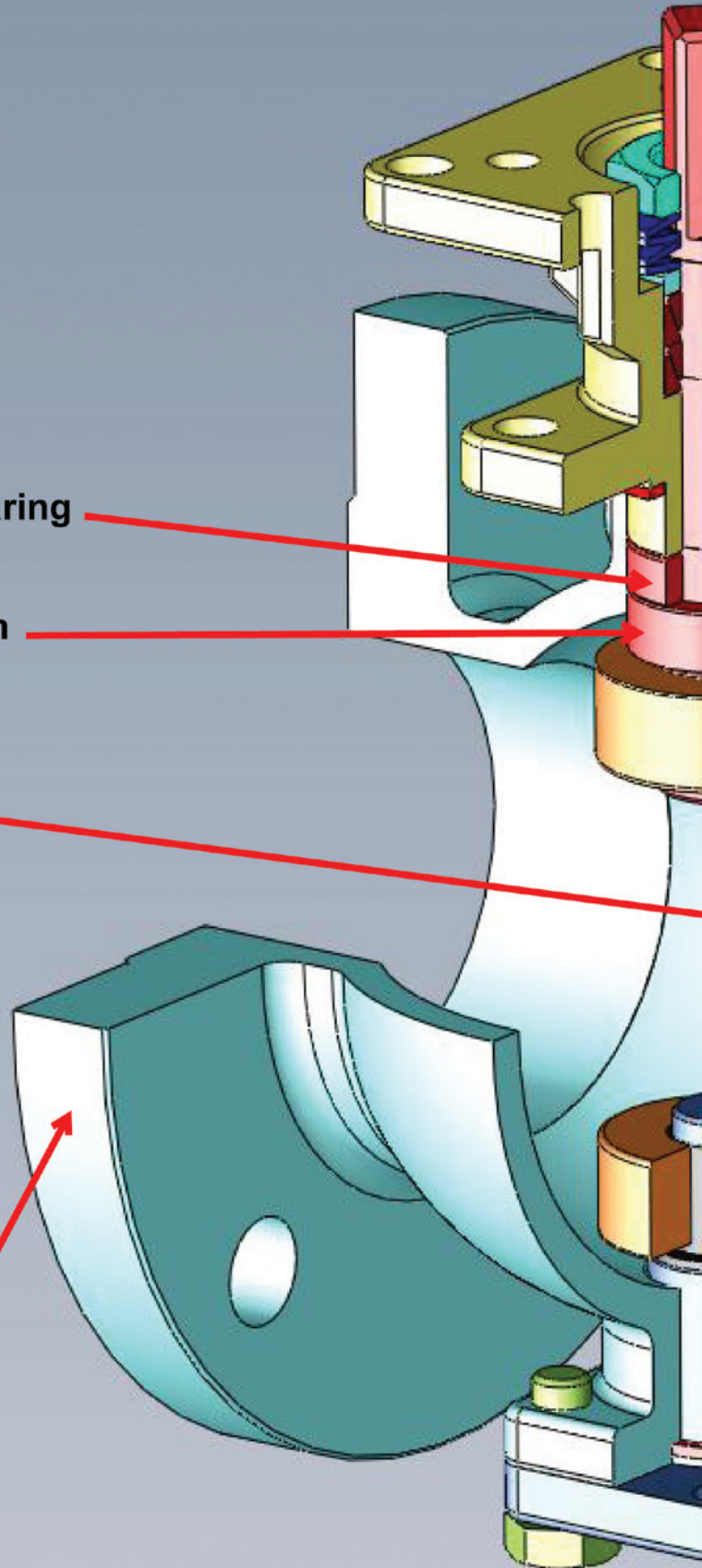


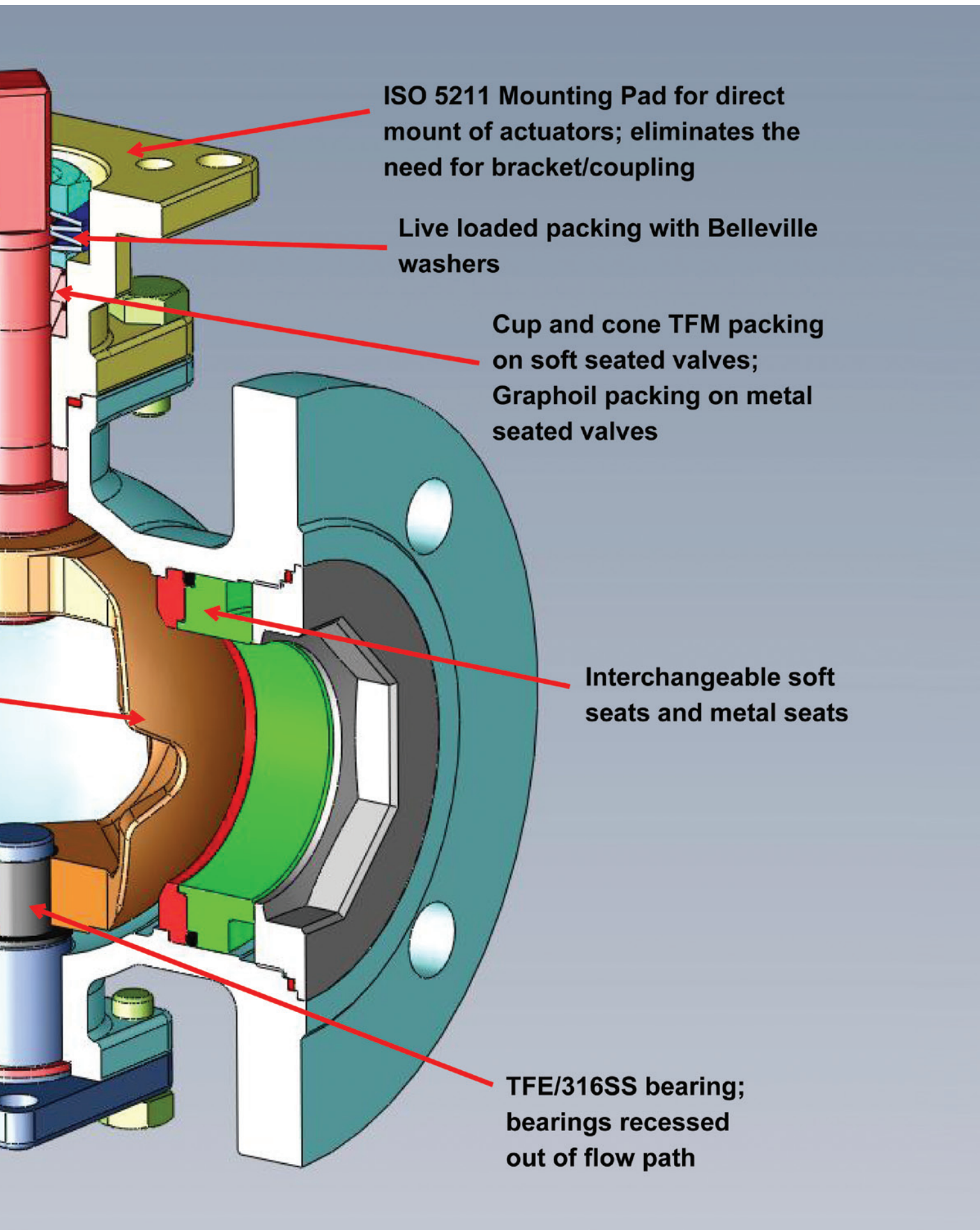
Graphite Bearing

Blow out proof stem

**Compound V in ball for
fine control on low end
and large capacity on high end**

**Uni-body construction
for reduced leak paths**





ISO 5211 Mounting Pad for direct mount of actuators; eliminates the need for bracket/coupling

Live loaded packing with Belleville washers

**Cup and cone TFM packing on soft seated valves;
Graphoil packing on metal seated valves**

Interchangeable soft seats and metal seats

**TFE/316SS bearing;
bearings recessed out of flow path**

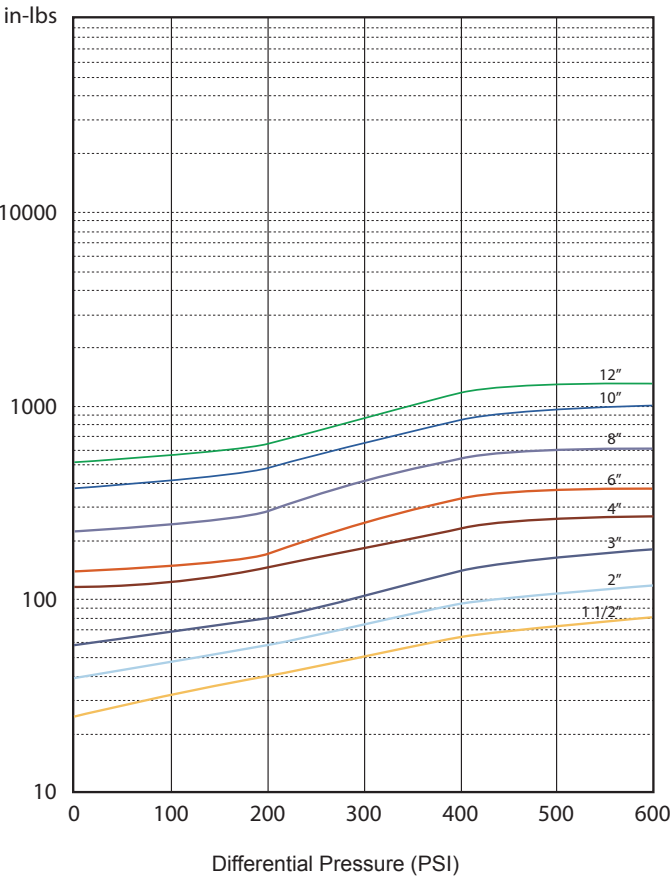
DM9900F Series - Size and Class (1 1/2" - 12")

Nominal Diameter		DM9900 Series Flanged	9900 Series Wafer		Cv
inches	mm	Class 150	Class150	Class 300	Max
1 1/2"	40				80
2"	50				102
3"	80				340
4"	100				650
6"	150				845
8"	200				1690
10"	250				2690
12"	300				4440

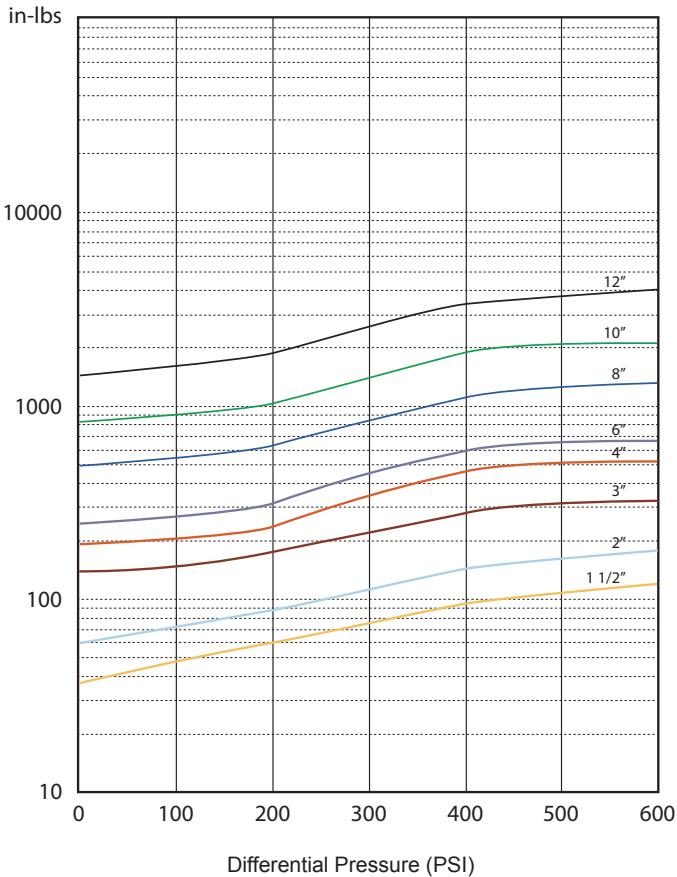
The segmented V-port ball valve can be used in modulating control services or “on-off” services

ACTUATOR SIZING TORQUE

DM9900 Soft Seats

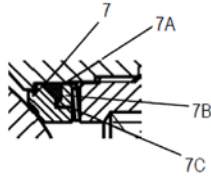
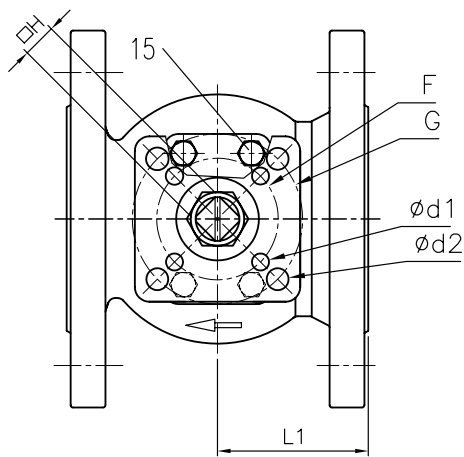


DM9900 Metal Seats

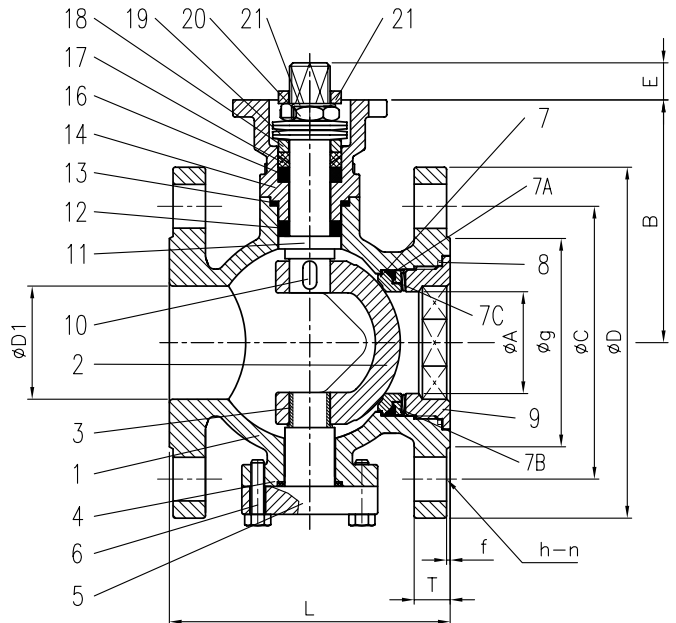


Torque is based on clean, clear liquid

DM9900F SERIES - 1 1/2" - 6" ANSI 150 FLANGED



Metal Seat Detail



Soft Seat

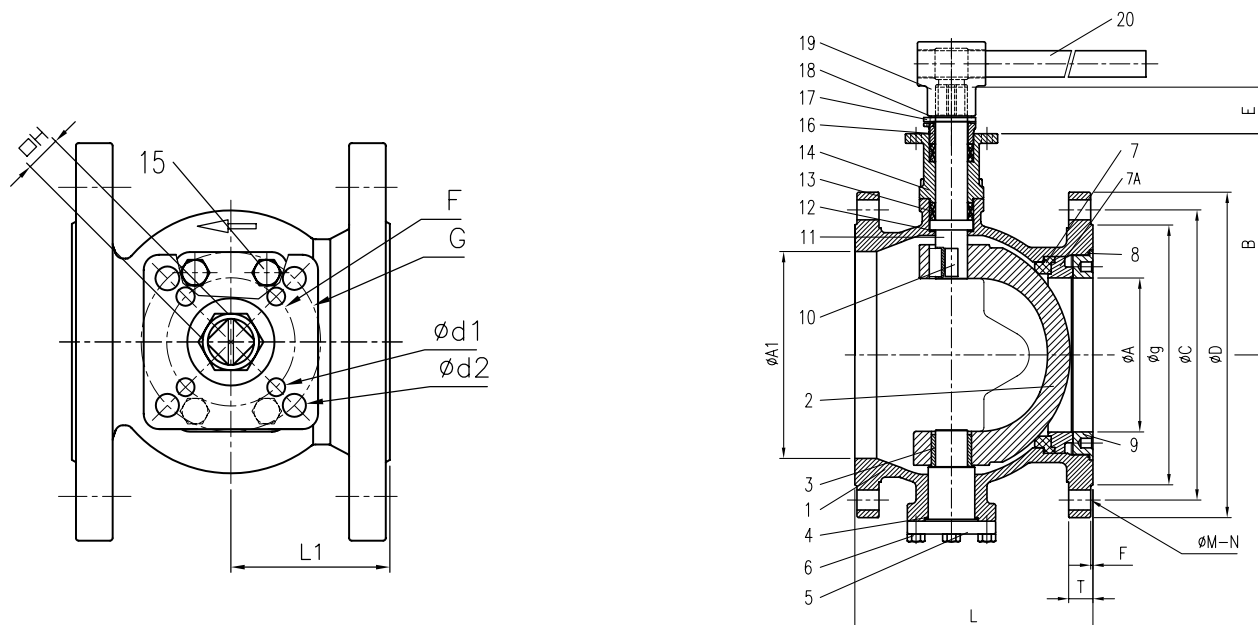
NO.	NAME OF PARTS	MATERIALS
1	BODY	A351 Gr. CF8M
2	BALL SEGMENT	CF8M(HARDENED-N)
3	BEARING	17-4PH
4	GASKET	GRAPHITE
5	TRUNNION CAP	A351 Gr. CF8M
6	TRUNNION CAP BOLTS	SS 304
7	SEAT	SS316+STELLITED
7A	SEAT BACK SEAL	GRAPHITE
7B	SEAT HOUSING	SS 316
7C	SPRING DISK	SS 301
8	INSERT GASKET	GRAPHITE
9	INSERT CAP	A351 Gr. CF8M
10	KEY	SS 316
11	STEM	SS 316
12	BEARING	GRAPHITE
13	BONNET GASKET	GRAPHITE
14	BONNET	A351 Gr. CF8M
15	BONNET BOLTS	SS 304
16	BEARING	GRAPHITE
17	STEM PACKING	GRAPHITE
18	GLAND	SS 304
19	BELLEVILLE WASHER	SS 301
20	STEM NUT	SS 304
21	NUT STOP	SS 304
22	SPACE WASHER	SS 304

NO.	NAME OF PARTS	MATERIALS
1	BODY	A351 Gr. CF8M
2	BALL SEGMENT	A351 Gr. CF8M
3	BEARING	PTFE+50%SS
4	GASKET	TFM1600
5	TRUNNION CAP	A351 Gr. CF8M
6	TRUNNION CAP BOLTS	SS 304
7	SEAT	TFM1600
7A	SEAT HOUSING	SS 316
7B	BACK-UP SEAL	VITON(O-RING)
8	INSERT GASKET	TFM1600
9	INSERT CAP	A351 Gr. CF8M
10	KEY	SS 316
11	STEM	SS 316
12	BEARING	TFM4215
13	BONNET GASKET	TFM1600
14	BONNET	A351 Gr. CF8M
15	BONNET BOLTS	SS 304
16	BEARING	TFM4215
17	STEM PACKING	TFM1600
18	GLAND	SS 304
19	BELLEVILLE WASHER	SS 301
20	STEM NUT	SS 304
21	NUT STOP	SS 304
22	SPACE WASHER	SS 304

UNIT: MM/INCH

SIZE		A	B	E	L		L1	H	D1	F	G	d1	d2	FLANGE DIMENSIONS (CLASS 150)						
					ISA	CLASS 150								D	BOLT HOLE			t	g	f
															C	h	n			
1½"	MM	35	107	14	114	165.1	57	14	38	50	70	7	9.2	127	98.5	15.9	4	14.2	73.2	1.5
	INCH	1.378	4.213	0.55	4.50	6.50	2.244	0.551	1.496	1.969	2.756	0.276	0.362	5.0	3.88	0.625	4	0.56	2.88	0.06
2"	MM	45	107	14	124	178	62	14	50	50	70	7	9.2	152	120.5	19.1	4	15.7	91.9	1.5
	INCH	1.772	4.213	0.55	4.88	7.00	2.441	0.551	1.969	1.969	2.756	0.276	0.362	6.0	4.75	0.750	4	0.62	3.62	0.06
3"	MM	66	140.2	24	165.1	203	87	17	82.5	70	102	9.2	11.4	190	152.5	19.1	4	19.1	127	1.5
	INCH	2.598	5.520	0.94	6.50	8.00	0.425	0.669	3.248	2.756	4.016	0.362	0.449	7.5	6.0	0.750	4	0.75	5.00	0.06
4"	MM	80.2	154.6	24	193.5	228.6	102.8	17	97.5	70	102	9.2	11.4	229	190.5	19.1	8	23.9	157.2	1.5
	INCH	3.157	6.087	0.94	7.62	9.00	4.047	0.669	3.839	2.756	4.016	0.362	0.449	9.0	7.5	0.750	8	0.94	6.19	0.06
6"	MM	114	192	26	228.6	266.7	124	22	153	102	125	11.4	13.5	279	241.5	22.2	8	25.4	215.9	1.5
	INCH	4.488	7.559	1.02	9.00	10.50	4.881	0.866	6.024	4.016	4.921	0.449	0.531	11.0	9.5	0.875	8	1.00	8.50	0.06

DM9900F SERIES - 8" - 12" ANSI 150 FLANGED (SOFT SEAT)



NO.	NAME OF PARTS	MATERIALS OPTION	
1	BODY	A351 Gr. CF8M	A216 Gr. WCB
2	BALL SEGMENT	A351 Gr. CF8M	_____
3	BEARING	PTFE+50%SS	_____
4	GASKET	TFM1600	_____
5	TRUNNION CAP	A351 Gr. CF8M	A216 Gr. WCB
6	TRUNNION CAP BOLTS	SS 304	_____
7	SEAT	TFM1600	_____
7A	SEAT HOUSING	SS 316	A216 Gr. WCB
8	INSERT GASKET	TFM1600	_____
9	INSERT CAP	A351 Gr. CF8M	A216 Gr. WCB
10	KEY	SS 316	_____
11	STEM	SS 316	_____
12	THRUST WASHER	TFM1600	_____
13	BEARING	TFM4215	_____
14	BONNET	A351 Gr. CF8M	A216 Gr. WCB
15	BONNET BOLTS	SS 304	_____
16	GLAND	A351 Gr. CF8	_____
17	STOP	SS 304	_____
18	STOP RING	SS 304	_____
19	HANDLE HEAD	FCD45	_____
20	HANDLE TUBE	CARBON STEEL	_____

UNIT: MM/INCH

SIZE		A	A1	B	E	L	L1	H	F	d1	FLANGE DIMENSIONS (CLASS 150)						
											D	BOLT HOLE			t	g	f
												c	h	n			
8"	MM	152	205	240	58	243	140	28	125	M12	343	298.5	22.3	8	29	270	1.5
	INCH	5.98	8.07	9.45	2.28	9.56	5.51	1.102	4.92		13.5	11.75	0.875	8	1.14	10.63	0.06
10"	MM	192	259	276	58	297	176	28	125	M12	406	362	25.4	12	30.5	324	1.5
	INCH	7.56	10.20	10.87	2.28	11.69	6.93	1.102	4.92		16.0	14.25	1.000	12	1.20	12.75	0.06
12"	MM	225	300	302	64	338	207	36	140	M16	483	432	25.4	12	32	381	1.5
	INCH	8.86	11.81	11.89	2.52	13.31	8.15	1.417	5.51		19.0	17.00	1.000	12	1.26	15.00	0.06

DM9900F FLANGED 0812



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Authorized Distributor

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