

**DESIGN FEATURES**

- Blow-out Proof Stem
- Pressure Balance Hole in Ball Slot
- Various Thread Standards Available
- NACE standard MR0175 & MR0103 (Optional)
- Casting Approved by TÜV AD 2000-Merkblatt W0



**APPLICABLE STANDARDS**

- Design Standard : MSS SP-110
- Wall Thickness : EN12516-3
- Pipe Thread : ASME B1.20.1, BS21, EN 10226  
DIN 2999/259, ISO 228/1  
JIS B0203 ISO 7/1
- Inspection & Testing : MSS SP-110

**WEIGHT / CV VALUES**

DN	NPS	CV	Weight	
			(kg)	(lb)
8	1/4	16	0.33	0.73
10	3/8	23	0.34	0.75
15	1/2	30	0.34	0.75
20	3/4	55	0.51	1.12
25	1	96	0.86	1.90
32	1 1/4	170	1.23	2.71
40	1 1/2	270	1.86	4.10
50	2	470	2.97	6.55
65	2 1/2	780	5.50	12.13
80	3	1150	8.40	18.52

**TORQUE VALUES**

Close to Open Torque at Various Differential Pressure ( $\Delta P$ ), Standard Seats (TFM1600, PTFE)

unit : in-lb / N-m

Size/ $\Delta P$		75 psig		150 psig		300 psig		700 psig		1000 psig	
		5 bar		10 bar		20 bar		50bar		63bar	
DN	NPS	N-m	In-lb	N-m	In-lb	N-m	In-lb	N-m	In-lb	N-m	In-lb
8	1/4	4.5	40	4.5	40	4.5	40	4.5	40	4.5	40
10	3/8	4.5	40	4.5	40	4.5	40	4.5	40	4.5	40
15	1/2	5	44	5	44	5	44	5	44	5	44
20	3/4	6	53	6	53	6	53	6	53	6	53
25	1	10	88	10	89	11	97	11	97	11	97
32	1 1/4	13	115	13	115	15	133	17	150	19	168
40	1 1/2	19	168	19	168	22	195	24	212	26	230
50	2	25	221	29	257	32	283	35	310	38	336
65	2 1/2	40	354	45	398	49	434	54	478	59	522
80	3	65	575	72	637	81	717	90	796	101	894

Remark :

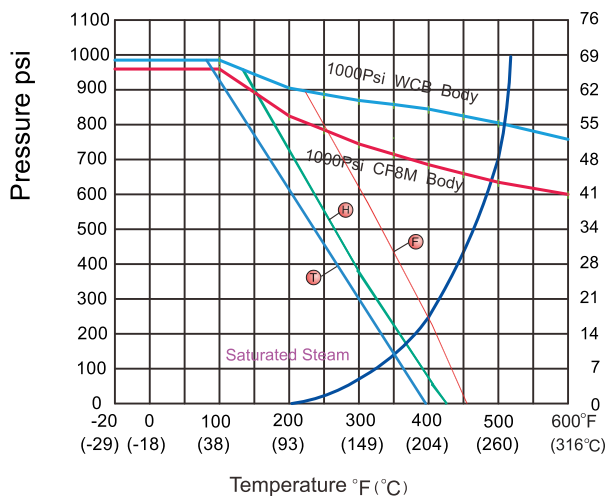
1. Torques will increase about 30% if seat materials are Reinforced Fiber-Glass PTFE, Carbon-filled PTFE or EK+PTFE or TFM4215.
2. The torque figures at 5 bar pressure are maximum values to be tested after the valves are placed for 24 hours.
3. For actuator sizing, a safety factor of minimum 30% is recommended.

**TECHNICAL INFORMATION**

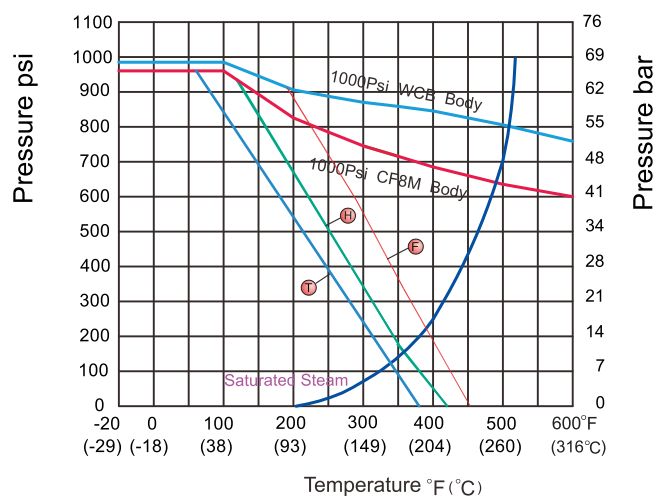
**PRESSURE - TEMPERATURE DATA**

The pressure-temperature data of ball valves are determined not only by valve shell materials but also by sealing materials used for ball seats, gland packings and flange gaskets.

Full Bore : NPS 1/4 ~ NPS 1 1/4  
DN 8 ~ DN 32



Full Bore : NPS 1 1/2 ~ NPS 3  
DN 40 ~ DN 80

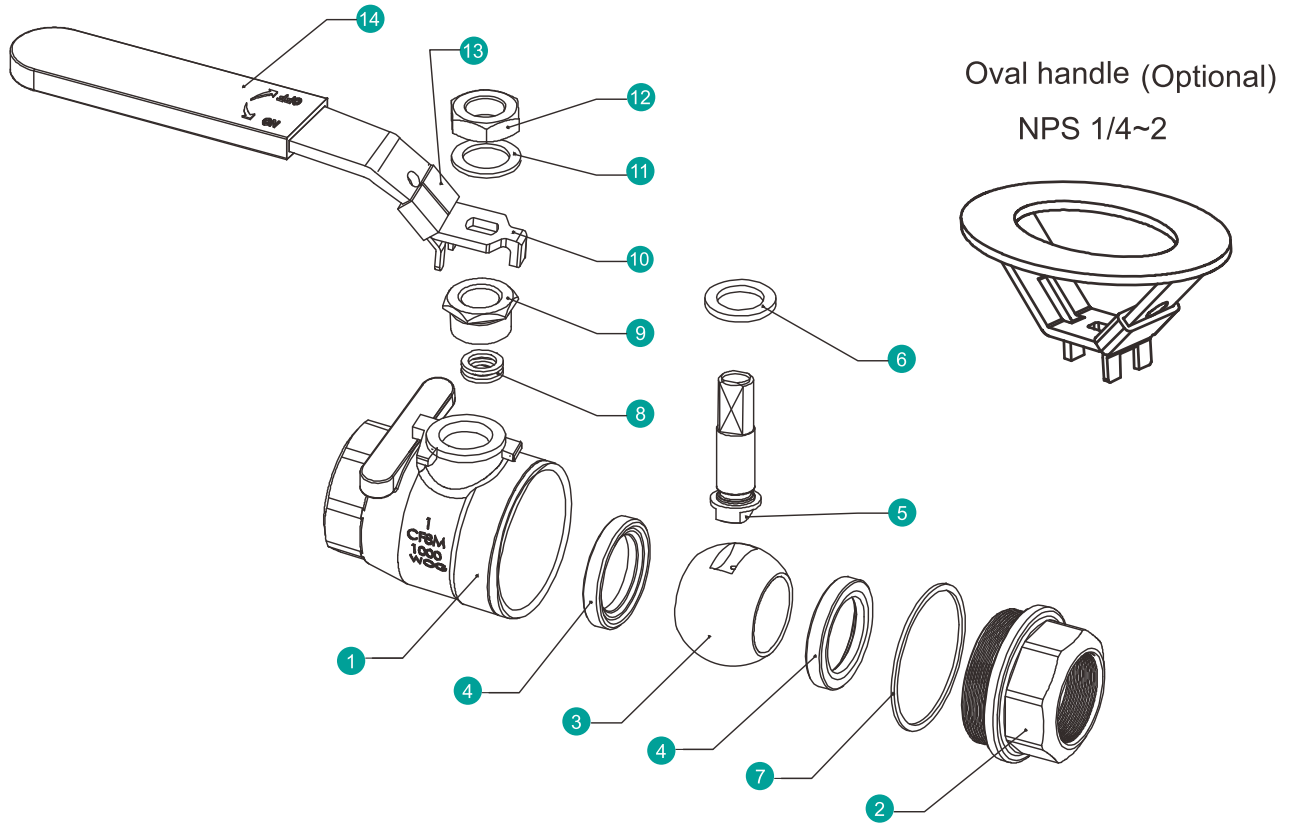


Seat Materials : (T) PTFE (H) TFM1600 (E) TFM4215

Body Ratings: Shown above are for ASTM A351 Gr.CF8M and A216 Gr.WCB

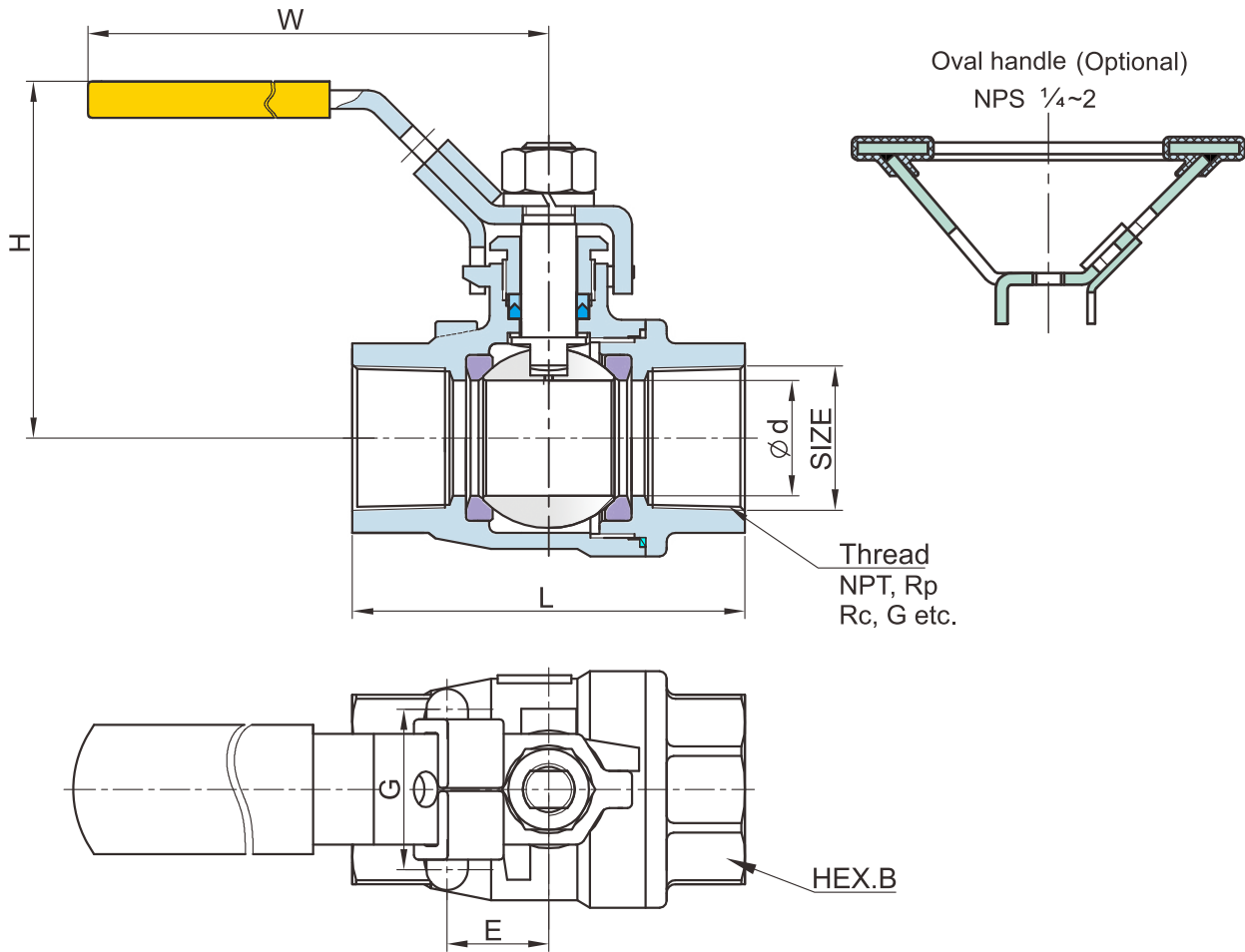
For ratings of other valve shell materials, please refer to the last edition of ASME B16.34.

**PRESSURE - TEMPERATURE RATINGS**



**MATERIAL OF CONSTRUCTION**

NO.	PART NAME	MATERIALS		
1	Body	CF8M(1.4408)	CF8(1.4308)	WCB(1.0619)
2	End Cap(Thread)	CF8M(1.4408)	CF8(1.4308)	WCB(1.0619)
3	Ball	316		304
4	Ball Seat	TFM1600/PTFE/TFM4215		
5	Stem	316		304
6	Body Gasket	PTFE/ GRAPHITE*		
7	Thrust washer	PTFE/TFM1600		
8	Packing	PTFE/ GRAPHITE*		
9	Gland Nut	304		
10	Handle	304		
11	Stem Washer	304		
12	Handle Nut	A193-8		
13	Lock Device	304		
14	Handle Sleeve	PVC		



**DIMENSION TABLE**

**ANSI 1000 WOG DIMENSION TABLE**

Unit : mm

DN	NPS	d	L	H	W	E	G	HEX.B
8	1/4	10.6	58.0	59	100	12.7	28.5	23.5
10	3/8	12.7	58.0	59	100	12.7	28.5	23.5
15	1/2	15	62.0	59	100	12.7	28.5	25
20	3/4	20	72.4	64	129	22.0	34.8	32
25	1	25	85.0	77	156	22.0	34.8	41
32	1 1/4	32	94.0	83	156	23.6	38.1	50
40	1 1/2	38	105.0	96	183	23.6	38.1	56
50	2	50	125.0	103	183	23.6	38.1	70
65	2 1/2	63.5	155.0	130	252	35.0	65.0	83
80	3	76	173.0	139	252	35.0	65.0	102

**ANSI 1000 WOG DIMENSION TABLE**

Unit : inch

DN	NPS	d	L	H	W	E	G	HEX.B
8	1/4	0.42	2.28	2.32	3.94	0.50	1.12	0.93
10	3/8	0.47	2.28	2.32	3.94	0.50	1.12	0.93
15	1/2	0.59	2.44	2.32	3.94	0.50	1.12	0.98
20	3/4	0.79	2.85	2.52	5.08	0.87	1.37	1.26
25	1	0.98	3.35	3.03	6.14	0.87	1.37	1.61
32	1 1/4	1.26	3.70	3.27	6.14	0.93	1.50	1.97
40	1 1/2	1.50	4.13	3.78	7.20	0.93	1.50	2.20
50	2	1.97	4.92	4.06	7.20	0.93	1.50	2.76
65	2 1/2	2.50	6.10	5.12	9.92	1.38	2.56	3.27
80	3	2.99	6.81	5.47	9.92	1.38	2.56	4.02