


## DESIGN FEATURES

- **Fire Safe** Design Approved
- 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
- Double Stem Sealing Acc. to TA-Luft
- Casting Approved by TÜV AD 2000-Merkblatt W0
- NACE standard MR0175 & MR0103 (Optional)
- **TA-LUFT** **ISO15848-1** Design Approved



## APPLICABLE STANDARDS

- Design : MSS SP-110  
2000WOG for NPS<sup>1/4</sup> ~NPS1  
1500WOG for NPS<sup>1/4</sup>~NPS2
- Wall Thickness : EN 12516-3
- Fire Safe : API 607 5<sup>th</sup> 2005, ISO 10497
- Pipe Thread **KV-080** : ASME B1.20.1, ISO 7/1,  
EN 10226, JIS B0203,  
ISO 228/1, JIS B0202,
- Butt Weld **KV-081**: ASME B16.25 (Ø B2 Sch 80)
- Extended Butt Weld **KV-081-L**: ASME B16.25 (Ø B2 Sch 80)
- Socket Weld **KV-082** : ASME B16.11
- Inspection & Testing : MSS SP-110

## CV VALUE / WEIGHT

DN	NPS	Weight (kg)						CV
		KV-080		KV-081		KV-082		
		Kg	lb	Kg	lb	Kg	lb	
8	1/4	1.05	2.31	1.05	2.31	1.05	2.31	16
10	3/8	1.05	2.31	1.05	2.31	1.05	2.31	23
15	1/2	1.03	2.27	1.03	2.27	1.03	2.27	30
20	3/4	1.48	3.26	1.43	3.15	1.48	3.26	55
25	1	2.15	4.74	2.07	4.56	2.15	4.74	96
32	1 <sup>1/4</sup>	3.45	7.61	3.45	7.61	3.45	7.61	170
40	1 <sup>1/2</sup>	4.5	9.92	4.28	9.44	4.4	9.70	270
50	2	6.92	15.26	6.83	15.06	6.9	15.21	460

## TORQUE VALUES

Close to Open Torque at Various Differential Pressure ( $\Delta P$ ), Standard Seats (TFM4215)

unit : in-lb / N-m

Size/ $\Delta P$		75 psig		150 psig		300 psig		700 psig		1000 psig		1500 psig		2000 psig	
		5 bar		10 bar		20 bar		50bar		63bar		100bar		140bar	
DN	NPS	N-m	In-lb	N-m	In-lb	N-m	In-lb	N-m	In-lb	N-m	In-lb	N-m	In-lb	N-m	In-lb
8	1/4	7	62	7	62	7	62	7	62	7	62	7	62	7	62
10	3/8	7	62	7	62	7	62	7	62	7	62	7	62	8	71
15	1/2	7	62	7	62	7	62	7	62	7	62	7	62	8	71
20	3/4	8	71	8	71	8	71	8	71	8	71	8	71	9	80
25	1	13	115	13	115	15	133	15	133	15	133	15	133	16	142
32	1 1/4	17	150	17	150	20	177	22	195	25	221	26	230	—	—
40	1 1/2	25	221	25	221	29	257	31	274	34	301	37	328	—	—
50	2	33	292	33	292	42	372	46	407	49	434	55	487	—	—

Remark :

- 1.The torque figures at 5 bar pressure are maximum values to be tested after the valves are placed for 24 hours.
- 2.For actuator sizing, a safety factor of minimum 30% is recommended.
- 3.If the working temperature is larger than 180°C(356°F), additional safety factor of minimum 20% is recommended.

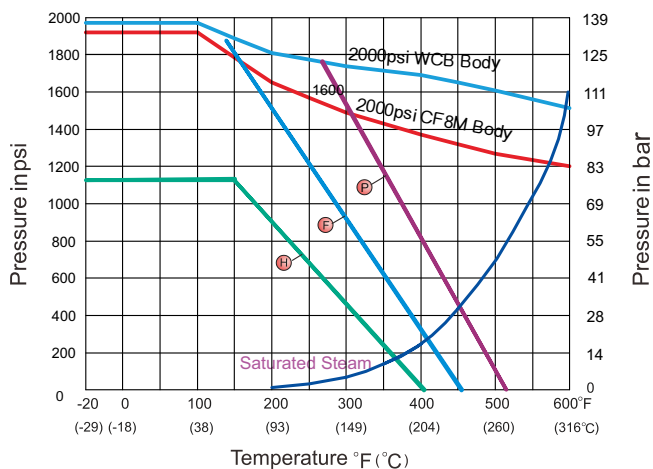
## TECHNICAL INFORMATION

### 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.

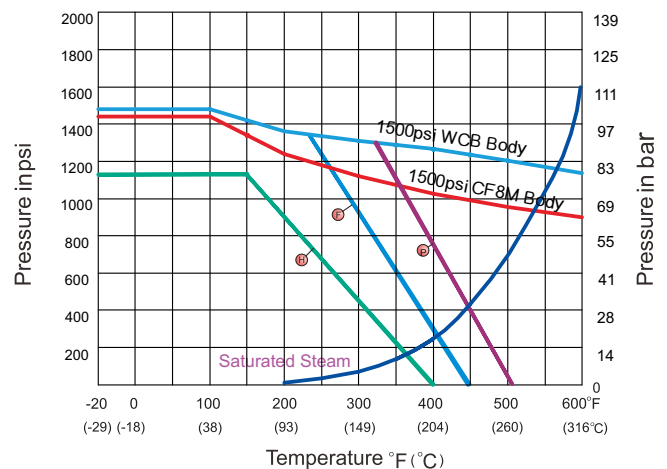
Floating Ball valves ,2000psi

Full Bore : NPS 1/4 ~ NPS 1



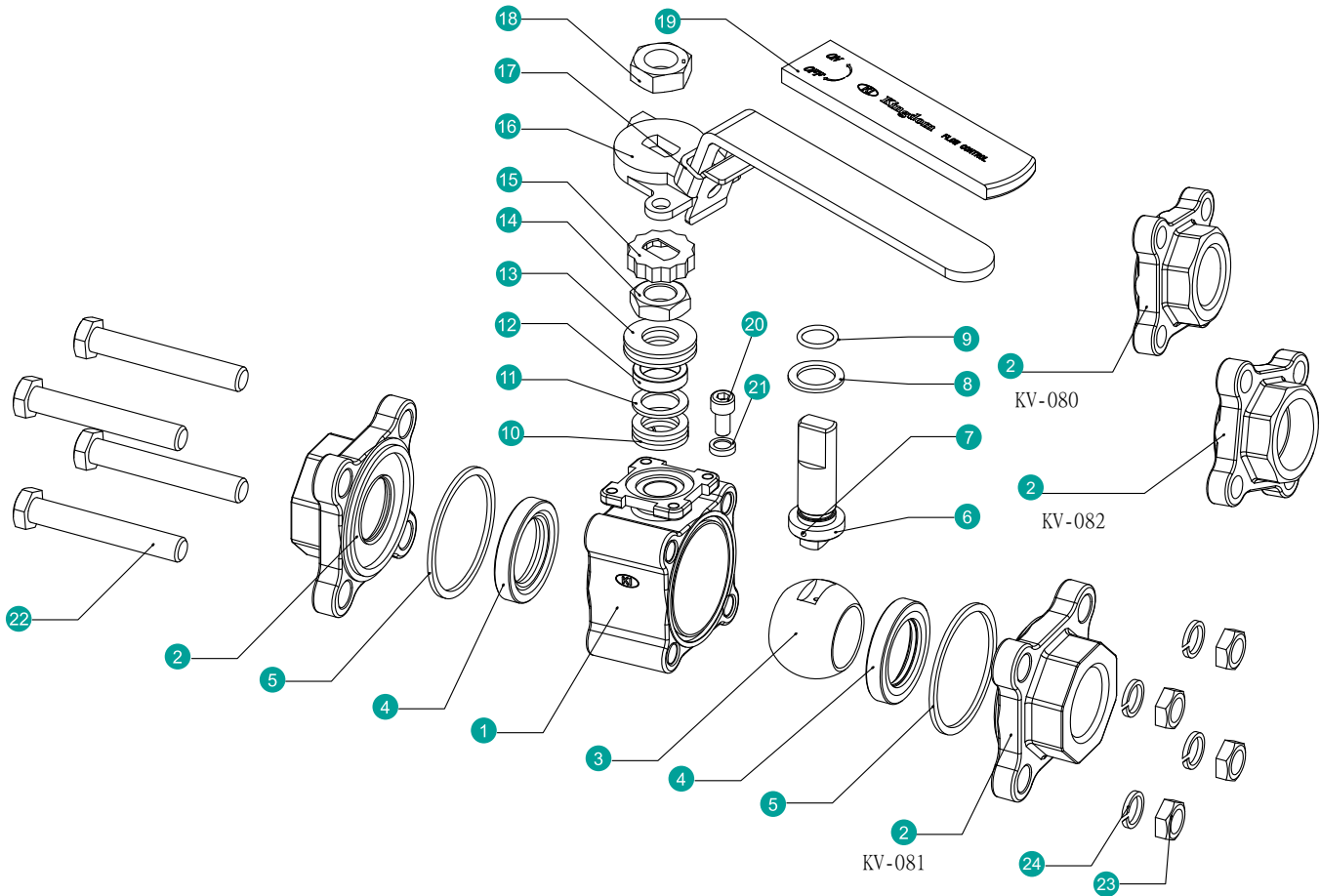
Floating Ball valves ,1500psi

Full Bore : NPS 1/4 ~ NPS 2



Seat Materials : Ⓜ TFM1600 Ⓜ TFM4215 Ⓜ PEEK

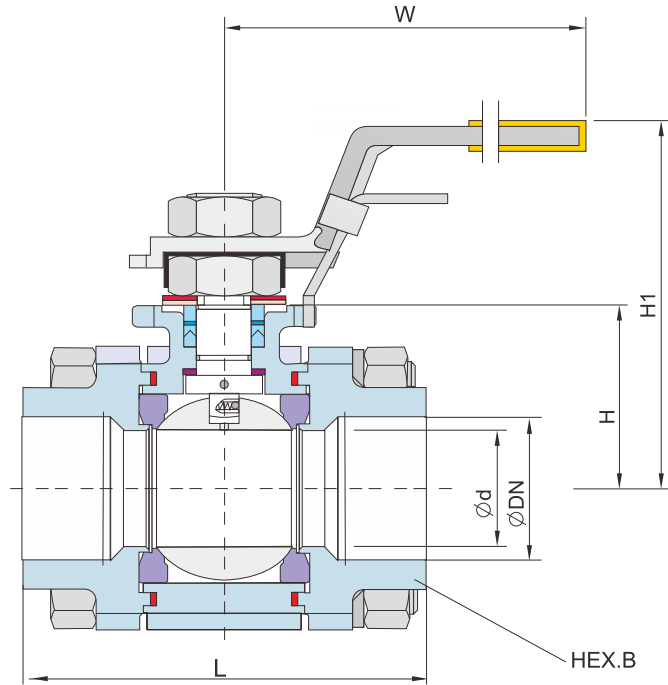
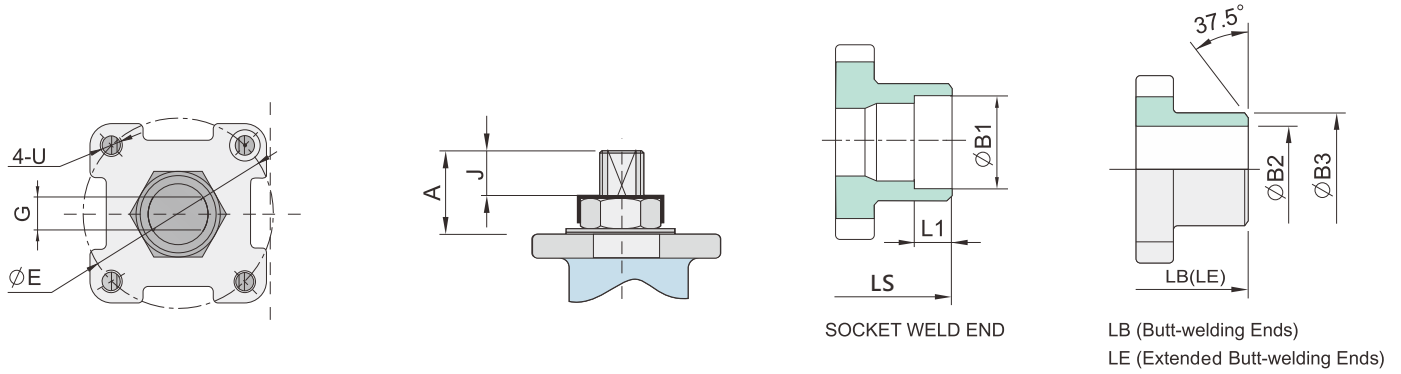
Body Ratings: Shown above are for ASTM A351 Gr.CF8M and A216 Gr.WCB  
For ratings of other valve shell materials, please refer to the last edition of ASME B16.34.



## 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		TFM4215	
5	Body Gasket	PTFE / TFM1600 / Graphite*		
6	Stem	316		304
7	Anti-Static Device	316		304
8	Thrust Washer	PTFE / TFM1600		
9	O-ring	FKM		
10	Stem 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	Lock Device	304		
18	Handle Nut	A194-8 (304)		
19	Handle Sleeve	Vinyl Plastic		
20	Stop Bolt	A2-70		
21	Stop Washer	304		
22	Bolting	A194-B8 / A2-70		
23	Bolt Nut	A194-8 / A2-70		
24	Bolt Washer	304		

\*Materials for KV-080F, KV-081F, KV-081F-L, KV-082F Series (Fire Safe Models)



## DIMENSION TABLE

### ANSI 2000WOG DIMENSION TABLE

Unit: mm

DN	NPS	d	L	LS	LB	LE	H	H1	W	B1	B2	B3	L1	G	A	J	E	U	HEX.B	ISO 5211
8	1/4	10.6	70	70	70	165	31	80	137	14.2	7.6	18	10.0	6.3	17.3	10.4	42	M5	23.5	F04
10	3/8	12.7	70	70	70	165	31	80	137	17.6	10.7	18	10.0	6.3	17.3	10.4	42	M5	23.5	F04
15	1/2	15.0	75	75	75	165	36	88	137	21.8	13.9	22	10.0	6.3	20.3	11.8	42	M5	28.0	F04
20	3/4	20.0	80	80	90	190	40	91	137	27.2	18.8	28	13.0	6.3	20.3	11.8	42	M5	34.0	F04
25	1	25.0	90	90	100	216	46	100	172	33.9	24.3	34	13.0	9.0	23.3	12.5	50	M6	46.0	F05

### ANSI 1500WOG DIMENSION TABLE

Unit: mm

DN	NPS	d	L	LS	LB	LE	H	H1	W	B1	B2	B3	L1	G	A	J	E	U	HEX.B	ISO 5211
32	1 1/4	32.0	110	110	110	229	50	104	172	42.7	32.5	43	13.0	9.0	23.3	12.5	50	M6	55.0	F05
40	1 1/2	38.0	120	120	125	241	60	116	202	48.8	38.1	50	13.0	9.6	30.0	15.1	70	M8	57.0	F07
50	2	50.0	140	140	150	292	68	124	202	61.2	49.2	61	16.0	9.6	30.0	15.1	70	M8	73.0	F07