



**AUTOMATION
BALL VALVES**



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KTC-ABV 200903(1C)
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Standard	ANSI/ASME	DIN	JIS
Rating	B16.34 CLASS 150 (BS5351 CLASS 150) B16.34 CLASS 300 (BS5351 CLASS 300)	DIN 3357 PN10-PN40 EN 12516-1	B2001 10K B2001 20K
Face to Face	B16.10	DIN 3202 F4/F18 DIN 3202 F1/F17	B2002 10K Form 6 B2002 20K Form 10
Connection Facing	B16.5RF serrated Finish (AARH200)	DIN 2501 PN10-PN40 Facing DIN 2526 Form C	B2212 10K B2214 20K
Inspection & Testing	API 598, API 6D	DIN 3230/3, EN 12266	JIS B2003
Quality Assurance	ISO 9001, QS9000 AD 2000-Merkblatt W0 PED 97/23/EC CE 0036 API 6D	ISO 9001, QS9000 AD 2000-Merkblatt W0 PED 97/23/EC CE 0036 API 6D	ISO 9001, QS 9000 AD 2000-Merkblatt W0 PED 97/23/EC CE 0036 API 6D

AVAILABLE OPTIONS

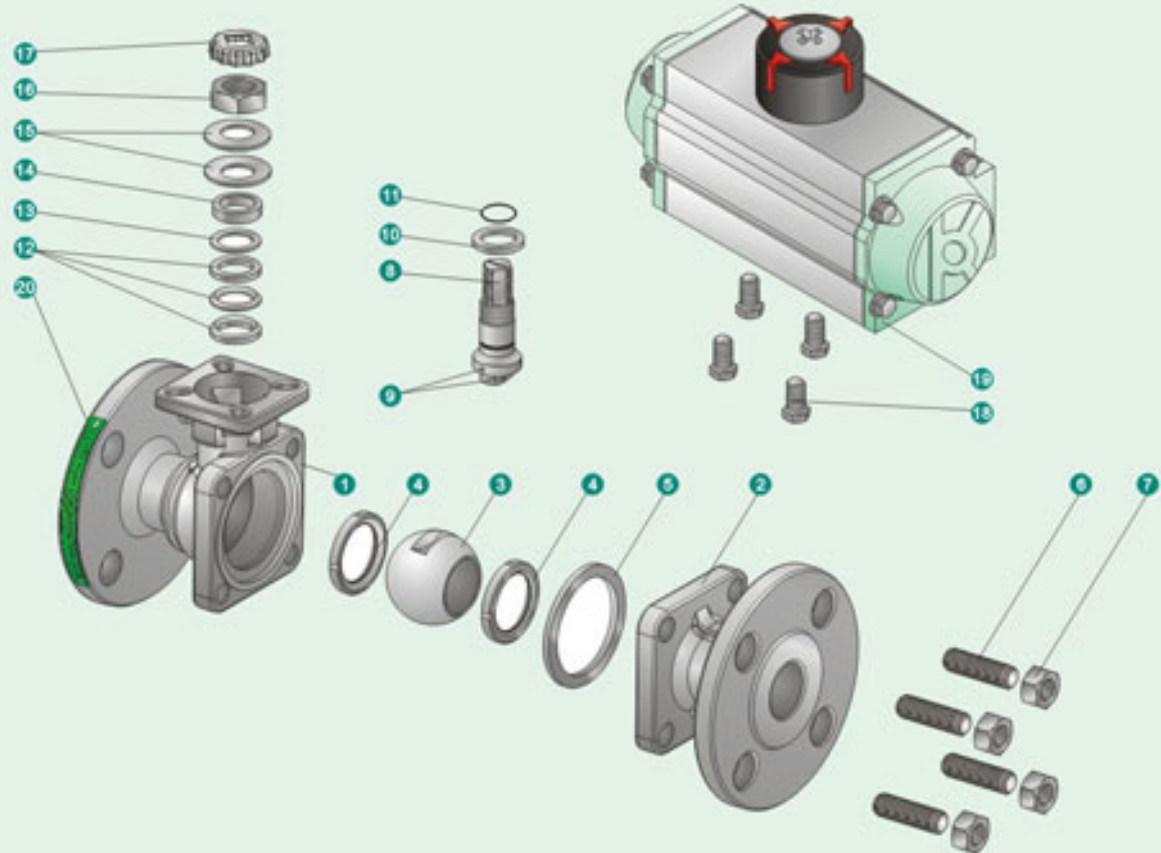
- Other Alloy Steels are Available
- Casting per NACE/MR-01-75 for Sour Gas Service.
- Castings Approved by TÜV AD 2000 -Merkblatt W0 /EN10204 3.2 Form. (EN10204 3.1 Form is free)

DESIGN FEATURES:

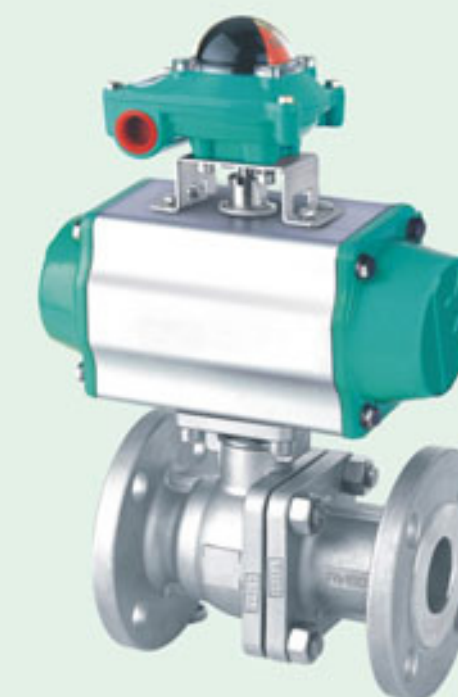
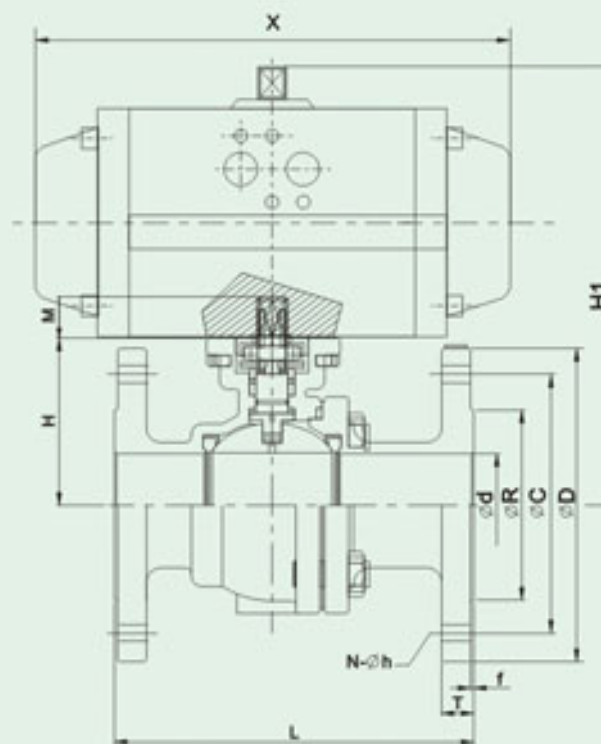
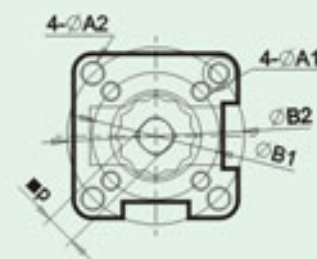
- Built-in ISO 5211 Direct Mounting Pad for Easy Automation
- Fire Safe** Design Approved
- Anti-static Devices for Ball-Stem-Body
- Blow-out Proof Stem
- Pressure Balance Hole in Ball Slot
- TA-LUFT** Design Approved
- Casting Boss on Body for Draining
- Options: 1. Actuator 2. Limit Switch 3. Positioner

APPLICABLE STANDARDS:

- Design: ASME B16.34, API 608
- Fire Safe: API 607 5th 2005, ISO 10497
- Face to Face: ASME B16.10
- Wall Thickness: ASME B16.34
- End Flange: ASME B16.5
- Inspection & Testing: API 598, API 6D



OPTION: 5" 8



MATERIAL OF CONSTRUCTION

NO	PART NAME	MATERIALS		
		ANSI / JIS / DIN	ANSI / JIS / DIN	ANSI / JIS / DIN
1	Body	A351-CF8M / SCS14A / 1.4408	A351-CF8 / SCS13A / 1.4308	A216-WCB / SCPH2 / 1.0619
2	End Cap	A351-CF8M / SCS14A / 1.4408	A351-CF8 / SCS13A / 1.4308	A216-WCB / SCPH2 / 1.0619
3	Ball	A351-CF8 / SCS14A / 1.4408		
4	Ball Seat	TFM1600 / PTFE / RTFE		
5	Body Gasket	TFM1600 / PTFE / 316 SPIRAL WOUND+ GRAFOIL*		
6	Bolting	A193-B8		
7	Bolt Nut	A194-8		
8	Stem	SUS316	SUS304	
9	Anti-Static Device	SUS316	SUS304	
10	Thrust Washer	PTFE		
11	O-Ring	FKM (VITON)		
12	Stem Packing	PTFE / GRAFOIL*		
13	Bushing	50%SS+50%PTFE / SUS304*		
14	Gland	SUS316		
15	Belleville Washer	SUS301		
16	Stem nut	A194-8		
17	Stop-lock-cap	SUS304		
18	Hex Bolting	A193-B8		
19	Actuator	Pneumatic KP / Electric KQ		
20	Nameplate	SUS304		

*Materials for KZV-L60 (Fire Safe Models)

ASME CLASS 150

SIZE	d	L	R	D	C	T	f	N	h	H	H1	M	P	A1	A2	B1	B2	X	Y	ISO 5211	P-Actuator	E-Actuator	Pressure
1/2"	15	108	35.0	89.0	60.5	9.7	2	4	16.0	48.0	145.0	9	9	6	6	36	42	144	72	F03-F04	KP50	KQ006	80PSI
3/4"	20	117	43.0	98.6	70.0	10.5	2	4	16.0	53.0	150.0	9	9	6	6	36	50	144	72	F03-F05	KP50	KQ006	80PSI
1"	25	127	51.0	108.0	79.2	11.2	2	4	16.0	58.5	168.5	11	11	6	7	42	50	164	84	F04-F05	KP63	KQ006	80PSI
1-1/4"	32	140	63.5	117.0	88.9	12.7	2	4	16.0	71.0	181.0	11	11	6	9	42	70	164	84	F04-F07	KP63	KQ006	80PSI
1-1/2"	38	165	73.2	127.0	98.6	14.2	2	4	16.0	76.0	204.0	14	14	7	9	50	70	208	96	F05-F07	KP75	KQ008	80PSI
2"	50	178	92.0	152.5	120.7	15.9	2	4	19.0	81.0	209.0	14	14	7	9	50	70	208	96	F05-F07	KP75	KQ008	80PSI
2-1/2"	63	190	104.7	177.8	139.7	17.5	2	4	19.0	101.5	243.5	17	17	9	11	70	102	247	108	F07-F10	KP88	KQ015	80PSI
3"	76	203	127.0	190.5	152.4	19.1	2	4	19.0	111.5	265.5	17	17	9	11	70	102	268	123	F07-F10	KP100	KQ015	80PSI
4"	100	229	157.2	228.6	190.5	23.9	2	8	19.0	140.0	335.0	22	22	N/A	11	N/A	102	345	151	F10	KP125	KQ020	80PSI
5"	125	356	186.0	254.0	216.0	24.0	2	8	22.3	183.0	414.0	27	27	14	N/A	125	N/A	450	202	F12	KP160	KQ030	80PSI
6"	150	394	216.0	279.4	241.3	25.4	2	8	22.3	204.0	435.0	27	27	14	N/A	125	N/A	450	202	F12	KP160	KQ030	80PSI
8"	200	457	270.0	342.9	298.5	28.5	2	8	22.3	252.5	555.5	27	27	14	N/A	125	N/A	545	224	F14	KP200	KQ050	80PSI

ASME CLASS 300

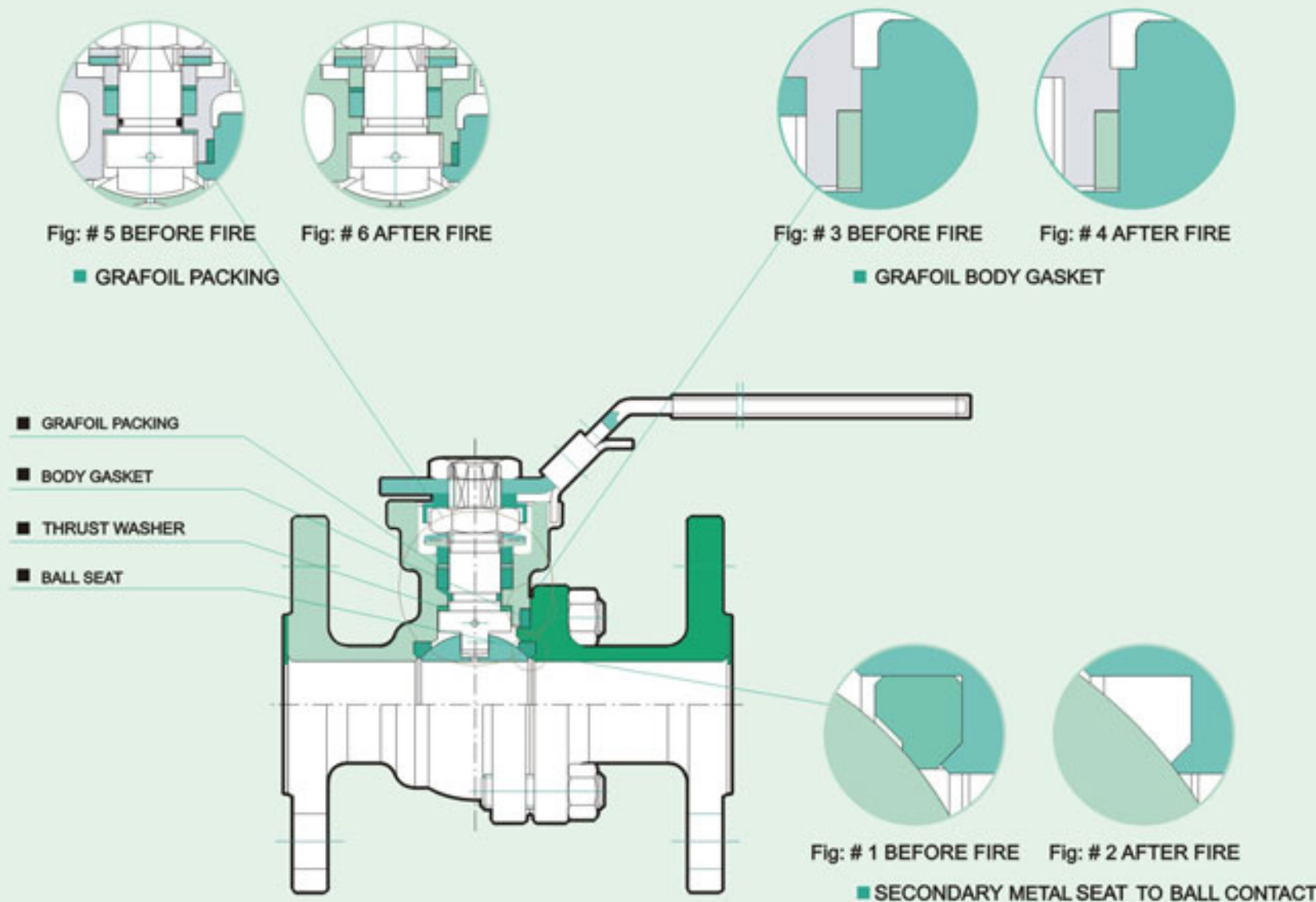
SIZE	d	L	R	D	C	T	f	N	h	H	H1	M	P	A1	A2	B1	B2	X	Y	ISO 5211	P-Actuator	E-Actuator	Pressure
5"	125	381	186	279.4	235.0	35.0	2	8	22.3	183.0	414.0	27	27	14	N/A	125	N/A	450	202	F12	KP160	KQ030	80PSI
6"	150	403	216	317.5	269.8	36.6	2	12	22.3	204.0	435.0	27	27	14	N/A	125	N/A	450	202	F12	KP160	KQ030	80PSI
8"	200	502	270	381.0	330.2	41.2	2	12	25.4	252.5	555.5	27	27	14	N/A	125	N/A	545	224	F14	KP200	KQ050	80PSI

API 607-Fire Safe Approved

Kingdom soft-seated ball valves (2-PC Body, Flange Ends, Series KV-060 and Series KV-L60) conform to Fire Safe Tests of API 607 Fifth Edition and ISO 10497. Our products can seal properly during the fire and after the accident, reduce inside and outside leakage of pipeline fluids, and prevent environmental pollution (even on fire) resulted from flammable or other fluids in the pipeline.

Design features:

- Secondary Metal Seat to Ball Contact:** During the fire, soft seats (such as TFM1600, PTFE, RTFE...) will burn up and lose supporting and sealing functions. Then, the Ball moves free downstream due to pressure from upstream, and contacts secondary metal seats of Body or End Cap, which comes to a leakage prevention (see Figures #1 & #2).
- Grafoil Body Gaskets** can endure high temperature and remain unaffected during the fire, and eventually prevent fluid leakage to the exterior. Moreover, the connection of Body and End Cap Flange maintains metal to metal contact by Stud Bolts screwed into Body (see Figures #3 & #4).
- Grafoil Packing** can endure high temperature and remain unaffected during the fire and prevent fluid leakage to the exterior (see Figures # 5 & # 6).



DESIGN FEATURES:

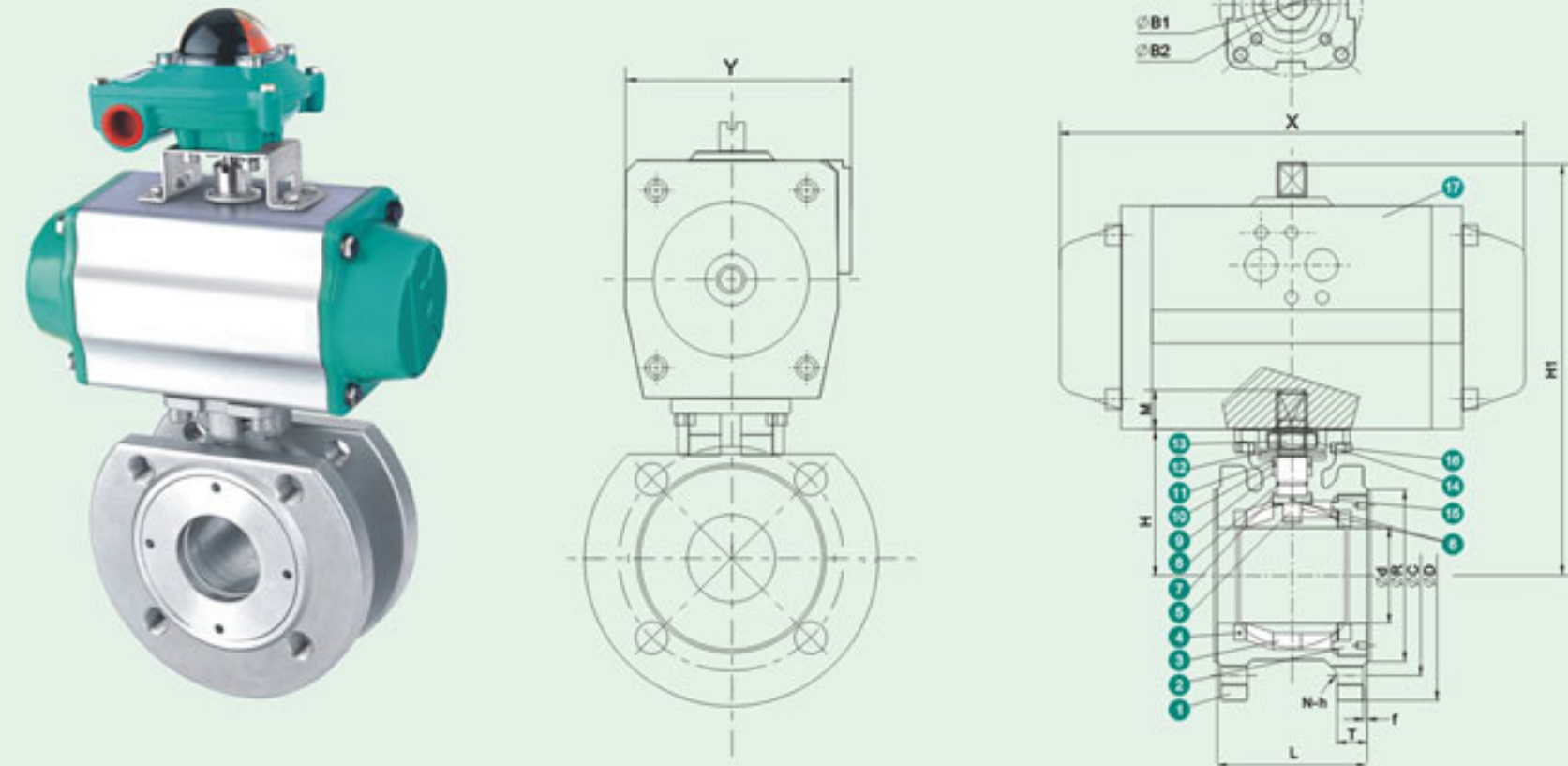
- Built-in ISO 5211 Direct Mounting Pad for Easy Automation
- **Fire Safe** Design Approved
- Anti-static Devices for Ball-Stem-Body
- Blow-out Proof Stem
- Pressure Balance Hole in Ball Slot
- **TA-LUFT** Design Approved
- Casting Approved by TÜV AD 2000-Merkblatt W0
- Options: 1. Actuator 2. Limit Switch 3. Positioner

APPLICABLE STANDARDS:

- Design: DIN 3375 / 1, 2. EN12516-1
- Fire Safe: API 607 5th 2005, ISO 10497
- Wall Thickness: EN12516-1
- Flanged Ends: DIN 2501 PN10-PN40
- Inspection & Testing: DIN 3230/3, EN12266

NO.	PART NAME	MATERIALS		
1	Body	1.4408	1.4308	1.0619
2	End Cap	1.4408	1.4308	1.0619
3	Ball	1.4408	1.4308	
4	Ball Seat	TFM1600 / PTFE / RTFE		
5	Stem	SUS 316	SUS 304	
6	Anti-Static Device	SUS 316	SUS 304	
7	Thrust Washer	PTFE		
8	O-Ring	FKM (VITON)		
9	Stem Packing	PTFE / GRAFOIL*		
10	Bushing	50%SS+50%PTFE / SUS 304*		
11	Gland	SUS 316		
12	Belleville Washer	SUS 301		
13	Stem Nut	A194-8		
14	Stop-lock-Cap	SUS 304		
15	Body Gasket	PTFE / 316 SPIRALWOUND+GRAFOIL*		
16	Hex Bolting	A193-B8		
17	Actuator	Pneumatic KP / Electric KQ		

*Materials for KZV-L7KF, KZV-L7NF (Fire-Safe Models)



SIZE	PN	φd	φR	φC	φD	f	T	L	H1	H	M	P	N	h	φA1	φA2	φB1	φB2	X	Y	ISO 5211	P-Actuator	E-Actuator	Pressure
DN15 1/2"	10-40	15.0	45	65	95	2	9	42	143	46	9	9	4	M12	6	6	36	42	144	72	F03-F04	KP50	KQ006	80PSI
DN20 3/4"	10-40	20.0	58	75	105	2	9	44	148	51	9	9	4	M12	6	7	36	50	144	72	F03-F04	KP50	KQ006	80PSI
DN25 1"	10-40	25.0	68	85	115	2	9	50	172	62	11	11	4	M12	6	7	42	50	164	84	F04-F05	KP63	KQ006	80PSI
DN32 1-1/4"	10-40	32.0	78	100	140	2	12	60	182	72	11	11	4	M16	6	9	42	70	164	84	F04-F05	KP63	KQ006	80PSI
DN40 1-1/2"	10-40	38.0	88	110	150	3	13	65	206	78	14	14	4	M16	7	9	50	70	208	96	F05-F07	KP75	KQ008	80PSI
DN50 2"	10-40	50.0	102	125	165	3	20	80	214	86	14	14	4	M16	7	9	50	70	280	96	F05-F07	KP75	KQ008	80PSI
DN65 2-1/2"	10/16 25/40	63.5	122	145	185	3	18 22	110 113	250	108.0	17	17	4 8	M16	9	11	70	102	247	108	F07-F10	KP88	KQ015	80PSI
DN80 3"	10/16 25/40	76.0	138	160	200	3	20 24	120 154	340	116.0	17	17	8	M16	9	11	70	102	268	123	F07-F10	KP100	KQ015	80PSI
DN100 4"	10/16 25/40	95.0	158 162	180 190	220 235	3	20 24	150 150	334 334	139.0	22	22	8	M16 M20	N/A	11	N/A	102	345	151	F10	KP125	KQ020	80PSI
DN125 5"	10/16 25/40	118.0	188 220	210 250	220 270	3	22 26	180 180	407 407	176.0	27	27	8	M16 M24	N/A	14	N/A	125	450	202	F12	KP160	KQ030	80PSI
DN150 6"	10/16 25/40	142.0	212 218	240 285	285 300	3	22 28	225 225	423 423	192.0	27	27	8	M20 M24	N/A	14	N/A	125	545	202	F12	KP160	KQ030	80PSI

KZV-L7K, KZV-L7KF - PN16
KZV-L7N, KZV-L7NF - PN40



KZV-071 (Bracket Mount Standard Type)
KZV-071F (Bracket Mount Fire Safe Type)

ASME CLASS 150
1-PC Body, Flanged Ends, Full Port, Wafer Type

DESIGN FEATURES:

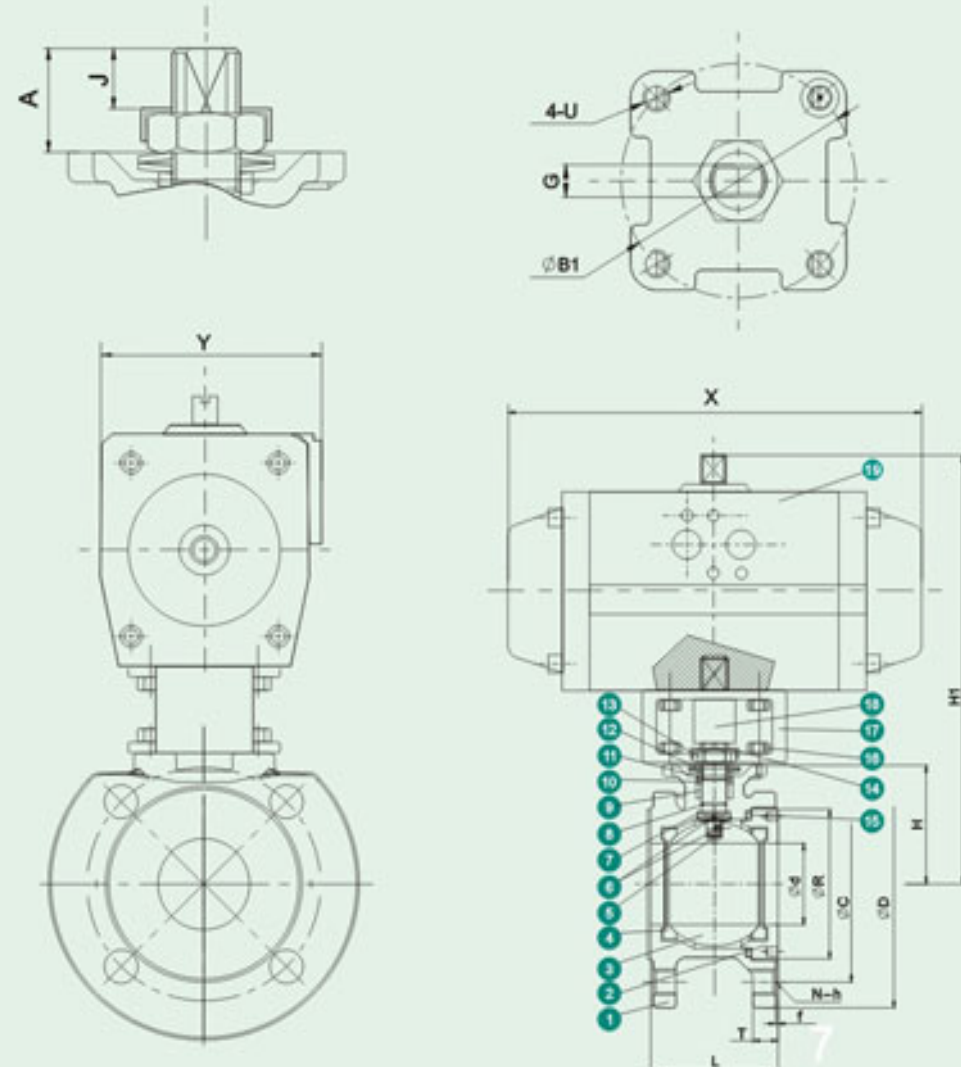
- **Fire Safe** Design and Construction
- Built-in ISO 5211 Mounting Pad for Easy Automation
- Anti-static Devices for Ball-Stem-Body
- Blow-out Proof Stem
- Pressure Balance Hole in Ball Slot
- **TA-LUFT** Design Approved
- Casting Approved by TÜV AD 2000-Merkblatt W0
- Options: 1. Actuator 2. Limit Switch 3. Positioner

APPLICABLE STANDARDS:

- Design: ASME B16.34, API 608
- Fire Safe: API 607 5th 2005, ISO 10497
- Wall Thickness: ASME B16.34
- Flange Ends: ASME B 16.5
- Inspection & Testing: API 598, API 6D

NO.	PART NAME	MATERIALS		
		CF8M	CF8	WCB
1	Body	CF8M	CF8	WCB
2	End Cap	CF8M	CF8	WCB
3	Ball	CF8M	CF8	
4	Ball Seat	TFM1600 / PTFE / RTFE		
5	Stem	SUS 316	SUS 304	
6	Anti-Static Device	SUS 316	SUS 304	
7	Thrust Washer	PTFE		
8	O-Ring	FKM (VITON)		
9	Stem Packing	PTFE / GRAFOIL*		
10	Bushing	50%SS + 50%PTFE / SUS 304*		
11	Gland	SUS 316		
12	Belleville Washer	SUS 301		
13	Stem Nut	A194-8		
14	Stop-Lock-Cap	SUS 304		
15	Body Gasket	PTFE / 316 SPIRALWOUND+GRAFOIL*		
16	Hex Bolting	A193-B8		
17	Bracket	SUS 304		
18	Stem Adapter	SUS 304		
19	Actuator	Pneumatic KP / Electric KQ		

*Materials for KZV-071F (Fire-Safe Models)



ASME CLASS 150

KZV-071, KZV-071F

Unit: mm

SIZE	φd	L	φR	φD	φC	T	f	H	H1	N	h	G	A	J	U	φB1	X	Y	ISO 5211	P-Actuator	E-Actuator	Pressure
1/2"	15.0	42	35.0	89.0	60.5	9.7	2	41.0	176	4	1/2"	6.3	17.0	8.1	M5	42	144	72	F04	KP50	KQ006	80PSI
3/4"	20.0	44	43.0	98.6	70.0	10.5	2	44.0	179	4	1/2"	6.3	17.0	8.1	M5	42	144	72	F04	KP50	KQ006	80PSI
1"	25.0	50	50.8	108.0	79.3	11.2	2	46.5	212	4	1/2"	9.0	22.7	10.2	M6	50	208	96	F05	KP63	KQ006	80PSI
1-1/4"	32.0	60	63.5	117.4	88.9	12.7	2	55.0	221	4	1/2"	9.0	24.0	11.0	M6	50	208	96	F05	KP63	KQ006	80PSI
1-1/2"	38.0	65	73.5	127.0	98.6	14.3	2	64.0	246	4	1/2"	9.6	25.8	13.9	M8	70	248	108	F07	KP75	KQ008	80PSI
2"	50.0	80	92.0	152.4	120.6	15.8	2	73.1	255	4	5/8"	9.6	23.9	13.9	M8	70	248	108	F07	KP75	KQ008	80PSI
2-1/2"	63.5	110	105.0	177.8	139.7	17.5	2	88.0	312	4	5/8"	16.0	42.5	24.0	M10	102	268	123	F10	KP88	KQ015	80PSI
3"	76.0	120	127.0	190.5	152.4	19.0	2	97.0	321	4	5/8"	16.0	42.6	22.5	M10	102	268	123	F10	KP100	KQ015	80PSI
4"	100.0	150	157.3	228.6	190.5	23.9	2	117.0	382	8	5/8"	18.0	51.4	24.5	M10	102	345	151	F10	KP125	KQ020	80PSI
5"	125.0	195	186.0	254.0	215.9	25.2	2	155.0	456	8	3/4"	23.0	76.5	36.0	M12	125	450	202	F12	KP160	KQ030	80PSI
6"	150.0	225	215.9	279.4	241.3	25.4	2	194.0	495	8	3/4"	23.0	76.5	36.0	M12	125	450	202	F12	KP160	KQ030	80PSI

Kamizawa BALL VALVES

MULTI-WAY BALL VALVES

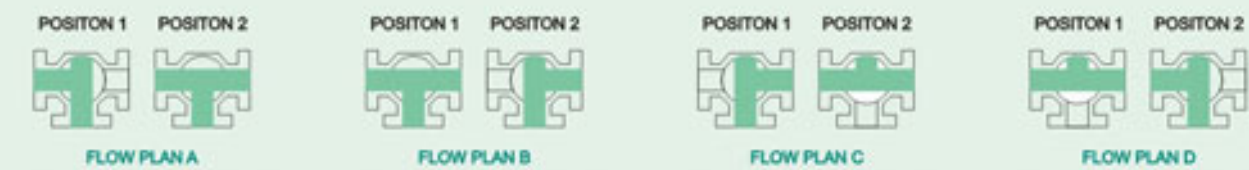


- Blow-out Proof and Anti-static Stem
- Pre-load 2 Belleville Washers to Self-adjust Packing
- Double Stem Sealing Design Has Been Approved for TA-Luft
- Casting Approved by TÜV AD-2000 Merkblatt W0

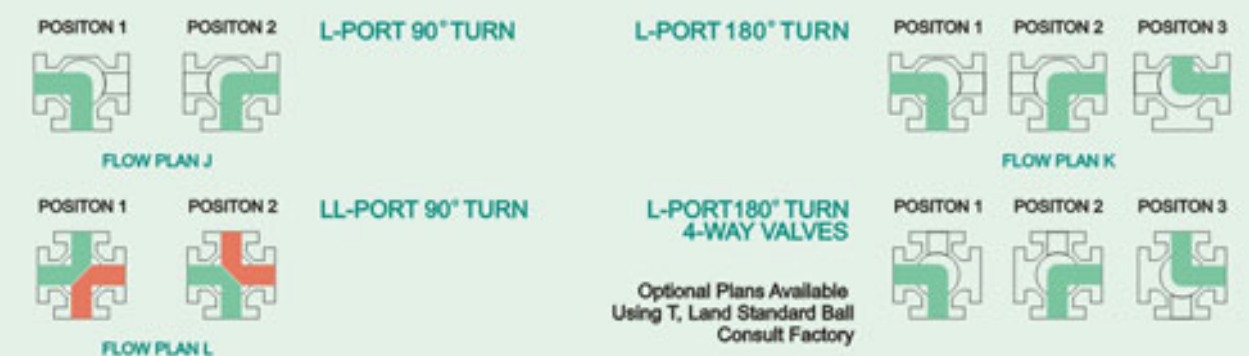
SERIES KZV-L50, KZV-L5N

FLOW PATTERNS FOR 3 & 4-WAY VALVE

T-PORT 90° TURN



T-PORT 180° TURN





FEATURES:

- Built-in ISO 5211 Direct Mounting Pad for Easy Automation
Anti-Static Devices for Ball-Stem-Body
Blow-out Proof Stem
Pressure Balance Hole in Ball Slot
TA-LUFT Design Approved
Positive Position Location At 90° Increments
Locking in Every 90° Increments
KZV-L5K/L, KZV-L5N/L: L-Port
KZV-L5K/T, KZV-L5N/T: T-Port
KZV-L5K/X, KZV-L5N/X: LL-Port
Options: 1. Actuator 2. Limit Switch 3. Positioner

APPLICABLE STANDARDS:

- Design: DIN 3357/1,2, EN12516-1
Flanged Ends: DIN 2501 PN10-PN40
Wall Thickness: ASME16.34
Inspection & Testing: DIN 3230/3, EN12266

Table with 3 columns: NO., PART NAME, MATERIALS. Lists 22 parts including Body, Cap, Ball, Ball Seat, Stem, etc.

FEATURES:

- Built-in ISO 5211 Direct Mounting Pad for Easy Automation
Anti-Static Devices for Ball-Stem-Body
Blow-out Proof Stem
Pressure Balance Hole in Ball Slot
TA-LUFT Design Approved
Positive Position Location At 90° Increments
Locking in Every 90° Increments
KZV-L5U/L, KZV-L5S/L: L-Port
KZV-L5U/T, KZV-L5S/T: T-Port
KZV-L5U/X, KZV-L5S/X: LL-Port
Options: 1. Actuator 2. Limit Switch 3. Positioner

APPLICABLE STANDARDS:

- Design: ASME B16.34, API 608
Flanged Ends: ASME B16.5
Wall Thickness: ASME16.34
Inspection & Testing: API 598, API 6D

Table with 3 columns: NO., PART NAME, MATERIALS. Lists 22 parts including Body, Cap, Ball, Ball Seat, Stem, etc.

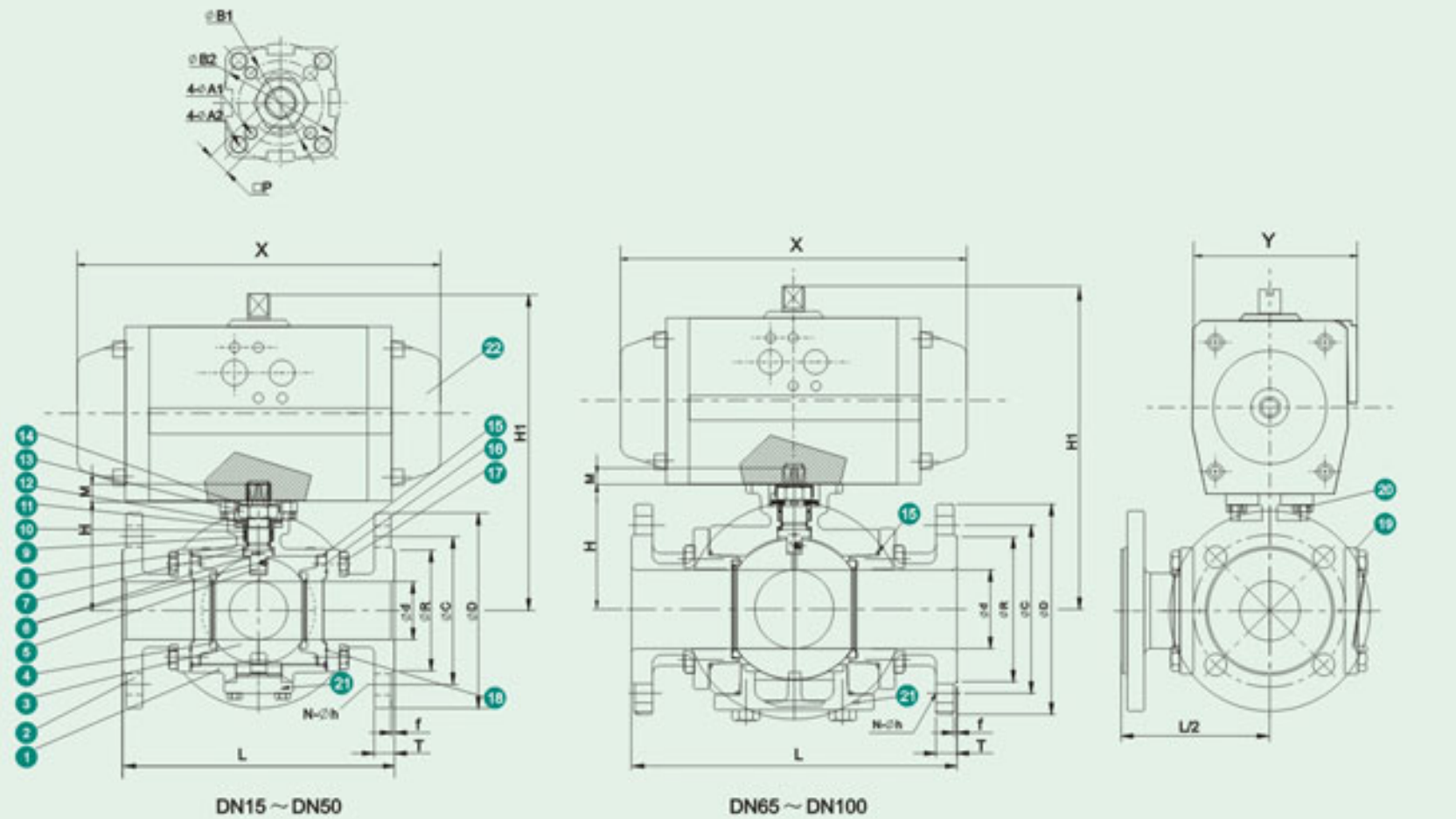


Table for DIN PN10-40 ball valve with columns: SIZE, PN, d, L, R, D, C, f, T, H, H1, N, h, P, M, A1, A2, B1, B2, X, Y, ISO 5211, P-Actuator, E-Actuator, Pressure.

KZV-L5K - PN16 KZV-L5N - PN40

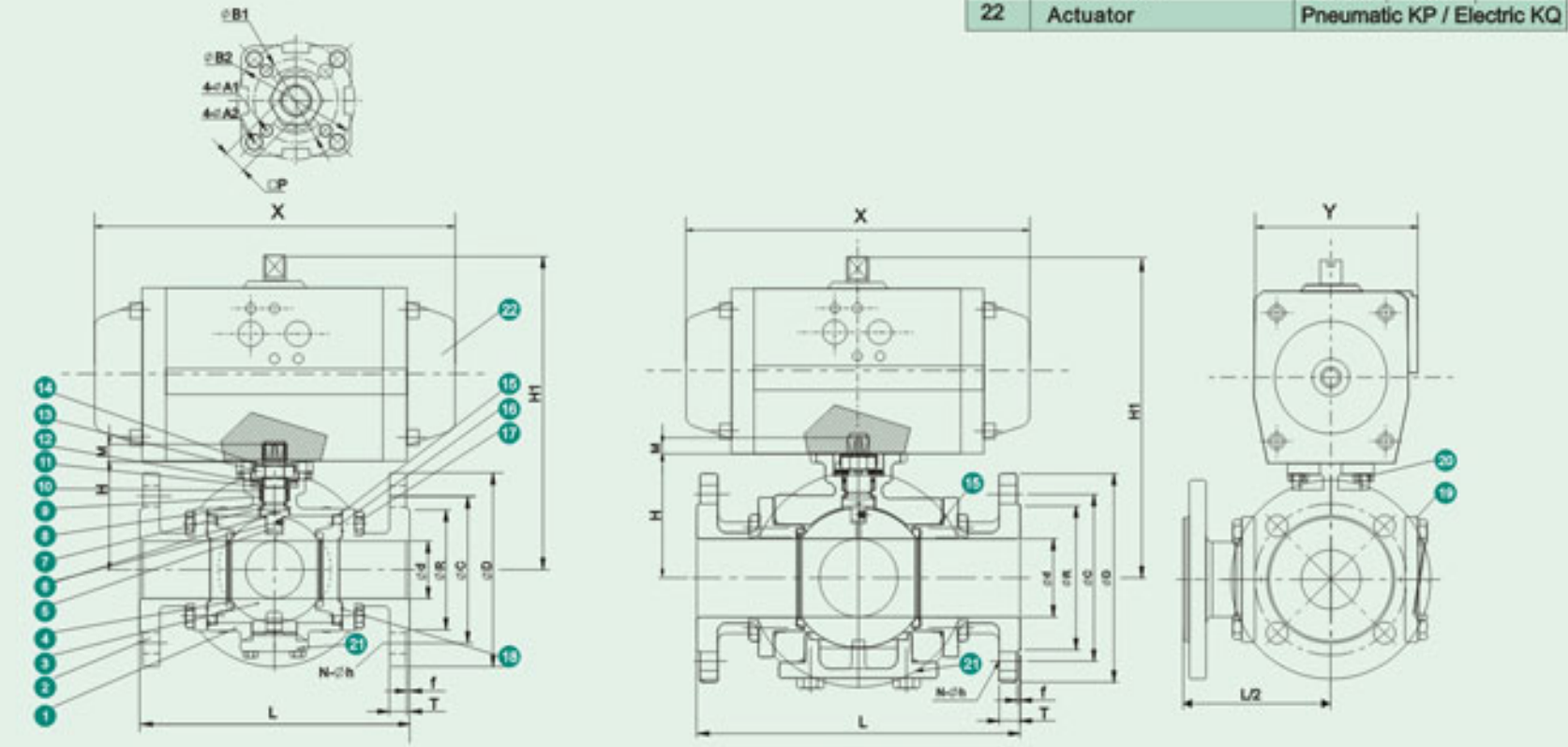


Table for ASME CLASS 150 ball valve with columns: SIZE, d, L, R, D, C, f, T, H, H1, N, h, P, M, A1, A2, B1, B2, X, Y, ISO 5211, P-Actuator, E-Actuator, Pressure.

Table for ASME CLASS 300 ball valve with columns: SIZE, d, L, R, D, C, f, T, H, H1, N, h, P, M, A1, A2, B1, B2, X, Y, ISO 5211, P-Actuator, E-Actuator, Pressure.



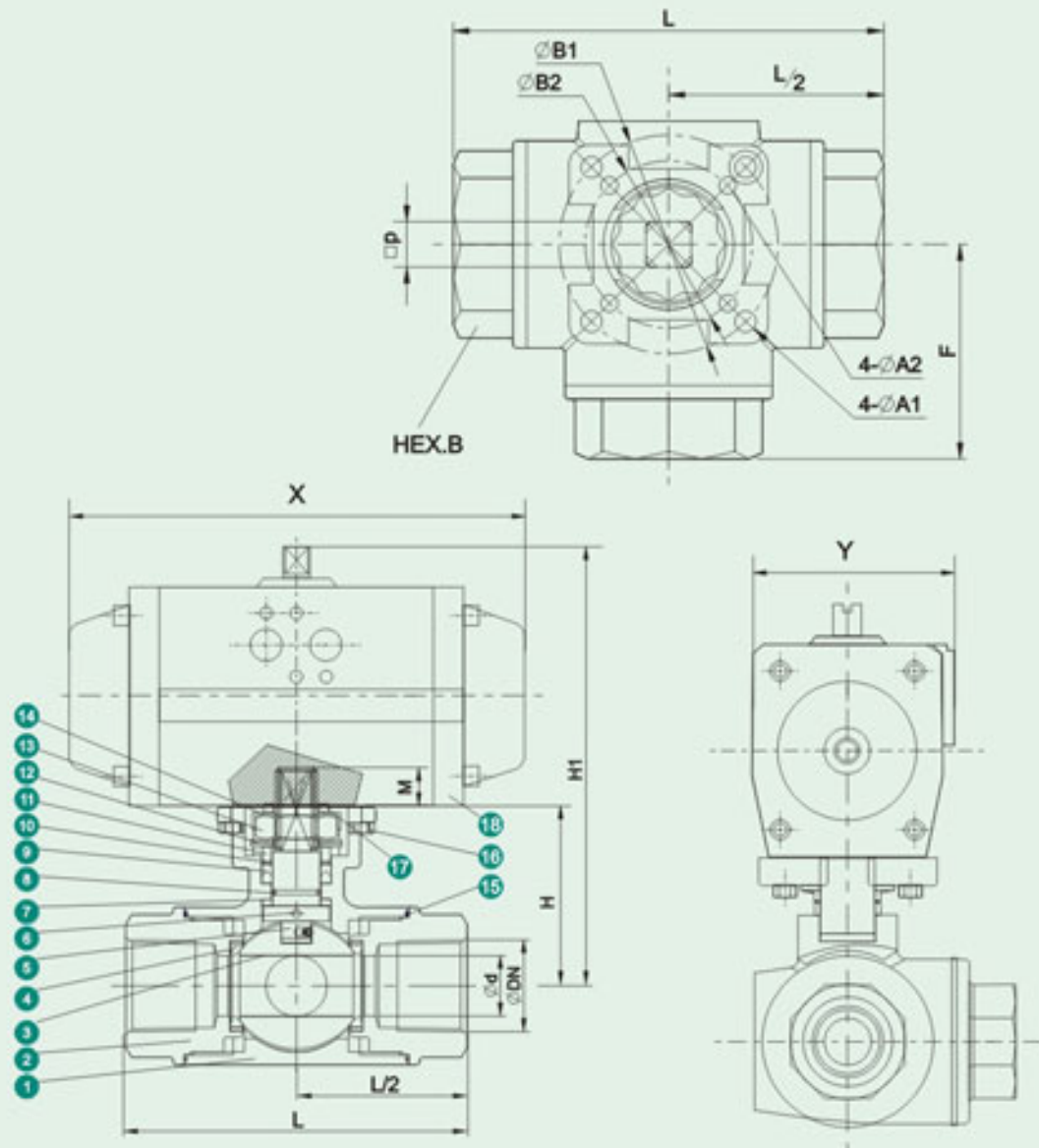
FEATURES:

- Investment Castings for Body and End Caps
- Various Thread Standards are Available
- Built-in ISO 5211 Direct Mounting Pad for Easy Automation
- Anti-Static Devices for Ball-Stem-Body
- Blow-out Proof Stem
- **TA-LUFT** Design Approved
- Positive Position Location At 90° Increments
- Locking in Every 90° Increments
- KZV-L53: L-Port; KZV-L54: T-Port
- Options: 1. Actuator 2. Limit Switch 3. Positioner

APPLICABLE STANDARDS:

- Design: ASME B16.34, API 608
- Wall Thickness: ASME B16.34 Class 400
- Pipe Thread: ASME B1.20.1, BS21
DIN 2999 / 259, ISO 228 / 1
JIS B 0203, ISO 7 / 1
- Inspection & Testing: API 598, EN 12266

NO.	PART NAME	MATERIALS
1	Body	CF8M CF8 WCB
2	End Cap	CF8M CF8 WCB
3	Ball	CF8M CF8
4	Ball Seat	TFM1600 / PTFE / RTFE
5	Stem	SUS 316 SUS 304
6	Anti-static Device	SUS 316 SUS 304
7	Thrust Washer	PTFE
8	O-ring	FKM (VITON)
9	Stem Packing	PTFE
10	Bushing	50%SS + 50%PTFE
11	Gland	SUS 316
12	Belleville Washer	SUS 301
13	Stem Nut	A194-8
14	Stop-lock-cap	SUS 304
15	Body Gasket	PTFE
16	Hex Bolting	A193-B8
17	Handle Gland	SUS 3
18	Actuator	Pneumatic KP / Electric KQ



Unit: mm

SIZE	φd	L	H	H1	M	F	φB1	φB2	φA1	φA2	P	HEX.B	X	Y	ISO 5211	P-Actuator	E-Actuator	Pressure
1/4"	11	79	42.0	139.0	9	39.5	42	36	6	6	9	23.5	144	72	F03-F04	KP50	KQ006	80PSI
3/8"	11	79	42.0	139.0	9	39.5	42	36	6	6	9	23.5	144	72	F03-F04	KP50	KQ006	80PSI
1/2"	15	88	49.0	146.0	9	44.0	50	36	7	6	9	27.0	144	72	F03-F05	KP50	KQ006	80PSI
3/4"	20	108	59.5	187.5	11	54.0	50	42	7	6	11	34.0	208	96	F04-F05	KP75	KQ006	80PSI
1"	25	124	63.0	191.0	11	62.0	70	42	9	6	11	41.0	208	96	F04-F07	KP75	KQ006	80PSI
1-1/4"	32	135	73.5	215.5	14	67.5	70	50	9	7	14	50.0	247	108	F05-F07	KP88	KQ008	80PSI
1-1/2"	40	164	82.8	225.0	14	82.0	70	50	9	7	14	56.0	247	108	F05-F07	KP88	KQ008	80PSI

Kamizawa BALL VALVES

ISO 5211 DIRECT MOUNT HIGH PERFORMANCE

1000-2000WOG, Full Port, Split Body, Threaded, Socket, Butt Weld End, Flanged Ends



KZV-M30



KZV-080



KZV-L20



KZV-L30

Series KZV-M30, KZV-080 (Bracket Mount Type)
Series KZV-L20, KZV-L30, KZV-L80 (Direct Mount Type)

FEATURES

- ISO 5211 Direct Mounting Pad
- Square Stem for Direct Mount with Actuator
- **TA-LUFT** Design Approved
- Pre-load 2 Belleville Washers to Self-adjust Packing
- PED 97/23/EC (CE 0036) Approved
- Casting Approved by TÜV AD 2000-Merkblatt W0

SPECIFICATIONS

- Full Port, Floating Ball Type
- ASME, DIN, BS & JIS Standards
- Size 1/2" - 4" (DN15 - DN100, 15A - 100A)
- Pressure Rating: 1000 WOG (Class 400), PN63
2000 WOG (Class 800), PN130



API 6D-0491



0036



TA-Luft
VDI 2440





FEATURES:

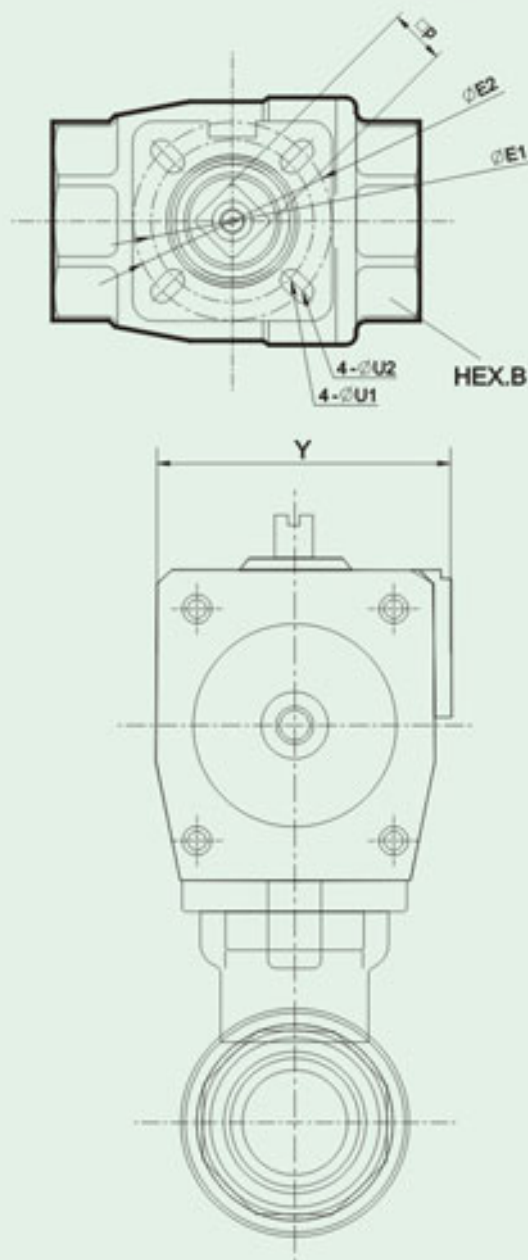
- Built-in ISO 5211 Direct Mounting Pad and Square Stem for Easy Automation
Anti-Static Devices for Ball-stem-body
Blow-out Proof Stem
Pressure Balance Hole in Ball Slot
Pre-load 2 Belleville Washers to Self-adjust Packing
TA-LUFT Design Approved
Options: 1. Actuator 2. Limit Switch 3. Positioner

STANDARDS:

- Design: ASME B16.34, API 608
Class 800 for 1/4" ~1"
Class 600 for 1-1/4" ~2"
Wall Thickness: EN 12516-3
Pipe Thread: ASME B1.20.1, BS21
DIN 2999 / 259, ISO 228/1
JIS B0203 ISO 7/1
Inspection & Testing: API 598, EN 12266

Table with 3 columns: NO., PART NAME, MATERIALS. Lists parts 1-17 including Body, End Cap, Ball Seat, Ball, Stem, Anti-Static Device, Thrust Washer, O-Ring, Stem Packing, Bushing, Gland, Belleville Washer, Stem Nut, Stop-Lock-Cap, Hex Bolting, Body Gasket, and Actuator.

*Materials for FIRE-SAFE Models



Unit: mm

Dimensional table for 2-PC valve with columns for SIZE, diameters, lengths, and materials. Includes actuator and pressure specifications.

FEATURES:

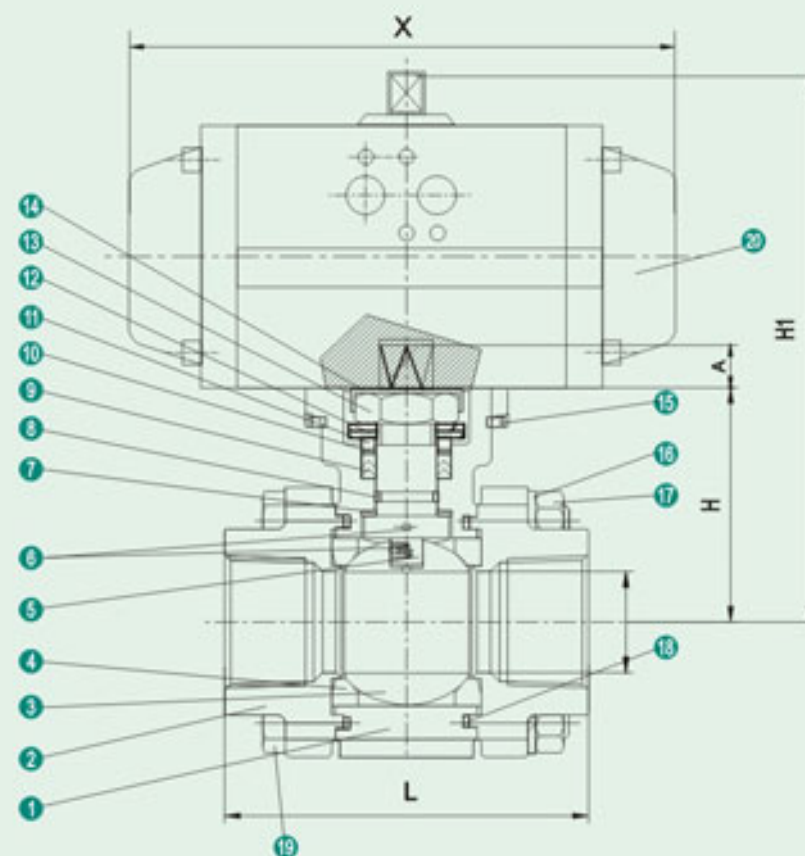
- Fire Safe Design and Construction
Built-in ISO 5211 Mounting Pad Automation
Anti-Static Devices for Ball-Stem-Body
Blow-out Proof Stem
Pressure Balance Hole in Ball Slot
Pre-Load 2 Belleville Washers to Self-adjust Packing
TA-LUFT Design Approved
Casting Approved by TÜV AD 2000 Merkblatt W0
Options: 1. Actuator 2. Limit Switch 3. Positioner

STANDARDS:

- Design: ASME B16.34, API 608
Class 800 for 1/4" ~1"
Class 600 for 1-1/4" ~2"
Fire Safe: API 607 5th 2005, ISO 10497
Wall Thickness: ASME B16.34 CLASS 800
Pipe Thread KZV-L80: ASME B1.20.1, BS21
DIN2999 / 259, ISO228/1
JIS B0203, ISO 7/1
Butt Weld KZV-L81: ASME B16.25 / (Sch 80)
Socket Weld KZV-L82: ASME B16.11
Flanged End KZV-L8F: ASME B16.5 CLASS 600
DIN 2501 PN100
JIS B2238 40K
Inspection & Testing: API 598, EN 12266

Table with 3 columns: NO., PART NAME, MATERIALS. Lists parts 1-20 including Body, Cap, Ball Seat, Stem, Thrust Washer, O-Ring, Stem Packing, Bushing, Gland, Belleville Washer, Stem Nut, Stop-lock-Cap, Bolt, Bolt Washer, Bolt Nut, Body Gasket, Bolt, and Actuator.

*Materials for Fire-Safe Models



Unit: mm

Dimensional table for 3-PC valve with columns for SIZE, diameters, lengths, and materials. Includes actuator and pressure specifications.

For KI 1-PC (KZV-010 & 070 & L70 & MIF)Series Ball Valves
 For KI 2-PC (KZV-020 & L20&040 & L40 & 060 & L60)Series Ball Valves
 For KI 3-PC (KZV-030 & M30&L30 & 080 & L80)Series Ball Valves
 Close to Open Torque at Various Different Pressure (ΔP), Standard Seats (TFM1600 & PTFE)

unit: in-lb/Nm

Size\ΔP	75psig		150psig		300psig		700psig		1000psig		1500psig		2000psig	
	5Bar		10Bar		20Bar		50Bar		63Bar		100Bar		140Bar	
	Nm	In-lb	Nm	In-lb	Nm	In-lb	Nm	In-lb	Nm	In-lb	Nm	In-lb	Nm	In-lb
1/4", 3/8" DN8,10	4.5	40	4.5	40	4.5	40	4.5	40	4.5	40	4.5	40	5	44
1/2" DN15	5	44	5	44	5	44	5	44	5	44	5	44	5.5	49
3/4" DN20	6	53	6	53	6	53	6	53	6	53	6	53	7	62
1" DN25	10	89	10	89	10.5	93	11	97	11	97	11	97	12	106
1-1/4" DN32	13	115	13	115	15	133	17	150	19	168	20	177	22	195
1-1/2" DN40	19	168	19	168	22	195	24	212	26	230	28	248	31	274
2" DN50	25	221	28.5	252	32	283	35	310	38	336	42	372	45	398
2-1/2" DN65	40	354	45	398	49	434	54	478	59	522	65	575	-	-
3" DN80	65	575	72	637	81	717	90	797	101	894	112	991	-	-
4" DN100	100	885	110	974	122	1080	135	1195	148	1310	162	1435	-	-
5" DN125	190	1682	208.5	1845	245	2168	285	2522	-	-	-	-	-	-
6" DN150	280	2478	306	2708	340	3009	408	3611	-	-	-	-	-	-
8" DN200	370	3275	430	3806	487	4310	560	4956	-	-	-	-	-	-
10" DN250	1190	10532	1330	11771	1500	13276	1880	16639	-	-	-	-	-	-
12" DN300	2055	18188	2210	19560	2400	21242	2738	24233	-	-	-	-	-	-
14" DN350	3200	28322	3385	29960	3600	31863	4020	35580	-	-	-	-	-	-
16" DN400	4076	36076	5170	45758	5400	47794	5980	52927	-	-	-	-	-	-

KZV-L5N Flange Ball Valves
 Close to Open Torque at Various Different Pressure (ΔP) Standard Seats (TFM1600 & PTFE)

unit: in-lb/Nm

Size\ΔP	75psig		150psig		300psig		600psig	
	5Bar		10Bar		20Bar		40Bar	
	Nm	In-lb	Nm	In-lb	Nm	In-lb	Nm	In-lb
1/2" DN15	8	71	8	71	8	71	8	71
3/4" DN20	12	106	12	106	12	106	12	106
1" DN25	18	159	18	159	19	168	20	177
1-1/4" DN32	23	204	23	204	27	239	30	266
1-1/2" DN40	32	283	32	283	38	336	41	363
2" DN50	44	389	50	443	56	495	62	548
2-1/2" DN65	70	620	79	699	86	761	95	841
3" DN80	110	974	122	1080	138	1221	153	1354
4" DN100	190	1682	209	1850	232	2053	257	2275

KZV-L50 Thread Ball Valves
 Close to Open Torque at Various Different Pressure (ΔP) Standard Seats (TFM1600 & PTFE)

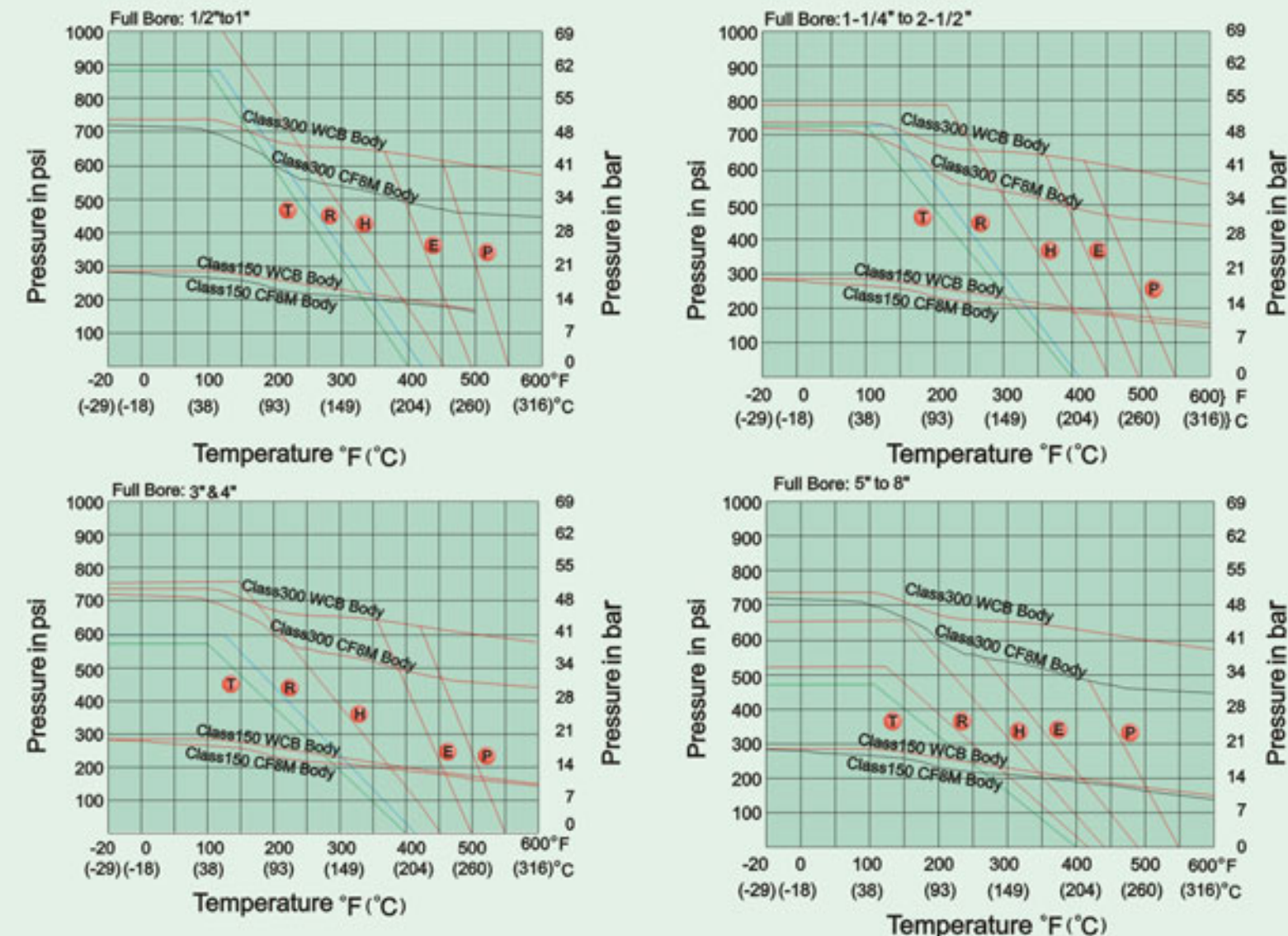
unit: in-lb/Nm

Size\ΔP	75psig		150psig		300psig		700psig		1000psig	
	5Bar		10Bar		20Bar		50Bar		63Bar	
	Nm	In-lb	Nm	In-lb	Nm	In-lb	Nm	In-lb	Nm	In-lb
1/4" & 3/8" & 1/2"	6	53	6	53	6	53	6	53	6	53
3/4"	9	80	9	80	9	80	9	80	9	80
1"	12	106	12	106	13	115	13	115	13	115
1-1/4"	15	133	15	133	17.5	155	20	177	22	195
1-1/2"	22	195	22	195	26	230	28	248	30	265
2"	33	292	38	336	42	371	46	407	50	442

- Remark: 1. Torques will increase about 15% if seat materials are Reinforced Fiber-Glass PTFE, Carbon-filled PTFE or EK+PTFE.
 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 30% at least is recommended.
 4. 10"-16" (DN250-400) is of soft seal fixed ball valve.

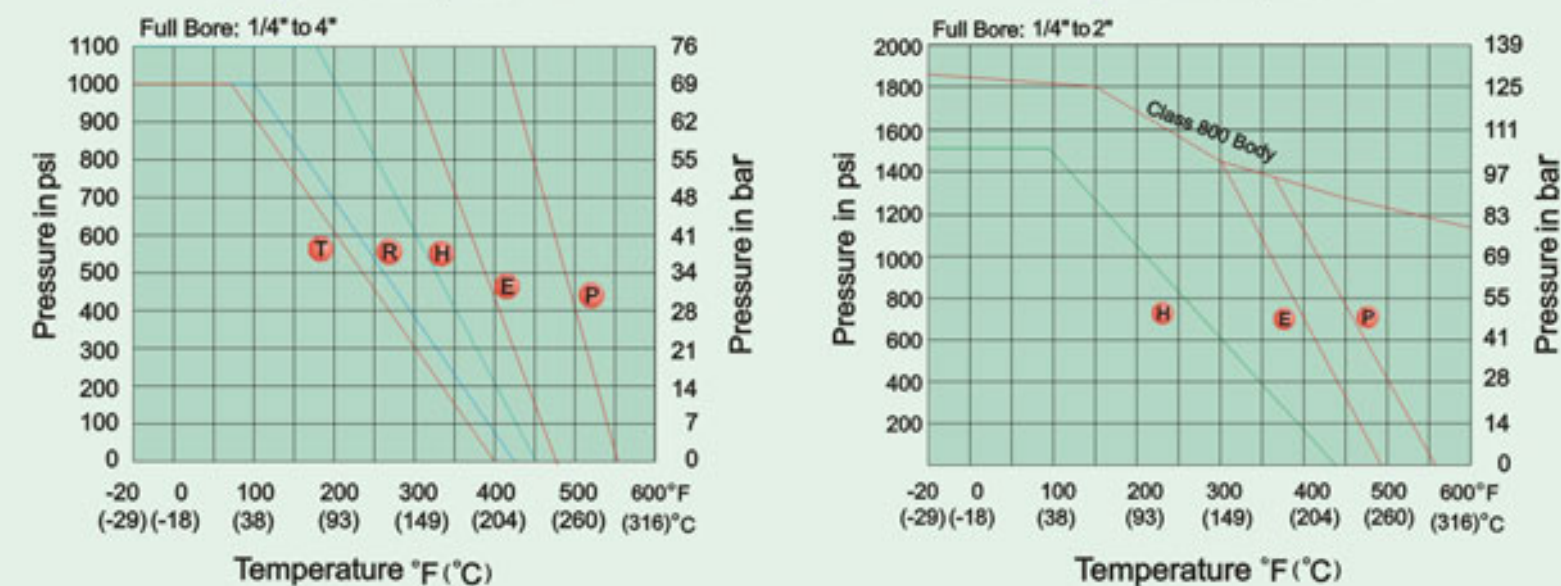
The pressure-temperature data of ball valves are determined, not only by valve shell materials, but also by sealing materials used for ball seats, gland packings and gaskets

Floating Ball Valves, Class 150/300



Floating Ball Valves, 1000 PSI

Floating Ball Valves, 2000 PSI



Seat Materials: T=PTFE R=RTFE H=TFM1600 E=EK+PTFE P=PEEK
 "H" is the standard seat material for KI ball valves, except KV-010, 020 & 030 series.
 The seat material of these types is PTFE.

Body Ratings: Body Ratings of ASME A351 CF8M, A216 WCB or other shell materials are referred to ASME B16.34.