STANDARDS

- B16.34
- BS6755
- JB/T 6899
- NACE Certified MR-0175
- Locking Device

J Flow Controls 9600 Series

Floating Ball Valve

FEATURES & BENEFITS

- Bigger sealing pressure ration between the ring surface and the ball when medium pressure gets lower, where the contacting area is smaller.
- When the medium pressure gets higher, the contacting area between sing ring and ball become bigger as the sealing ring transforms elastically to undertake the bigger force pushed by the medium without any damage
- J-Flow's specially designed structure of auxiliary metal to metal seal is provided to effectively prevent both internal and external leakage of the valve
- MTR Reports available

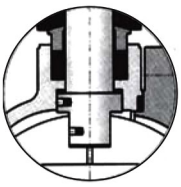
APPLICATIONS & INDUSTRIES

- Oil and gas production
- Diesel fuel
- Natural gas applications
- Steam service
- Chemical application

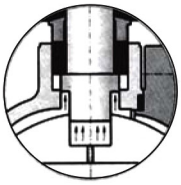
FEATURES

Reliable Stem Seal

The blow-out proof design has been adopted for the stem to ensure that even if the pressure in the body cavity is risen accidentally and the packing flange becomes invalid, the stem may not be blown out by medium. The stem features the design with a backseat, being assembled from underneath. The sealing force against the backseat gets higher as the medium pressure becomes higher. So the reliable seal of the stem can be assured under variable medium pressure.



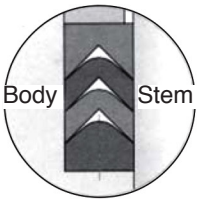
Stem assembled from underneath may not be blown out by medium



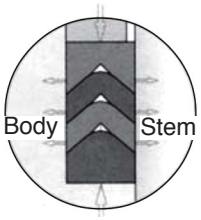
Stem assembled downward may be blown out

Packing

V-type packing structure has been employed to effectively transform the pushing force of the gland flange and the medium pressure into the sealing force against the stem.



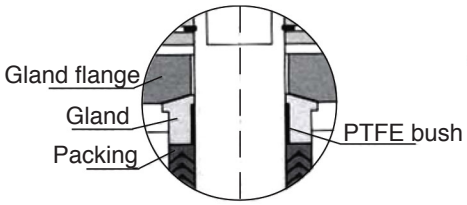
Packing before pressed



Packing after pressed

Packing Flange & Gland

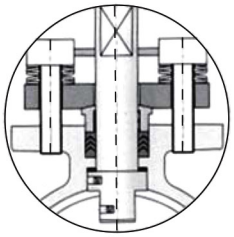
The traditional packing flange design has been improved to be of two piece structure, i.e. being as a gland flange end gland, the latter contacts the gland flange with spherical surface. Thus, the gland remains vertical always, and is lined internally with a PTFE bush to prevent the galling against and friction between the stem, which can also reduce the operation torque of the valve.



Stem galling prevented in application

Bevelled Washer

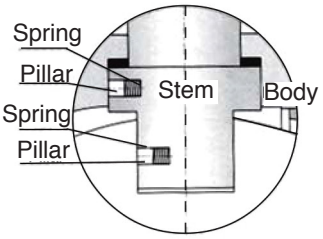
Based on customer's requirement, a packing tightening design may be employed to obtain more reliable stem packing seal, which is loaded by bevelling spring.



FEATURES

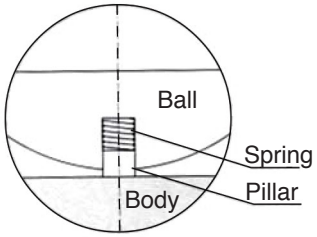
Anti-Static Feature

The traditional packing flange design has been improved to be of two piece structure, i.e. being as a packing flange plate and a follower, the latter contacts the flange plate and a follower, the latter contacts the flange plate with spherical surface. Thus the follower remains vertical always, and is lined internally with a PTFE bush to prevent the galling against and friction between the stem, which can also reduce the operation torque of the valve.



Anti-static design for ball valves

≥ 1-1/4"

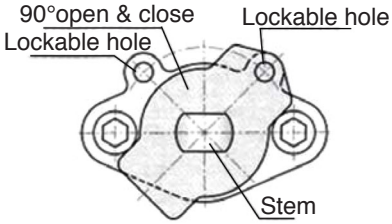


Anti-static design for ball valves

≤ 1"

Anti-Static Feature

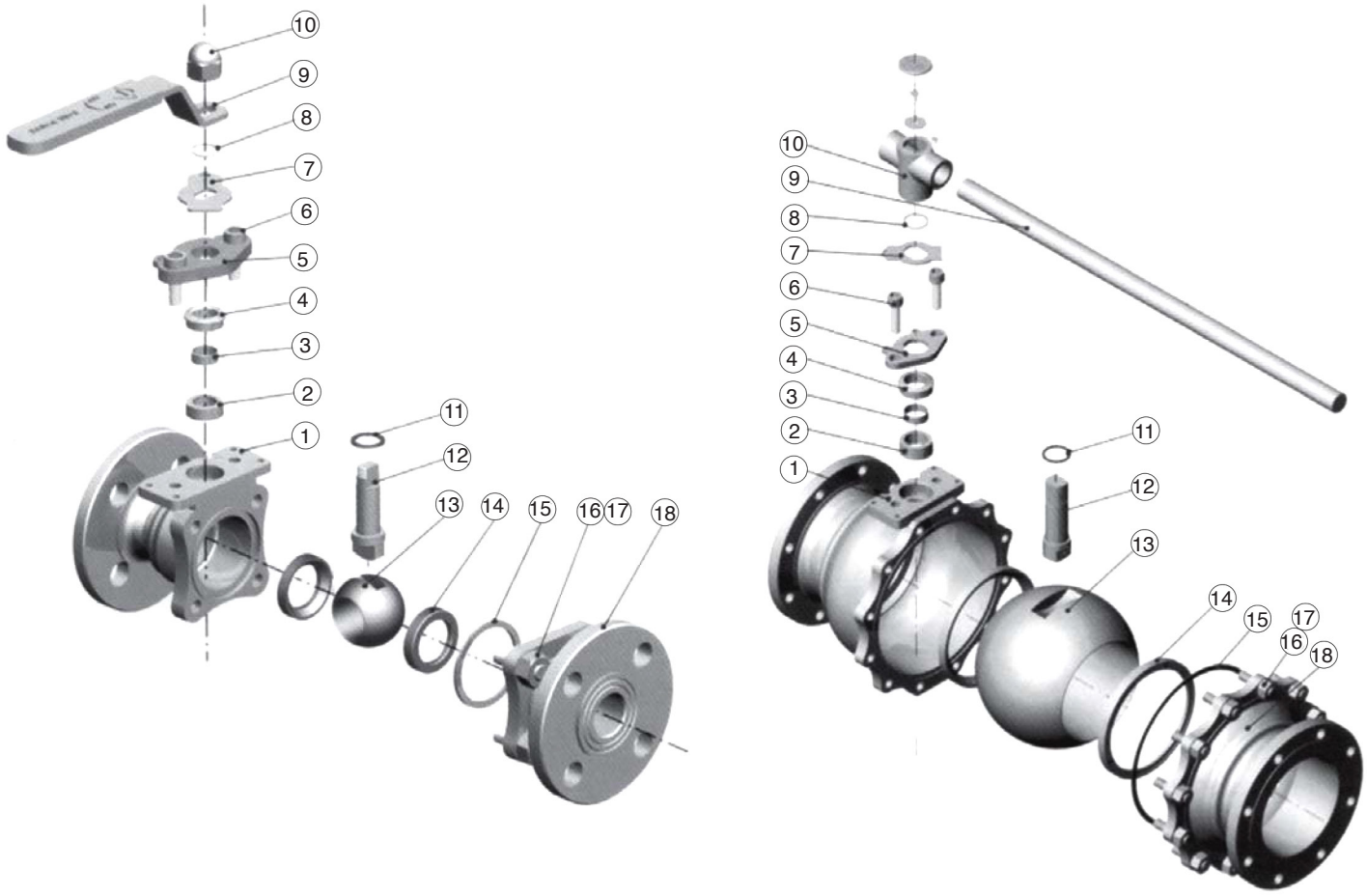
To prevent the ball valve from wrong operation, the key lock with 90° of open and close positioning pad has been provided, which can be lockable as required. At the stem head, where the lever fixes, a flat is so designed that the valve opens with the lever in parallel to piping, and with the lever right-angled to the piping, the valve is closed. So, it is ensured that the valve indicator of open and close can never be mistaken.



Anti-Static Feature

J Flow has provided for flating ball valve with a mounting pad, through which it is easy to fix the actuators, such as worm gear, pneumatic and electric actuators

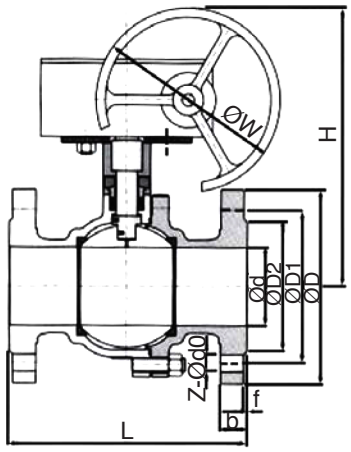
PARTS IDENTIFICATION



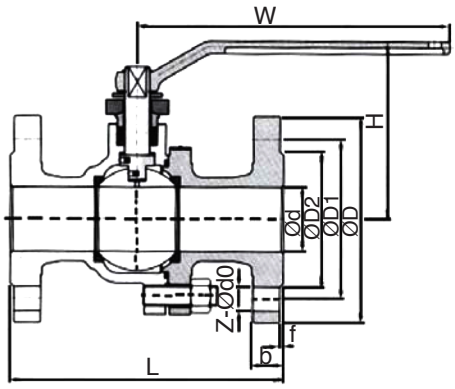
No	Parts Name	Materials				
		WCB/13Cr	WCB/304	WCB/316	CF8	CF8M
1	Body	ASTM A216 WCB	ASTM A216 WCB	ASTM A216 WCB	ASTM A351 CF8	ASTM A351 CF8M
2	Packing	PTFE	PTFE	PTFE	PTFE	PTFE
3	Stem Bearing	PTFE	PTFE	PTFE	PTFE	PTFE
4	Gland	ASTM A182 F6a	ASTM A182 F304	ASTM A182 F316	ASTM A182 F304	ASTM A182 F316
5	Gland Flange	ASTM A246 WCB	ASTM A216 WCB	ASTM A216 WCB	ASTM A351 CF8	ASTM A351 CF8M
6	Gland Bolt	ASTM A193 B7	ASTM A193 B7	ASTM A193 B7	ASTM A193 B8	ASTM A193 B8M
7	Stop Collar	Carbon Steel	Carbon Steel	Carbon Steel	Stainless Steel	Stainless Steel
8	Circlip	Carbon Steel	Carbon Steel	Carbon Steel	Stainless Steel	Stainless Steel
9	Lever	Carbon Steel	Carbon Steel	Carbon Steel	Stainless Steel	Stainless Steel
10	Nut or Wrench Head	Carbon Steel	Carbon Steel	Carbon Steel	Stainless Steel	Stainless Steel
11	Thrust Washer	PTFE	PTFE	PTFE	PTFE	PTFE
12	Stem	ASTM A182 F6a	ASTM A182 F304		ASTM A182 F304	ASTM A182 F316
13	Ball	ASTM A182 F6a	ASTM A182 F304		ASTM A182 F304	ASTM A182 F316
14	Seat	Reinforced PTFE	Reinforced PTFE	Reinforced PTFE	Reinforced PTFE	Reinforced PTFE
15	Gasket	PTFE	PTFE	PTFE	PTFE	PTFE
16	Body Nut	ASTM A194 2H	ASTM A194 2H	ASTM A194 2H	ASTM A194 B8	ASTM A194 B8
17	Body Bolting	ASTM A193 B7	ASTM A193 B7	ASTM A193 B7	ASTM A193 B8	ASTM A193 B8
18	Closure	ASTM A216 WCB	ASTM A216 WCB	ASTM A216 WCB	ASTM A351 CF8	ASTM A351 CF8M

Note: The chart above only lists some common composition of steel ball valve parts. We may provide different parts material composition according to the customer's request or the actual valve working condition. See Model Numbering for available materials.

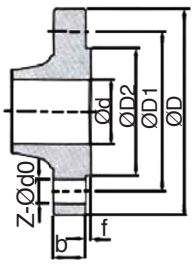
DIMENSIONS



Gear Box



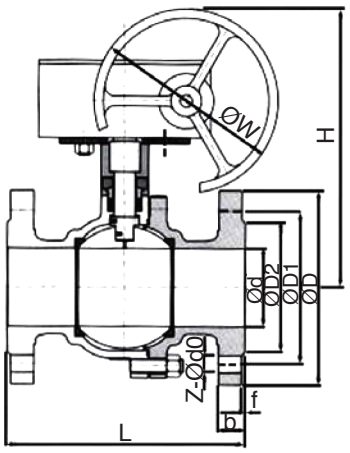
Handwheel



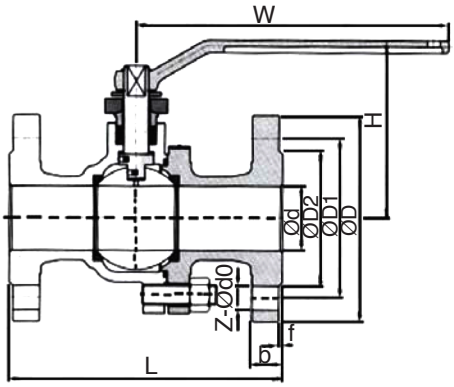
Class 600 ~ Class 1500 flange

Pressure	Size	Dimensions													Weight	
		L		d	D	D1	D2	b	f	Z-Ød0	W		H			
		RF	RTJ								Hand wheel	Gear Box	Hand wheel	Gear Box	Hand wheel	Gear Box
Class 150	1/2"	4.3	4.7	0.6	3.5	2.4	1.4	0.5	0.06	0.2-0.6	5.5	--	3.3	--	6.6	--
	3/4"	4.6	5.1	0.7	3.9	2.8	1.7	0.5	0.06	0.2-0.6	5.5	--	3.5	--	8.8	--
	1"	5.0	5.5	0.9	4.3	3.1	2.0	0.5	0.06	0.2-0.6	5.9	--	3.9	--	11.0	--
	1-1/4"	5.5	6.0	1.3	4.6	3.5	2.5	0.5	0.06	0.2-0.6	7.1	--	4.1	--	15.4	--
	1-1/2"	6.5	7.0	1.5	5.0	3.9	2.9	0.6	0.06	0.2-0.6	7.9	--	5.0	--	17.6	--
	2"	7.0	7.5	2.0	6.0	4.7	3.6	0.6	0.06	0.2-0.7	9.8	--	5.5	--	26.5	--
	2-1/2"	7.5	8.0	2.5	7.0	5.5	4.1	0.7	0.06	0.2-0.7	11.8	--	6.5	--	39.7	--
	3"	8.0	8.5	3.0	7.5	6.0	5.0	0.8	0.06	0.2-0.7	13.8	--	7.0	--	52.9	--
	4"	9.0	9.5	4.0	9.0	7.5	6.2	0.9	0.06	0.3-0.7	19.7	12.0	9.1	15.0	83.8	117
	5"	14.0	14.5	5.0	10.0	8.5	7.3	0.9	0.06	0.3-0.9	31.4	12.0	11.0	15.9	132	174
	6"	15.5	16.0	6.0	11.0	9.5	8.5	1.0	0.06	0.3-0.9	31.4	12.0	12.2	18.1	181	225
	8"	18.0	18.0	8.0	13.5	11.8	10.6	1.1	0.06	0.3-0.7	39.4	12.0	13.8	21.7	320	408
	10"	21.0	21.5	10.0	16.0	14.3	12.8	1.2	0.06	0.5-1.0	--	15.8	--	27.8	--	617
Class 300	1/2"	5.5	6.0	0.6	3.7	2.6	1.4	0.6	0.06	0.2-0.6	5.5	--	3.3	--	6.6	--
	3/4"	6.0	6.5	0.7	4.6	3.2	1.7	0.7	0.06	0.2-0.7	5.5	--	3.5	--	11.0	--
	1"	6.5	7.0	0.9	4.9	3.5	2.0	0.7	0.06	0.2-0.7	5.9	--	3.9	--	13.2	--
	1-1/4"	7.0	7.5	1.3	5.2	3.9	2.5	0.8	0.06	0.2-0.7	7.1	--	4.1	--	17.6	--
	1-1/2"	7.5	8.0	1.5	6.1	4.5	2.9	0.8	0.06	0.2-0.9	7.9	--	5.0	--	24.3	--
	2"	8.5	9.1	2.0	6.5	5.0	3.6	0.9	0.06	0.3-0.7	9.8	--	5.6	--	35.3	--
	2-1/2"	9.5	10.1	2.5	7.5	5.9	4.1	1.0	0.06	0.3-0.9	11.8	--	6.5	--	53	--
	3"	11.1	11.8	3.0	8.3	6.6	5.0	1.1	0.06	0.3-0.9	13.8	--	7.0	13.0	75	115
	4"	12.0	12.6	4.0	10.0	7.9	6.2	1.3	0.06	0.3-0.9	19.7	12.0	9.1	15.0	124	168
	5"	15.0	15.6	5.0	11.0	9.3	7.3	1.4	0.06	0.3-0.9	31.4	12.0	11.0	16.5	190	273
	6"	15.9	16.5	6.0	12.5	10.6	8.5	1.5	0.06	0.5-0.9	31.4	12.0	12.2	18.9	276	359
	8"	19.8	20.4	8.0	15.0	13.0	10.6	1.6	0.06	0.5-1.0	39.4	12.0	13.8	22.0	489	589

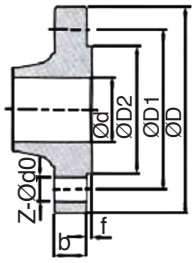
DIMENSIONS



Gear Box



Handwheel

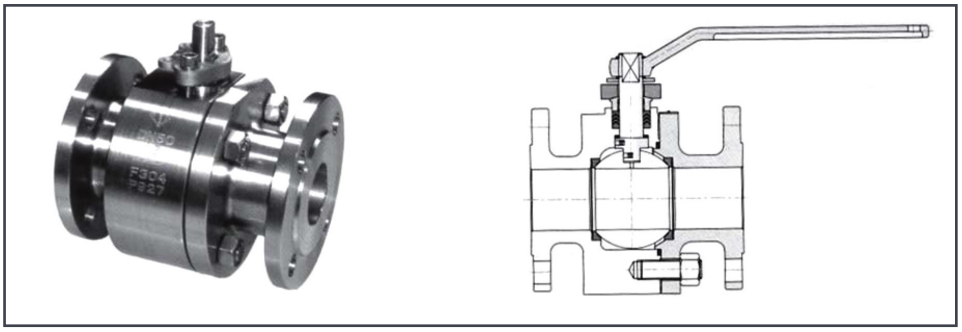


Class 600 ~ Class 1500 flange

Pressure	Size	Dimensions													Weight	
		L		d	D	D1	D2	b	f	Z-Ød0	W		H			
		RF	RTJ								Hand wheel	Gear Box	Hand wheel	Gear Box	Hand wheel	Gear Box
Class 600	1/2"	6.5	6.5	0.6	3.7	2.6	1.4	0.06	0.25	0.2-0.6	5.5	--	3.1	--	11.0	--
	3/4"	7.5	7.5	0.7	4.6	3.2	1.7	0.7	0.25	0.2-0.7	5.5	--	3.3	--	15.4	--
	1"	8.5	8.5	0.9	4.9	3.5	2.0	0.7	0.25	0.2-0.7	7.9	--	4.5	--	19.8	--
	1-1/4"	9.0	9.0	1.3	5.2	3.9	2.5	0.8	0.25	0.2-0.7	7.9	--	4.7	--	28.7	--
	1-1/2"	9.5	9.5	1.5	6.1	4.5	2.9	0.9	0.25	0.2-0.9	9.8	--	4.9	--	37.5	--
	2"	11.5	11.6	2.0	6.5	5.0	3.6	1.0	0.25	0.3-0.7	11.8	--	6.1	--	55	--
	2-1/2"	13.0	13.1	2.5	7.5	5.9	4.1	1.1	0.25	0.3-0.9	13.8	--	6.8	--	93	--
	3"	14.0	14.1	3.0	8.3	6.6	5.0	1.3	0.25	0.3-0.9	19.7	12.0	8.7	14.6	124	168
	4"	17.0	17.1	4.0	10.7	8.5	6.2	1.5	0.25	0.3-1.0	25.6	12.0	9.8	15.7	187	271
Class 900	1/2"	8.5	8.5	0.6	4.8	3.2	1.4	0.9	0.25	0.2-0.9	5.9	--	3.9	--	20	--
	3/4"	9.0	9.0	0.8	5.1	3.5	1.7	1.0	0.25	0.2-0.9	5.9	--	4.1	--	29	--
	1"	10.0	10.0	0.9	5.9	4.0	2.0	1.1	0.25	0.2-1.0	7.9	--	4.3	--	35	--
	1-1/4"	11.0	11.0	1.3	6.3	4.4	2.5	1.1	0.25	0.2-1.0	9.8	--	4.7	--	53	--
	1-1/2"	12.0	12.0	1.5	7.0	4.9	2.9	1.3	0.25	0.2-1.1	9.8	--	4.9	--	68	--
	2"	14.5	14.6	2.0	8.5	6.5	3.6	1.5	0.25	0.3-1.0	13.8	--	6.3	--	99	--
Class 1500	1/2"	8.5	8.5	0.6	4.8	3.2	1.4	0.9	0.25	0.2-0.9	7.2	--	3.9	--	22	--
	3/4"	9.0	9.0	0.8	5.1	3.5	1.7	1.0	0.25	0.2-0.9	7.9	--	4.1	--	31	--
	1"	10.0	10.0	0.9	5.9	4.0	2.0	1.1	0.25	0.2-1.0	9.8	--	4.3	--	38	--
	1-1/4"	11.0	11.0	1.3	6.3	4.4	2.5	1.1	0.25	0.2-1.0	11.8	--	4.7	--	55	--
	1-1/2"	12.0	12.0	1.5	7.0	4.9	2.9	1.3	0.25	0.2-1.1	13.18	--	5.1	--	73	--
	2"	14.5	14.6	2.0	8.5	6.5	3.6	1.5	0.25	0.3-1.0	19.7	--	6.3	--	106	--

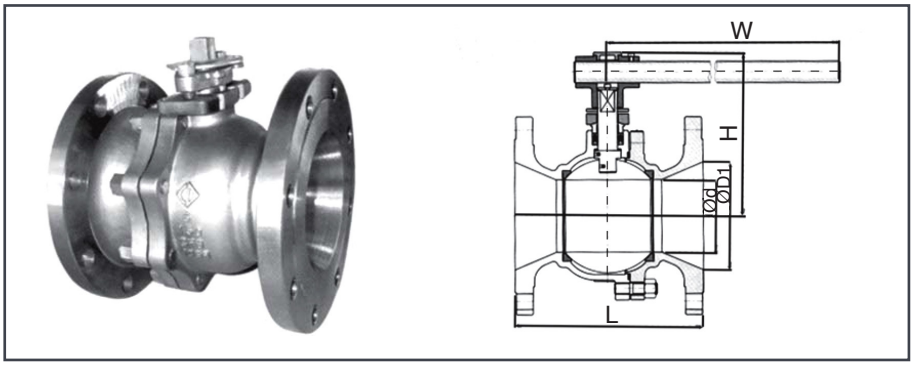
DIMENSIONS - FORGED STEEL

The floating ball valve is generally a cast steel valve body; however, as required by the customer, forged steel valve body is also available, of which the main sizes such as flange connections and face-to-face dimensions are the same as that of the cast steel ball valve



REDUCED BORE

In addition to the full bore floating ball valve, the floating ball valve with reduced bore is also available to satisfy different requirements of the customer, which can not only lower the cost and the pricing, but also meet customers' special requirements.



Size	Class 150						Class 300						Class 600				
	L		d	d1	H	W	L1		d	d1	H	W	L	d	d1	H	W
	Long	Short					Long	Short									
1/2"	4.3		0.4	0.6	3.1	5.5	5.5		0.4	0.6	3.1	5.5	6.5	0.4	0.6	3.0	5.5
3/4"	4.6		0.6	0.7	3.3	5.5	6.0		0.6	0.7	3.3	5.5	7.5	0.6	0.7	3.1	5.5
1"	5.0		0.8	1.0	3.5	5.5	6.5		0.8	1.0	3.5	5.5	8.5	0.8	1.0	3.3	5.5
1-1/4"	5.5		1.0	1.3	3.9	5.9	7.0		1.0	1.3	3.9	5.9	9.0	1.0	1.3	4.5	5.9
1-1/2"	6.5		1.3	1.5	4.1	7.1	7.5		1.3	1.5	4.1	7.1	9.5	1.3	1.5	4.7	7.9
2"	7.0		1.5	2.0	5.0	7.9	8.5		1.5	2.0	5.0	7.9	11.5	1.5	2.0	4.9	9.8
2-1/2"	7.5		2.0	2.5	5.5	9.8	9.5		2.0	2.5	5.5	9.8	13.0	2.0	2.5	6.1	11.8
3"	8.0		2.5	3.0	6.5	11.8	11.1		2.5	3.0	6.5	11.8	14.0	2.5	3.0	6.8	13.8
4"	9.0		3.0	4.0	7.0	13.8	12.0		3.0	4.0	7.0	13.8	17.0	3.0	4.0	8.7	19.7
5"	14.0		4.0	5.0	9.0	19.7	15.0		4.0	5.0	9.0	19.7	20.0	4.0	5.0	9.8	25.6
6"	15.5	10.5	5.0	6.0	11.0	31.5	15.9		5.0	6.0	11.0	31.5	--	--	--	--	--
8"	18.0	11.5	6.0	8.0	12.2	31.5	19.8	16.5	6.0	8.0	12.2	31.5	--	--	--	--	--
10"	21.0	13.0	8.0	10.0	13.8	39.4	22.4	18.0	8.0	10.0	13.8	39.4	--	--	--	--	--

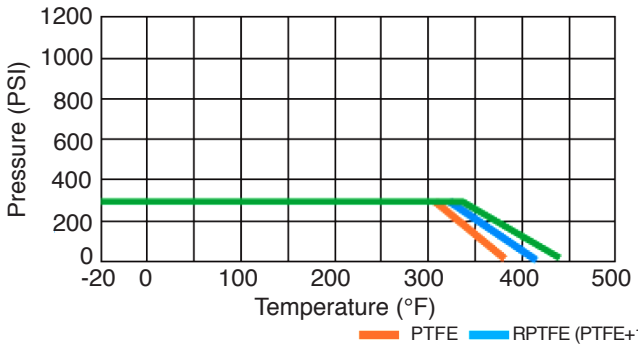
FLOATING BALL VALVE TORQUE VALUE INCH POUNDS

Size	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"	5"	6"	8"
Cv	25	60	115	185	270	500	805	1160	2120	3415	5075	9340
ANSI Class												
150	124	159	212	319	460	620	797	1062	2478	3806	6195	9735
300	150	186	266	407	531	761	991	1593	3717	5133	8142	14160
600	212	310	602	841	1150	1681	3186	4071	6815	C/F	C/F	C/F

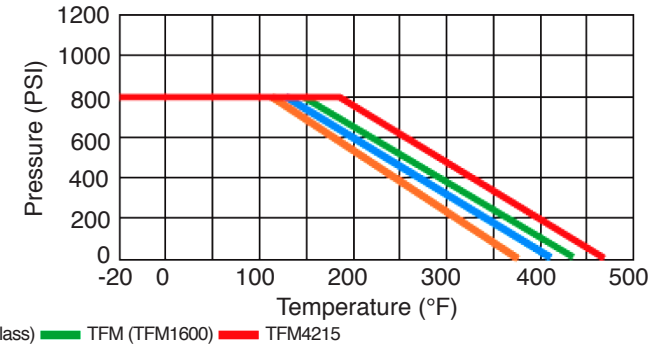
For ANSI 900 and ANSI 1500, please contact J Flow Controls. Torques are based on TFE seats

PRESSURE TEMPERATURE CHART

ANSI 150



ANSI 300



PTFE RPTFE (PTFE+15% Glass) TFM (TFM1600) TFM4215

HOW TO ORDER

Sizes		Series	Body[1], Ball & Stem		Port		Packing		Body Seal		Seat	
3	1/2"	96	00	CF8	F	Full	T	TFM 1600	T	TFM 1600	T	TFM 1600
4	3/4"		0L	CF3	R	Reduced	C	TFM4215	C	TFM4215	P	Peek
5	1"		11	LF5			G	Graphite	G	Graphite	R	Reinforced Teflon
6	1-1/2"		23	WCB, CF8M Ball & Stem			U	UHMWPE	U	WHMWPE	N	Nylon
7	2"		33	CF8M							C	TFM4215
8	2-1/2"		44	Alloy 20							M	Metal
9	3"		55	Monel							U	UHMWPE
A	4"		6L	CF3M							K	Kel-F
C	6"		77	Hastelloy C								
E	8"		88	LF2/LCB 17-4 Stem								
			83	LCB, CF8M Ball & Stem								
			99	Duplex								
			AA	A105 with Chrome								
			AB	A105, AISI 410 trim								
			EE	A105 with Electroless Nickel Ball & Stem								

End Connections		End Connections		Options	
B1	BW10	F9	ANSI 900	GO	Gear Operator
B4	BW40	F5	ANSI 1500	FS	Fire Safe
B8	BW80	F2	ANSI 2500	SE	Stem Extension
F1	ANSI 150	SW	Socket Weld	VB	Vented Ball
F3	ANSI 300	FT	Female NPT		
F6	ANSI 600				