



**SERIES 23PJ Available**  
**3-Pcs Body, Steam Jacket Ball Valve**



NOTE: FOR SERIES 23PJ PLEASE CONTACT US FOR MORE INFORMATION.

## Features / Design

- 1.- **Heavy Duty Three-Pieces Ball Valve.**
- 2.- Three-Pieces Design allows fast and simple in line maintenance; seats, seals, and ball can be replaced quickly and easily without disturbing pipe alignment – Swing Out Design.
- 3.- **Full port**, minimizes pressure drop and prolong life.
- 4.- **“V” Port Design Available:** 30°V, 60°V, 90°V (upon request).
- 5.- Investment cast body construction.
- 6.- **Pressure Rating: 2,000 PSI Max.**
- 7.- **TFV Triple – Sealing Stem (High Cycle) Stem Packing System** – live loaded maintenance free – extra long cycle life (100,000 cycles and up).– TA-Luft approved.

**Primary Seal** Pyramidal stem with stem seal.

**Secondary Seal** Chevron “V” Ring design improves seal and reduce actuation torque.

**Self Adjusting Stem Packing System with Belleville Washers** (automatically adjust wear temperature and pressure fluctuations).

- 8.- **Double Anti-Static Device** (stem to ball and stem to body) as standard & Blow-Out proof stem.
- 9.- Wide range of valve (body) and seat materials available.

**For valve:** ASTM A351 Gr. CF8M, WCB, CF3M, Titanium, Duplex, Hastelloy C... and others.

**Seats:** RPTFE, TFM 1600, Carbon Filled PTFE, 50/50 SS Filled PTFE, PEEK, UHMWPE... and others.

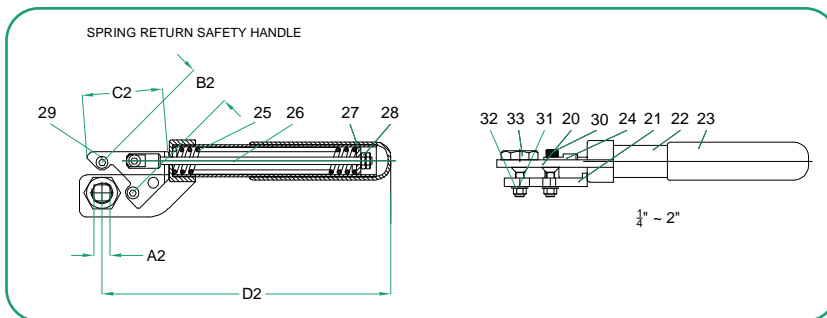
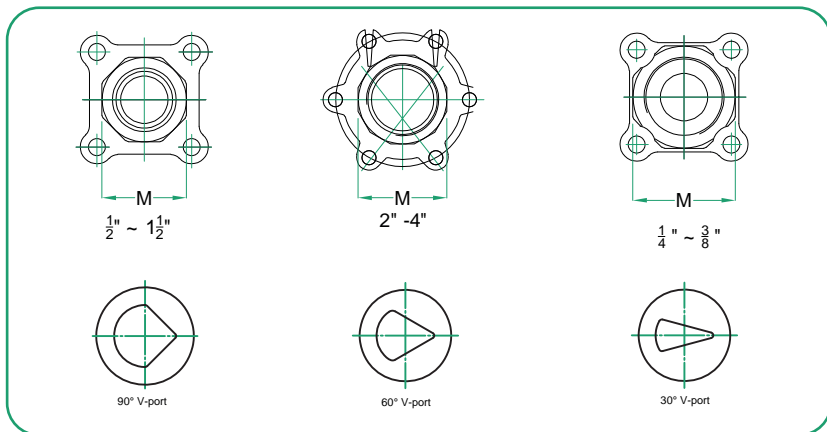
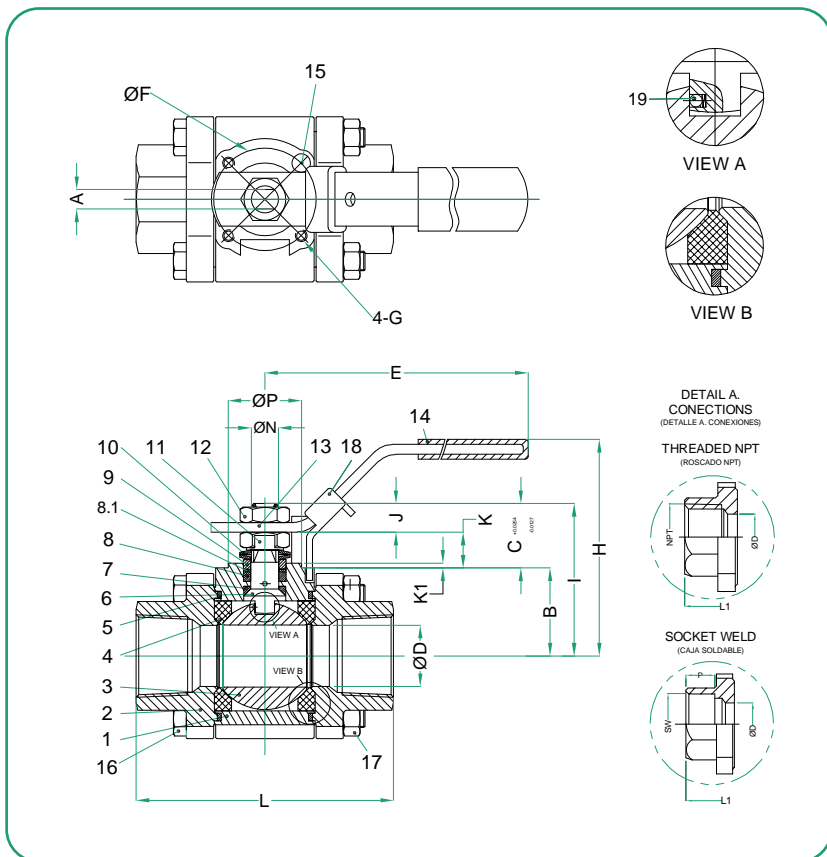
- 10.- Inspection and testing according to API 598.
- 11.- Fire Safe Design API 607 (upon request).
- 12.- NACE MR0175 (upon request).
- 13.- Locking Device as standard.
- 14.- **Approvals available:** Fire safe as per API 607 Rev 6, CE 0035 PED 2014/68/EU Category II Module H, TA-Luft, ATEX 2014/34/EU.
- 15.- End connection: Threaded (NPT) ASME B1.20.1, Socket Weld (SW) ASME B16.11... and others.
- 16.- **All stainless weld ends in CF3M Standard.** Reduce Inter-granular corrosion in welding.
- 17.- Manufactured in ISO 9001 approved facility.



## Material List

POS	DESCRIPTION	MATERIAL
1	BODY	A216 WCB / A351 CF8M
2	END CAP	A216 WCB / A351 CF8M
3	BALL	$\frac{1}{2}$ " SS316 $\frac{1}{4}$ , $\frac{3}{8}$ , $\frac{1}{2}$ "-2" ASTM A351 CF8M
4	SEAT	R-PTFE
5	JOINT GASKET	PTFE
6	STEM	SS316
7	STEM SEAL	PTFE
8	STEM PACKING	SS304
9	GLAND	SS301
10	BELLEVILLE WASHER	SS304
11	LOCK SADDLE	SS304
12	STEM NUT	SS304
13	HANDLE	SS304
14	HANDLE SLEEVE	VINYL
15	STOP PIN	SS304
16	BOLT	A193 B7M / A193 B8M
17	BOLT NUT	A194 2HM / A194 8M
18	LOCKING DEVICE	SS304
19	ANTI-STATIC DEVICE	SS316
20	HANDLE PAD	SS304
21	TRIANGLE PAD	SS304
22	TUBE	SS304
23	HANDLE SLEEVE	VINYL
24	SUB. SHAFT	SS304
25	SPRING	$\frac{1}{2}$ "- $\frac{1}{2}$ " SWP $1\frac{1}{2}$ "-2" CARBON STEEL
26	SHAFT	SS304
27	WASHER	SS304
28	NUT	A194 2HM / A194 8M
29	BOLT	A193 B7M / A193 B8M
30	SCREW	SS304
31	WASHER	SS304
32	NUT	A194 2HM / A194 8M
33	STEM NUT	A194 2HM / A194 8M

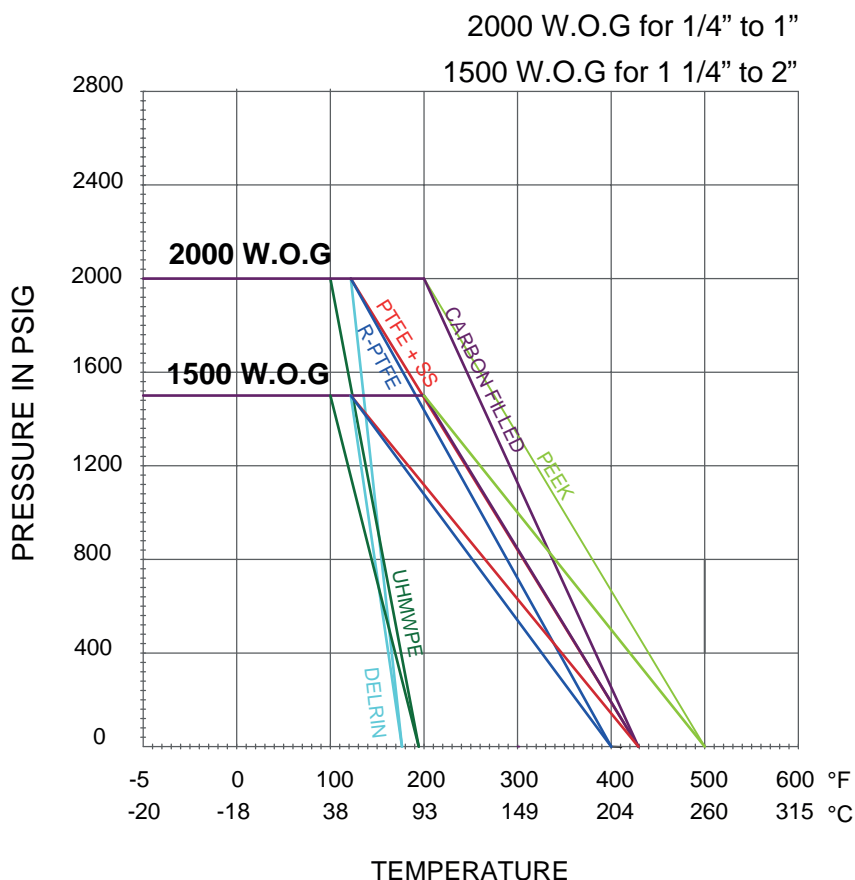
Safety Handle Dimensions (inches)	SIZE	A2 (in)	B2 (in)	C2 (in)	D2 (in)	Weight <sup>(4)</sup> (lb)
	1/4"	9.000	1.169	1.669	7.677	0.857
3/8"	9.000	1.169	1.669	7.677	0.857	
1/2"	0.354	1.169	1.669	7.677	0.857	
3/4"	0.354	1.169	1.669	7.677	0.857	
1"	0.433	1.390	1.720	7.677	0.868	
1 1/4"	0.433	1.390	1.720	7.677	0.868	
1 1/2"	0.551	1.949	2.154	10.433	1.650	
2"	0.551	1.949	2.254	10.433	1.650	



## Dimensions (inches)

SIZE	ØD (in)	A (in)	B (in)	C (in)	E (in)	ØF (in)	G (in)	H (in)	I (in)	K (in)	K1 (in)	L1 <sup>(1)</sup> (in)	M (in)	ØP (in)	ØN (in)	ISO5211	NPT (in)	SW (in)	P MIN (in)	ØR (in)	CV (USGpm)	TORQUE <sup>(2)</sup> (lb*in) PTFE	WT <sup>(3)</sup> (lb)
1/4"	0.394	0.256	1.173	0.291	5.276	1.417	M5	2.531	1.465	0.051	0.020	2.551	1.180	1.000	0.380	F03	1/4"	0.6±0.008	0.374	0.482	8.000	60.000	1.700
3/8"	0.394	0.256	1.173	0.291	5.276	1.417	M5	2.531	1.465	0.051	0.020	2.551	1.180	1.000	0.380	F03	3/8"	0.7±0.008	0.374	0.482	8.000	60.000	1.500
1/2"	0.591	0.256	1.142	0.634	5.276	1.417	M5	2.815	1.776	0.346	0.079	2.854	1.200	1.000	0.380	F03	1/2"	0.9±0.008	0.374	0.600	15.000	70.000	1.800
3/4"	0.787	0.256	1.299	0.713	5.276	1.417	M5	1.992	2.012	0.366	0.079	3.362	1.440	1.000	0.380	F03	3/4"	1-1±0.008	0.492	0.728	40.000	92.000	3.000
1"	0.984	0.315	1.417	0.969	6.693	1.654	M5	3.240	2.386	0.535	0.079	4.146	1.780	1.200	0.444	F04	1"	1.3±0.008	0.492	0.880	70.000	127.000	4.500
1 1/4"	1.260	0.315	1.575	0.957	6.693	1.654	M5	3.437	2.531	0.575	0.079	4.370	2.160	1.200	0.444	F04	1 1/4"	1.7±0.008	0.492	0.799	110.000	207.000	6.000
1 1/2"	1.496	0.382	1.862	1.189	8.150	1.969	M6	4.079	3.051	0.709	0.087	5.012	2.400	1.400	0.572	F05	1 1/2"	1.9±0.008	0.492	0.860	250.000	276.000	8.900
2"	1.969	0.382	2.736	1.024	8.150	1.969	M6	4.787	3.760	0.528	0.059	5.622	2.928	1.400	0.572	F05	2"	2.4±0.01	0.629	0.961	430.000	292.000	12.100
2 1/2"	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	*	/	*
3"	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	*	/	*
4"	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	*	/	*

## Pressure-Temperature Chart



## How to Order

CLASS	VALVE BODY DESIGN (SERIES)	SPECIAL FEATURES	MATERIAL			ENDS	SIZE	OPERATION
			BODY	TRIM	SEAT			
2 2000/1500# WOG	3 Full Port 3 Pcs Ball Valve	NONE NONE	2 WCB	3 316SS	P PTFE	T Threaded	0.25 1/4"	L Manual Lever Operator
		F Fire Safe API 607	3 CF8M	4 304 SS	R R-PTFE	M Two different ends to be specify on each order	0.38 3/8"	C Manual Lever with Locking Device
	3S Standard Full Port 3 Pcs	G Fire Safe API 607+ NACE	4 CF8	5 316L SS	U UHMWPE	S Socket Weld	0.5 1/2"	O Oval Handle
		0 Oxygen Service	5 CF3M	8 Alloy 20	50/50 SS	B Butt Weld	0.75 3/4"	SR Spring Return Sliding lock
		N NACE	8 Alloy 20	9 Hastelloy	S Filled PTFE	F Flanged RF (150#)	01 1"	X Economical Stem extention
		PJ Partial Jacketed	9 Hastelloy	0 Monel	C Carbon Filled PTFE		01.25 1 1/4"	B Bare Shaft
		ND NACE /API6D	0 Monel	T Titanium	M MG1241		01.5 1 1/2"	P Preumatic Actuator
		FE Fugitive Emissions Unit	T Titanium		D DELRIN		02 2"	E Electric Actuator
		V3 "V" Port 30°			K PEEK			
		V6 "V" Port 60°V			B NBR			

### Example:

Full Port Ball Valve Body & Trim 316SS, Seats: R-PTFE, Ends: Threaded, 1/2" 2000# WOG with Lever.

**2333RT0.5L**

Notes:

- (1) Face to face for threaded NPT and socketweld valves.
- (2) The torque es measured based on the conditions of with 30% safety factor, with grease, at 0 bar pressure and ambiental temperature.
- (3) The weight change depending on the type of lever .
- (4) Spring safety handle weight.

