



VALVES

Series W10 Seal Welded Ball Valves 1/4" - 3" 1000 WOG

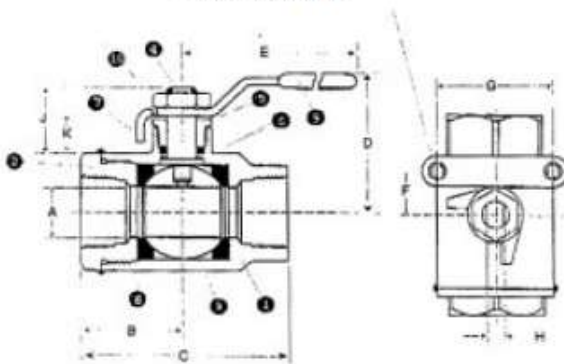


FEATURES

- SEAL WELDED CONSTRUCTION
- All sizes are Full Port
- 1000 WOG Rating
- NACE MR-01-75 Compliant
- CF8M Bodies and Tailpieces, 316 Stainless Steel Internals
- Standard Actuator Mounting Pads on all sizes
- Standard Locking Stainless Steel Handles
- Locking Stainless Steel Oval Handles Available
- The Ultimate in Safe Design

MOUNTING HOLES
1/4" - 3/4".....10-24 NC
1" - 3".....1/4-20 NC

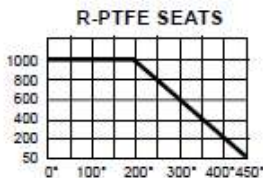
RATINGS
1000 PSIG @ 100F WATER, OIL, GAS
150 PSIG SATURATED STEAM



MATERIALS OF CONSTRUCTION

PART	DESCRIPTION	STANDARD MATERIAL	OPTIONAL MATERIAL
1	BODY	ASTM A351 Gr.CF8M	
2	TAILPIECE	ASTM A351 Gr.CF8M	
3	BALL	ASTM A276 Gr.316	
4	STEM	ASTM A276 Gr.316	
5	PACKING NUT	ASTM A276 Gr.316	
6	SEATS (2)	R-PTFE	Steam Seats
7	PACKING	R-PTFE	Graphite
8	THRUST WASHER	R-PTFE	
9	HANDLE ASSY	Stainless Steel w/Vinyl	Stainless Locking Oval
10	HANDLE NUT	Stainless Steel	

DIMENSIONS, WEIGHTS, CV FACTORS & MAXIMUM OPERATING TORQUE



SIZE	A	B	C	D	E	F	G	H	J	K	WEIGHT LBS.	Cv Value	MAX TORQUE
1/4-3/8"	0.43	1.10	2.20	2.20	4.20	0.50	1.12	0.20	0.82	0.49	0.58	10	60 IN-LB
1/2"	0.56	1.30	2.60	2.30	4.30	0.50	1.38	0.20	0.98	0.58	0.75	16	60 IN-LB
3/4"	0.81	1.50	3.00	2.60	5.60	0.87	1.38	0.28	1.32	0.71	1.47	32	120 IN-LB
1"	1.00	1.70	3.50	3.00	5.60	0.87	1.50	0.28	1.32	0.71	2.23	62	160 IN-LB
1-1/4"	1.25	2.00	4.00	3.60	7.50	0.93	1.50	0.35	1.44	0.81	3.47	115	180 IN-LB
1-1/2"	1.50	2.20	4.40	3.90	7.50	0.93	1.50	0.35	1.46	0.81	5.35	140	260 IN-LB
2"	2.00	2.50	5.00	4.30	8.10	1.00	1.50	0.35	1.46	0.82	7.99	365	350 IN-LB
2-1/2"	2.50	3.30	6.60	5.00	10	1.37	2.75	0.39	1.87	0.94	15.1	450	420 IN-LB
3"	3.00	3.60	7.20	5.40	10	1.37	2.75	0.39	1.80	0.85	22.1	1100	800 IN-LB

Warren® VALVES

Series W21

Seal Welded High Pressure Ball Valves 1/4" - 2" ASME Class 900

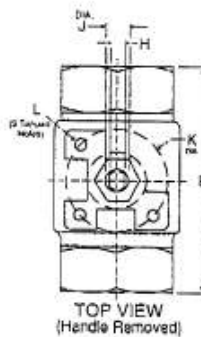
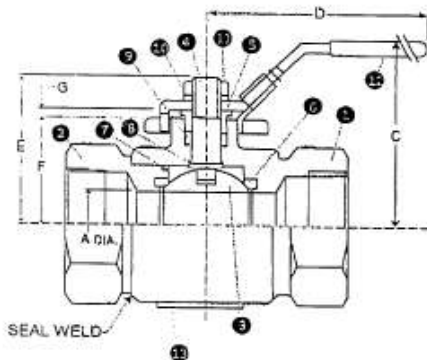


FEATURES

- SEAL WELDED CONSTRUCTION
- Available in WCB Carbon Steel with 316SS Trim, or Full CF8M/316 Stainless
- 2160 WOG Rating on CF8M, 2220 WOG on WCB
- Fully Compliant with ASME B16.34 Class 900
- NACE MR-01-75 Compliant
- API 607 Fourth Edition Fire Safe
- Fully Compliant with API 608
- Standard ISO Actuator Mounting Pads on all sizes
- Standard Locking Stainless Steel Handles
- Locking Stainless Steel Oval Handles Available
- "Dead-Man" Spring Return Stainless Steel Handle Available 1/4"-1" Sizes
- The Ultimate Valve for Safe High Pressure Service

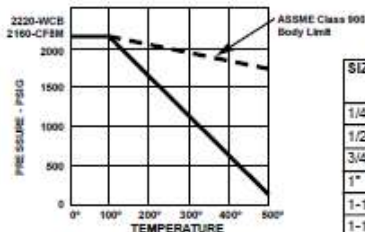
RATINGS

2160 PSIG @ 100F WATER, OIL, GAS (CF8M)
2220 PSIG @ 100F WATER, OIL, GAS (WCB)
250 PSIG SAT. STEAM



MATERIALS OF CONSTRUCTION

PART	DESCRIPTION	STANDARD MATERIAL
1	BODY	CF8M or WCB
2	TAILPIECE	CF8M or WCB
3	BALL	ASTM A276 Gr.316 SS
4	STEM	ASTM A276 Gr.316 SS
5	PACKING NUT	ASTM A276 Gr.316 SS
6	SEATS (2)	R-PTFE
7	TAILPIECE SEAL	GRAPHITE
8	THRUST WASHER	R-PTFE
9	STEM PACKING	GRAPHITE
10	LOCK WASHER	304 SS
11	HANDLE ASSY	304 SS
12	HANDLE NUT	304 SS
13	NAME PLATE	304 SS



DIMENSIONS, WEIGHTS, CV FACTORS & MAXIMUM OPERATING TORQUE

SIZE	A	B	C	D	E	F	G	H	J	K	L	ISO PATTERN	WEIGHT LBS.	CV	MAX. TORQUE
1/4-3/8"	0.43	2.65	2.23	5.04	1.53	0.78	0.35	0.20	0.31	1.42	1/4"-20 UNC	F03	1.00	10	40 IN-LB
1/2"	0.43	2.65	2.23	5.04	1.53	0.78	0.35	0.20	0.31	1.42	1/4"-20 UNC	F03	1.00	16	75 IN-LB
3/4"	0.59	3.08	2.72	5.75	2.06	1.03	0.43	0.28	0.44	1.65	1/4"-20 UNC	F04	1.80	27	120 IN-LB
1"	0.81	3.54	2.87	5.75	2.33	1.34	0.40	0.28	0.44	1.65	1/4"-20 UNC	F04	2.50	42	140 IN-LB
1-1/4"	1.00	4.01	3.47	7.36	2.76	1.61	0.45	0.35	0.56	1.97	1/4"-20 UNC	F05	3.90	52	250 IN-LB
1-1/2"	1.25	4.26	3.69	7.36	2.98	1.83	0.45	0.35	0.56	1.97	1/4"-20 UNC	F05	5.50	80	300 IN-LB
2"	1.50	4.94	3.39	7.36	3.18	2.00	0.47	0.35	0.56	1.97	1/4"-20 UNC	F05	8.50	115	320 IN-LB