Kingdom
FLOW CONTROL CO., LTD.

KV-030/KV-031/KV-032/KV-031-L

1000 WOG, Economical type
3 - PC Body, Full Port, Thread/BW/SW/EXBW Ends Ball valve

260225

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 (KV-030) : ASME B1.20.1, BS21, EN 10226
  DIN 2999/259, ISO 228/1
  JIS B0203 ISO7/1
- Butt Weld (KV-031,031-L) : ASME B16.25(Ø B2 Sch40) , EN 12627
- Socket Weld (KV-032) : ASME B16.11
- Inspection & Testing : MSS SP-110

CV KV VALUES

NPS	DN	CV	KV
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

NPS	DN	KV-030		KV-031		KV-032	
		(kg)	(lb)	(kg)	(lb)	(kg)	(lb)
1/4	8	0.49	1.08	0.44	0.97	0.46	1.01
3/8	10	0.45	0.99	0.43	0.95	0.50	1.10
1/2	15	0.49	1.08	0.48	1.06	0.63	1.39
3/4	20	0.77	1.70	0.79	1.75	0.76	1.68
1	25	1.21	2.67	1.17	2.58	1.18	2.60
1 1/4	32	1.86	4.10	1.88	4.14	1.84	4.06
1 1/2	40	2.63	5.80	2.68	5.91	2.65	5.84
2	50	4.15	9.15	4.00	8.82	3.82	8.42
2 1/2	65	8.25	18.19	8.00	17.64	8.08	17.81
3	80	11.5	25.35	11.8	26.01	10.7	23.50

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TORQUE VALUES

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

unit : in·lb / N·m

Size\△P		75psig		150psig		300psig		700psig		1000psig	
		5bar		10bar		20bar		50bar		63bar	
NPS	DN	N·m	In·lb	N·m	In·lb	N·m	In·lb	N·m	In·lb	N·m	In·lb
¼	8	4.5	40	4.5	40	4.5	40	4.5	40	4.5	40
⅜	10	4.5	40	4.5	40	4.5	40	4.5	40	4.5	40
½	15	5	44	5	44	5	44	5	44	5	44
¾	20	6	53	6	53	6	53	6	53	6	53
1	25	10	88	10	89	11	97	11	97	11	97
1 ¼	32	13	115	13	115	15	133	17	150	19	168
1 ½	40	19	168	19	168	22	195	24	212	26	230
2	50	25	221	29	257	32	283	35	310	38	336
2 ½	65	40	354	45	398	49	434	54	478	59	522
3	80	65	575	72	637	81	717	90	796	101	894

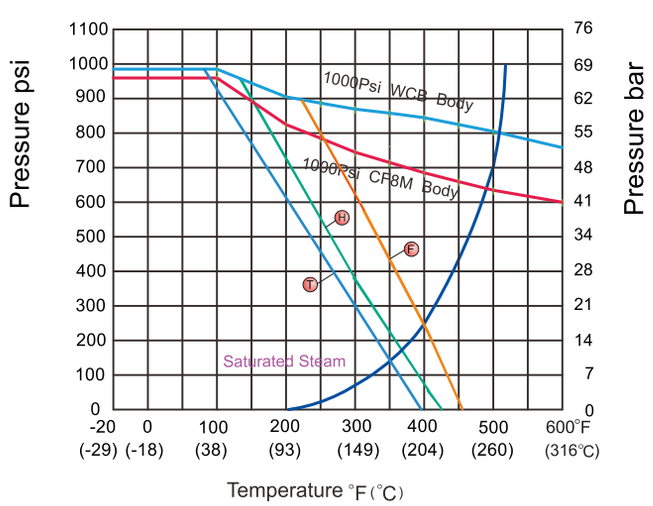
Remark : 1.Torques will increase about 30% if seat materials are Reinforced Fiber-Glass PTFE, Carbon-filled PTFE or EK+PTFE or TFM4215.
2.The torque figures at 5 bar pressure are maximum values to be tested after the valves are placed for 24 hours.
3.For actuator sizing, a safety factor of minimum 30%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

TECHNICAL INFORMATION

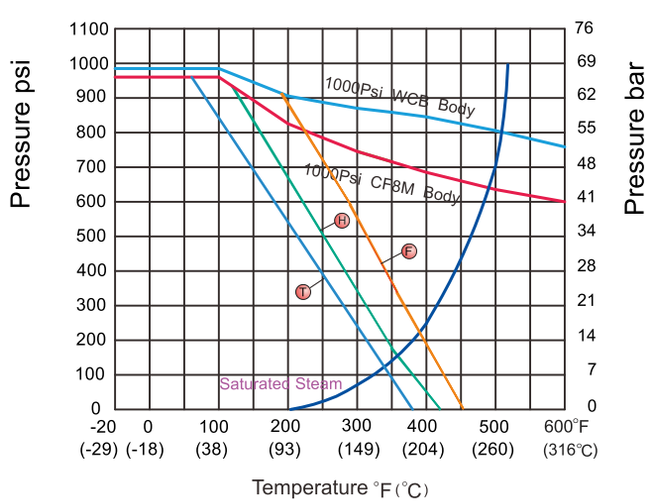
PRESSURE - TEMPERATURE DATA

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.

Full Bore : NPS ¼ ~ NPS 1 ¼
DN8 to DN32



Full Bore : NPS 1 ½ ~ NPS 3
DN40 to DN80



Seat Materials : Ⓣ PTFE Ⓗ TFM1600 Ⓕ TFH4215

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.

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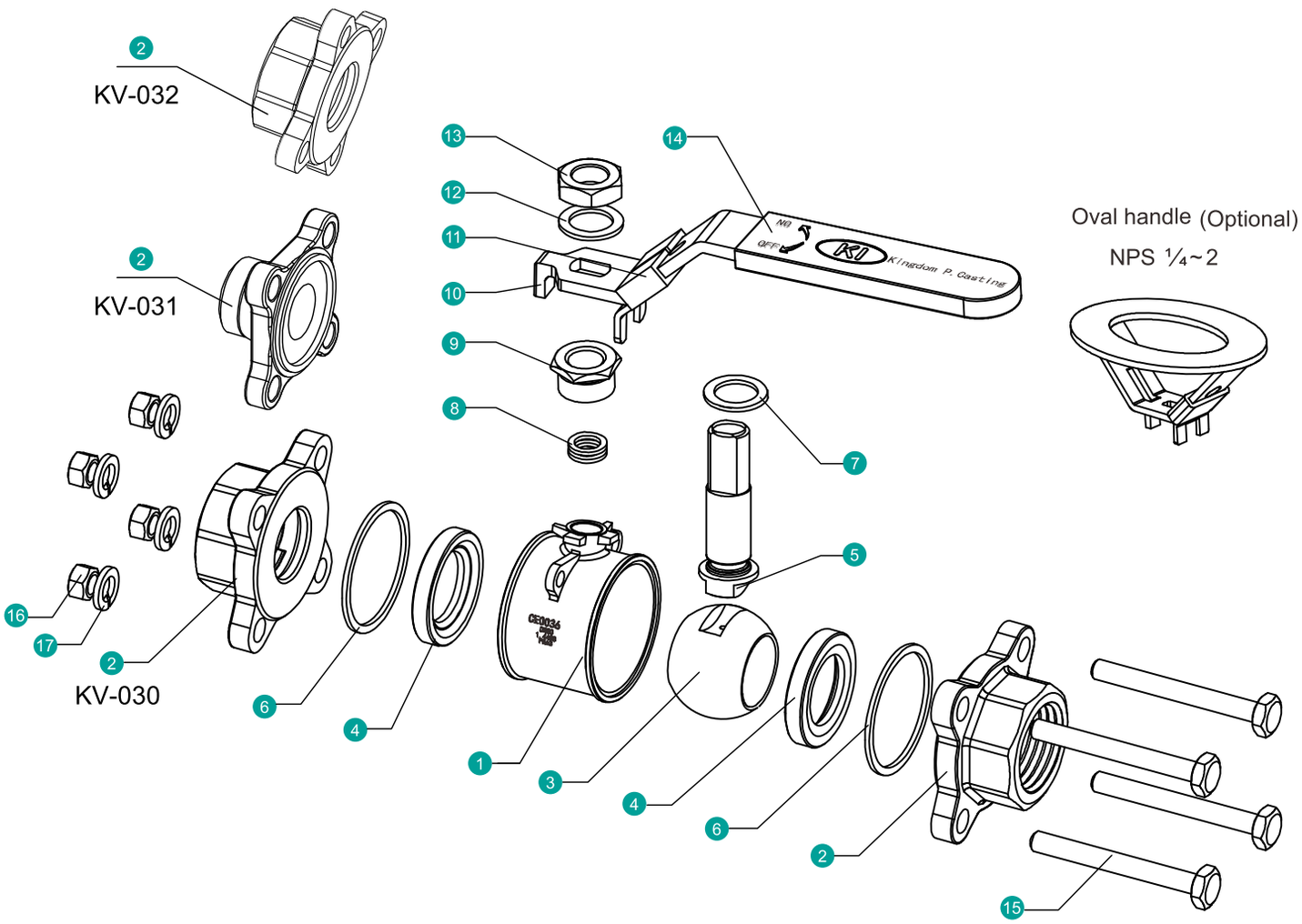

MATERIAL OF CONSTRUCTION

NO.	PART NAME	MATERIALS		
1	Body	CF8M(1.4408)	CF8(1.4308)	WCB(1.0619)
2	End Cap(Thread) End Cap(BW/SW)	CF8M(1.4408) CF3M(1.4409)	CF8(1.4308) CF8(1.4308)	WCB(1.0619) WCB(1.0619)
3	Ball	316	304	
4	Ball Seat	TFM1600/ PTFE		
5	Stem	316	304	
6	Body Gasket	PTFE / TFM1600		
7	Thrust washer	PTFE / TFM1600		
8	Packing	PTFE / GRAPHITE		
9	Gland Nut	304		
10	Handle	304		
11	Lock Device	304		
12	Stem Washer	304		
13	Handle Nut	A194-8		
14	Handle Sleeve	PVC		
15	Bolting	A193-B8/A2-70		
16	Bolt Nut	A194-8/A2-70		
17	Bolt Washer	304		

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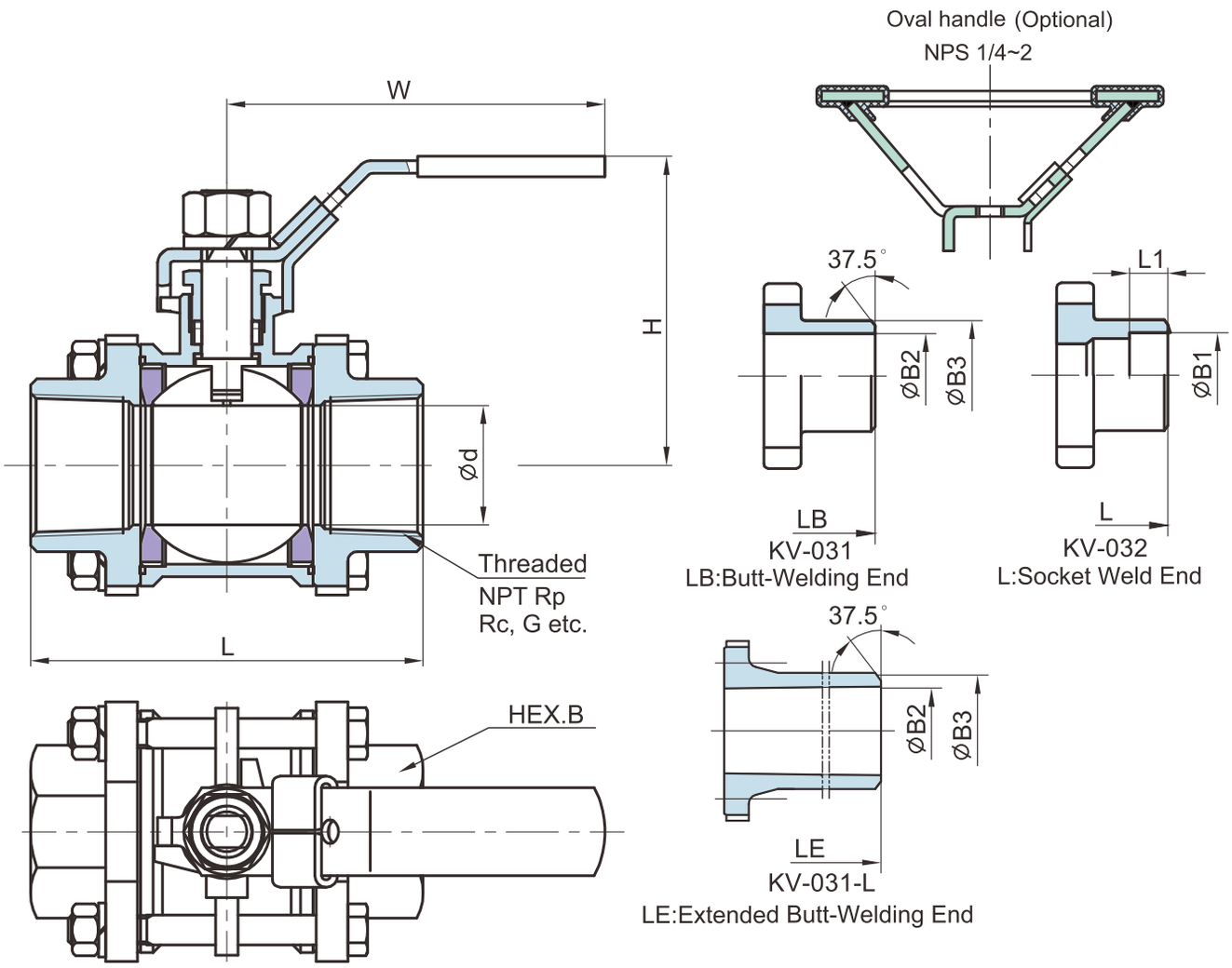

DIMENSION TABLE

ANSI 1000 WOG DIMENSION TABLE

Unit : mm

NPS	DN	d	L	LB	LE	H	W	B1	B2	B3	L1	HEX.B
1/4	8	10.6	65.2	65.2	225	58	100	14.2	9.3	18	10.0	22
3/8	10	12.7	65.2	65.2	225	58	100	17.8	12.5	18	10.0	23.5
1/2	15	15	69.5	75	225	58	100	21.8	15.8	22	10.0	28
3/4	20	20	80	90	225	63	129	27.3	20.9	28	13.0	34.5
1	25	25	90	100	245	76	156	34.0	26.7	34	13.0	42
1 1/4	32	32	110	110	255	81	156	42.8	35.1	43	16.0	52
1 1/2	40	38	120	125	260	94	184	48.9	40.9	50	16.0	58.5
2	50	50	140	150	275	105	184	61.4	52.5	61	17.0	71.5
2 1/2	65	63.5	185	190	330	131	252	74.0	62.7	76	17.0	86.5
3	80	76	205	220	356	139	252	90.0	78.0	92	17.0	101

ANSI 1000 WOG DIMENSION TABLE

Unit : inch

NPS	DN	d	L	LB	LE	H	W	B1	B2	B3	L1	HEX.B
1/4	8	0.42	2.57	2.57	8.86	2.26	3.94	0.56	0.37	0.71	0.39	0.87
3/8	10	0.50	2.57	2.57	8.86	2.26	3.94	0.70	0.49	0.71	0.39	0.93
1/2	15	0.59	2.74	2.95	8.86	2.26	3.94	0.86	0.62	0.87	0.39	1.10
3/4	20	0.79	3.15	3.54	8.86	2.48	5.08	1.07	0.82	1.10	0.51	1.36
1	25	0.98	3.54	3.94	9.65	2.97	6.14	1.34	1.05	1.34	0.51	1.65
1 1/4	32	1.26	4.33	4.33	10.04	3.19	6.14	1.69	1.38	1.69	0.63	2.05
1 1/2	40	1.50	4.72	4.92	10.24	3.70	7.24	1.93	1.61	1.97	0.63	2.30
2	50	1.97	5.51	5.91	10.83	4.11	7.24	2.42	2.07	2.40	0.67	2.81
2 1/2	65	2.50	7.28	7.48	12.99	5.16	9.92	2.91	2.47	2.99	0.67	3.41
3	80	2.99	8.07	8.66	14.02	5.47	9.92	3.54	3.07	3.62	0.67	3.98

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