



Series M1-CS & SS

3-Piece Steel Ball Valve with
“Live-Load” Stem Packing

FEATURES

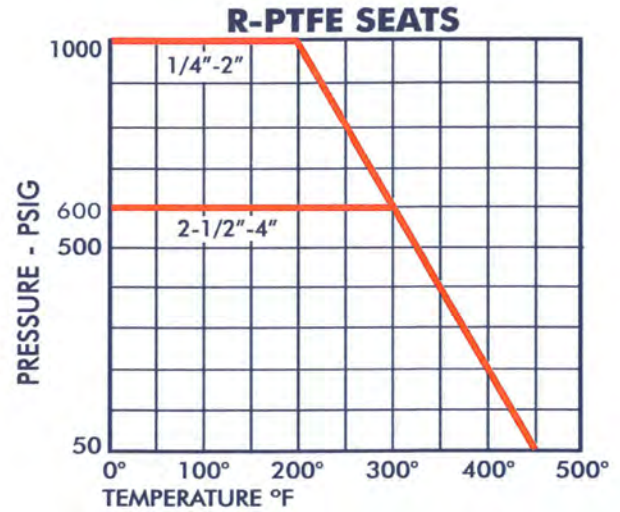
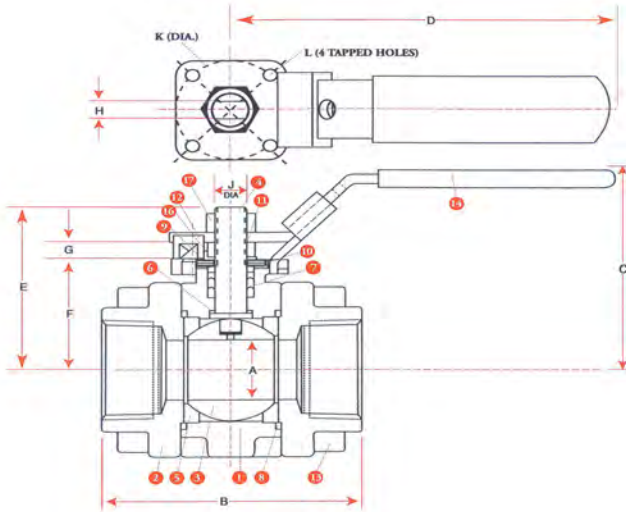
- 3-Piece, 4 Bolt Construction
- Standard Electrically Grounded Ball & Stem
- Live-load PTFE Stem Packing
- NACE MROI-75 Compliant
- ISO 5211 4 Bolt Mounting
- Standard 31655 Ball & Stem
- Standard 30455 latch lock Handles
- 1/4”-4” Full Port
- Female NPT and Socket-Weld Ends Available
- 304SS Packing Clip Secures Packing Adjustment

RATINGS

1/4”-2”: 1000WOG
2-1/2”-4”: 600WOG
All Sizes: 200 PSIG WSP

MATERIALS OF CONSTRUCTION

PART	QTY.	DESCRIPTION	STANDARD MATERIAL
1	1	Body	ASTM A351 GR CF8M OR A216 GR WCB
2	2	Tailpiece	ASTM A351 GR CF3M OR A216 GR WCB
3	1	Ball	ASTM A276 GR 316 OR CF8M
4	1	Stem	ASTM A276 GR 316 OR CF8M
5	2	Seat	R-TFM (R-PTFE)
6	1	Thrust Washer	R-PTFE
7	1	Packing Set	TFE
8	2	Body Seal	R-PTFE
9	1	Gland	ASTM A276 GR 316 SS
10	2	Belleville Washer	STAINLESS STEEL
11	1	Packing Nut	ASTM A276 GR 304 SS
12	1	Stop Pin	ASTM A276 GR 304 SS
13	8	Body Bolt & Nut	300 SS
14	1	Handle Assy	304 SS
16	1	Packing Clip	304 SS
17	1	Handle Nut	300 SS



DIMENSIONS, WEIGHTS, CV FACTORS & MAXIMUM OPERATING TORQUE

SIZE	A (PORT)	B	C	D	E	F	G	H	J DIA	K DIA	L (3 TAPPED HOLES)	ISO PATTERN	WEIGHT LBS.	CV	TORQUE IN-LBS
1/4-3/8"	.43	2.49	2.36	4.17	1.84	1.14	.35	.20	.31	1.42	1/4"-20 UNC	F03	1.1	10	60
1/2"	.56	2.76	2.36	4.17	1.90	1.14	.37	.20	.31	1.42	1/4"-20 UNC	F03	1.1	16	80
3/4"	.81	3.03	2.83	5.04	2.37	1.34	.48	.31	.50	1.65	1/4"-20 UNC	F04	1.4	32	150
1"	1.00	3.62	3.06	5.04	2.68	1.58	.48	.31	.50	1.65	1/4"-20 UNC	F04	2.1	62	250
1-1/4"	1.25	4.13	3.40	7.83	3.13	1.79	.57	.39	.62	1.97	1/4"-20 UNC	F05	3.3	115	320
1-1/2"	1.50	4.72	3.66	7.83	3.39	2.05	.57	.39	.62	1.97	1/4"-20 UNC	F05	4.3	140	400
2"	2.00	5.43	4.61	7.83	3.71	2.41	.53	.39	.62	1.97	1/4"-20 UNC	F05	6.6	365	500
2-1/2"	2.50	6.69	5.37	10.00	4.96	2.89	.73	.47	.75	2.76	5/16"-18 UNC	F07	10.8	450	1050
3"	3.00	7.52	5.76	10.00	5.47	3.29	.72	.47	.75	2.76	5/16"-18 UNC	F07	33	1100	1350
4"	4.00	8.54	6.88	11.93	6.82	4.21	.91	.55	.87	4.02	3/8"-16 UNC	F10	55	2200	2200

Numbering System ... How to Order

<u>M1</u>	<u>F</u>	<u>C</u>	<u>S</u>	<u>R</u>	<u>Z</u>	<u>SL</u>	<u>TT</u>	<u>100</u>
SERIES	PORT SIZE	BODY & TAILPIECE MATERIAL	BALL/STEM MATERIAL	SEAT MATERIAL	SEAL MATERIAL	HANDLE TYPE	ENDS	SIZE
M1	F = Full	C = A216 WCB Carbon Steel S = A351 GR CF8M Stainless A = A351 GR CN7M Alloy 20	S = ASTM A276 GR 316 SS A = A351 GR CN7M Alloy 20	R = R-PTFE U = UHMW	Z = Live loaded PTFE Packing, R-PTFE Thrust Washer, R-PTFE Seals X = Live loaded graphite packing, R-PTFE Thrust Washer, Graphite Seals	SL = Stainless Latch Lock SO = Stainless Oval LO = Stainless Locking Oval PA = Double Acting Pneumatic SA = Spring Return Pneumatic XH = Extended Topworks	TT = FNPT WW = Socket Weld WT = Socket Weld x FNPT	025 = 1/4" 038 = 3/8" 050 = 1/2" 075 = 3/4" 100 = 1" 125 = 1-1/4" 150 = 1-1/2" 200 = 2" 250 = 2-1/2" 300 = 3" 400 = 4"