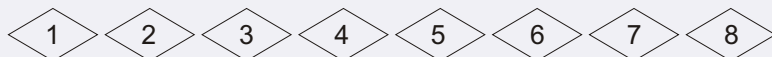


KOFLOW

BALL VALVES

Ball Valve Model Schedule Illustration



① Codes of Nominal Diameter

British series indicated by A××in value, and metric series indicated by G××mm value.

② Codes of Driving Modes (For handle or lever drive, this code can be omitted.)

3—Manual Operator; 6—Pneumatic; 6S—Pneumatic Spring Return; 6A—Pneumatic Control; 5—Gear Drive;
7—Hydraulic; 8—Airdraulic; 8H—Airdraulic with Emergency Cutoff; 9—Electric

③ Codes of Valve Types

FB—Float Ball Valve; TB—Fixed Ball Valve

④ Codes of Nominal Pressure Class

1—PN1.6 class150; 2—PN2.5; 3—class300; 4—PN4.0 class400; 6—PN6.4 class600
9—class900; 10—PN10.0; 15—class1500; 16—PN16.0; 20—PN20.0; 25—class2500;

⑤ Codes of Connecting Modes

RF—Raised Face Flange; FF—Fully Flat Face Flange; MFM—Male and Female Flange; TG—Tongued and Grooved Flange;
RJ—Ring Junction Flange; BW—Butt Welding; SW—Socket Welding; NPT—Threaded Connection

⑥ Codes of Structural Modes

1—Full Bore Straightway; 2—Reducing Straightway; 3T—T-shaped Three-Way; 3L—L-shaped Three-way; 4—Four-way;
5—Overall Top Installed (Full Bore); 5A—Overall Top Installed (Reducing); 6—Track Ball Valve (Full Bore); 6A—Track Ball Valve (Reducing);
7H—Eccentric Half Ball; 7F—Eccentric Full Ball; 8—All Welded (Full Bore); 8A—All Welded (Reducing)

⑦ Codes of Shell Materials

C—WCB; C5—C5; C6—WC6; C9—WC9; BL—LCB; CL—LCC
8—CF8; 8M—CF8M; 3—CF3; 3M—CF3M; ML—MONEL

⑧ Codes of Ball Materials

1—WCB; 2—CF8; 3—CF8M; 4—CF3; 5—CF3M
1F—A105or25 2F—304; 3F—316; 4F—304L; 5F—316L

⑨ Codes of Seat Materials

F—PTFE; N—Nylon; G—Carbon Fiber; P—PPL; E—PEEK; M—MOLON

Note:* The letters of “K”、“E”、“O” and “J” are placed in front of the codes of valve types, respectively representing hydrogen sulphide resistant, extension bar, oxygen, and jacketed ball valve.

Example: A8 " TB3RF1C2F means API 8 " worm gear drive, fixed ball valve, 300Lb, raised face flange, full bore, body material WCB, ball material CF8, and seat of F4.

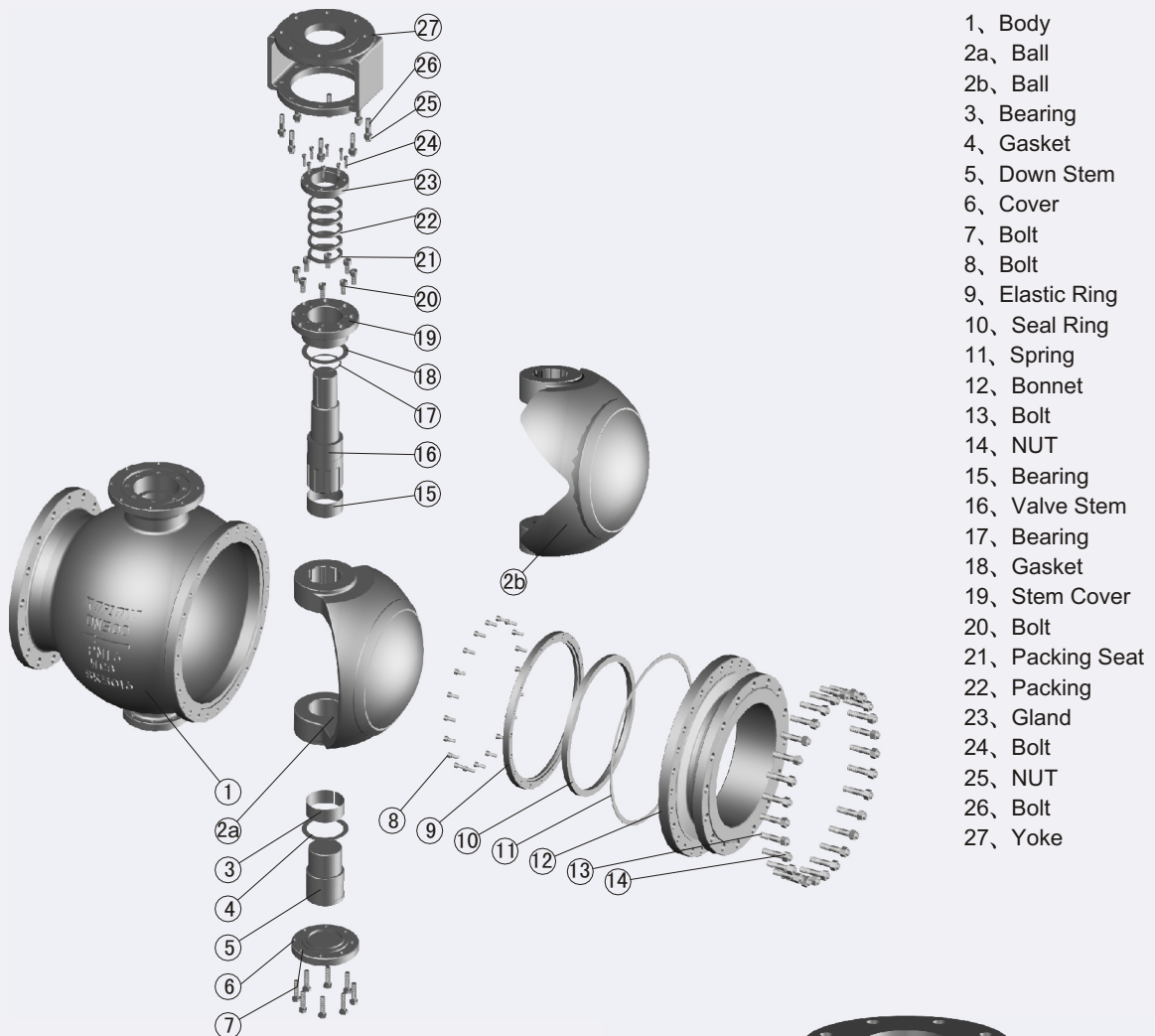
* The figures mentioned hereunder don't have the codes of caliber and valve material, they are to be specified by users.

Technical Specifications of Ball Valve

Technical Specifications	API Series	GB Series
Design Specifications	API6D、API608、BS5351	GB/T12237、JB/T7745
Pressure and Temperature Class	ASME B16.34	GB/T9124
Face-to-face	ASME B16.10	GB/T12221、GB/T15188.1
Flange Type and Dimensions	ASME B16.5、ASME B16.47	GB/T9113、JB/T79
Butt Welded	ASME B16.25	GB/T12224
Socket Welded	ASME B16.11	/
Threaded	ASME B16.1.20	/
Inspection and Test	API598、API6D	JB/T9092、GB/T13927
Fireproofing Test	API6FA、API607	JB/T6899-1993
Quality Inspection of Cast Steel Body	MSS -SP-55	JB/T9092-1999

HALF BALL VALVE

Valve Structural Diagram



HALF BALL VALVE

Materials of Main Parts

No.	Part Name	Materials		
		Carbon Steel	Stainless Steel	Low Temperature Steel
1	Body	A216 WCB	A351 CF8M	A352 LCB
2a	Ball	A216 WCB+ENP	A351 CF8M/or +STL	A352 LCB/or +STL
2b				
3	Bearing	PTFE+CS	PTFE+SS	PTFE+SS
4	Gasket	Graphite+SS		
5	Down Stem	A276 410	A276 316	
6	Cover	A105	A182 F316	A350 LF2
7	Bolt	A193 B7	A193 B8	A320 L7
8	Bolt	A193 B7	A193 B8	A320 L7
9	Elastic Ring	A105+ENP	A182 F316	A350 LF2
10	Seal Ring	PTFE, NYLON, PEEK, PCTFE, VITON or METAL		
11	Spring	Inconel600		
12	Bonnet	A216 WCB	A351 CF8M	A352 LCB
13	Bolt	A193 B7	A193 B8	A320 L7
14	NUT	A194 2H	A194 8	A194 8
15	Bearing	PTFE+CS	PTFE+SS	PTFE+SS
16	Valve Stem	A182 F6a	A182 F316	A182 F316
17	Bearing	PTFE+CS	PTFE+SS	PTFE+SS
18	Gasket	Graphite+SS		
19	Stem Cover	A105+ENP	A182 F316	A350 LF2
20	Bolt	A193 B7	A193 B8	A320 L7
21	Packing Seat	A182 F6a	A182 F316	A182 F316
22	Packing	Graphite		
23	Gland	A105+ENP	A182 F316	A350 LF2
24	Bolt	A193 B7	A193 B8	A320 L7
25	NUT	A194 2H	A194 8	A194 8
26	Bolt	A193 B7	A193 B8	A320 L7
27	Yoke	A216 WCB		

Note: 1. Different materials for internal components can be adopted in accordance with different working conditions and customer requirements.
 2. After all internal components are loaded, gather such parts up as body, left and right assemblies, ball and seat to be welded after passing the pressure and inspection.

HALF BALL VALVE

Product Structural Features

The series of half ball valve is a new product through the independent R&D of our company in accordance with market requirements, which is mainly applied to transport media with two or more phases which are vulnerable to depositing, scaling and separation by crystallization and contain many impurities. Its structure adopts the eccentric--wedge-caulking principle to achieve such functions as gate tightening, regulation and on/off through the drive gear. Its ball structure includes two types: normal half ball and V-type half ball. Of them, the V-notch half ball has an additional unique function of regulation besides those functions of the normal half ball type. This series of product boasts novel structure, stable performance, rapid and easy opening, and self-compensation for abrasion; its seal is reliable and durable with different materials for seal pair in accordance with different working conditions, easy for adjustment and maintenance; it can break the scale by itself, easy for valve opening, and it has no "dead zone", overcoming such shortcomings of normal valve as being vulnerable to scaring, jamming and leakage as well as a short life; its actuator modes include: manual, worm gear, pneumatic and electric.

Product Specification Range

Type	Nominal Pressure	Actuator mode	Nominal Diameter													
			50	65	80	100	125	150	200	250	300	350	400	450	500	600
QPB(V)47F (P, H, Y, D)	1.0	Manual	☆	☆	☆	☆	☆	☆	-	-	-	-	-	-	-	-
	1.6		☆	☆	☆	☆	☆	☆	-	-	-	-	-	-	-	-
QPB(V)347F (P, H, Y, D)	1.0	Gear drive	-	-	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆
	1.6		-	-	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	-
	2.5		-	-	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	-	-
	4.0		-	-	☆	☆	☆	☆	☆	☆	☆	☆	-	-	-	-
QPB(V)947F (P, H, Y, D)	1.0	Electric	-	-	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆
	1.6		-	-	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	-	
	2.5		-	-	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	-	-
	4.0		-	-	☆	☆	☆	☆	☆	☆	☆	☆	-	-	-	-

Note: 1. PB in the type stands for the eccentric half ball valve and V for V-type half ball valve; generally the structure of V-type ball valve is not eccentric.

2. Our company is available for customization.

Product Performance Specifications

Nominal Pressure	Shell test pressure	Seal test pressure	Medium temperature	Applicable medium
1.0	1.5	1.1	≤425°C	Media containing grains like industrial slurry and slurry cinder
1.6	2.4	1.8		
2.5	3.8	2.8		
4.0	6.0	4.4		

Technical Specifications of Product

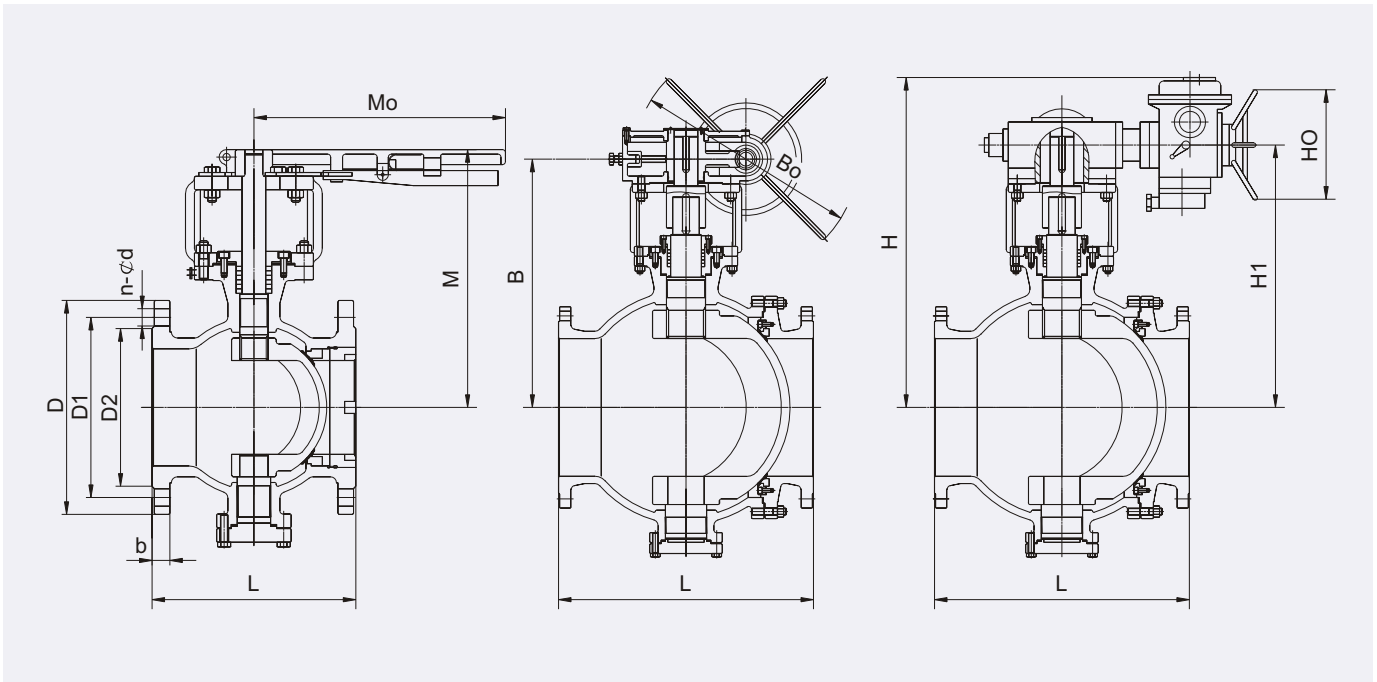
1. Design and manufacture: as per GB/T 12237
2. Structural length: as per GB/T12221
3. Flange end dimensions: as per GB/T9115.8~11
4. Inspection standard: as per GB/T13927
5. Actuator mode: manual, electric and worm gear

Note: the connecting flange dimensions of this series can be designed and manufactured in accordance with customer requirements.

HALF BALL VALVE

PN1.0~4.0MPa

HALF BALL VALVE



Main Dimensions

PN1.0MPa mm

DN	NPS	L	D	D1	D2	b	n-φd	Manual			Gear				Electric				
								M	M0	Weight	B	B0	Operator	Weight	H	H1	H0	Operator	Weight
50	2	178	165	125	99	20	4-18	160	250	17	-	-	-	-	-	-	-	-	-
65	2 1/2	190	185	145	118	20	4-18	195	250	18	-	-	-	-	-	-	-	-	-
80	3	203	200	160	132	20	8-18	215	300	22	255	200	O	30	454	359	190	Q60-1	100
100	4	229	220	180	156	22	8-18	250	300	30	290	300	A	40	493	398	190	Q60-1	135
125	5	254	250	210	184	22	8-18	290	350	45	330	300	A	65	574	424	400	Q120-1	192
150	6	267	285	240	211	24	8-22	295	400	53	350	300	A	74	646	496	400	Q120-1	200
200	8	292	340	295	266	24	8-22	-	-	-	390	400	B	100	678	528	400	Q120-1	225
250	10	394	395	350	319	26	12-22	-	-	-	515	400	B	195	652	435	200	SMC-04/H0BC	360
300	12	419	445	400	370	26	12-22	-	-	-	545	600	C	250	761	480	280	SMC-04/H1BC	415
350	14	550	505	460	429	26	16-22	-	-	-	590	600	C	369	771	520	280	SMC-03/H2BC	435
400	16	600	565	515	480	26	16-26	-	-	-	625	600	C	450	831	580	280	SMC-00H3BC	542
450	18	650	615	565	530	28	20-26	-	-	-	660	600	D	600	921	670	305	SMC-00/H3BC	672
500	20	700	670	620	582	28	20-26	-	-	-	695	800	D	730	943	770	305	SMC-00/H3BC	892
600	24	800	780	725	682	30	20-30	-	-	-	732	800	D	850	1123	850	305	SMC-00H4BC	995

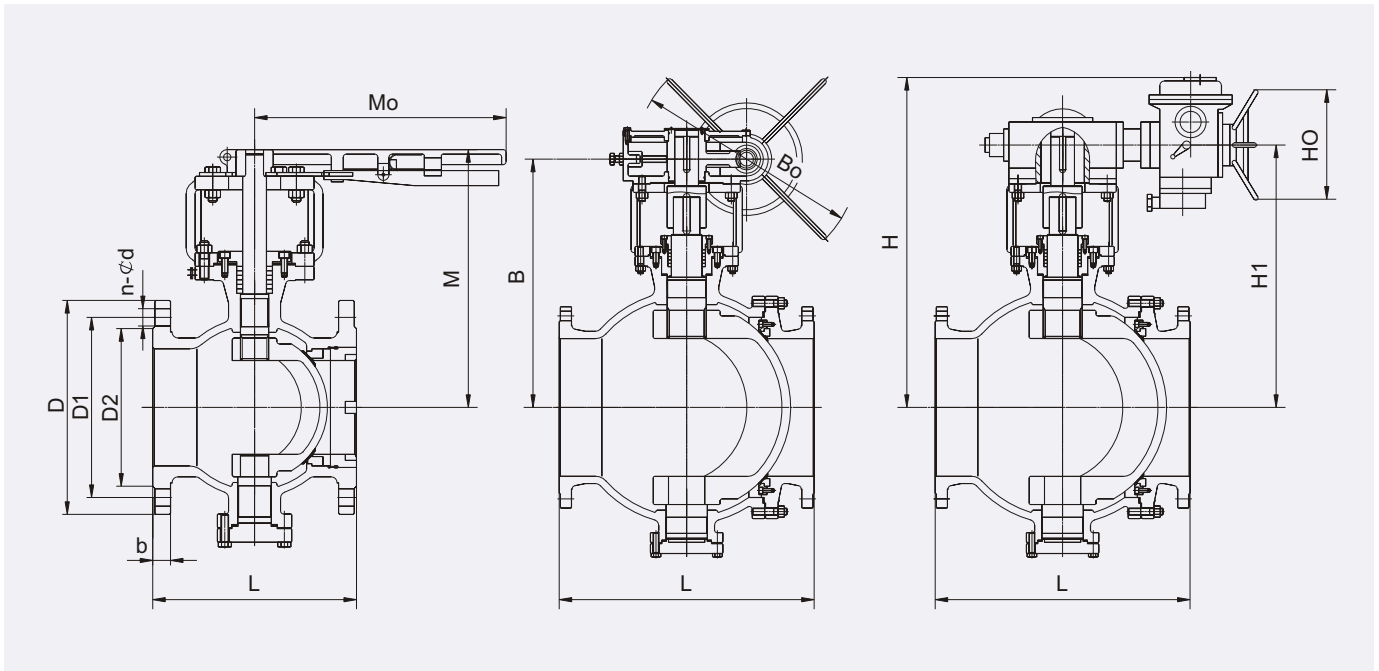
PN1.6MPa mm

DN	NPS	L	D	D1	D2	b	n-φd	Manual			Gear				Electric				
								M	M0	Weight	B	B0	Operator	Weight	H	H1	H0	Operator	Weight
50	2	178	165	125	99	20	4-18	160	250	17	-	-	-	-	-	-	-	-	-
65	2 1/2	190	185	145	118	20	4-18	195	250	18	-	-	-	-	-	-	-	-	-
80	3	203	200	160	132	20	8-18	215	300	22	255	200	O	30	454	359	190	Q60-1	100
100	4	229	220	180	156	22	8-18	250	300	30	290	300	A	40	493	398	190	Q60-1	135
125	5	254	250	210	184	22	8-18	290	350	45	330	300	A	65	574	424	400	Q120-1	192
150	6	267	285	240	211	24	8-22	295	400	53	350	300	A	74	646	496	400	Q120-1	200
200	8	292	340	295	266	24	8-22	-	-	-	390	400	B	105	678	528	400	Q120-1	230
250	10	394	405	355	319	26	12-22	-	-	-	515	400	B	200	652	435	200	SMC-04/H0BC	370
300	12	419	460	410	370	28	12-26	-	-	-	545	600	C	250	761	480	280	SMC-04/H1BC	425
350	14	550	520	470	429	30	16-26	-	-	-	590	600	C	375	771	520	280	SMC-03/H2BC	450
400	16	600	580	525	480	32	16-30	-	-	-	625	600	C	460	831	580	280	SMC-00H3BC	557
450	18	650	640	585	548	34	20-30	-	-	-	660	600	D	610	921	670	305	SMC-00/H3BC	690
500	20	700	715	650	609	36	20-33	-	-	-	695	800	D	750	943	770	305	SMC-00/H3BC	913

HALF BALL VALVE

PN2.5~4.0MPa

HALF BALL VALVE



Main Dimensions

PN2.5MPa mm

DN	NPS	L	D	D1	D2	b	n-φd	Gear				Electric				
								B	B0	Operator	Weight	H	H1	H0	Operator	Weight
80	3	203	200	160	132	24	8-18	255	300	A	32	579	484	190	Q60-1	100
100	4	229	235	190	156	24	8-22	290	300	A	48	595	500	190	Q60-1	135
125	5	254	270	220	184	26	8-26	330	300	A	68	650	500	400	Q120-1	192
150	6	267	300	250	211	28	8-26	350	300	B	85	739	589	400	Q120-1	200
200	8	292	360	310	274	30	12-26	390	400	B	113	799	649	400	Q120-1	225
250	10	394	425	370	330	32	12-30	515	400	B	203	652	432	200	SMC-04/H1BC	360
300	12	419	485	430	389	34	16-30	545	600	C	260	761	480	280	SMC-04/H1BC	415
350	14	550	555	490	448	38	16-33	590	600	C	375	771	520	280	SMC-03/H1BC	435
400	16	600	620	550	503	40	16-36	625	800	D	475	831	580	280	SMC-00H1BC	542
450	18	650	670	600	548	42	22-36	660	800	D	625	921	670	305	SMC-00/H1BC	672

PN4.0MPa mm

DN	NPS	L	D	D1	D2	b	n-φd	Gear				Electric				
								B	B0	Operator	Weight	H	H1	H0	Operator	Weight
80	3	203	200	160	132	24	8-18	255	300	A	32	579	484	190	Q60-1	105
100	4	229	235	190	156	24	8-22	290	300	A	48	595	500	190	Q60-1	145
125	5	254	270	220	184	26	8-26	330	400	B	68	650	500	400	Q120-1	195
150	6	267	300	250	211	28	8-26	350	400	B	85	739	589	400	Q120-1	205
200	8	292	375	320	284	34	12-30	390	400	B	120	799	649	400	Q120-1	250
250	10	394	450	385	345	38	12-33	515	600	C	208	652	435	200	SMC-04/H1BC	445
300	12	419	515	450	409	42	16-33	545	600	C	265	761	480	280	SMC-04/H1BC	465
350	14	550	580	510	465	46	16-36	590	800	D	383	771	520	280	SMC-03/H1BC	588