

DESIGN FEATURES

- Built-in ISO 5211 Mounting Pad for Easy Automation
-  Anti-static devices for ball-stem-body
- Blow-out Proof Stem
- Pressure Balance Hole in Ball Slot
- Pre-Load 2 Belleville Washers to Self-adjust Packing
- Casting Approved by TÜV AD 2000-Merkblatt W0
- Options: 1. Actuator 2. Limit Switch 3. Positioner
- **TA-LUFT** **ISO15848-1** Design Approved
- NACE standard MR0175 & MR0103 (Optional)

APPLICABLE STANDARDS

- Design : MSS SP-110
- Wall Thickness : EN 12516-3
- Pipe Thread **KV-M30**: ASME B1.20.1, ISO 7/1,
EN 10226, JIS B0203,
ISO 228/1, JIS B0202,
- Butt Weld **KV-M31**: ASME B16.25 (ø B2 Sch 40)
- Extended Butt Weld **KV-M31-L**: ASME B16.25 (ø B2 Sch 40)
- Socket Weld **KV-M32**: ASME B16.11
- Inspection & Testing : MSS SP-110

CV / KV VALUES

Size / Δ P		CV	KV
NPS	DN		
1/4	8	16	14
3/8	10	23	20
1/2	15	30	26
3/4	20	55	48
1	25	96	83
1 1/4	32	170	147
1 1/2	40	270	234
2	50	470	407
2 1/2	65	780	675
3	80	1150	995

WEIGHT

Size / Δ P		KV-M30		KV-M31		KV-M32	
NPS	DN	(kg)	(lb)	(kg)	(lb)	(kg)	(lb)
1/4	8	0.58	1.28	0.60	1.32	0.60	1.32
3/8	10	0.61	1.34	0.58	1.28	0.61	1.34
1/2	15	0.66	1.46	0.68	1.50	0.68	1.50
3/4	20	0.86	1.90	0.87	1.92	0.86	1.90
1	25	1.35	2.98	1.29	2.84	1.29	2.84
1 1/4	32	2.13	4.70	2.01	4.43	2.01	4.43
1 1/2	40	2.93	6.46	2.96	6.53	2.78	6.13
2	50	4.57	10.08	4.39	9.68	4.39	9.68
2 1/2	65	8.90	19.62	8.89	19.60	8.78	19.36
3	80	12.0	26.46	12.24	26.98	12.24	26.98



TORQUE VALUES

Close to Open Torque at Various Differential Pressure (ΔP), Standard Seats (TFM1600 & PTFE)

unit : in·lb / N·m

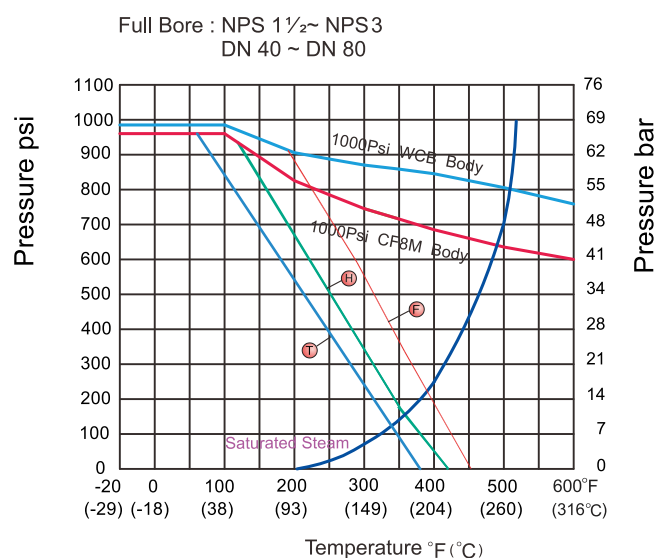
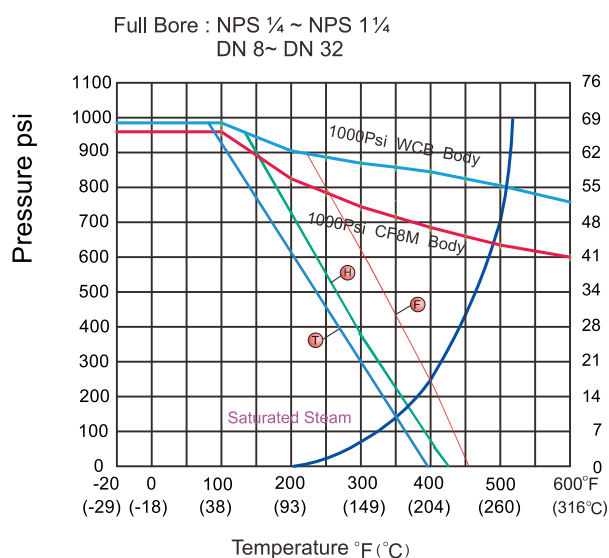
Size/ ΔP		75 psig		150 psig		300 psig		700 psig		1000 psig	
		5 bar		10 bar		20 bar		50 bar		63 bar	
NPS	DN	N·m	In·lb	N·m	In·lb	N·m	In·lb	N·m	In·lb	N·m	In·lb
1/4	8	4.5	40	4.5	40	4.5	40	4.5	40	4.5	40
3/8	10	4.5	40	4.5	40	4.5	40	4.5	40	4.5	40
1/2	15	5	44	5	44	5	44	5	44	5	44
3/4	20	6	53	6	53	6	53	6	53	6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

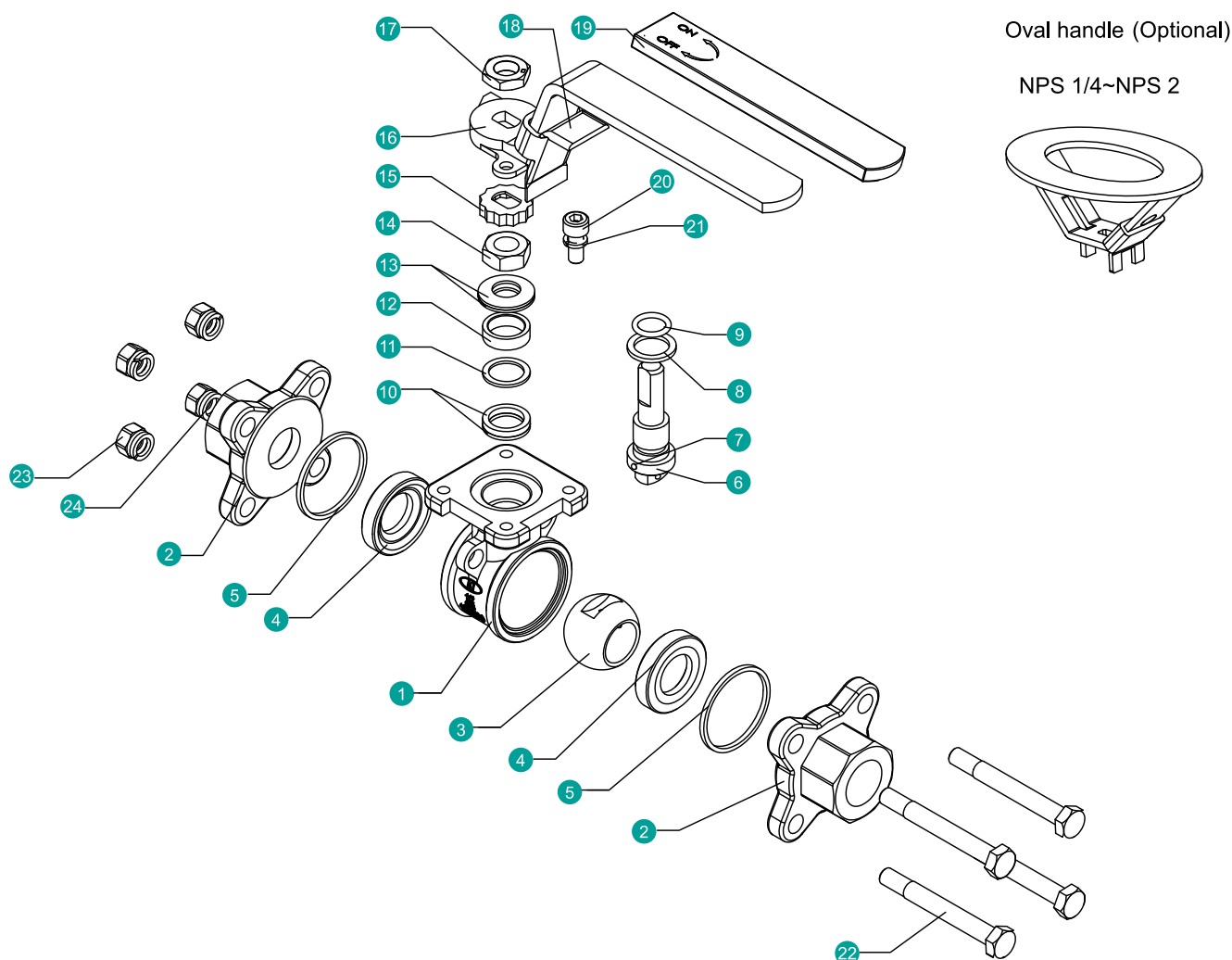
PRESSURE - TEMPERATURE DATA

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



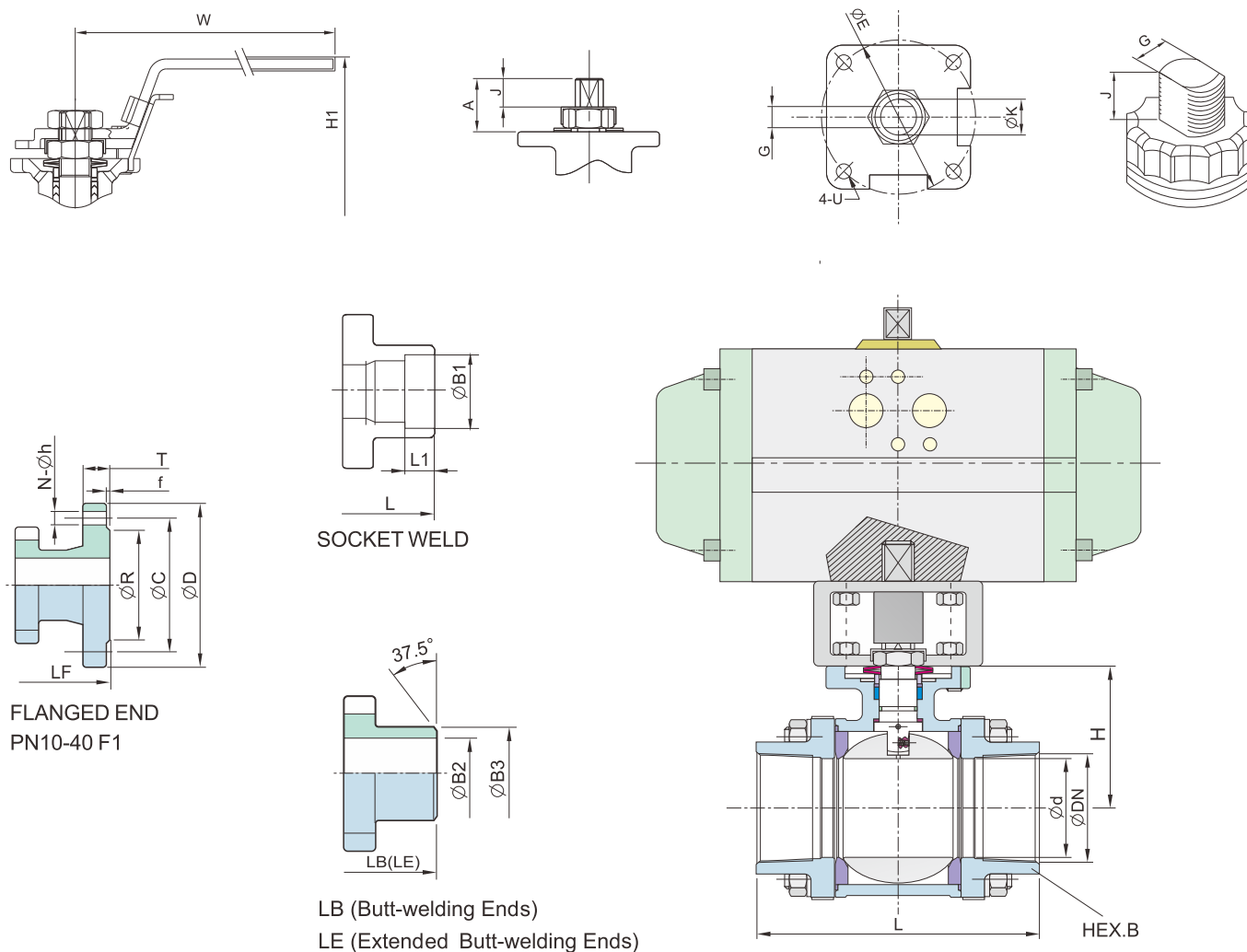
Seat Materials : T PTFE H TFM1600 F TFM4215

Body Ratings: Shown above are for EN10213 Nr. 1.4408 and EN 10213 Nr. 1.0619
For ratings of other valve shell materials, please refer to the last edition of EN12516-1.



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)
	End Cap(BW/SW)	CF3M(1.4409)	CF8(1.4308)	WCB(1.0619)
3	Ball	316	304	
4	Ball Seat	TFM1600/PTFE/TFM4215		
5	Body Gasket	PTFE/TFM1600		
6	Stem	316	304	
7	Anti-Static Device	316	304	
8	Thrust Washer	PTFE/TFM1600/RTFE		
9	O-ring	FKM		
10	Packing	PTFE/Graphite		
11	Bushing	50%SS+50%PTFE/304		
12	Gland	316		
13	Belleville Washer	301		
14	Stem Nut	A194-8(304)		
15	Stop-Lock-Cap	304		
16	Handle	CF8		
17	Handle Nut	A194-8(304)		
18	Lock Device	304		
19	Handle Sleeve	PVC		
20	Stop Bolt	A2-70		
21	Stop washer	304		
22	Bolting	A193-B8/A2-70		
23	Bolt Nut	A194-8/A2-70		
24	Bolt Washer	304		



DIMENSION TABLE

Unit: mm

NPS	d	L	LB	LE	LF	H	H1	W	E	G	K	U	A	J	D	C	R	T	f	N	h	L1	B1	B2	B3	HEX.B	ISO 5211
1/4	10.6	68	68	225	N/A	29.5	76	135	42	6.3	3/8-24UNF	M5	17.3	10.4	—	—	—	—	—	—	—	10	14.2	9.3	18	22.0	F04
3/8	12.7	68	68	225	N/A	29.5	76	135	42	6.3	3/8-24UNF	M5	17.3	10.4	—	—	—	—	—	—	—	10	17.8	12.5	18	23.5	F04
1/2	15.0	73	73	225	130	35.5	83	135	42	6.3	3/8-24UNF	M5	20.3	11.8	95	65	45	16	2	4	14	10	21.8	15.8	22	28.0	F04
3/4	20.0	80	90	225	150	38.5	88	135	42	6.3	3/8-24UNF	M5	20.3	11.8	105	75	58	18	2	4	14	13	27.3	20.9	28	34.5	F04
1	25.0	90	100	245	160	45.5	98	170	50	9.0	3/16-18UNF	M6	23.3	12.5	115	85	68	18	2	4	14	13	34.0	26.7	34	42.0	F05
1 1/4	32.0	110	110	255	180	51.0	103	170	50	9.0	3/16-18UNF	M6	23.3	12.5	140	100	78	18	2	4	18	16	42.8	35.1	43	52.0	F05
1 1/2	38.0	120	125	260	200	60.5	110	200	70	9.6	5/8-18UNF	M8	23.8	15.1	150	110	88	18	3	4	18	16	49.0	40.9	50	58.5	F07
2	50.0	140	150	275	230	68.5	119	200	70	9.6	5/8-18UNF	M8	23.8	15.1	165	125	102	20	3	4	18	17	61.4	52.5	61	71.5	F07
2 1/2	63.5	185	190	330	290	86.5	147	250	102	16.0	7/8-14UNF	M10	42.5	23.5	185	145	122	22	3	8	18	17	74.0	62.7	76	86.5	F10
3	76.0	205	220	356	310	94.5	155	250	102	16.0	7/8-14UNF	M10	42.5	23.5	200	160	138	24	3	8	18	17	90.0	78.0	92	101.0	F10

*M3 Face to Face dimensions are available

*For valves with butt weld ends per DIN11850 series 2 or ISO1127, the pressure rating will be 400 WOG.

*Flanged end dimensions "D, C, R, T, f, N, h" are for PN40. Please contact KI for more details about the other flange connection ends.