



Flowtecal Group Introduction

Flowtecal Group, established since May 1997 in the United Kingdom (UK). Dedicates to the R&D and manufacturing of world-class automatics valves, manual valves, actuators and other flow control instruments. We provide high quality products and technical total solutions for flow control through our worldwide networks. "Flowtecal" is an international brand specialize in flow control.

The headquarter of Flowtecal Group in China is in Guangzhou, Guangdong province. And fully taking charge of the sales, technical supports and after-sale services of control valves, manual valves, actuators in greater China region, Asia, Africa and South America. The manufacturing base of Flowtecal in China is Flowtecal Control Valve (Heyuan) Co., Ltd. and manufacturing ball valves, butterfly valves, control valves and actuators under the brands "Flowtecal", "FT" and "孚罗泰", all of which are proprietary trademarks of Flowtecal Group.

Since 1997 till nowadays, Flowtecal has developed into a famous and highly competitive brand in valves and flow control industries, such as: Oil & Gas, Chemical and Refinery, Fine Chemical, Power and Power Station, Metallurgy & Mine, Food & Beverage, Pulp & Paper, Light Industry and general industry.

Flowtecal, with its outstanding and highly cost-effective product ranges, complete production quality management system, rapid and timely after-sales service system, reliable product quality, regular and reassuring tracking service, strong technical support capability, and accurate type selection under various operating conditions, has won approval and trust from our users, which also lays a solid foundation for 'Flowtecal's future development.



Our mission: :

Pursuing Excellent Flow Control
Creating Perfect Valve Products.

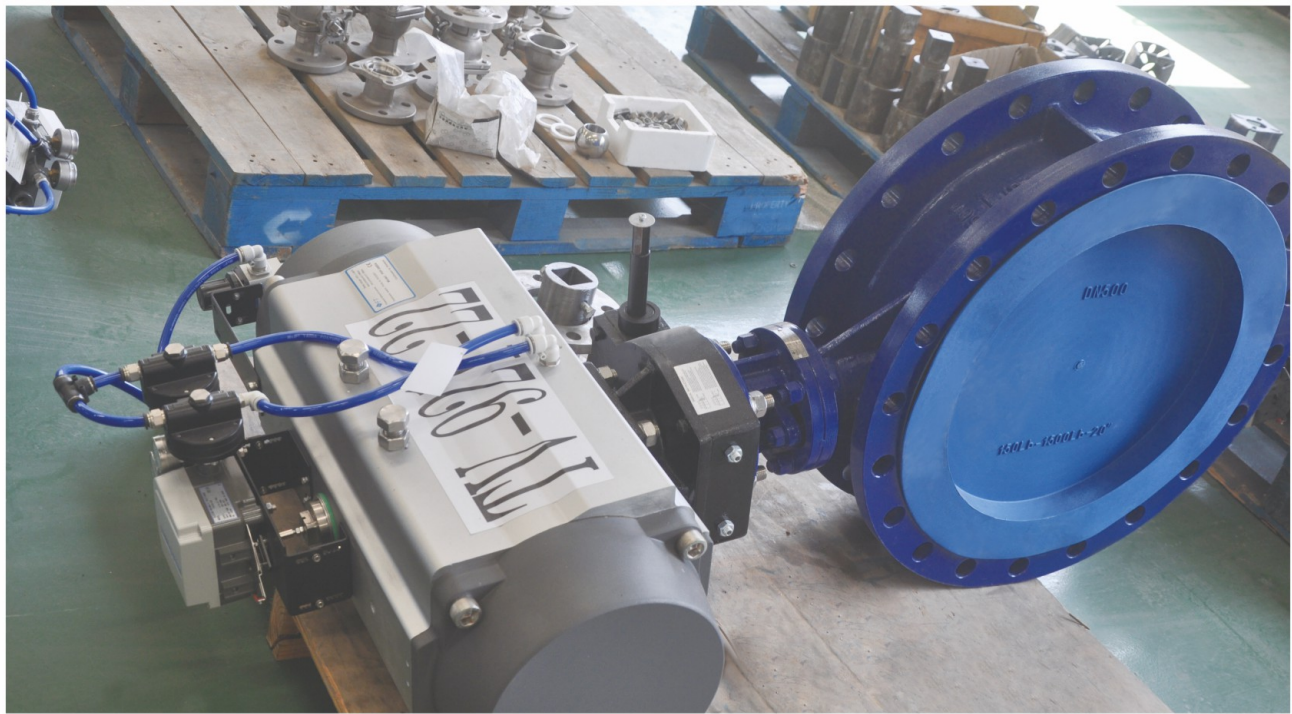
Our core values:

Lofty goals and an open mind,
Adhering to the honesty and trust,
Continuous innovation and high quality products,
Perfect services and outstanding reputation.

Our core strategies:

Focus on R&D, manufacturing, assembly of automatic actuating valves. And provide total solution for flow control systems of various industry. Be dedicated to developments the Flowtecal valve brands and provide our valve products to the world.

FLOWTECAL VALVE (GUANGZHOU) CO., LTD.



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Flowtecal Model Code System of Ball Valve



Code principle of B300 series ball valve DN100 B31 01 – W0SP RF

DN15	B31	01	F	-	W	0	S	P	RF
Valve size Inch: 1/2" or ISO: DN15					End connection Wafer RF M / FM MFM T / G TG RTJ SW Socket BW Butt-welded NPT NPT Thread BSPT BSPT Screw				
Flowtecal ball valve Model No. B31 Floating ball B32 Trunnion mounted ball valve B33 Three way ball valve B3V V type ball valve B3H Pipeline ball valve Ob32 Eccentric semi-ball valve BB31 Bottom valve BG6U Expanding tank valve BG6D Down expanding tank valve					Seat material P PTFE R R.PTFE L PPL K PEEK J PA NYLON M Metal seat S Stellite				
Pressure rating 15 DIN PN64 01 ANSI 150Lb 16 DIN PN100 02 ANSI 300Lb 03 ANSI 600Lb 21 GB PN10 04 ANSI 900Lb 22 GB PN16 05 ANSI 1500Lb 23 GB PN25 11 DIN PN10 24 GB PN40 12 DIN PN16 25 GB PN64 13 DIN PN25 26 GB PN100 14 DIN PN40 27 GB PN160					Stem material W A105(or 45#) S 420SS or 2Cr13 H 17-4PH 0 304SS/CF8 1 316SS/CF8M 2 316L/CF3M 3 2205 Duplex 4 2507 Duplex				
Identification this code of special valve Standard valve code omit F PFA Liner F₄₆ F₄₆ Liner L L Structure of three way ball valve T T Structure of three way ball valve J Jacket insulated ball valve M Metal seated ball valve									
Body material W A216/ WCB 0 304SS/CF8 1 316SS/CF8M 2 316L/CF3M 3 2205 Duplex 4 2507Duplex 5 Other material					Ball valve material 0 304SS/CF8 1 316SS/CF8M 2 316L/CF3M 3 2205 Duplex 4 2507 Duplex 5 Other material				

Product Introduction

The new type leak proof ball valve is designed with two piece body, double flange connection, floating ball and ISO5211 top flange . Main applications: Food and beverage, water and wastewater treatment, pulp and paper, oil and gas, fine chemicals, metallurgy and air separation , power & power plants, pharmaceutical and light industry.

Features

1. Full Bore;
2. New generation splite body design. The secondary metal to metal seat design to assure the alignment and the bolting force to assure the valve torque;
3. ISO 5211 Top mounting flange designed.Easily to mount with difference actuator;
4. Blow-out proof stem, optional with static electrical grouding device;
5. V Type stem packing, meets TUV TA –LUFT standard sealing;
6. Valve seat is designed a groove to reduce the pressure from upstream side, and provide a pre-seating force for the valve seat;
7. Fire test to API 607 4th edition;
8. With locking device;
9. Meet with NACE MR-01-07 standard.

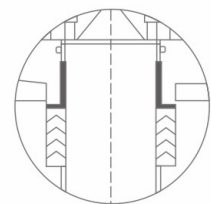
Technical Data

Full bore structure
Valve size: DN15 – DN250
Pressure rating: ANSI Class150/Class300
B3101 Class150
B3102 Class300
Temperature range: – 25℃~220℃

Standard

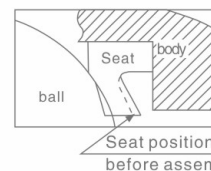
Design & manufacture: ANSI/ASME B16.34
Face to face: ASME B16.10
End dimension: ASME B16.5
Testing standard: API 598, API 6D, BS 5146

Technical Design Characteristic



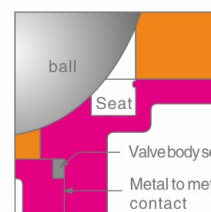
Stem sealing

Multi-layered V type RPTFE adjustable packing ring to assure the stem sealing;Fire safety design with graphite packing.



Seat

With pressure reducing groove resilient valve seat designed, reduce the pressure from upstream side, and provide a pre-seating force for the valve seat.
Standard seat of Flowtec ball valve: PTFE, optional R.PTFE, PPL and PEEK.



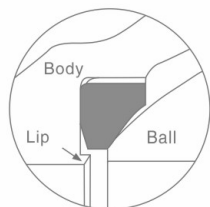
Body

Rigid split valve body designed with extra bolts to assure positive alignment and with metal to metal touch pad to assure valve sealing and stable valve torque.



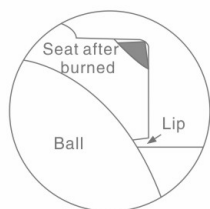
Ball

Valve ball' s sphericity and surface roughness are the key factors for valve life, torque, pressure holding capacity. All Flowtec ball valve ball is polished after mechanical machined, which assure the lower valve torque and long service life.



Fire safe type design (API 607 The 4th version)

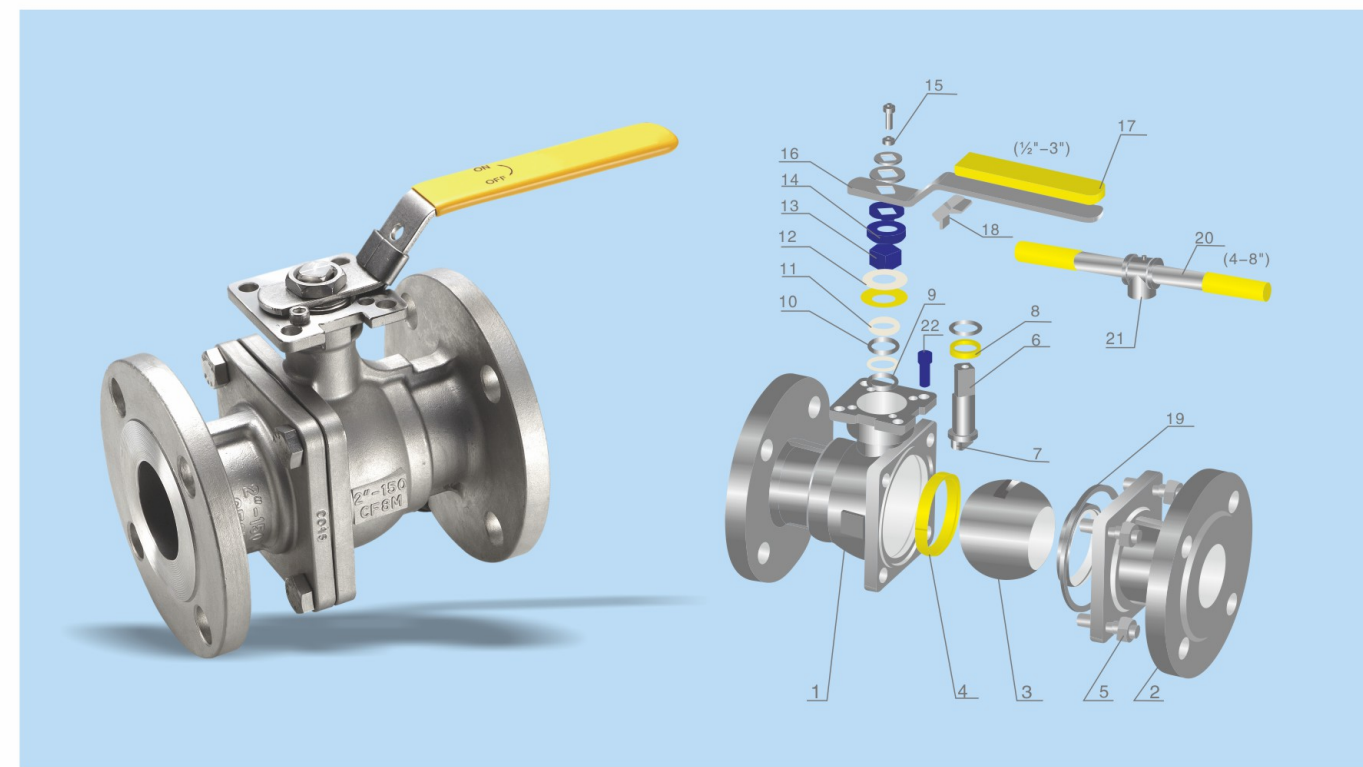
A secondary back up lip is machined in the Flowtec ball valve body. Which can eliminate PTFE seat ring' s cold flow feature, and provide a secondary back up metal to metal seal, when fire burn out the PTFE seat ring.



Anti static grounding

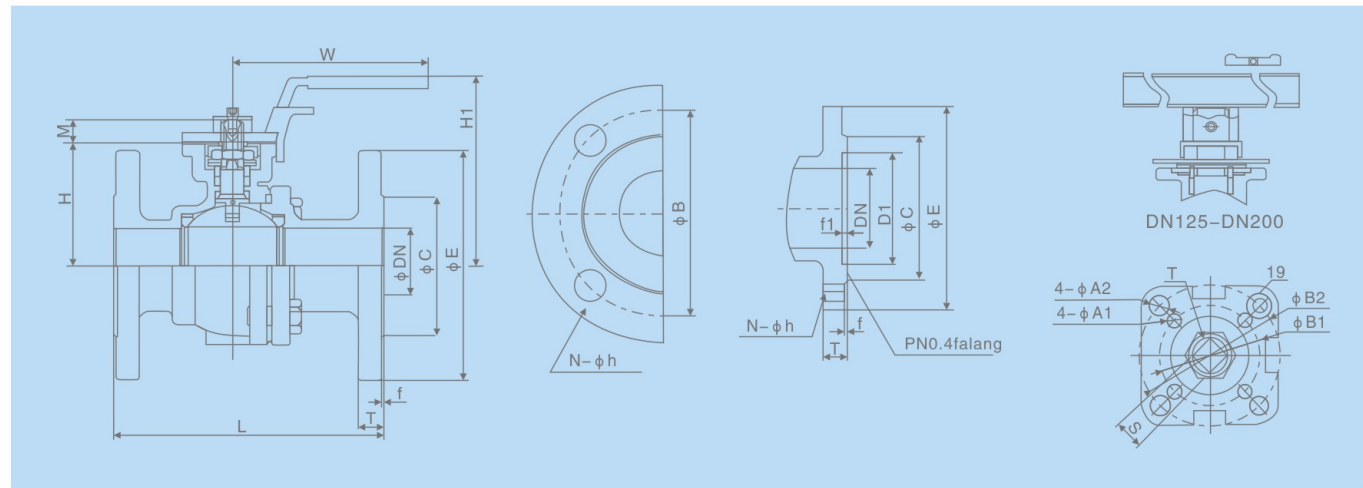
A special grounding spring is retained between the floating ball and valve body. Which provide positive grounding for use with volatile or flammable liquids.

II Class



Parts and Materials

No.	Part name	Material				No.	Part name	Material
1	Body	CF8M	CF8	WCB	TiN	12	Spring	301
2	Cap	CF8M	CF8	WCB	TiN	13	Nut	304
3	Ball	316	304		TiN	14	Anti loose cover	304
4	Seat	PTFE、PPL				15	Nut	304
5	Nut	A193-B8 A193-B7				16	Handle (1/2"-3")	304
6	Stem	316	304		TiN	17	Handlesleeve(1/2"-3")	Plastic
7	Antistatic device	304				18	Limit block(1/2"-3")	304
8	Trust washer	PTFE、Flexible graphite				19	Seling ring	PTFE、Flexible graphite+ Stainless steel wire
9	Packing	PTFE、Flexible graphite				20	Pipe (4"-6")	Galvanized steel pipe
10	Excessive gasket	RPTFE、Flexible graphite				21	Wrench (4"-6")	CF8
11	Packing ring	304				22	Locating screw	304



Standard Regulation

Design& Manufacture: GB/T12237-2007 Fire safe test: API607-1993 Face-to-face: GB/T12221-1989
End Connection: GB9113.1 Inspection and testing: GB/T13927-1992

Dimensions

B3122-**** PN1.6MPa(GB/T 9113, RF)

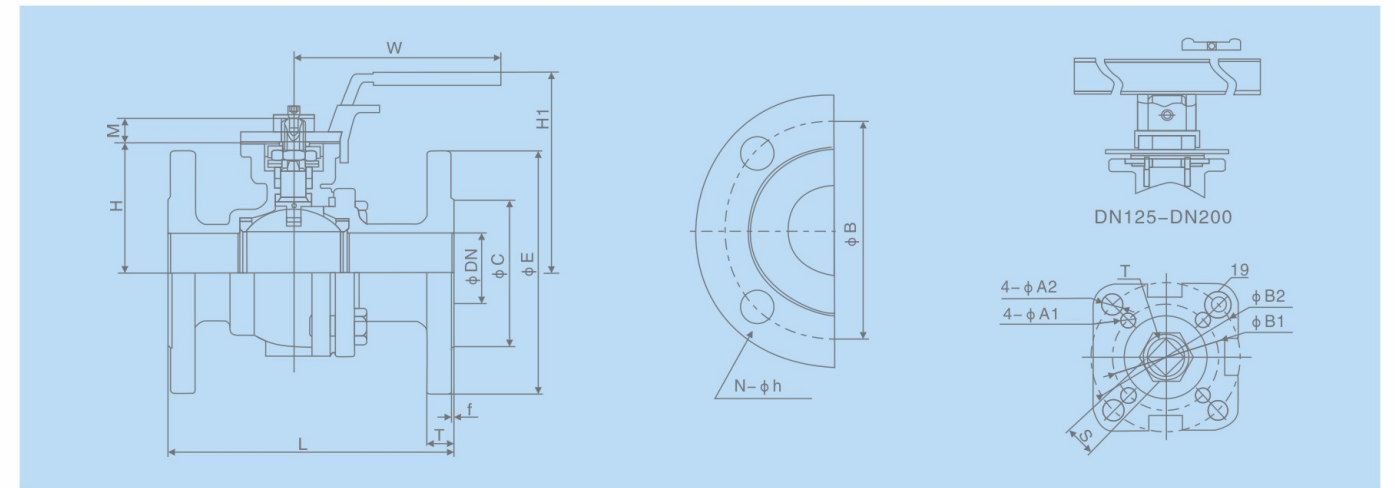
DN(mm)	L	φE	φB	φC	D1	T	f	f1	N-φh	H	H1	W	M	A1	A2	B1	B2
15	130	95	65	46	/	14	2	/	4-14	48	80	145	13	6	6	36	42
20	130	105	75	56	/	16	2	/	4-14	53	86	145	14	6	6	36	42
25	140	115	85	65	/	16	2	/	4-14	63.5	92	165	14	6	7	42	50
32	165	140	100	76	/	18	2	/	4-18	72	99	165	14	6	7	42	50
40	165	150	110	84	/	18	2	/	4-18	77	124	200	16	7	9	50	70
50	203	165	125	99	/	20	2	/	4-18	85	132	200	22	7	9	50	70
65	222	185	145	118	/	20	2	/	4-18	106	160	290	20	9	11	70	102
80	241	200	160	132	/	20	2	/	8-18	121	183	290	20	9	11	70	102
100	280	220	180	156	/	22	2	/	8-18	143	220	360	24	9	11	70	102
125	325	250	210	184	/	22	2	/	8-18	183	231	600	27	14	/	125	/
150	350	285	240	211	/	24	2	/	8-22	201	250	800	27	14	/	125	/
200	400	340	295	266	/	24	2	/	12-22	252	300	1000	27	14	/	125	/

B3123-**** PN2.5MPa(GB/T 9113, RF)

DN(mm)	L	φE	φB	φC	D1	T	f	f1	N-φh	H	H1	W	M	A1	A2	B1	B2
15	130	95	65	46	/	14	2	/	4-14	48	80	145	13	6	6	36	42
20	130	105	75	56	/	16	2	/	4-14	53	86	145	14	6	6	36	42
25	140	115	85	65	/	16	2	/	4-14	63.5	92	165	14	6	7	42	50
32	165	140	100	76	/	18	2	/	4-18	72	99	165	14	6	7	42	50
40	165	150	110	84	/	18	2	/	4-18	77	124	200	16	7	9	50	70
50	203	165	125	99	/	20	2	/	4-18	85	132	200	22	7	9	50	70
65	222	185	145	118	/	22	2	/	8-18	106	160	290	20	9	11	70	102
80	241	200	160	132	/	24	2	/	8-18	121	183	290	20	9	11	70	102
100	280	235	190	156	/	24	2	/	8-18	143	220	360	24	/	11	/	102
125	325	270	220	184	/	26	2	/	8-26	183	231	600	27	14	/	125	/
150	350	300	250	211	/	28	2	/	8-26	201	250	800	27	14	/	125	/
200	400	360	310	274	/	30	2	/	12-22	252	300	1000	27	14	/	125	/

B3124-**** PN4.0MPa(GB/T 9113, RF)

DN(mm)	L	φE	φB	φC	D1	T	f	f1	N-φh	H	H1	W	M	A1	A2	B1	B2
15	130	95	65	46	40	14	3	4	4-14	48	80	145	13	6	6	36	42
20	130	105	75	56	51	16	3	4	4-14	53	86	145	14	6	6	36	42
25	140	115	85	65	58	16	3	4	4-14	63.5	92	165	14	6	7	42	50
32	165	140	100	76	66	18	3	4	4-18	72	99	165	14	6	7	42	50
40	165	150	110	84	76	18	3	4	4-18	77	124	200	16	7	9	50	70
50	203	165	125	99	88	20	3	4	4-18	85	132	200	22	7	9	50	70
65	222	185	145	118	110	22	3	4	8-18	106	160	290	20	9	11	70	102
80	241	200	160	132	121	24	3	4	8-18	121	183	290	20	9	11	70	102
100	280	235	190	156	150	24	3.5	4.5	8-22	143	220	360	24	/	11	/	102
125	325	270	220	184	176	26	3.5	4.5	8-26	183	231	600	27	14	/	125	/
150	350	300	250	211	204	28	3.5	4.5	8-26	201	250	800	27	14	/	125	/
200	400	375	320	284	260	34	3.5	4.5	12-30	252	300	1000	27	14	/	125	/



Standard Regulation

Design& Manufacture: ASME B16.34-2004 Face-to-face: ASME B16.10-2000 End Connection: ASME B16.5-2003
Inspection and testing: API598-2004

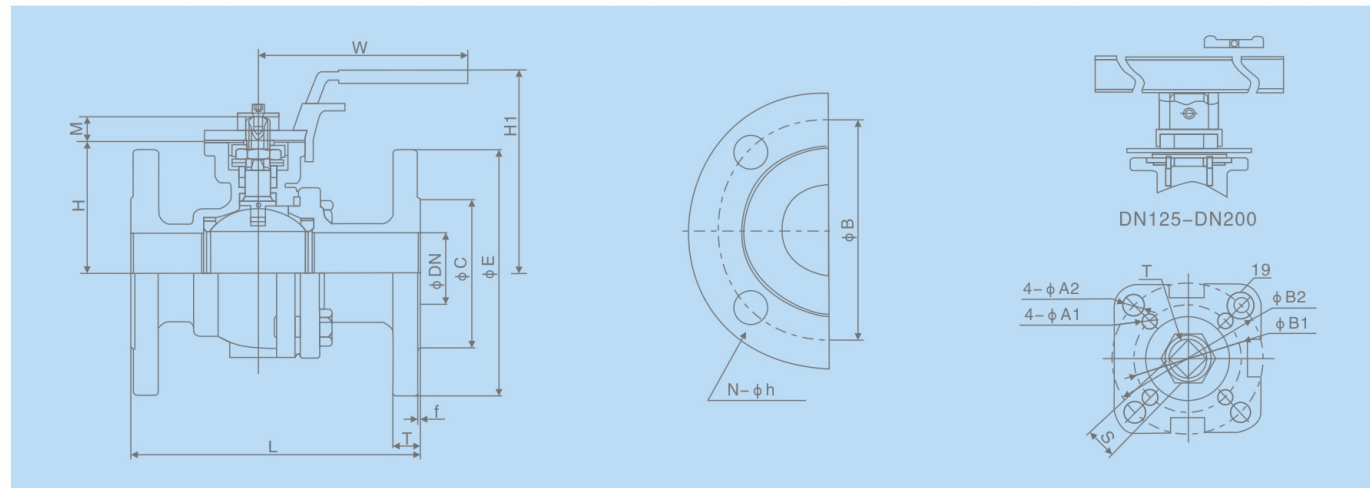
Dimensions

B3101-**** ANSI CLASS 150,RF

NPS(in)	φ DN	L	φ E	φ B	φ C	T	f	N-φ h	H	H1	W	M	A1	A2	B1	B2
1/2"	13	108	89	60.5	35	11.5	1.6	4-16	45	82	145	17	6	6	36	42
3/4"	19	117	98	70	43	11.5	1.6	4-16	45	83	145	19	6	6	36	42
1"	25	127	108	79.5	51	12	1.6	4-16	55	93	165	20.5	6	7	42	50
1 1/4"	32	140	117	89	64	13	1.6	4-16	72	105	165	14.5	6	7	42	50
1 1/2"	38	165	127	98.5	73	15	1.6	4-16	77	122	200	20.5	7	9	50	70
2"	51	178	152	120.5	92	16	1.6	4-19	85	120	200	14	7	9	50	70
2 1/2"	64	190	178	139.5	105	18	1.6	4-19	108	167	290	17	9	11	70	102
3"	76	203	190	152.5	127	19	1.6	4-19	127	190	290	20	9	11	70	102
4"	102	229	229	190.5	157	24	1.6	8-19	150	228	360	24	9	11	70	102
5"	127	356	254	216	186	24	1.6	8-22	175	270	600	73	14	/	125	/
6"	152	394	279	241.5	216	26	1.6	8-22	200	293	800	95	14	/	125	/
8"	203	457	343	298.5	270	29	1.6	8-22	247	300	1000	84	14	/	125	/

B3102-**** ANSI CLASS 300,RF

NPS(in)	φ DN	L	φ E	φ B	φ C	T	f	N-φ h	H	H1	W	M	A1	A2	B1	B2
1/2"	13	140	95	66.5	35	15	1.6	4-16	45	82	145	17	6	6	36	42
3/4"	19	152	117	82.5	43	16	1.6	4-19	45	83	145	19	6	6	36	42
1"	25	165	124	89	51	18	1.6	4-19	55	93	165	20.5	6	7	42	50
1 1/4"	32	178	133	98.5	64	19	1.6	4-19	72	105	165	14.5	6	7	42	50
1 1/2"	38	190	156	114.5	73	21	1.6	4-22	77	122	200	20.5	7	9	50	70
2"	51	216	165	127	92	23	1.6	8-19	85	120	200	14	7	9	50	70
2 1/2"	64	241	190	149	105	26	1.6	8-22	108	167	290	17	9	11	70	102
3"	76	283	210	168.5	127	29	1.6	8-22	127	190	290	20	9	11	70	102
4"	102	305	254	200	157	32	1.6	8-22	150	228	360	24	9	11	70	102
5"	127	381	279	235	186	35	1.6	8-22	175	270	600	73	14	/	125	/
6"	152	403	318	270	216	37	1.6	12-22	200	293	800	95	14	/	125	/
8"	203	502	381	330	270	42	1.6	12-25	247	300	1000	84	14	/	125	/



Standard Regulation

Design & Manufacture: DIN 3357/1.2 Fire safe test : API 607 Face-to-face: DIN 3202
End Connection: DIN 2543 Inspection and testing: DIN 3230

Dimensions

B3112 – **** PN1.6MPa(DIN2543–2000, RF)

DN(mm)	L	φE	φB	φC	T	f	N–φh	H	H1	W	M	A1	A2	B1	B2
15	115	95	65	45	16	2	4–14	48	80	145	9	6	6	36	42
20	120	105	75	58	18	2	4–14	53	84	145	9	6	6	36	42
25	125	115	85	68	18	2	4–14	58	92	165	15	6	7	42	50
32	130	140	100	78	18	2	4–18	72	108	165	11	6	7	42	50
40	140	150	110	88	18	3	4–18	75.5	122	200	14.5	7	9	50	70
50	150	165	125	102	20	3	4–18	84	120	200	15.5	7	9	50	70
65	170	185	145	122	18	3	4–18	87	164	290	21	9	11	70	102
80	180	200	160	138	20	3	8–18	100	178	290	21	9	11	70	102
100	190	220	180	158	20	3	8–18	134	225	360	24	9	11	70	102
125	325	250	210	188	22	3	8–18	183	231	600	27	14	/	125	/
150	350	285	240	212	22	3	8–22	201	250	800	27	14	/	125	/
200	400	340	295	268	24	3	12–22	253	300	1000	27	14	/	125	/

B3113 – **** PN2.5MPa(DIN2544–2000, RF)

DN(mm)	L	φE	φB	φC	T	f	N–φh	H	H1	W	M	A1	A2	B1	B2
15	130	95	65	45	16	2	4–14	48	80	145	9	6	6	36	42
20	150	105	75	58	18	2	4–14	53	84	145	9	6	6	36	42
25	160	115	85	68	18	2	4–14	58	92	165	15	6	7	42	50
32	180	140	100	78	18	2	4–18	72	108	165	11	6	7	42	50
40	200	150	110	88	18	3	4–18	75.5	122	200	14.5	7	9	50	70
50	230	165	125	102	20	3	4–18	84	120	200	15.5	7	9	50	70
65	290	185	145	122	22	3	8–18	87	164	290	21	9	11	70	102
80	310	200	160	138	24	3	8–18	100	178	290	21	9	11	70	102
100	350	235	190	162	24	3	8–22	134	225	360	24	9	11	70	102
125	400	270	220	188	26	3	8–26	183	231	600	27	14	/	125	/
150	450	300	250	218	28	3	8–26	201	250	800	27	14	/	125	/
200	550	360	310	278	30	3	12–26	253	300	1000	27	14	/	125	/

B3114 – **** PN4.0MPa(DIN2545–2000, RF)

DN(mm)	L	φE	φB	φC	T	f	N–φh	H	H1	W	M	A1	A2	B1	B2
15	130	95	65	45	16	2	4–14	48	80	145	9	6	6	36	42
20	150	105	75	58	18	2	4–14	53	84	145	9	6	6	36	42
25	160	115	85	68	18	2	4–14	58	92	165	15	6	7	42	50
32	180	140	100	78	18	2	4–18	72	108	165	11	6	7	42	50
40	200	150	110	88	18	3	4–18	75.5	122	200	14.5	7	9	50	70
50	230	165	125	102	20	3	4–18	84	120	200	15.5	7	9	50	70
65	290	185	145	122	22	3	8–18	87	164	290	21	9	11	70	102
80	310	200	160	138	24	3	8–18	100	178	290	21	9	11	70	102
100	350	235	190	162	24	3	8–22	134	225	360	24	9	11	70	102
125	400	270	220	188	26	3	8–26	183	231	600	27	14	/	125	/
150	450	300	250	218	28	3	8–26	201	250	800	27	14	/	125	/
200	550	375	320	285	34	3	12–30	253	300	1000	27	14	/	125	/

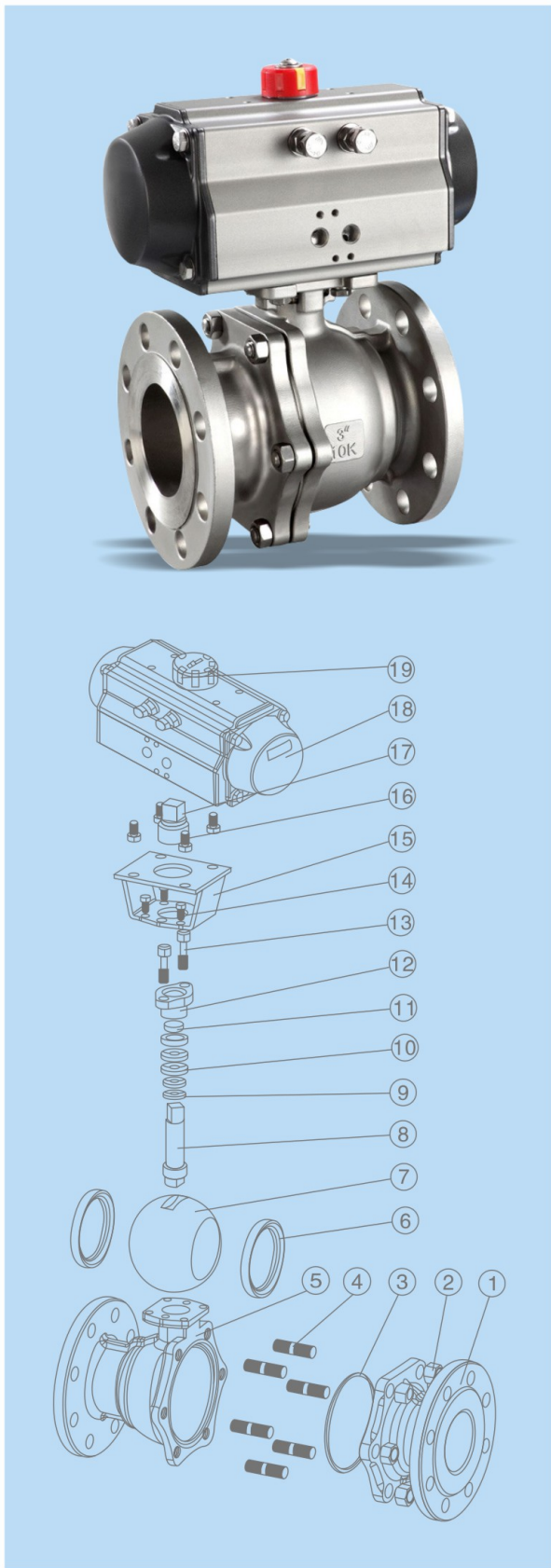
Technical Regulation

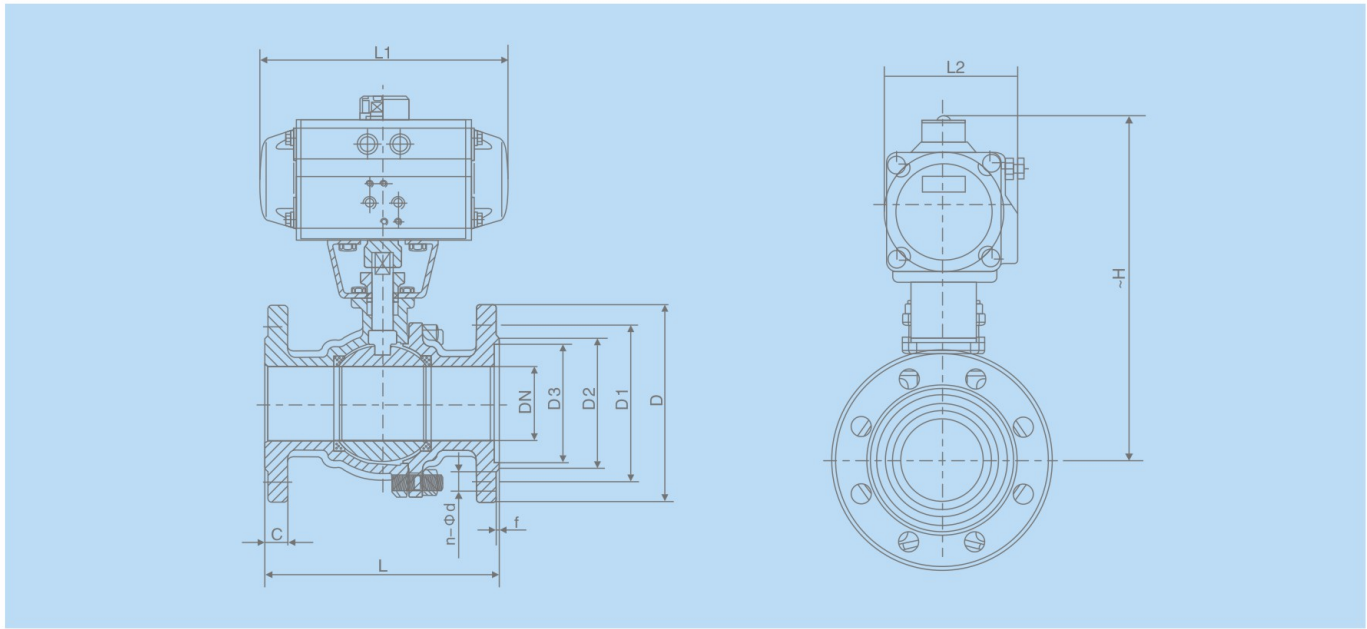
Standard	GB Series	ANSI Series	DIN Series
Design & Manufacture	GB/12237	API 608 ANSI B16.34	DIN 3357/1, 2
Face to Face	GB/12221	ASME B16.10	DIN 3202
End Connection	GB/9113 JB/T79	ASME B16.5	DIN 2543~254
Inspection and testing	GB/T13927	API 598	DIN 3230/3

Parts and Materials

No.	Part name	Material		
1	Cap	WCB	CF8	CF8M
2	Nut	35	304SS	316SS
3	Gasket	PTFE、Flexible graphite.		
4	Bolt	35	304SS	316SS
5	Body	WCB	CF8	CF8M
6	Seat	PTFE、NYLON、PPL、Hard alloy		
7	Ball	304SS	304SS	316SS
8	Stem	420SS	304SS	316SS
9	Gasket	304SS	304SS	316SS
10	Packing	PTFE、Flexible graphite.		
11	Bushing	PTFE composite bearing		
12	Gland	WCB	CF8	CF8M
13	Bolt	35	304SS	316SS
14	Bolt	35	304SS	316SS
15	Bracket	WCB	WCB、CF8	WCB、CF8、CF8M
16	Bolt	35	304SS	304SS
17	Adapter	35	304SS	304SS
18	Actuator	FRPSeries、FHPSeries、FAWSeries		
19	Position indicator	Plastic		

Note: the main components of ball valve and sealing material can be designed according to the actual working conditions and the user's special requirements .





Dimensions

B3122 – **** PN16(1.6MPa)

DN	Overall dimension				Flange dimension						Actuator model
	L	L1	L2	~H	D	D1	D2	C	f	n-φ d	
15	130	141/159	71/83	204/235	95	65	46	14	2	4-φ 14	FHP52DA/FHP63S
20	140	141/159	71/83	209/240	105	75	56	16	2	4-φ 14	FHP52DA/FHP63S
25	150	159/211	83/95	214/256	115	85	65	16	2	4-φ 14	FHP63DA/FHP75S AT65/ATE83
32	165	159/248	83/107	257/277	140	100	76	18	2	4-φ 18	FHP63DA/FHP83S AT65/ATE105
40	180	211/248	95/107	274/292	150	110	84	18	3	4-φ 18	FHP75DA/FHP92S AT83/ATE105
50	200	248/269	107/123	290/300	165	125	99	20	3	4-φ 18	FHP83DA/FHP105S AT83/ATE105
65	220	248/315	107/141	310/335	185	145	118	20	3	4-φ 18	FHP92DA/FHP125S AT105/ATE125
80	250	269/345	123/152	346/368	200	160	132	20	3	8-φ 18	FHP105DA/FHP140S AT105/ATE125
100	280	345/409	152/172	378/410	220	180	156	22	3	8-φ 18	FHP125DA/FHP160S AT125/ATE160
125	320	409/550	172/215	425/450	250	210	184	22	3	8-φ 18	FHP140DA/FHP190S AT160/ATE190
150	360	550/600	215/240	468/531	285	240	211	24	3	8-φ 22	FHP160DA/FHP210S AT190/ATE210
200	400	600/633	240/262	583/618	340	295	266	24	3	12-φ 22	FHP210DA/FHP240S AT210/ATE240

Note: 1, The face to face length and connecting flange dimension is designed and manufactured according to the JB/T79 standards or customer’ s requirements ;
2, Actuator model XXX/XXX is double acting / single action (spring return) pneumatic actuator;
3, The actuator model and size will be different based on different types of valve torque and applied medium;
4, The above actuator configuration and data are used in soft seat valve, metal seat valve configuration and data please consult us.

Dimensions

B3123–**** PN25(2.5MPa)

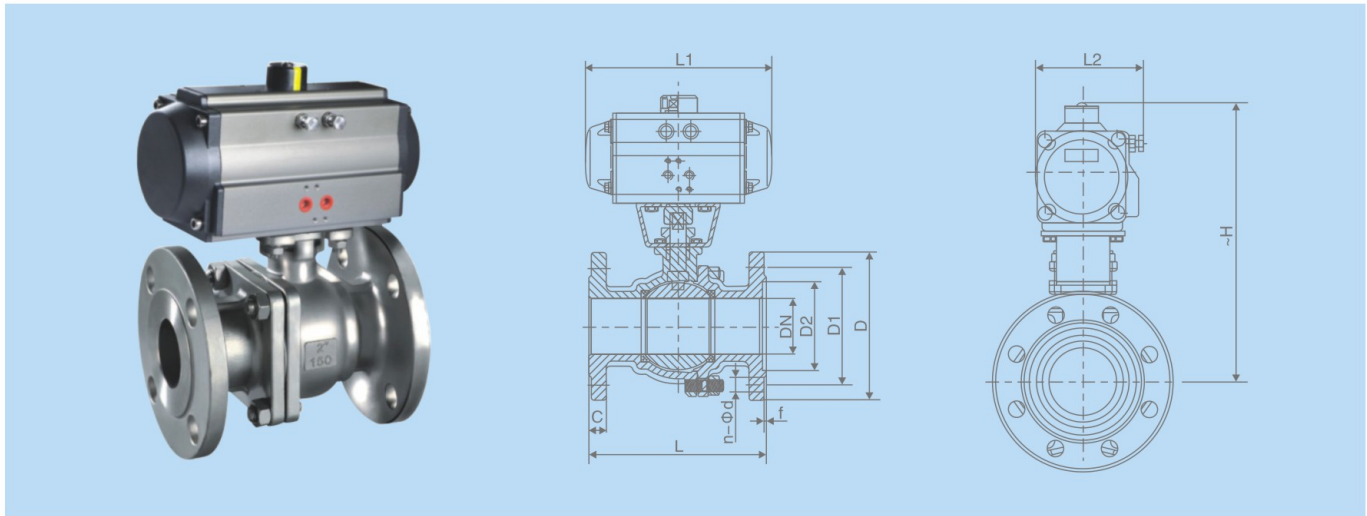
DN	Overall dimension				Flange dimension						Actuator model
	L	L1	L2	~H	D	D1	D2	C	f	n-φ d	
15	130	141/159	71/83	204/235	95	65	46	14	2	4-φ 14	FHP52DA/FHP63S
20	140	141/159	71/83	209/240	105	75	56	16	2	4-φ 14	FHP52DA/FHP63S
25	150	159/211	83/95	257/265	115	85	65	16	2	4-φ 14	FHP63DA/FHP83S
32	165	211/248	95/107	269/287	140	100	76	18	3	4-φ 18	FHP75DA/FHP92S
40	180	248/269	95/107	282/292	150	110	84	18	3	4-φ 18	FHP83DA/FHP105S
50	200	248/345	107/123	290/325	165	125	99	20	3	4-φ 18	FHP92DA/FHP125S
65	220	269/345	107/152	310/357	185	145	118	22	3	8-φ 18	FHP92DA/FHP125S
80	250	345/409	152/172	346/368	200	160	132	24	3	8-φ 18	FHP105DA/FHP140S
100	280	345/438	152/187	418/443	235	190	156	24	3	8-φ 22	FHP125DA/FHP160S
125	320	438/550	187/215	460/503	270	220	184	26	3	8-φ 26	FHP160DA/FHP190S
150	360	550/600	215/240	518/563	300	250	211	28	3	8-φ 26	FHP190DA/FHP210S
200	400	633/730	262/330	583/618	360	310	274	30	3	12-φ 26	FHP240DA/FHP270S

Dimensions

B3124–**** PN40(4.0MPa)

DN	Overall dimension				Flange dimension							Actuator model
	L	L1	L2	~H	D	D1	D2	D3	C	f	n-φ d	
15	130	141/159	71/83	204/235	95	65	46	40x4	14	2	4-φ 14	FHP52DA/FHP63S
20	140	159/211	83/95	240/252	105	75	56	51x4	16	2	4-φ 14	FHP63DA/FHP75S
25	150	211/248	95/107	257/265	115	85	65	58x4	16	2	4-φ 14	FHP75DA/FHP92S
32	180	211/248	95/107	269/287	140	100	76	66x4	18	3	4-φ 18	FHP75DA/FHP92S
40	200	248/269	107/123	282/292	150	100	84	76x4	18	3	4-φ 18	FHP83DA/FHP105S
50	220	248/315	107/141	300/325	165	125	99	88x4	20	3	4-φ 18	FHP92DA/FHP125S
65	250	269/345	123/152	335/357	185	145	118	110x4	22	3	8-φ 18	FHP105DA/FHP140S
80	280	345/409	152/172	368/400	200	160	132	121x4	24	3	8-φ 18	FHP125DA/FHP160S
100	320	409/438	172/187	418/506	235	190	156	150x4.5	24	3	8-φ 22	FHP140DA/FHP190S
125	400	550/600	215/240	445/548	270	220	184	176x4.5	26	3	8-φ 26	FHP190DA/FHP240S
150	400	600/633	215/262	563/598	300	250	211	204x4.5	28	3	8-φ 26	FHP210DA/FHP270S
200	502	730	330	636/666	375	320	284	260x4.5	34	3	12-φ 30	FHP270DA/FHP350S

Note: 1, The face to face length and connecting flange dimension is designed and manufactured according to the JB/T79 standards or customer’ s requirements ;
2, Actuator model XXX/XXX is double acting / single action (spring return) pneumatic actuator;
3, The actuator model and size will be different based on different types of valve torque and applied medium;
4, The above actuator configuration and data are used in soft seat valve, metal seat valve configuration and data please consult us.



Dimensions

B3101-**** Class150

DN		Overall dimension				Flange dimension						Actuator model
mm	in	L	L1	L2	~H	D	D1	D2	C	f	n-Φd	
15	1/2	108	141/159	71/83	204/235	89	60.5	35	10	1.6	4-φ15	FHP52DA/FHP63S
20	3/4	117	141/159	71/83	209/240	99	69.9	43	10.5	1.6	4-φ15	FHP52DA/FHP63S
25	1	127	159/211	83/95	214/256	108	79.2	51	11.5	1.6	4-φ15	FHP63DA/FHP75S
32	1 1/4	140	211/248	95/107	257/277	117	88.9	64	13	1.6	4-φ15	FHP75DA/FHP92S
40	1 1/2	165	248/269	107/123	274/292	127	98.6	73	14.5	1.6	4-φ15	FHP83DA/FHP105S
50	2	178	248/269	107/123	290/300	152	120.7	92	16	1.6	4-φ19	FHP92DA/FHP105S
65	2 1/2	190	269/345	123/152	310/335	178	139.7	105	18	1.6	4-φ19	FHP92DA/FHP125S
80	3	203	269/345	123/152	346/368	191	152.47	127	19.5	1.6	4-φ19	FHP105DA/FHP140S
100	4	229	345/409	152/172	378/410	229	190.5	157	24	1.6	8-φ19	FHP125DA/FHP160S
125	5	356	409/438	172/187	425/450	254	215.9	186	24	1.6	8-φ22	FHP140DA/FHP190S
150	6	394	550/600	215/240	468/531	279	241.3	216	25.5	1.6	8-φ22	FHP190DA/FHP240S
200	8	457	633/730	262/330	583/618	343	298.5	270	28.5	1.6	8-φ22	FHP210DA/FHP270S

Dimensions

B3102-**** Class-300

DN		Overall dimension				Flange dimension						Actuator model
mm	in	L	L1	L2	~H	D	D1	D2	C	f	n-Φd	
15	1/2	140	141/159	71/83	204/235	95	65.7	35	14.5	1.6	4-φ16	FHP52DA/FHP63S
20	3/4	152	141/159	71/83	209/240	117	82.5	43	15.8	1.6	4-φ19	FHP52DA/FHP75S
25	1	165	211/248	95/107	214/265	124	88.9	51	17.6	1.6	4-φ19	FHP75DA/FHP92S
32	1 1/4	178	211/248	95/107	269/287	133	98.4	64	19.1	1.6	4-φ19	FHP83DA/FHP105S
40	1 1/2	190	248/269	107/123	282/292	155	114.3	73	20.6	1.6	4-φ19	FHP92DA/FHP125S
50	2	216	269/315	123/141	290/325	165	127	92	22.3	1.6	8-φ19	FHP92DA/FHP125S
65	2 1/2	241	269/345	123/152	310/357	191	149.2	105	25.4	1.6	8-φ22	FHP105DA/FHP140S
80	3	283	345/409	152/172	346/368	210	168.3	127	28.6	1.6	8-φ22	FHP125DA/FHP160S
100	4	305	409/438	172/187	418/443	254	200	157	31.8	1.6	8-φ26	FHP140DA/FHP190S
125	5	381	438/550	187/215	460/503	279	234.9	186	35	1.6	8-φ26	FHP190DA/FHP240S
150	6	403	550/600	240/262	518/563	318	269.9	216	36.6	1.6	12-φ26	FHP210DA/FHP270S
200	8	502	633/730	262/330	583/618	381	330.2	270	41.3	1.6	12-φ29	FHP270DA/FHP350S

Product Introduction

Flowtec trunnion mounted ball valve are heavy duty and full bore designed. Main applications: Petroleum and natural gas, fine chemicals, metallurgy and air separation, food and beverage, water and waste-water treatment, pulp and paper, power and power plants, pharmaceutical, light industry.

Features

- Full bore designed to meet industry standards;
- Meet API;
- Two piece body construction;
- Lower operation torque,can be mounted with smaller actuators;
- Spring loaded PTFE seat rings for positive sealing;
- Fire safety body seat retainer design,and provided a secondary metal to metal seated between the ball and the seat retainer after the PTFE seat ring buened out.Fire test to API 607 and 6FA;
- V Type stem packing ring provided a long life stem sealing;
- Adjustable stem packing;
- Automatically middle cavity pressure relief;
- API 6D standards;
- Trunnion ball are installed with bearing to reduce friction and absorb radial thrust;
- Suitable for block and bleed application.

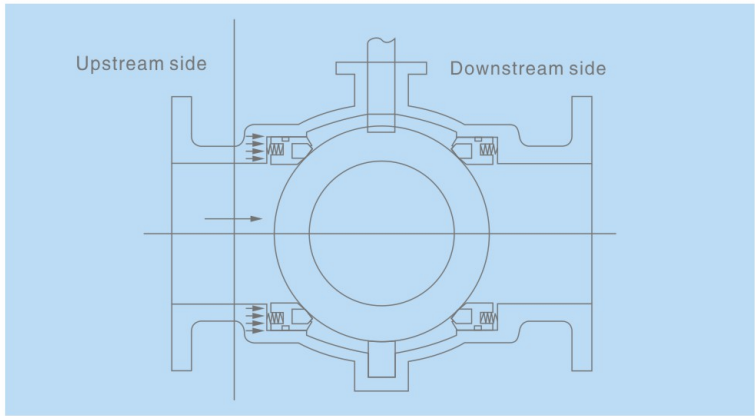
Standard

Design & manufacture: ANSI/ASME B16.34/GB12237
Face to face: ASME B16.10/GB1221
End dimension: ASME B16.5/GB/HG/JIS
Testing standard: API 598, API 6D, BS 5146

Technical Parameter

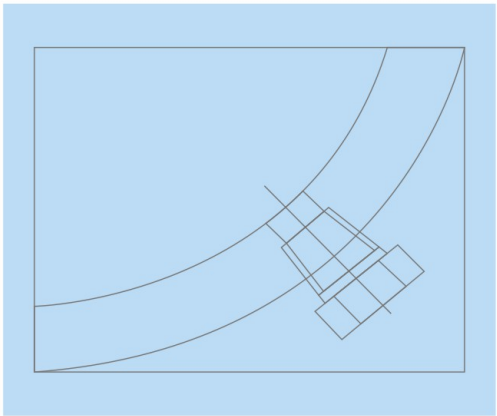
Full bore structure
Valve size: DN50 – DN1400
Pressure rating: GB PN1.6~PN10.0MPa
ANSI Class150#~Class600#
Temperature range: – 25℃~250℃





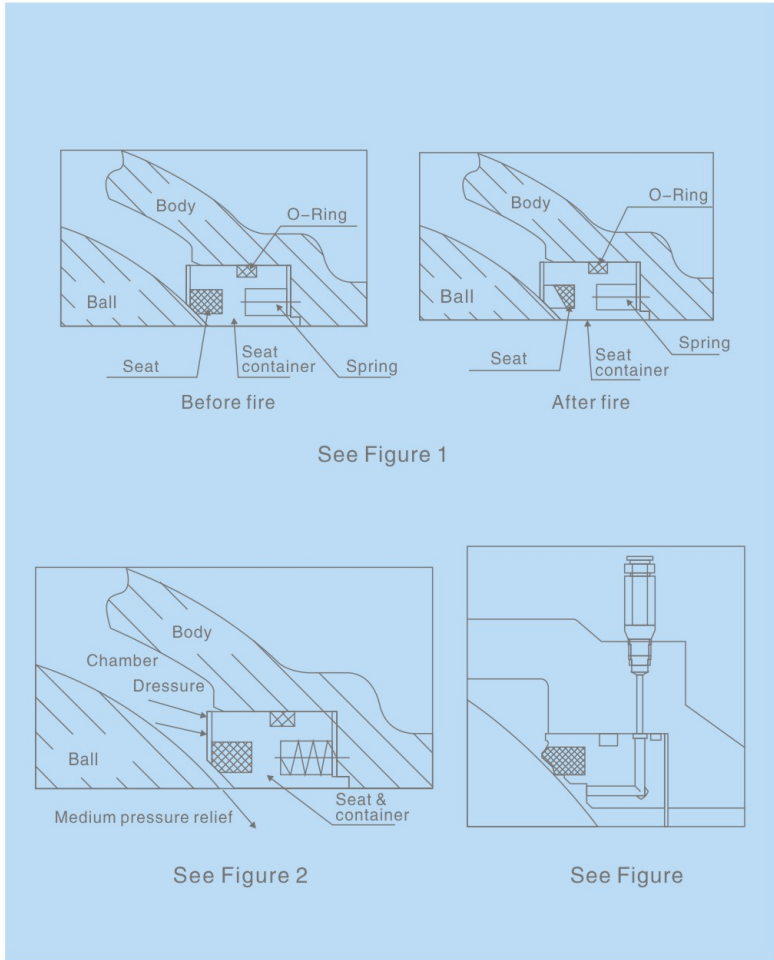
The Sealing Principle of Trunnion Mounted Ball Valve

The ball is fixed in the valve body and axis rotation around the valve stem and the bottom stem. The inlet fluid drive the valve seating sealing closely on the ball surface to provide a tightly sealing.



Block and Bleed Function

Normally the trunnion mounted ball valve is designed with a drain hole(blocked by a plug)on the valve body, through which the pressure and the sediment can be discharged when the valve is blocked. Also double block and bleed function is optional for Flowtec trunnion mounted ball valve.



Fire Safety Function

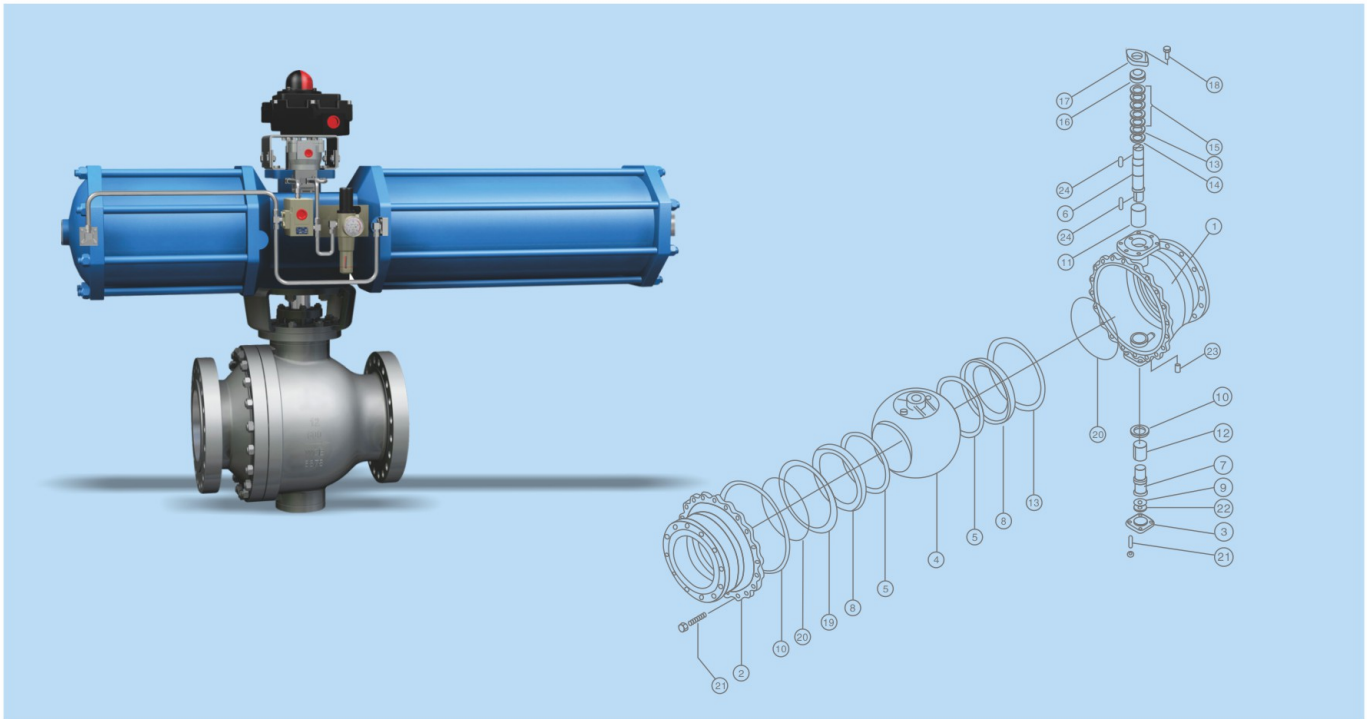
The valve seat of Flowtec soft seat tyrunnion mounted ball valve is assmblied by a seat container and a soft seat ring. In case of fire, the soft seat ring (PTFE or R.PTFE) is burned out, the metal seat container is seating on the ball surface by spring force, and form a secondary metal to metal sealing to block the fire in pipeline, which meet to meet API 6FA's and API 607's request. (see Figure 1)

Self-pressure Relief Function

When the pressure in the valve cavity increased abnormally beyond the preload of the downstream valve seat spring, it will push the valve seat to turn away from the ball surface, the pressure is released to the downstream. After the pressure was relesed, the downstream seat will reseal automatically on the ball surface by the spring force. This is the self-pressure relief function of Flowtec's trunnion mounted ball valve (see Figure 2)

Emergency Injection Sealing

Trunnion mounted ball valve is designed with auxiliary seat emergency system (optional), once the soft seal damaged or in case of an emergency and fail to seal, to inject related sealant through seal auxiliary systems to achieve the emergency seal, the emergency sealing device can be used to flush and lubricate the seat area if necessary, to keep clean. (see Figure 3)



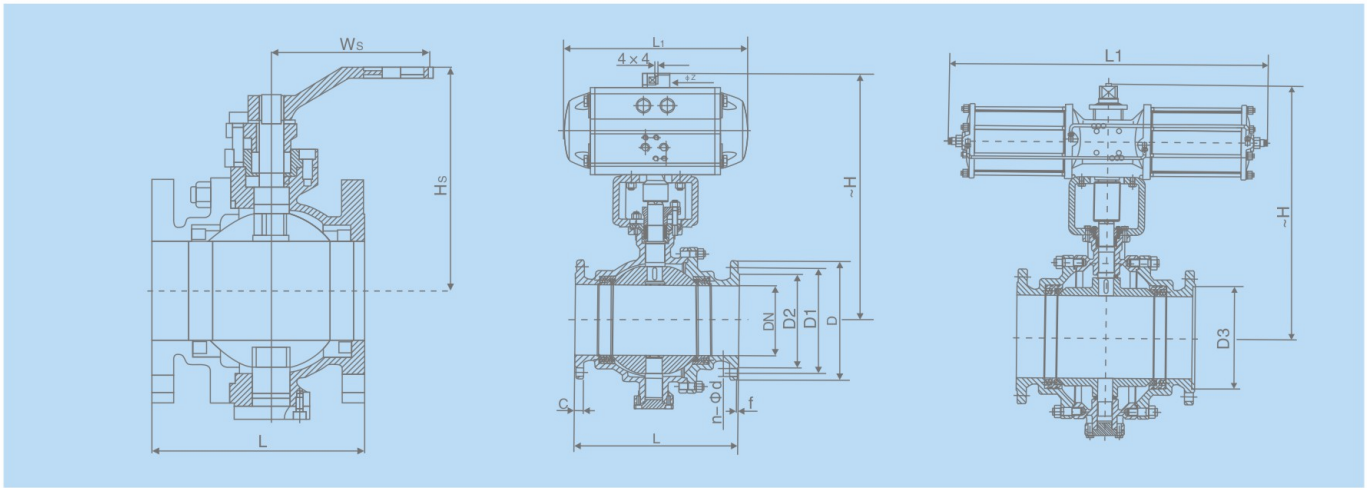
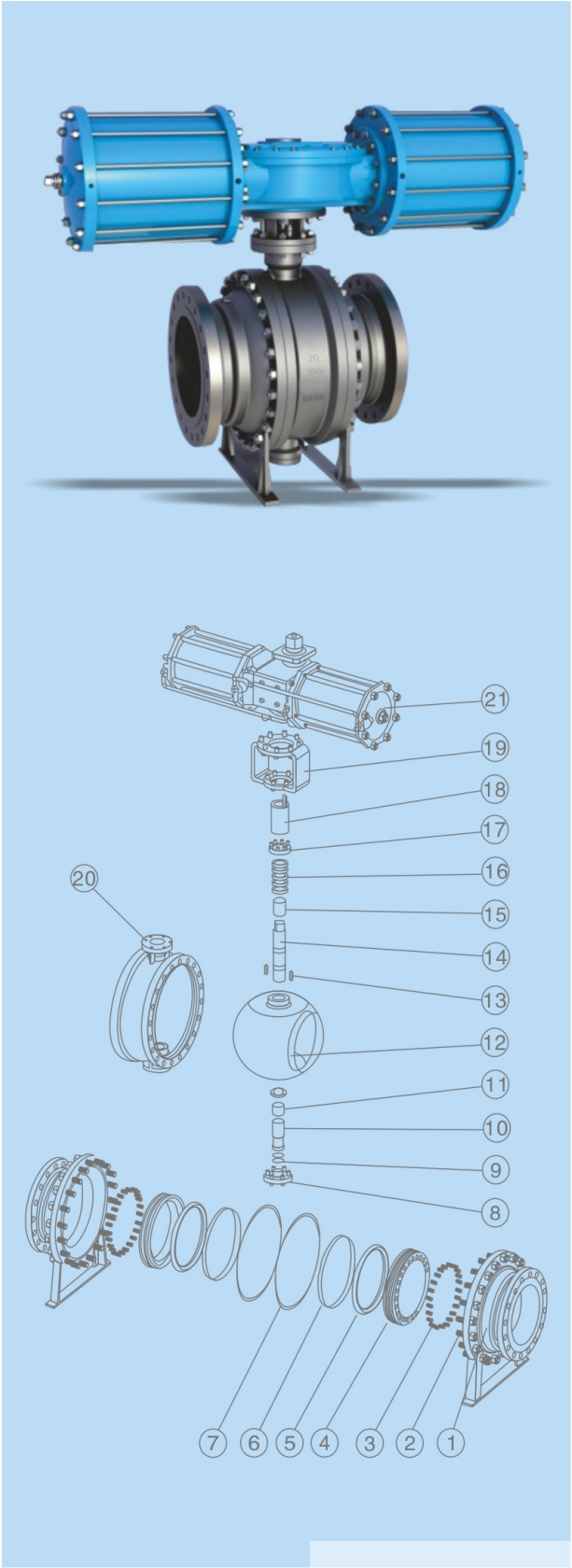
Parts and Materials

No.	Part name	Carbon steel	Stainless steel
1	Body	A216-WCB	A351-CF8,A351-CF8M,A351-CF3,A351-CF3M
2	Body cap	A216-WCB	A351-CF8,A351-CF8M,A351-CF3,A351-CF3M
3	Bottom cover	A216-WCB	A351-CF8,A351-CF8M,A351-CF3,A351-CF3M
4	Ball	A216-WCB, HCr ¹	A351-CF8,A351-CF8M,A351-CF3,A351-CF3M
5	Seat	R.TFE	R.TFE
6	Up Stem	304or1Cr13 HCr	A276-304,A276-316,A276-316L
7	Down Stem	304or1Cr13	A276-304,A276-316,A276-316L
8	Seat container	A105-1025.Zn	A276-304,A276-316,A276-316L
9	Thrust bearing	Metal liner PTFE	Metal liner PTFE
10	Gasket	R.PTFE+O ring	R.PTFE+O ring
11	Up stem bearing	Metal liner PTFE	Metal liner PTFE
12	Down stem bearing	Metal liner PTFE	Metal liner PTFE
13	Packing gasket	Metal liner PTFE	Metal liner PTFE
14	Thrust bearing	Metal liner PTFE	Metal liner PTFE
15	Packing	R.PTFE+O ring	R.PTFE+O ring
16	Packing ring	304	A276-304
17	Gland	A105-1025	304
18	Gland Bolt	A2-70	304
19	Spring	316 CPS-H	316 CPS-H
20	Seal	VITON:NBR	VITON:NBR
21	Stud/Nut	A193-B7/A194-2H	A193-B8/A194-8
22	Spacer shim	316	316
23	Drain plug	A105-1025.Zn	A276-304,A276-316
24	Key	1045	329

Note: 1, DN50 to 200 should be 1Cr13 or CF8 (304) stainless steel; 2, HCr- hard chromium plated, Zn- zinc plated

Parts and Materials

No.	Part name	Material		
1	Outlet Body	WCB	CF8	CF8M
2	Bolt	35	304SS	316SS
3	Spring	60Si2Mn	304SS	316SS
4	Seat	25or1Cr13	304SS	316SS
5	Sealing ring	PTFE、NYLON、PPL、Hard alloy		
6	O ring	EPDM,NBR,FKM,Viton		
7	Gasket	PTFE、Graphite		
8	Flange	WCB	CF8	CF8M
9	Gasket	304SS	304SS	316SS
10	Down Stem	1Cr13	304SS	316SS
11	Bushing	PTFE		
12	Ball	304SS	304SS	316SS
13	Key	35	304SS	316SS
14	Stem	420SS	304SS	316SS
15	Bushing	PTFE		
16	Packing	PTFE、Flexible graphite		
17	Packing Gland	WCB	CF8	CF8M
18	Adapter	35	304SS	316SS
19	Bracket	WCB	WCB、304SS	WCB、304SS 316SS
20	Body	WCB	CF8	CF8M
21	Actuator	FHPseries、FRPseries、FAWseries		



Dimensions

PN	DN	Overall dimension			Flange dimension							
		L	L1	~H	D	D1	D2	C	f	Ws	Hs	n-φd
B3222-****、B3223-****												
PN 16 (1.6MPa)	50	178	211/315	323/348	165	125	99	20	3	260	165	4-φ18
	65	190	248/269	363/388	185	145	118	20	3	350	185	4-φ18
	80	203	269/345	408/430	200	160	132	20	3	500	205	8-φ18
	100	356	345/438	470/527	220	180	156	22	3	650	255	8-φ18
	125	356	409/550	537/625	250	210	184	22	3	800	285	8-φ18
	150	394	438/600	577/655	285	240	211	24	3	1000	305	8-φ22
	200	457	600/633	695/730	340	295	266	24	3	-	-	12-φ22
	250	533	633/730	762/792	405	355	319	26	3	-	-	12-φ26
	300	610	1180	808	460	410	370	28	4	-	-	12-φ26
	350	686	1180	916	520	470	429	30	4	-	-	16-φ26
	400	762	1320	970	580	525	480	32	4	-	-	16-φ30
	500	914	1430	1088	715	650	609	36	4	-	-	20-φ33
PN 25 (2.5MPa)	50	216	248/345	333/370	165	125	99	20	3	260	155	4-φ18
	65	243	269/409	388/442	185	145	118	22	3	350	185	4-φ18
	80	283	345/438	430/472	200	160	132	24	3	500	205	8-φ18
	100	305	409/550	507/575	235	190	156	24	3	650	255	8-φ22
	125	381	438/600	562/630	270	220	184	26	3	800	285	8-φ26
	150	403	550/633	640/700	300	250	211	28	3	1000	305	8-φ26
	200	502	600/633	705/740	360	310	274	30	3	-	-	12-φ26
	250	568	633/730	772/802	425	370	330	32	3	-	-	12-φ30
	300	648	1180	821	485	430	389	34	4	-	-	16-φ30
	350	762	1180	934	555	490	448	38	4	-	-	16-φ30
	400	838	1320	990	620	555	503	40	4	-	-	16-φ36
	500	991	1430	1006	730	660	609	44	4	-	-	20-φ36

Note: 1, Ball valve face to face length and end flange dimension can be designed according to JB/T79 standard or user's requirements.
2, The actuator model and size will be different based on different types of valve torque and applied medium.

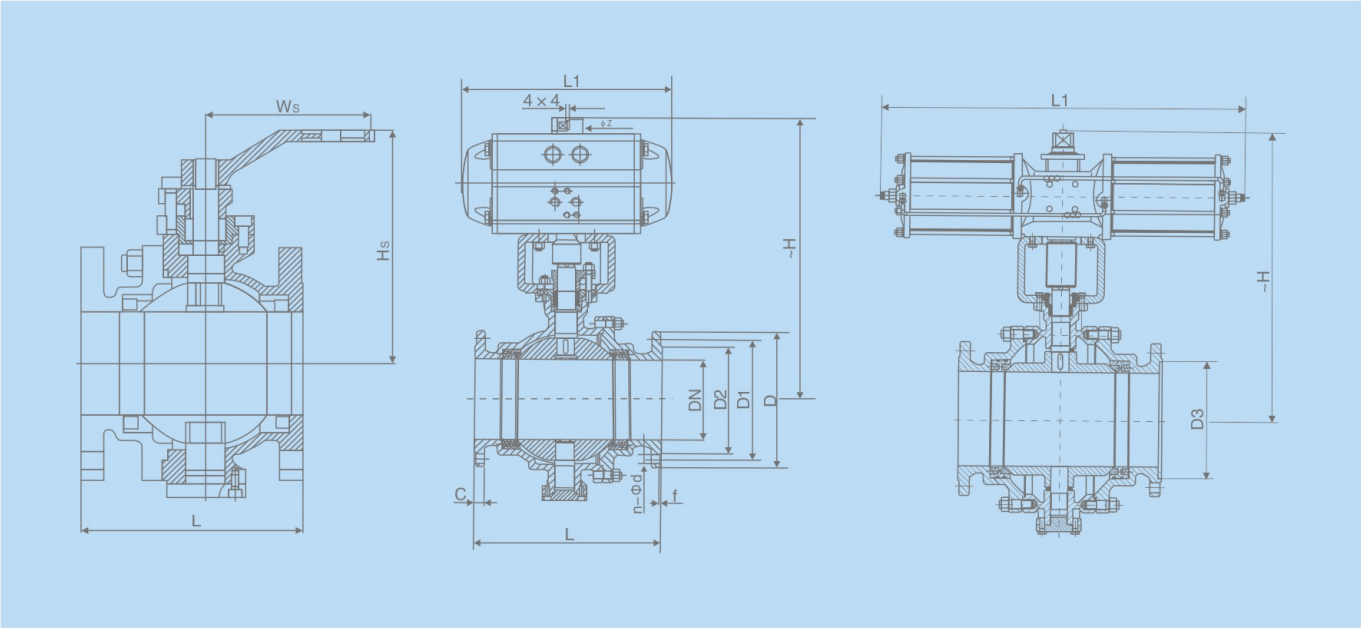
Dimensions

PN	DN	Overall dimension			Flange dimension								
		L	L1	~H	D	D1	D2	D3	C	f	Ws	Hs	n-φ d
B3224-****													
PN 40 (4.0 MPa)	50	216	248/345	358/397	165	125	99	88x4	20	3	260	155	4-φ 18
	65	243	269/345	410/452	185	145	118	110x4	22	3	350	185	8-φ 18
	80	283	345/409	462/530	200	160	132	121x4	24	3	500	205	8-φ 18
	100	305	409/438	547/615	235	190	156	150x4.5	24	3	800	270	8-φ 22
	125	381	438/550	635/695	270	220	184	176x4.5	26	3	1000	300	8-φ 26
	150	403	550/600	700/735	300	250	211	204x4.5	28	3	1200	340	8-φ 26
	200	502	633/730	748/778	375	320	284	260x4.5	34	3	-	-	12-φ 30
	250	568	730	803	450	385	315	313x4.5	38	3	-	-	12-φ 33
	300	648	1320	914	515	450	409	364x4.5	42	4	-	-	16-φ 33
	350	762	1320	970	580	510	465	422x5	46	4	-	-	16-φ 36
	400	838	1430	1060	660	585	535	474x5	50	4	-	-	16-φ 39
	500	991	1950	1228	755	670	615	576x5	52	4	-	-	20-φ 42

Dimensions

PN	DN	Overall dimension	Flange dimension							
		L	D	D1	D2	D3	C	Ws	Hs	n-φ d
B3225-****、B3226-****										
PN 64 (6.4MPa)	50	292	180	135	105	88	26	260	165	4-φ 23
	65	330	205	160	130	110	28	350	190	8-φ 23
	80	356	215	170	140	121	30	500	225	8-φ 23
	100	406	250	200	168	150	32	800	260	8-φ 25
	125	400	295	240	202	176	36	1000	310	8-φ 30
	150	495	345	280	240	204	38	1200	360	8-φ 34
	200	597	405	345	300	260	44	-	-	12-φ 34
	250	673	470	400	352	313	48	-	-	12-φ 41
	300	762	530	460	412	364	54	-	-	16-φ 41
	350	826	600	525	475	422	60	-	-	16-φ 41
	400	902	670	585	525	474	66	-	-	16-φ 48
	500	1054	800	705	640	576	70	-	-	20-φ 54
PN 100 (10.0MPa)	50	292	195	145	112	88	28	350	175	4-φ 25
	65	330	220	170	138	110	32	500	200	8-φ 25
	80	356	230	180	148	121	34	650	235	8-φ 25
	100	432	265	210	172	150	38	1000	275	8-φ 30
	125	508	315	250	210	176	42	1200	325	8-φ 34
	150	559	355	290	250	204	46	-	-	12-φ 34
	200	660	430	360	312	260	54	-	-	12-φ 41
	250	787	505	430	382	313	60	-	-	12-φ 41
	300	838	585	500	442	364	70	-	-	16-φ 48

Note: 1, Ball valve face to face length and end flange dimension can be designed according to JB/T79 standard or user's requirements.
2, The actuator model and size will be different based on different types of valve torque and applied medium.



Dimensions

B3201-**** Class150

DN		Overall dimension			Flange dimension							
DN	in	L	L1	~H	D	D1	D2	C	f	Ws	Hs	n-φ d
50	2"	178	248/269	320/345	152	120.6	92	15.8	1.6	260	155	4-φ 19
65	2 ¹ / ₂ "	190	248/269	365/390	178	139.7	105	17.6	1.6	350	185	4-φ 19
80	3"	203	269/345	403/425	190	152.4	127	19.1	1.6	500	205	4-φ 19
100	4"	229	345/438	475/532	229	190.5	157	23.9	1.6	650	255	8-φ 19
125	5"	356	409/550	539/627	254	216	186	23.9	1.6	800	285	8-φ 22
150	6"	394	438/600	574/652	279	241.3	216	25.4	1.6	1000	305	8-φ 22
200	8"	457	600/633	693/728	343	298.5	270	28.6	1.6	-	-	8-φ 22
250	10"	533	633/730	762/792	406	362	324	30.2	1.6	-	-	12-φ 25
300	12"	610	1180	820	483	432	381	31.8	1.6	-	-	12-φ 25
350	14"	686	1180	923	533	476	413	35	1.6	-	-	12-φ 29
400	16"	762	1320	979	597	539.5	470	36.6	1.6	-	-	16-φ 29
500	20"	914	1430	1079	699	635	584	42.9	1.6	-	-	20-φ 32

Note: 1, Ball valve face to face length and end flange dimension can be designed according to JB/T79 standard or user's requirements.
2, The actuator model and size will be different based on different types of valve torque and applied medium.

Dimensions

B3202-**** Class300

DN		Overall dimension			Flange dimension							
DN	in	L	L1	~H	D	D1	D2	C	f	Ws	Hs	n-φd
50	2"	216	248/345	336/373	165	127	92	22.3	1.6	260	155	8-φ19
65	2 1/2"	241	269/409	395/449	190	149.2	105	25.4	1.6	350	185	8-φ22
80	3"	283	315/438	435/477	210	168.3	127	28.6	1.6	500	205	8-φ22
100	4"	305	409/550	504/572	254	200	157	31.8	1.6	800	270	8-φ22
125	5"	381	438/600	566/634	279	234.9	186	35	1.6	1000	305	8-φ22
150	6"	403	550/633	649/709	318	269.9	216	36.6	1.6	1200	340	12-φ22
200	8"	502	600/633	715/750	381	330.2	270	41.3	1.6	-	-	12-φ25
250	10"	568	633/730	782/812	444	387.5	324	47.7	1.6	-	-	16-φ29
300	12"	648	1162	839	521	451	381	50.8	1.6	-	-	12-φ32
350	14"	762	1380	984	584	514.5	413	54	1.6	-	-	20-φ32
400	16"	838	1860	1004	648	571.5	470	57	1.6	-	-	20-φ35
500	20"	991	1860	1118	775	686	584	63.5	1.6	-	-	24-φ35

Dimensions

B3203-**** Class600

DN		Overall dimension								
DN	in	L	D	D1	D2	D3	C	Ws	Hs	n-φd
50	2"	292	165	127	108	82.6	26	350	175	8-19
65	2 1/2"	330	190	149	127	101.6	29	500	200	8-22
80	3"	356	210	168	146	123.8	32	650	235	8-22
100	4"	432	273	216	175	149.2	38	1000	275	8-25
125	5"	508	330	266.5	210	181.0	45	1200	325	8-29
150	6"	559	356	292	241	211.1	48	-	-	12-29
200	8"	660	419	349	302	269.9	56	-	-	12-32
250	10"	787	508	432	356	323.9	64	-	-	16-35
300	12"	838	559	489	413	381.0	67	-	-	20-35

Product Introduction

There are many types of V type ball valve :wafer type, flange connection type ,V port structure, quarter turn, rotary control valve. Main applications: pulp and paper, food and beverage, water and waste water treatment, petroleum and natural gas, fine chemicals, metallurgy and air separation gas, power generation systems and power plants, pharmaceutical, light industry.

Features

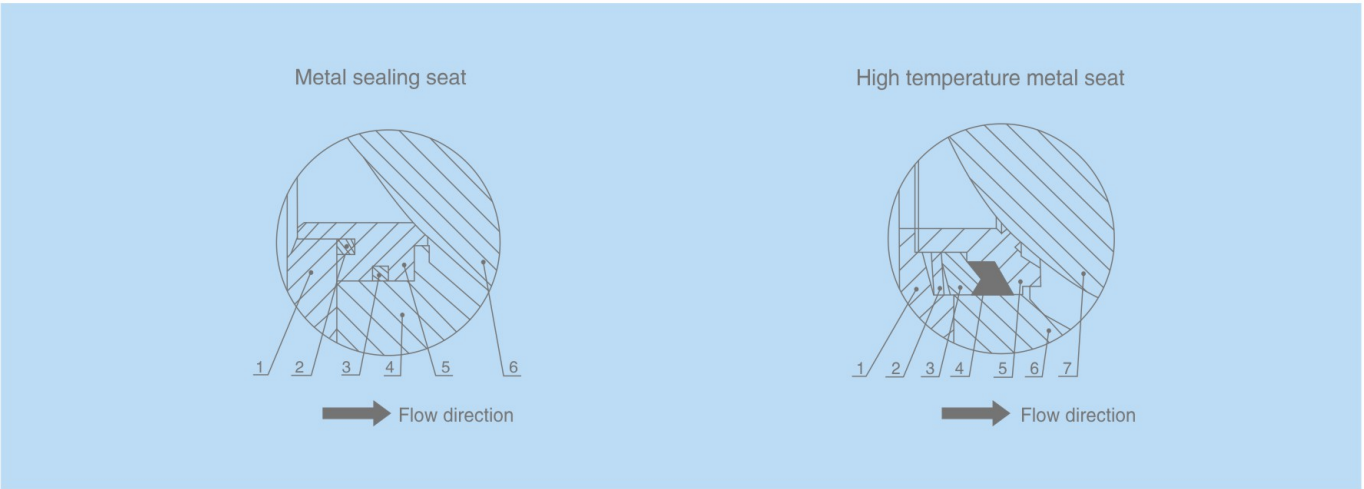
One piece valve body design.Eliminated the leakage from body.
Protecting valve seat out of bent force from the pipe line;
New V structure with large Cv value design.Reduce the flow resistance;
Wide range of modulation,the modulating rate can be:300:1;
ISO 5211 Top mounting flange designed.Easily to mount with difference actuator;
Multi seat design,can be used in different condition.PTFE resilient seat is using in most process.And spring pre-loaded metal seat is specially in heavy duty;
V type stem packing design,with higher sealing quality.And meet TUV TA-LUFTS request;
Standard with wafer connection,which save the cost of end user;
Flange end connection is also available for different condition.

Standard

Design & manufacture: ANSI/ASME B16.34/GB12237
Face to face: ASME B16.10/GB1221
End dimension: ASME B16.5/GB9113
Inspection and testing: API 598, API 6D, BS5146, GB13927

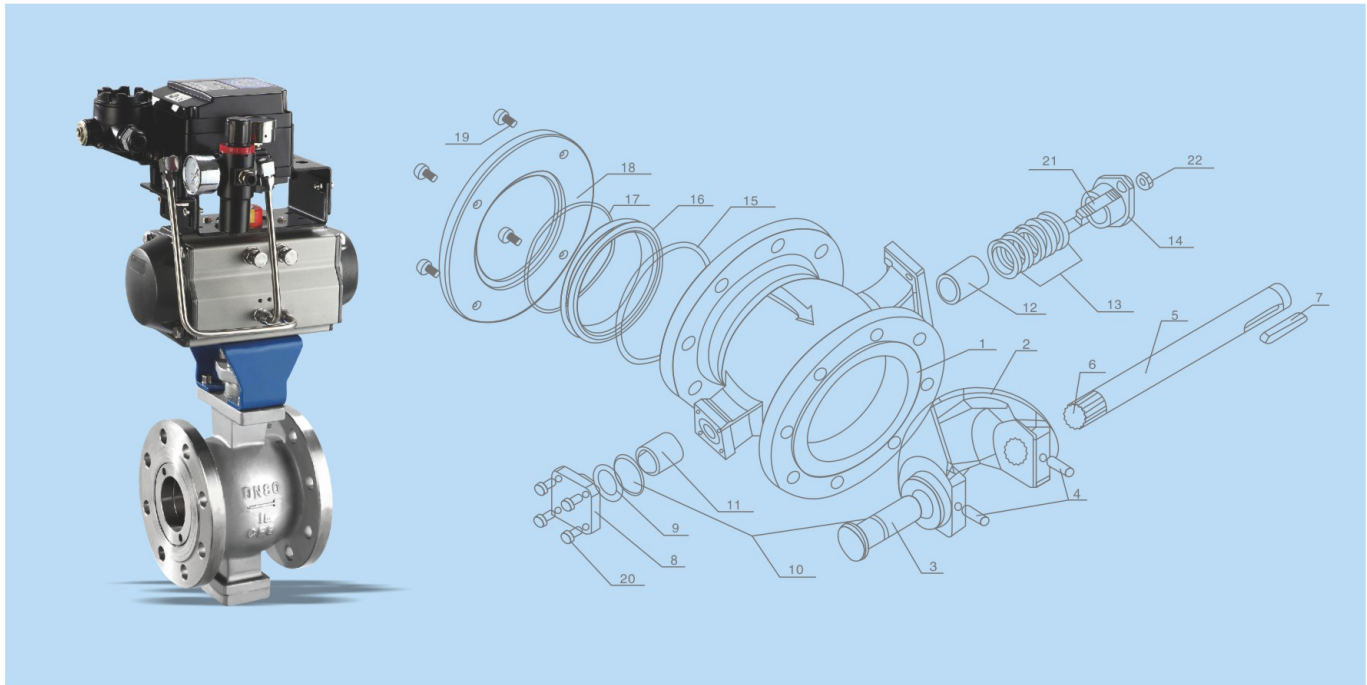
Technical Data

Valve size: Wafer typeDN25 – DN250
Valve size: Flange typeDN25 – DN600
Pressure rating: ANSI Class150Lb/Class300Lb
PN1.6/2.5/4.0/6.4MPa
Temperature range: –25℃~220℃



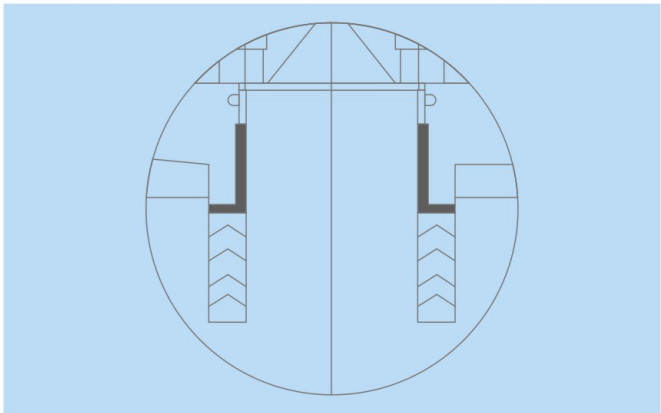
Metal sealing seat		
No.	name	Temperature range
1	Gland	-20~230℃
2	Spring	
3	O Ring	
4	Body	
5	Seat	
6	V Ball	

High temperature metal seat		
No.	name	Temperature range
1	Gland	-20~425℃
2	Spring	
3	Compression ring	
4	Graphite ring	
5	Seat	
6	Body	
7	V Ball	



Parts and Materials

No.	Part name	Quantity (pcs)	Material
1	Body	1	WCB、CF8、CF8M、CF3、CF3M
2	V Ball	1	CF8、CF8M+Cr
3	Bottom stem	1	17-4PH、SS316
4	Pin	2	SS304、SS316
5	Upper stem	1	17-4PH、SS316
6	Spline	1	17-4PH、SS316
7	Key	1	SS304、45#
8	Bottom cap	1	CF8、CF8M
9	O Ring	1	FKM,Viton
10	Spacer shim	each1	PTFE
11	Bearing	1	Composite materials
12	Bearing	1	Composite materials
13	Packing	1team	PTFE
14	Packing gland	1	CF8
15	O Ring	1	FKM,Viton
16	Seat	1	SS304、SS316+Cr
17	Spring	1	SS316
18	Gland	1	Q235、SS304、SS316
19	Socket head cap screw		SS304
20	Hex head screw	4	SS304
21	Dowel screw	2	SS304
22	Hex head screw	2	SS304



Multi Seat Structure

Metal Seat

The metal seat is pre-load by the spring back up seat ring. While the downstream flow pressure provide an enhance seal for the shut-off character. As differential pressure increase, the sealing force is also increase by the flow pressure. Shut-off seal up to:ANSI Class IV.

Soft Seat

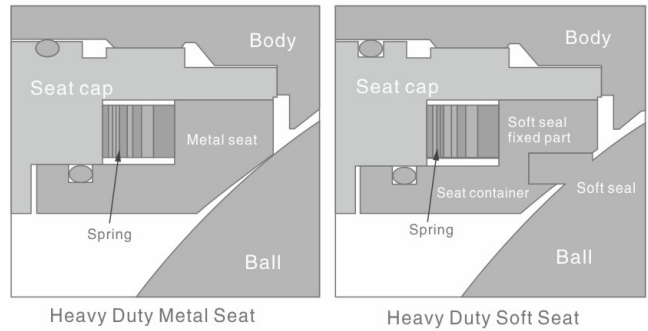
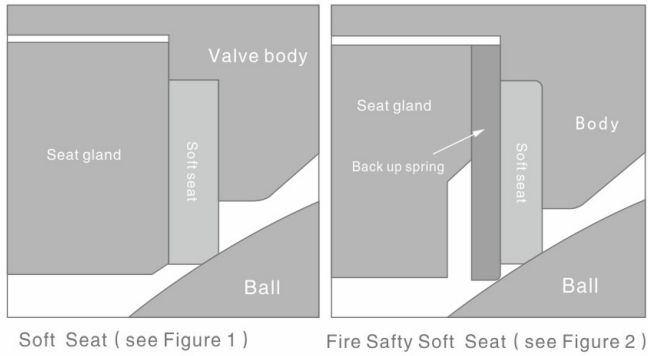
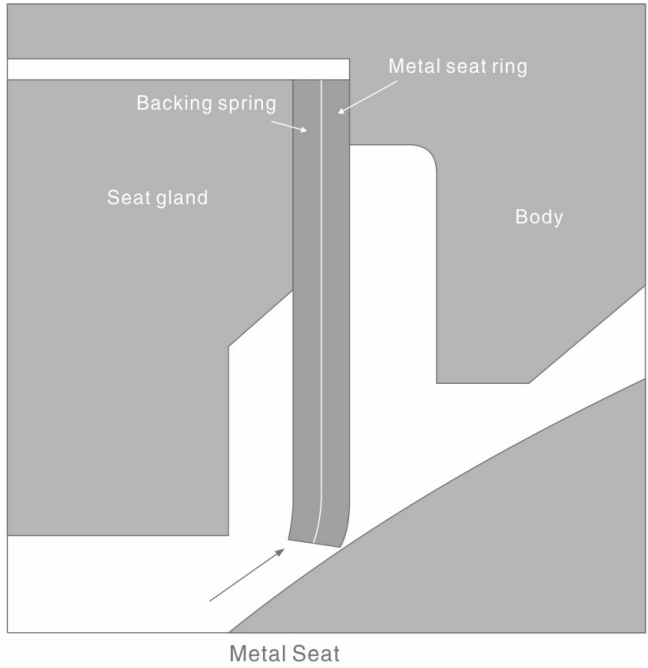
Flowtec V Ball valve using PTFE/R.PTFE or PEEK for soft seat. For fire safe application, a metal back up seat ring is add to the soft seat. When the soft seat was burnout, the metal back-up seal ring will provide a metal to metal sealing, while in fire event. Shut-off seal for soft seat valve are:ANSI Class V.

Heavy Duty Seat

Heavy duty seat was designed for application request higher pressure drop. A disc spring set is application between the seat retainer and valve seat. Which provide a consistent sealing load on the seat and provide a reliability shut-off sealing. Shut-off: Metal Seat: (Class IV) Soft Seat: (Class V)

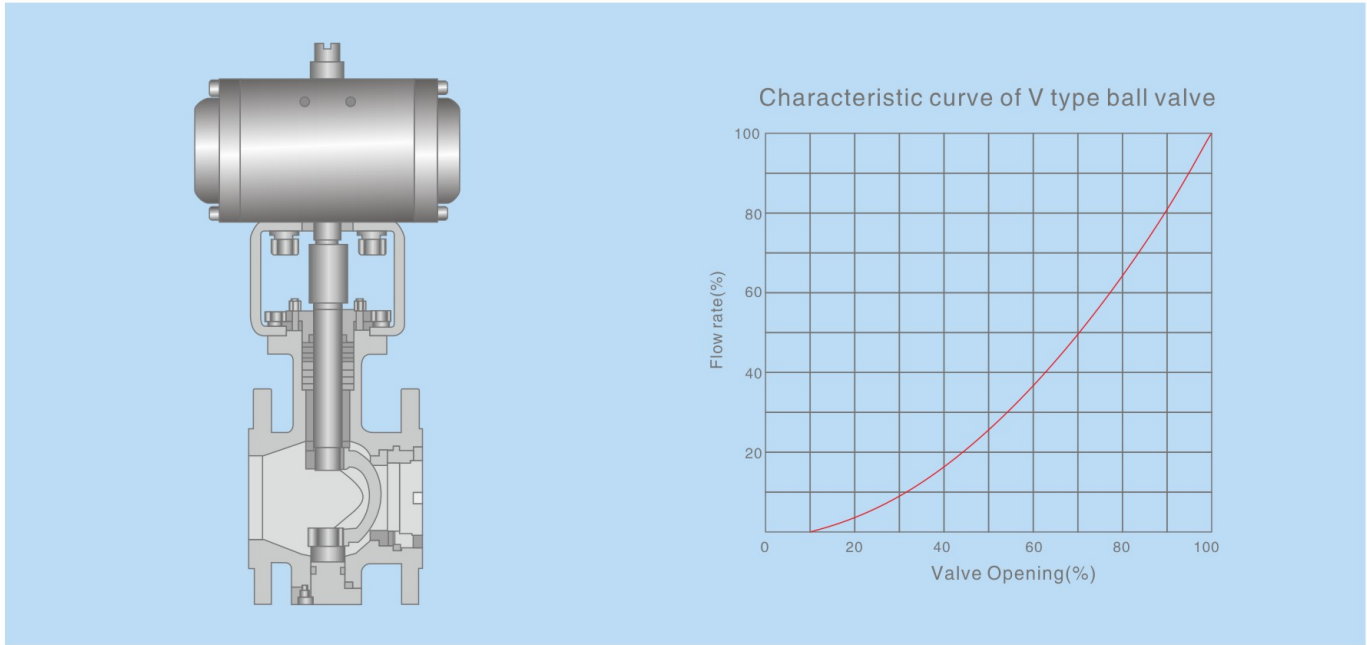
Stem Seal

Multi-layer V type adjustable packing ring designed. Which provide a superior sealing quality for Flowtec's ball valve. Fire safe design use graphite packing to minimize, the leakage in the event of fire.



Inherent Flow Characteristic

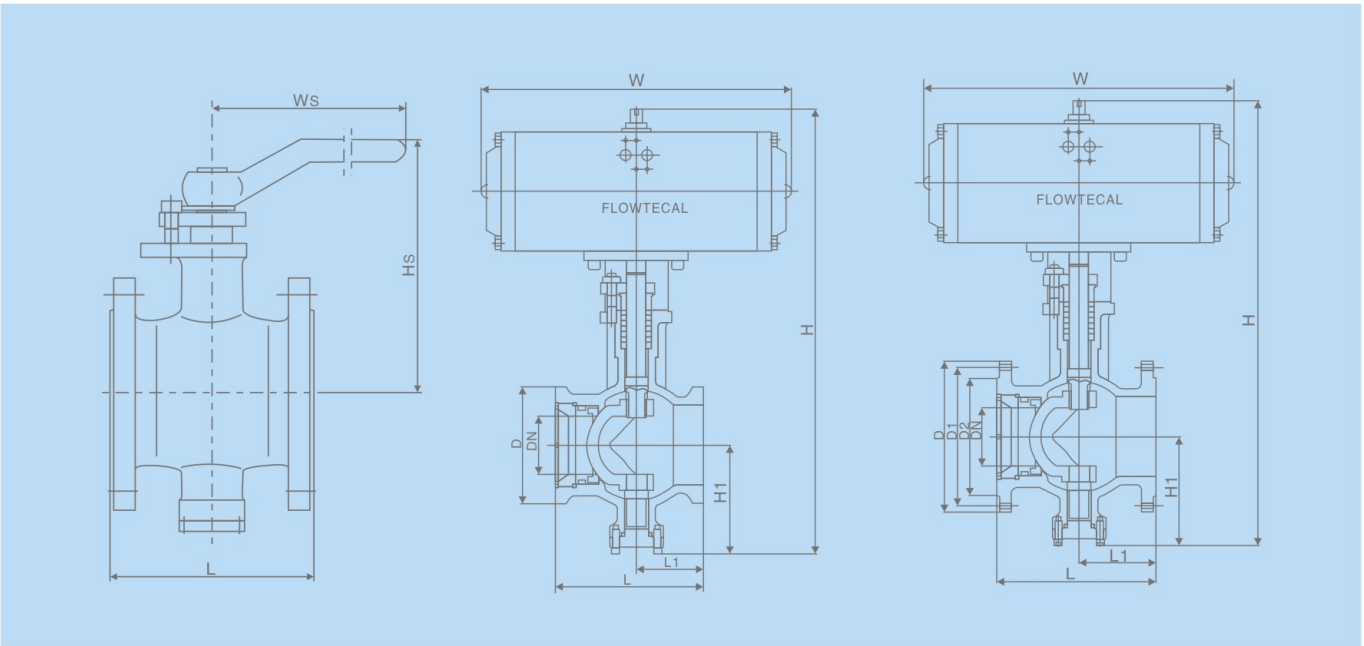
Flowtec V port ball valve's inherent flow characteristic is approximately midway between linear and equal percentage.



Cv Values

Size (RB)	Opening degree									
	10°	20°	30°	35°	45°	55°	60°	70°	80°	90°
DN 25	0.6	1.1	2.2	3.1	5.0	6.7	9.2	12.7	17.4	28
DN32	1.0	2.0	4.0	5.5	9.0	12.0	16.5	22.8	31.0	50
DN40	1.5	3.0	6.0	8.3	13.5	18.0	24.8	34.1	46.5	75
DN50	2.3	4.6	9.2	12.7	20.7	27.6	38.0	52.3	71.3	115
DN65	3.6	7.2	14.4	19.8	32.4	43.2	59.4	81.9	111.6	180
DN80	6.0	11.9	23.8	32.8	53.6	71.5	98.3	135.6	184.8	298
DN100	9.2	18.4	36.8	50.6	82.8	110.4	151.8	209.3	285.2	460
DN125	15.2	30.4	60.8	83.6	136.8	182.4	250.8	345.8	471.2	760
DN150	19.0	38.0	76.0	104.5	171.0	228.0	313.5	432.3	589.0	950
DN200	34.0	68.0	136.0	187.0	306.0	408.0	561.0	773.5	1,054	1,700
DN250	54.0	108.0	216.0	297.0	486.0	648.0	891.0	1,229	1,674	2,700
DN300	76.0	152.0	304.0	418.0	684.0	912.0	1,254	1,729	2,356	3,800
DN350	142.0	284.0	568.0	781.0	1,278	1,704	2,343	3,231	4,402	7,100
DN400	190.0	380.0	760.0	1,045	1,710	2,280	3,135	4,323	5,890	9,500
DN450	244.0	488.0	976	1,342	2,196	2,928	4,026	5,551	7,564	12,200
DN500	307.6	615.2	1,230	1,692	2,768	3,691	5,075	6,998	9,536	15,380
DN 600	459.6	919.2	1,838	2,528	4,136	5,515	7,583	10,456	14,248	22,980

Note: Cv = The flow volume of water through the valve per hour under condition with 20°C temperature and 1Bar pressure drop (100KPa); in case the valve is working as regulating valve , then the recommended control opening degree is between the range of 30° ~70° the best performance of regulating is between 45° ~65° .



Dimensions

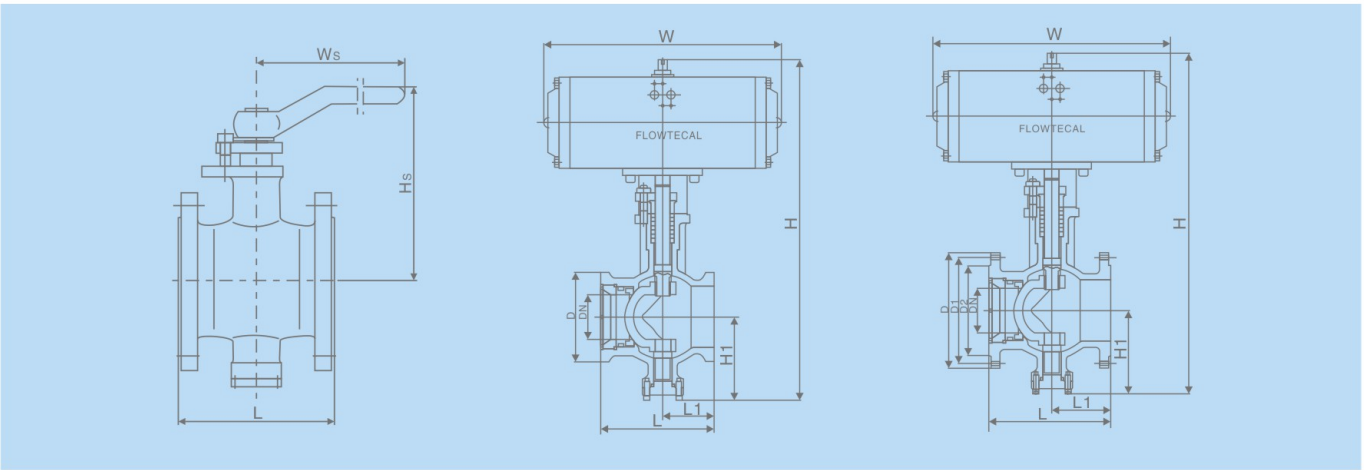
PN	DN	Wafer					Flange connection						
		L	L1	D	H1	H	L	L1	D	D1	D2	H1	H
PN 16 (1.6MPa)	25	62	31	68	60	320	102	51	115	85	65	60	320
	32	62	31	78	60	360	102	51	135	100	78	60	360
	40	62	31	85	63	400	114	57	145	110	85	63	400
	50	75	37.5	100	92	450	124	62	160	125	100	92	450
	65	90	45	120	100	460	145	72.5	180	145	125	100	460
	80	100	50	132	108	470	165	82.5	195	160	135	108	470
	100	115	57.5	158	117	512	194	97	215	180	155	117	512
	125	130	65	180	140	550	213	100.5	245	210	185	140	550
	150	160	80	215	177	610	220	114.5	280	240	210	177	610
	200	200	100	265	200	720	243	121.5	335	295	265	200	720
	250	240	120	322	252	850	297	148.5	405	355	320	252	850
	300						300	169	460	410	375	270	950
	350						414	207	520	470	435	305	1050
	400						490	245	580	525	548	340	1100
	450						580	290	640	585	545	363	1300
	500						690	345	705	650	68	405	1300
	600						750	375	810	770	718	470	1380

Dimensions

PN	DN	Wafer					Flange connection						
		L	L1	D	H1	H	L	L1	D	D1	D2	H1	H
PN 25 (2.5MPa)	25	62	31	68	60	320	102	51	115	85	65	60	320
	32	62	31	78	60	360	102	51	135	100	78	60	360
	40	62	31	85	63	400	114	57	145	110	85	63	400
	50	75	37.5	100	92	450	124	62	160	125	100	92	450
	65	90	45	120	100	460	145	72.5	180	145	125	100	460
	80	100	50	132	108	470	165	82.5	195	160	135	108	470
	100	115	57.5	158	117	512	194	97	230	190	160	117	512
	125	130	65	180	140	550	213	106.5	270	220	188	140	550
	150	160	80	215	177	610	229	114.5	300	250	218	177	610
	200	200	100	265	200	720	243	121.5	360	310	278	200	720
	250	240	120	322	252	850	297	148.5	420	370	332	252	850
	300						338	169	485	430	390	270	950
	350						414	207	550	490	448	305	1050
	400						490	245	610	550	505	340	1100

Dimensions

PN	DN	Flange connection PN4.0MPa							Flange connection PN6.4MPa						
		L	L1	D	D1	D2	H1	H	L	L1	D	D1	D2	H1	H
PN 40/64 (4.0/ 6.4MPa)	25	102	51	115	85	65	60	320	102	51	135	100	78	60	320
	32	102	51	135	100	78	60	360	102	51	150	110	82	60	360
	40	114	57	145	110	85	63	400	114	57	165	125	95	63	400
	50	124	62	160	125	100	92	450	124	62	175	135	105	92	450
	65	145	72.5	180	145	125	100	460	145	72.5	200	160	130	100	460
	80	165	82.5	195	160	135	108	470	165	82.5	210	170	140	108	470
	100	194	97	230	190	160	117	512	194	97	250	200	168	117	512
	125	213	106.5	270	220	188	140	550	213	106.5	295	240	202	140	550
	150	229	114.5	300	250	218	177	610	229	114.5	340	280	240	177	610
	200	243	121.5	375	320	282	200	720	243	121.5	405	345	300	200	720
	250	297	148.5	445	385	345	252	850	297	148.5	470	400	352	252	850
	300	338	169	510	450	408	240	950	338	169	530	460	412	270	950



Dimensions

PN	DN	Wafer					Flange connection						
		L	L1	D	H1	H	L	L1	D	D1	D2	H1	H
Class 150	25	62	31	68	60	320	102	51	108	79.5	51	60	320
	32	62	31	78	60	360	102	51	117	89	64	60	360
	40	62	31	85	63	400	114	57	127	98.5	73	63	400
	50	75	37.5	100	92	450	124	62	152	120.5	92	92	450
	65	90	45	120	100	460	145	72.5	178	139.5	105	100	460
	80	100	50	132	108	470	165	82.5	190	152.5	127	108	470
	100	115	57.5	158	117	512	194	97	229	190.5	157	117	512
	125	130	65	180	140	550	213	106.5	254	216	186	140	550
	150	160	80	215	177	610	229	114.5	279	241.5	216	177	610
	200	200	100	265	200	720	243	121.5	343	298.5	270	200	720
	250	240	120	322	252	850	297	148.5	406	362	324	252	850
	300						338	169	483	432	381	270	950

Dimensions

PN	DN	Flange connection						
		L	L1	D	D1	D2	H1	H
Class 300	25	102	51	124	89	51	60	320
	32	102	51	133	98.5	64	60	360
	40	114	57	156	114.5	73	63	400
	50	124	62	165	127	92	92	450
	65	145	72.5	190	149	105	100	460
	80	165	82.5	210	168.5	127	108	470
	100	194	97	254	200	157	117	512
	125	213	106.5	279	235	186	140	550
	150	229	114.5	318	270	216	177	610
	200	243	121.5	381	330	270	200	720
	250	297	148.5	445	387.5	324	252	850
	300	338	169	521	451	381	270	950

Product Introduction

B3300L series L type three way ball valve ,B3300T series T type three way ball valve.Main applications: pulp and paper, food and beverage, water and waste water treatment, petroleum and natural gas, fine chemicals, metallurgy and air separation gas, power generation systems and power plants, pharmaceutical, light industry.

Features

- 1、 Valve design in accordance with ANSI B16.34
- 2、 ISO5211 Top flange design
- 3、 Full bore
- 4、 Trunnion mounted ball design
- 5、 Easy replacement of seat and packing
- 6、 DIN standard flange connection for standard supply
- 7、 Other standards may be provided upon request
- 8、 There are "T" and "L" type for choice
- 9、 Unique design of ball and stem
- 10、 Pressure grade: PN10, 16, 25, 40;
- 11、 Valve working temperature: –20℃~+230℃。

Technical Data

Full bore design
Wafer valve size: DN50 – DN200
Pressure rating: PN16~PN40 Bar
ANSI Class150Lb#、 Class300#
Temperature range: –25℃~230℃

Applied Medium

Flowtec three way ball valve, suitable for confluence , diversion or switching of medium, such as gas, liquid, powder and so on.

Standard

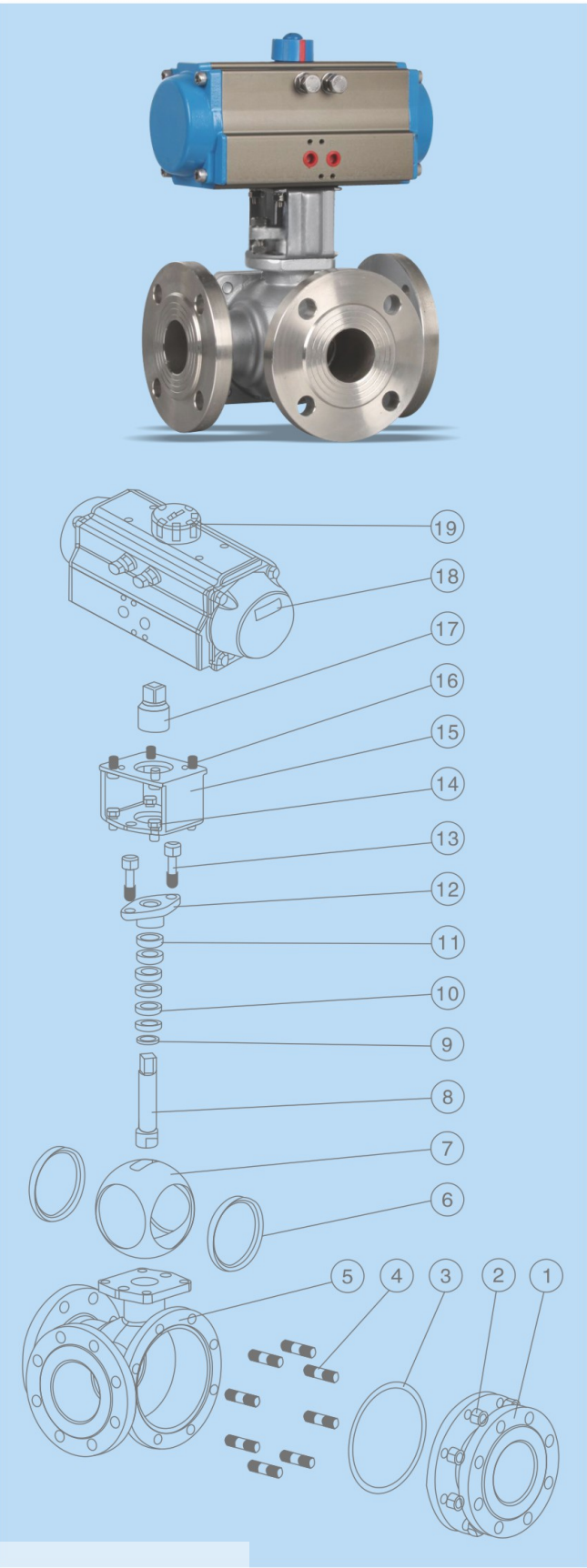
Design & manufacture: ANSI/ASME B16.34/GB12237
Face to face: ASME B16.10/GB1221
End dimension: ASME B16.5/GB/HG/JIS
Inspection and testing: API 598, API 6D, GB/T13927



Parts and Materials

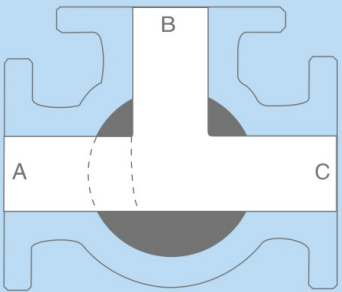
NO.	Part name	Material		
		WCB	CF 8	CF 8M
1	Cap	WCB	CF 8	CF 8M
2	Nut	35	304SS	316SS
3	Gasket	PTFE、Graphite metal composite pad		
4	Bolt	35	304SS	316SS
5	Body	WCB	CF 8	CF 8M
6	Seat	PTFE、NYLON、PPL、Hard alloy		
7	Ball	304SS	304SS	316SS
8	Stem	420SS	304SS	316SS
9	Gasket	304SS	304SS	316SS
10	Packing	PTFE、Flexible graphite		
11	Bushing	PTFE		
12	Gland	WCB	CF 8	CF 8M
13	Bolt	35	304SS	316SS
14	Bolt	35	304SS	316SS
15	Bracket	WCB、CF 8	WCB、CF 8	WCB、CF 8 CF 8M
16	Bolt	35	304SS	316SS
17	Adapter	A105、304SS	304SS	304SS 316SS
18	Actuator	FHPseries、FRPseries、FAWseries		
19	Indicator	Plastic		

Note: The main components of ball valve and sealing material can be designed according to the actual working conditions or the user's special requirements .

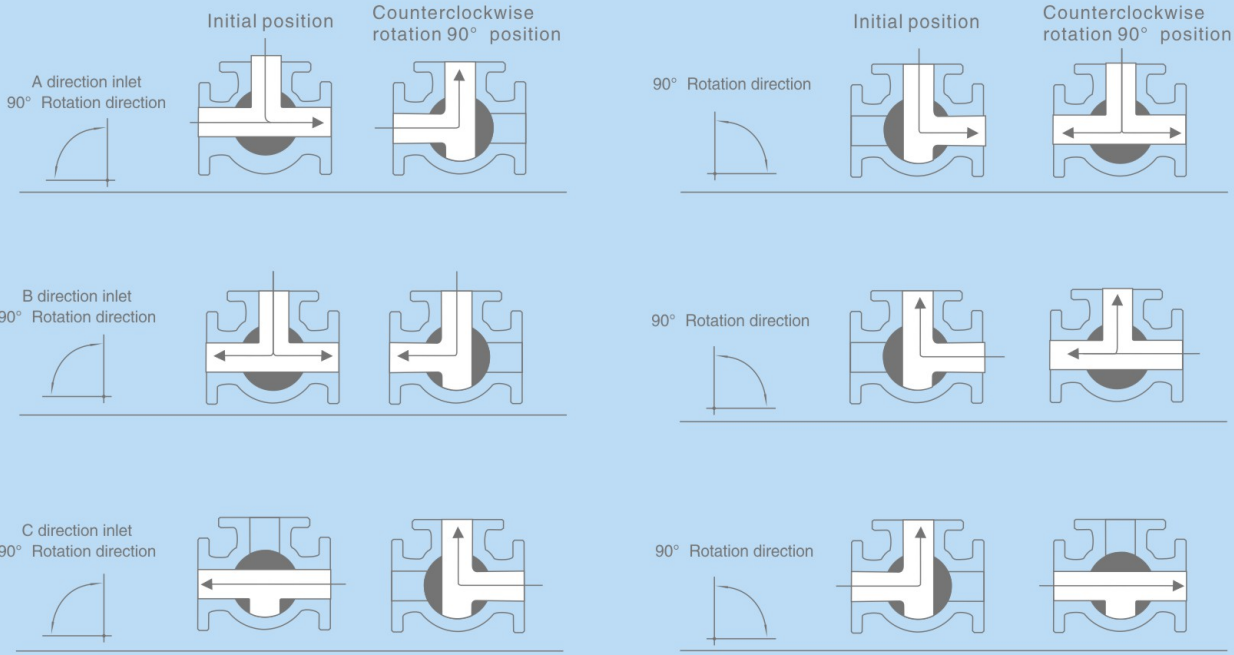


Three Way Ball Valve Medium Flow Diagram

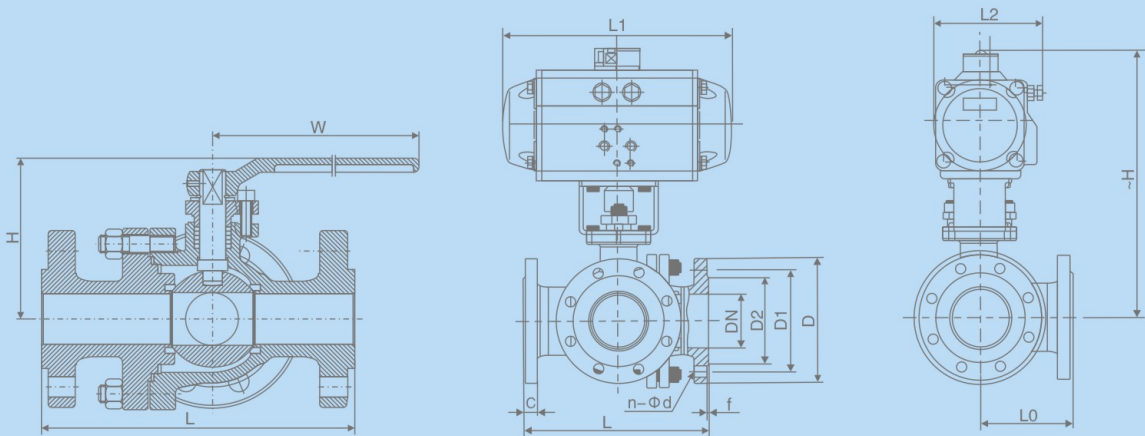
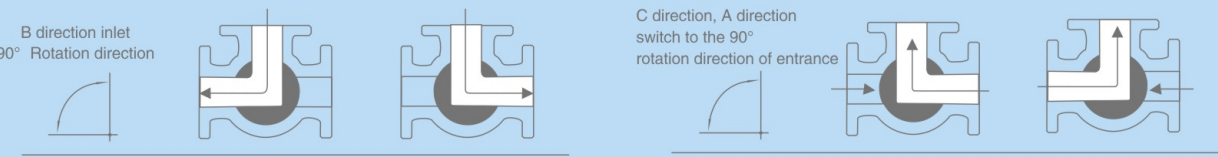
Three way ball valve is used for diversion or confluence flow, is a multi port ball valve with two seat or four seat, any port can be used as the entrance without leakage. Three way type can be made into L port and also can be made into T port.。



T Type Bore



L Type Port



Dimensions

PN16(1.6MPa)

DN		Overall dimension					Flange dimension					
mm	in	L	L0	L1	L2	~H	D	D1	D2	C	f	n-Φd
15	1/2	150	72	141/159	71/83	204/235	95	65	46	14	2	4-Φ14
20	3/4	160	80	159/211	83/95	240/252	105	75	56	16	2	4-Φ14
25	1	180	90	211/248	95/107	257/265	115	85	65	16	2	4-Φ14
32	1 1/4	200	100	211/248	95/107	277/312	140	100	76	18	3	4-Φ18
40	1 1/2	220	110	248/269	107/123	292/317	150	110	84	18	3	4-Φ18
50	2	240	120	248/345	107/152	325/347	165	125	99	20	3	4-Φ18
62	2 1/2	260	130	315/409	141/172	357/389	185	145	118	20	3	4-Φ18
80	3	280	140	345/409	152/172	368/400	200	160	132	20	3	8-Φ18
100	4	320	160	409/550	172/215	410/498	220	180	156	22	3	8-Φ18
125	5	380	190	438/600	187/240	470/538	250	210	184	22	3	8-Φ18
150	6	440	220	550/633	215/262	556/591	285	240	211	24	3	8-Φ22
200	8	550	260	600/730	210/330	648/687	340	295	266	24	3	12-Φ22

Dimensions

PN25(2.5MPa)

DN		Overall dimension					Connection dimension					
mm	in	L	L0	L1	L2	~H	D	D1	D2	C	f	n-Φd
15	1/2	150	72	159/211	83/95	235/247	95	65	46	14	2	4-Φ14
20	3/4	160	80	211/248	95/107	252/260	105	75	56	16	2	4-Φ14
25	1	180	90	248/269	107/123	265/289	115	85	65	16	2	4-Φ14
32	1 1/4	200	100	248/315	107/141	287/312	140	100	76	18	3	4-Φ18
40	1 1/2	220	110	269/409	123/152	317/339	150	110	84	18	3	4-Φ18
50	2	240	120	345/345	123/152	325/347	165	125	99	20	3	4-Φ18
65	2 1/2	260	130	269/345	141/172	357/389	185	145	118	22	3	4-Φ18
80	3	280	140	315/438	152/187	400/425	200	160	132	24	3	8-Φ18
100	4	320	160	409/550	172/215	443/531	235	190	156	24	3	8-Φ22
125	5	380	190	438/600	187/240	548/583	270	220	184	26	3	8-Φ26
150	6	440	220	550/633	215/262	628/665	300	250	211	28	3	8-Φ26
200	8	550	260	600/730	240/330	695/744	360	310	274	30	3	12-Φ26

Dimensions

Class150 Lb

DN	Overall dimension			Flange dimension					
in	L	L1	W	D	D1	D2	C	f	n-Φd
1/2	140	70	130	89	60.5	35	10	1.6	4-φ15
3/4	165	83	160	99	69.9	43	10.5	1.6	4-φ15
1	165	83	200	108	79.2	51	11.5	1.6	4-φ15
1 1/2	250	125	500	127	98.6	73	14.5	1.6	4-φ15
2	260	130	500	152	120.7	92	16	1.6	4-φ19
2 1/2	320	160	600	178	139.7	105	18	1.6	4-φ19
3	320	160	600	191	152.47	127	19.5	1.6	4-φ19
4	370	185	700	229	190.5	157	24	1.6	8-φ19
5	510	255	850	254	215.9	186	24	1.6	8-φ22
6	510	255	850	279	241.3	216	25.5	1.6	8-φ22
8	580	290	1000	343	298.5	270	28.5	1.6	8-φ22

Product Introduction

Floating ball structure, The surface of all the parts contact with the medium should be lined with PTFE which are suitable for hydrochloric acid, sulfuric acid and other strong corrosive medium. Main applications: PVC and Chlor-Alkali Chemical industry, petrochemical and natural gas, pulp and paper, fine chemical, power plant water system, semiconductor.

Features

- 1, The valve cavity surface are evenly coated with PTFE/PFA lining, providing strong corrosion resistance;
- 2, The ball and seat sealing surface is precision machined by CNC, to ensure the sealing to meet ANSI Class VI;
- 3, Full bore structure, which can reduce the strong corrosion caused by the change of flow status because of reduced bore, and provide a Cv value equal to the pipeline's to reduce the flow resistance;
- 4, The metal structure valve body, which can avoid the damaged of the lining layer cause by the pipe bending stress;
- 5, Integral ball and stem structure, ball and stem will not be separated during the ball valve rotation, so as to ensure that the PTFE/PFA lining layer on ball surface will not be scratched by stem;
- 6, Anti-static structure, due to the potential of ball-axis is equal to the inner valve, the valve will not generate static aggregation;
- 7, Automatic compensation type packing design, supported by the elastic effect of packing spring, which can ensure the long service life;
- 8, The external valve surface is coated with polyester to protect the appearance of the body, and offer the external corrosion protection.

Standard

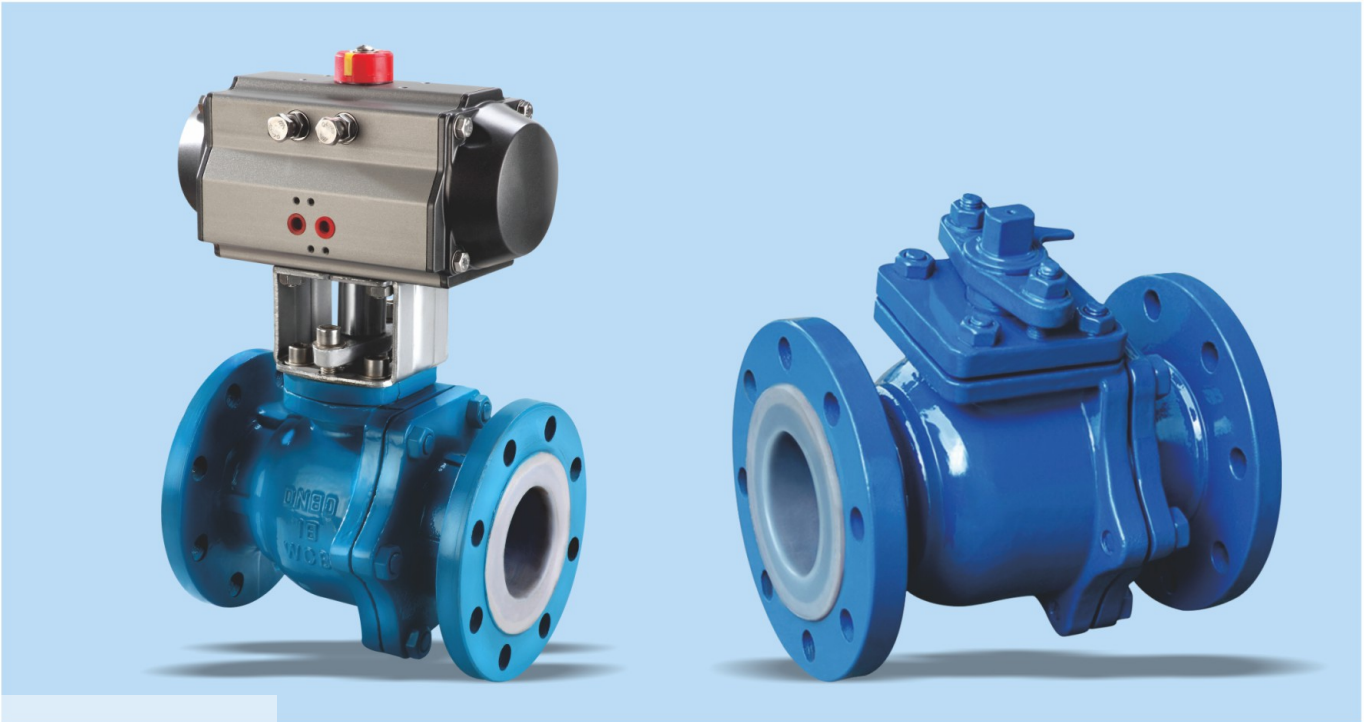
Design & manufacture: ANSI/ASME B16.34/GB12237
Face to face: ASME B16.10/GB1221
End dimension: ASME B16.5; GB/HG/JIS
Inspection and testing: API 598, API 6D, GB13927

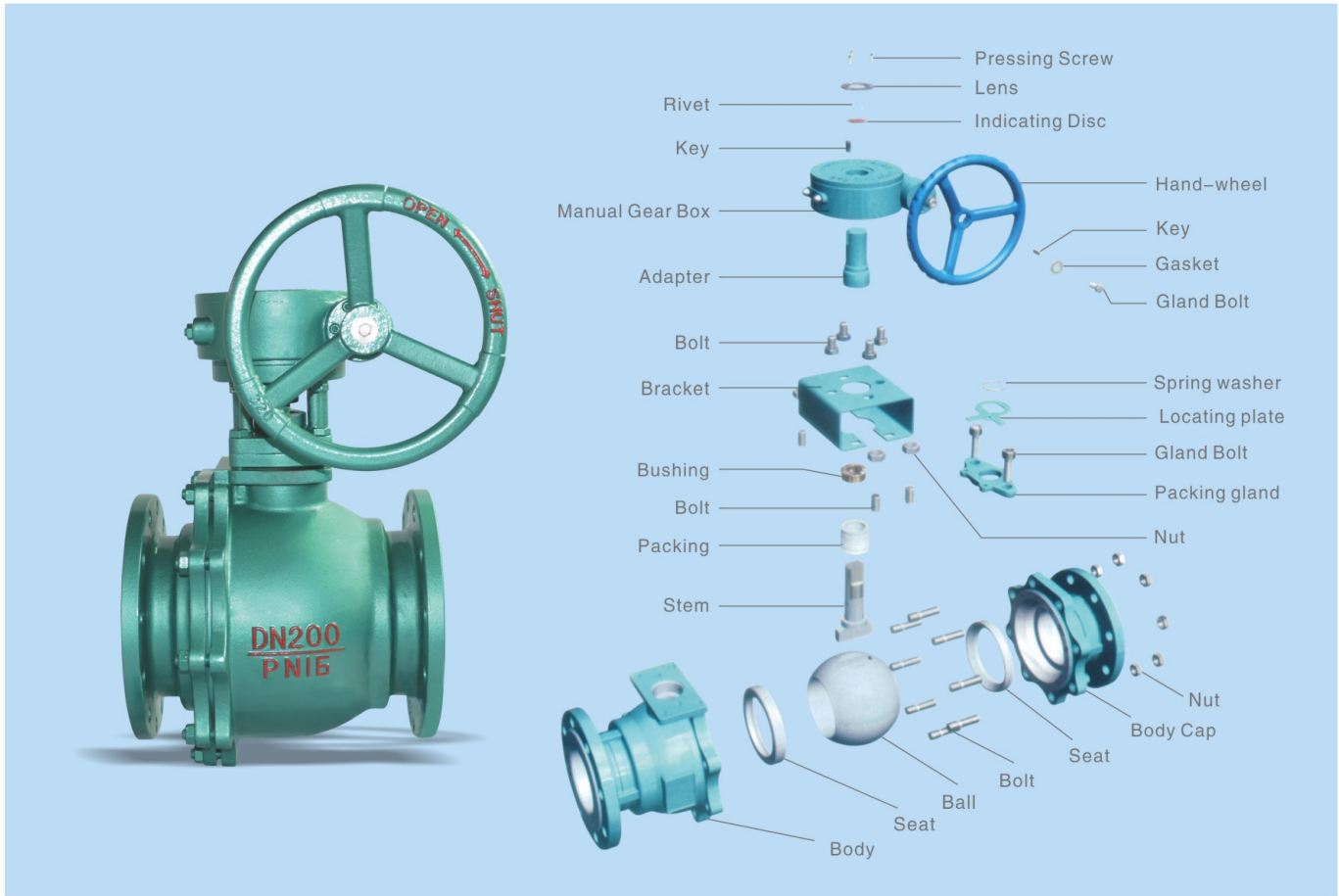
Technical Data

Full bore structure
Valve size: DN25 – DN250
Pressure rating: PN1.0~1.6MPa
ANSI Class150#
Temperature range: –25℃~180℃

Applied Medium

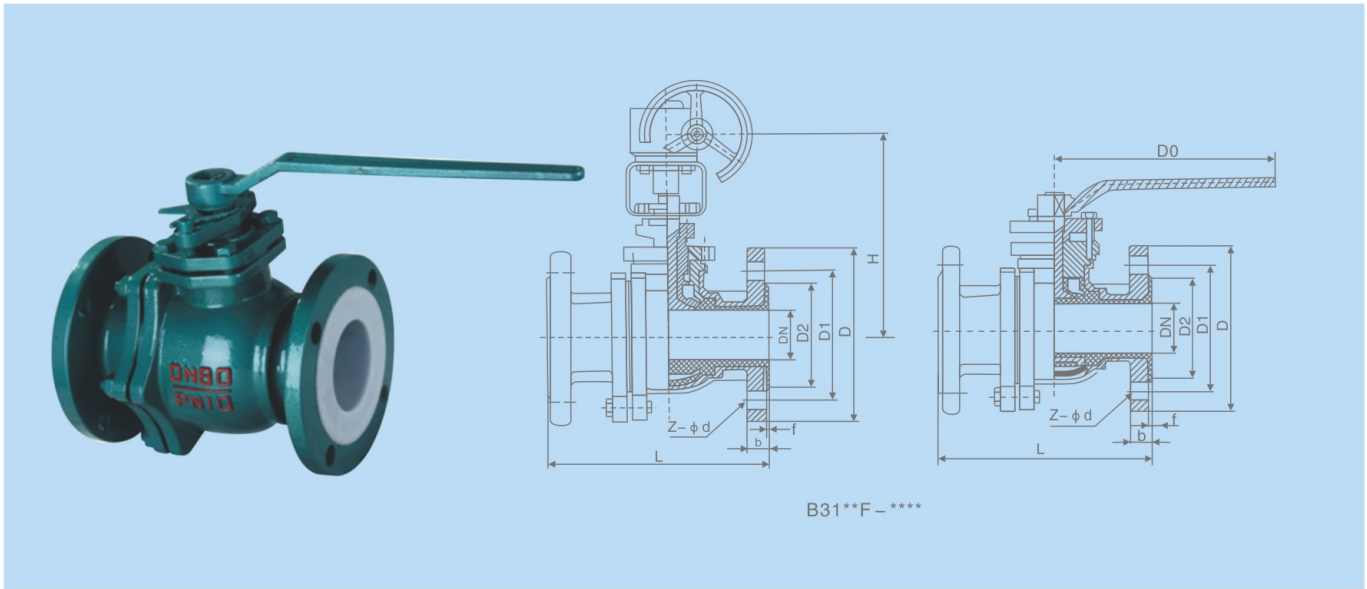
Flowtec lined ball valve, especially suitable for sulfuric acid, hydrochloric acid, nitric acid, caustic soda, chlorine, hydrogen sulfide and other corrosive media without solid particles.





Parts and Materials

Part name	Carbon steel	Stainless steel		Low carbon Stainless steel	
	WCB	304SS	316SS	304L	316L
Body、Cap	WCB	CF8	CF8M	CF3	CF3M
Ball	WCB	CF8	CF8M	CF3	CF3M
Lining/seat	FEP(F ₄₆)、PCTFE(F ₃)、PTFE(F ₄)、PFA、PO(Polyolefin)				
Packing gland	WCB	CF8	CF8M	CF3	CF3M
Packing	PTFE(F ₄) PTFE				
Bolt	35	304SS	316SS	304L	316L
Nut	45	304SS	316SS	304L	316L
Handle	WCB	304SS	304SS	304SS	304SS



Dimensions and Weight

PN1.0MPa

DN		Main dimension							Reference		
DN (mm)	NPS (inch)	L	D	D1	D2	F	b	Z- φ d	D0	H	WT(kg)
15	1/2	140	95	65	45	2	14	4-14	120	80	3
20	3/4	140	105	75	55	2	16	4-14	140	90	3.9
25	1	150	115	85	65	2	16	4-14	160	100	4.5
32	1 1/4	165	135	100	78	2	18	4-18	160	110	6.5
40	1 1/2	180	145	110	85	3	18	4-18	200	120	8
50	2	200	160	125	100	3	20	4-18	250	135	11
65	2 1/2	220	180	145	120	3	20	4-18	300	145	15.5
80	3	250	195	160	135	3	22	4/8-18	350	180	19
100	4	280	215	180	155	3	22	8-18	240	195	26
125	5	320	245	210	185	3	24	8-18	500	210	44
150	6	360	280	240	210	3	24	8-23	200*	450	70
200	8	457	335	295	265	3	26	8-23	240*	490	110
250	10	533	390	350	320	3	28	12-23	240*	550	220
300	12	610	440	400	368	4	28	12-23	320*	600	280
350	14	686	500	460	428	4	30	16-23	320*	675	410



GB Series B31**F Lined Ball Valve

Dimensions and Weight

PN1.6(MPa)

DN		Standard value							Reference value		
DN (mm)	NPS (inch)	L	D	D1	D2	f	b	Z-φd	D0	H	WT(kg)
15	1/2	140	95	65	45	2	14	4-φ14	120	80	2.5
20	3/4	140	105	75	55	2	16	4-φ14	140	90	3
25	1	150	115	85	65	2	16	4-φ14	160	100	4.5
32	1 1/4	165	135	100	78	2	18	4-φ18	160	110	5.7
40	1 1/2	180	145	110	85	3	18	4-φ18	200	120	7
50	2	200	160	125	100	3	20	4-φ18	250	135	9.5
65	2 1/2	220	180	145	120	3	20	4-φ18	300	145	15
80	3	250	195	160	135	3	22	8-φ18	350	185	19
100	4	280	215	180	155	3	24	8-φ18	240	195	33
125	5	320	245	210	185	3	26	8-φ18	500	210	58
150	6	360	280	240	210	3	28	8-φ23	200*	450	93
200	8	457	335	295	265	3	30	12-φ23	240*	490	155
250	10	533	405	355	320	3	32	12-φ25	240*	550	210
300	12	610	460	410	375	4	34	12-φ25	280*	600	220
350	14	686	520	470	435	4	38	16-φ25	320*	675	245
400	16	762	580	525	485	4	40	16-φ30	360*	780	260

Dimensions and Weight

PN2.5(MPa)

DN		Standard value							Reference value		
DN (mm)	NPS (inch)	L	D	D1	D2	f	b	Z-φd	D0	H	WT(kg)
15	1/2	140	95	65	45	2	16	4-φ14	120	80	2.5
20	3/4	140	105	75	55	2	16	4-φ14	140	90	3
25	1	150	115	85	65	2	16	4-φ14	160	100	4.5
32	1 1/4	165	135	100	78	2	18	4-φ18	160	110	5.7
40	1 1/2	180	145	110	85	3	18	4-φ18	200	120	7
50	2	200	160	125	100	3	20	4-φ18	250	135	9.5
65	2 1/2	220	180	145	120	3	22	8-φ18	300	145	15
80	3	250	195	160	135	3	22	8-φ18	300	185	19
100	4	280	230	190	160	3	24	8-φ23	200*	195	33
125	5	320	270	220	188	3	28	8-φ25	200*	210	58
150	6	360	300	250	218	3	30	8-φ25	200*	450	93
200	8	457	360	310	278	3	34	12-φ25	240*	495	155
250	10	533	425	370	332	3	36	12-φ30	280*	555	210
300	12	610	485	430	390	4	40	16-φ30	320*	605	230
350	14	686	550	490	448	4	44	16-φ34	320*	685	250

ANSI Series B31**F Lined Ball Valve



Dimensions and Weight

ANSI 150Lb

DN		Standard value							Reference value		
DN (mm)	NPS (inch)	L	D	D1	D2	f	b	Z-φd	D0	H	W(kg)
15	1/2	108	89	60.5	35	2	12	4-φ15	120	80	2.5
20	3/4	117	98	70	43	2	12	4-φ15	140	90	3
25	1	127	108	79.5	51	2	12	4-φ15	160	100	4.5
32	1 1/4	140	117	89	64	2	13	4-φ15	160	110	5.7
40	1 1/2	165	127	98.5	73	3	15	4-φ15	200	120	9.5
50	2	178	152	120.5	92	2	16	4-φ19	250	135	15
65	2 1/2	190	178	139.5	105	2	18	4-φ19	300	145	19
80	3	203	190	152.5	127	2	19	4-φ19	350	185	30
100	4	229	229	190.5	157	2	24	8-φ19	400	195	58
125	5	(254)	254	216	186	2	24	8-φ22	500	210	93
150	6	394	279	241.5	216	2	26	8-φ22	200*	450	155
200	8	457	343	298.5	270	2	29	8-φ22	240*	490	210
250	10	533	406	362	324	2	31	12-φ25	280*	550	295
300	12	610	483	432	381	2	32	12-φ25	320*	605	305
350	14	686	533	476	413	2	35	12-φ29	320*	685	325
400	16	762	597	540	470	2	37	16-φ29	360*	785	325

Dimensions and Weight

ANSI 300Lb

DN		Standard value							Reference value		
DN (mm)	NPS (inch)	L	D	D1	D2	f	b	Z-φd	D0	H	WT(kg)
15	1/2	140	95	66.5	35	2	15	4-φ15	140	90	3
20	3/4	152	117	82.5	43	2	16	4-φ19	140	100	4
25	1	165	124	89	51	2	18	4-φ19	160	120	6
32	1 1/4	178	133	98.5	64	2	19	4-φ19	200	135	8
40	1 1/2	190	156	114.5	73	2	21	4-φ22	250	150	11
50	2	216	165	127	92	2	23	8-φ19	300	165	17
65	2 1/2	241	190	149	105	2	26	8-φ22	350	180	23
80	3	283	210	168.5	127	2	29	8-φ22	350	195	33
100	4	305	254	200	157	2	32	8-φ22	400	215	63
125	5	(381)	279	235	186	2	35	8-φ22	500	240	115
150	6	403	318	270	216	2	37	12-φ22	200*	460	165
200	8	502	381	330	270	2	42	12-φ25	240*	495	225
250	10	568	445	387.5	324	2	48	16-φ29	380*	560	298
300	12	648	521	451	381	2	51	16-φ32	320*	610	305

Product Introduction

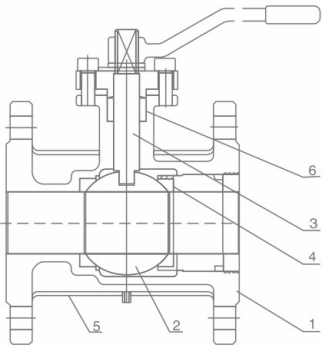
Full bore floating jacket ball valve structure. Main applications: PVC and Chlor-Alkali Chemical industry, polyester chips, petrochemical and natural gas, fine chemicals, semiconductors.

Features

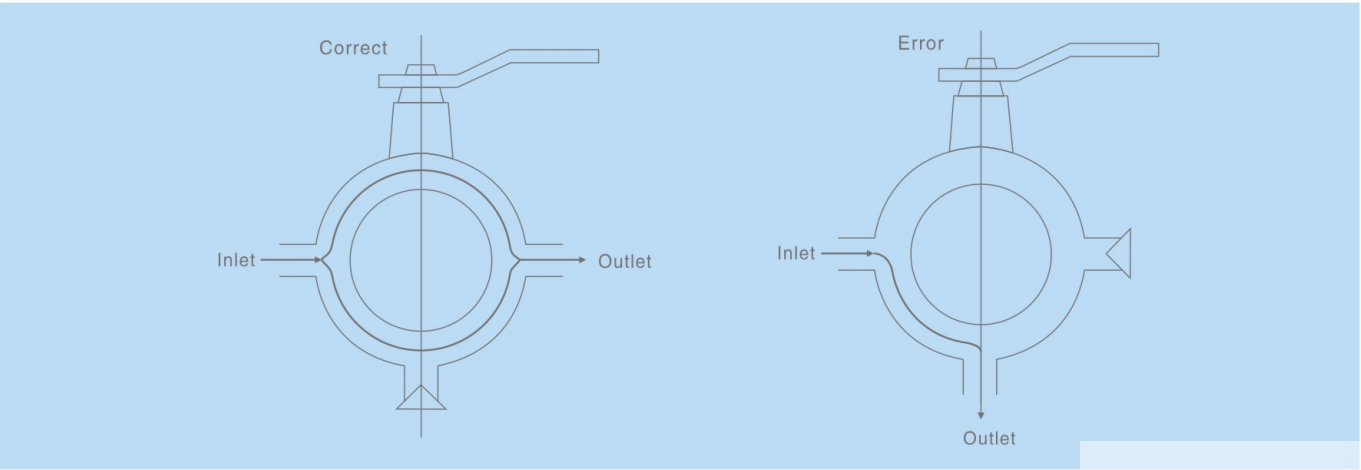
- 1、 Full bore structure, valve diameter keep the same with pipe diameter ; large Cv value, small flow resistance. Especially suitable for medium with high viscosity and easy solidification;
- 2、 One piece jacket designed, the heat or cold energy can be evenly distributed around the ball valve during the heating or cooling medium running in jacket, to achieve the best thermal insulation effect;
- 3、 The jacket is welded on ball valve body, which can effectively prevent the jacket leakage, and bear high pressure in the jacket, can effectively save energy; the maximum pressure of cooling or heating medium (steam)is up to 1.0MPa.

Applied Medium

Flowtec jacket ball valve, especially suitable for easy solidification, high viscosity of the fluid, such as rosin, asphalt, such as polyester, sulfur, benzene anhydride medium.



Correct Flow of Jacket Medium



Technical Data

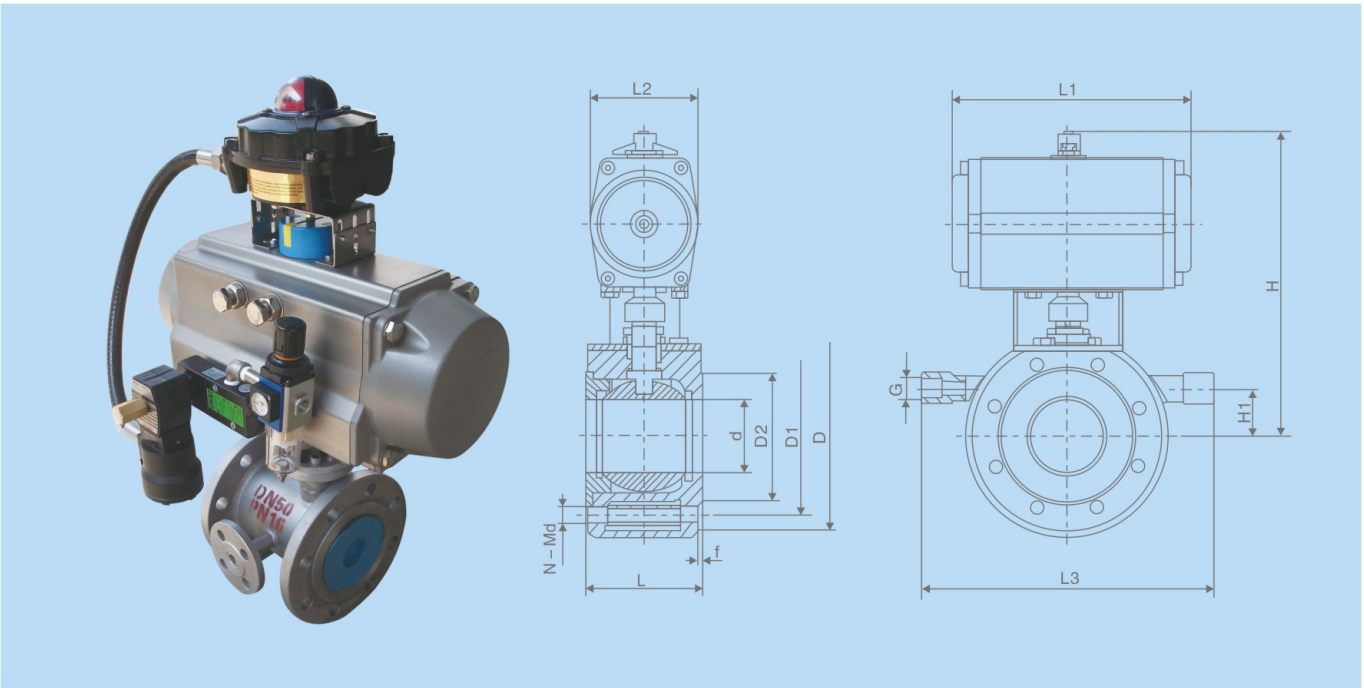
Full bore structure
Valve size: DN50 – DN200
Pressure rating: PN1.6、 PN2.5MPa
ANSI Class150#、 Class300#
Temperature range: – 25℃~450℃

Standard

Design & manufacture: ANSI/ASME B16.34/GB12237
Face to face: ASME B16.10/GB1221
End dimension: ASME B16.5; GB/HG/JIS
Inspection and testing: API 598, API 6D, GB13927

Parts and Materials

No.	Partname	Part material		
1	Body	A216-WCB	A351-CF8	A351-CF8M
2	Ball	A351-CF8	A351-CF8	A351-CF8M
3	Seat	PTFE/R.PTFE/Metal seat		
4	Stem	420SS、 304SS、 316SS、 17-4PH		
5	Jacket	304SS、 316SS		
6	Stem Packing	PTFE or Flexible graphite		



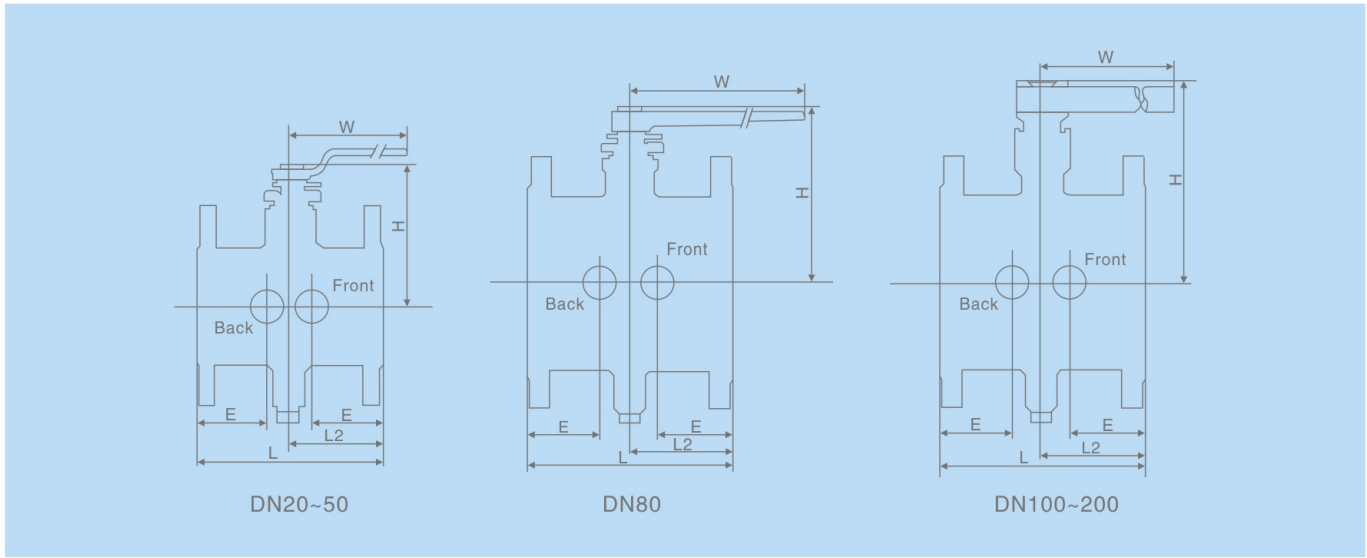
Technical Regulation

Design & manufacture: ASME B 16.34、 GB/T12224
Face to face : ASME B 16.10、 GB/T12221
Flange connection: ASME B 16.5、 JB/T 79

Operation way: Manuel, Motor, Pneumatic
Test and inspection: JB/T9092 API 598
Applied medium: Heavy fuel oil, rubber,easy solidified medium

Dimensions

DN	Overall dimension							Connection dimension					
	d	L	L1	L2	L3	H	H1	G	D	D1	D2	f	N – Md
15	14	35	140/178	62/75	150	170/176	15	1/2"	90	65	45	2	4 – M14
20	19	38	140/178	62/75	160	175/181	20	1/2"	100	75	55	2	4 – M14
25	25	42	140/214	62/91	190	180/214	20	1/2"	110	85	65	2	4 – M14
32	29	50	164/214	75/91	210	215/243	25	1/2"	130	100	78	3	4 – M18
40	38	60	164/246	75/101	230	225/263	30	1/2"	145	110	85	3	4 – M18
50	48	70	190/295	91/112	250	248/274	30	1/2"	160	125	100	3	4 – M18
65	64	95	210/295	101/112	270	258/284	45	1/2"	180	145	120	3	4/8 – M18
80	76	118	247/395	112/139	300	300/326	50	1/2"	190	160	135	3	8 – M18
100	95	140	276/478	127/176	340	315/370	70	1"	215/230	180/190	155/160	3	8 – M18/20
125	112/118	175/195	348/562	159/206	360	375/440	80	1"	245/270	210/220	185/188	3	8 – M18/24
150	135/150	210/260	378/724	176/228	420	428/500	95	1"	280/300	240/250	210/218	3	8 – M22/24



Dimensions

Class 150Lb

DN	d	L	Flange						
			Flange size	D	G	T	f	C	N-h
15	13	117	DN40	127	73	14.3	1.6	98.5	4-19
20	19	117	DN40	127	73	14.3	1.6	98.5	4-19
25	25	127	DN50	152	92	15.9	1.6	120.5	4-19
40	38	165	DN65	178	105	17.5	1.6	139.5	4-19
50	51	178	DN80	190	127	19.1	1.6	152.5	4-19
80	76	229	DN150	279	216	25.4	1.6	241.5	8-22
100	102	254	DN200	343	270	28.6	1.6	298.5	8-22
150	152	292	DN250	406	324	30.2	1.6	362	12-25
200	203	330	DN350	533	413	35	1.6	476	12-29

Dimensions

Class 300Lb

DN	d	L	Flange						
			Flange size	D	G	T	f	C	N-h
15	13	117	DN40	156	73	20.7	1.6	114.5	4-22
20	19	117	DN40	156	73	20.7	1.6	114.5	4-22
25	25	127	DN50	165	92	22.3	1.6	127	8-19
40	38	165	DN65	190	105	25.4	1.6	149	8-22
50	51	178	DN80	210	127	28.6	1.6	168	8-22
80	76	229	DN150	318	216	36.6	1.6	270	12-22
100	102	254	DN200	381	270	41.3	1.6	330	12-25
150	152	292	DN250	444	324	47.7	1.6	387.5	16-29
200	203	330	DN350	584	413	54	1.6	514.5	20-32

Product Introduction

Flowtec Metal seat floating ball valve is mainly used in natural gas, oil, chemical industry, metallurgy, construction, environmental protection, pharmaceutical, food and other industries, and anti sulfur series products are suitable for natural gas pipelines of medium containing hydrogen sulfide, impurities and high corrosion .

Features

1. The unique structure of valve seat: Double beveled elastic sealing ring or V type groove elastic sealing ring structure , to ensure the reliability of sealing ,for the ball valve used on ultra low pressure or vacuum conditions, spring loaded valve seat sealing structure is used to ensure long-term reliable sealing. PPL or metal seat materials is available for medium and high temperature application..
2. Automatic cavity pressure relief designed, in case of abnormal pressure in the cavity,the medium in cavity can push the valve seat to move and release the pressure ,there by ensuring the safety of the valve.
3. Reliable stem sealing: Stem seal is designed with downloading back seal structure, the back seal force increase when medium pressure increases, it can ensure a reliable stem seal , Blowout proof stem design,which ensure the stem would no be blowout, when the abnormal pressure increase in cavity.
4. Fire safety valve seat design according to API 607 & API 6FA. One the soft seat is burned in fire,it can prevent the medium leakage by a secondary metal to metal sealing structure to prevent further fires.
5. Anti-static structure: Inorder to prevent electrostatic sparks, special anti static device is designed on the valve stem, so the charge accumulation on the ball is derived.
6. Locking device: manual ball valve can be designed with locking device on the fully open, fully closed position , to prevent the incorrect operation , especially in the production line of combustible medium of petroleum and chemicals.
7. Full bore design for Flowtec standard metal seat ball valve. Rdduce bore metal seat ball valve is optional for user's request.

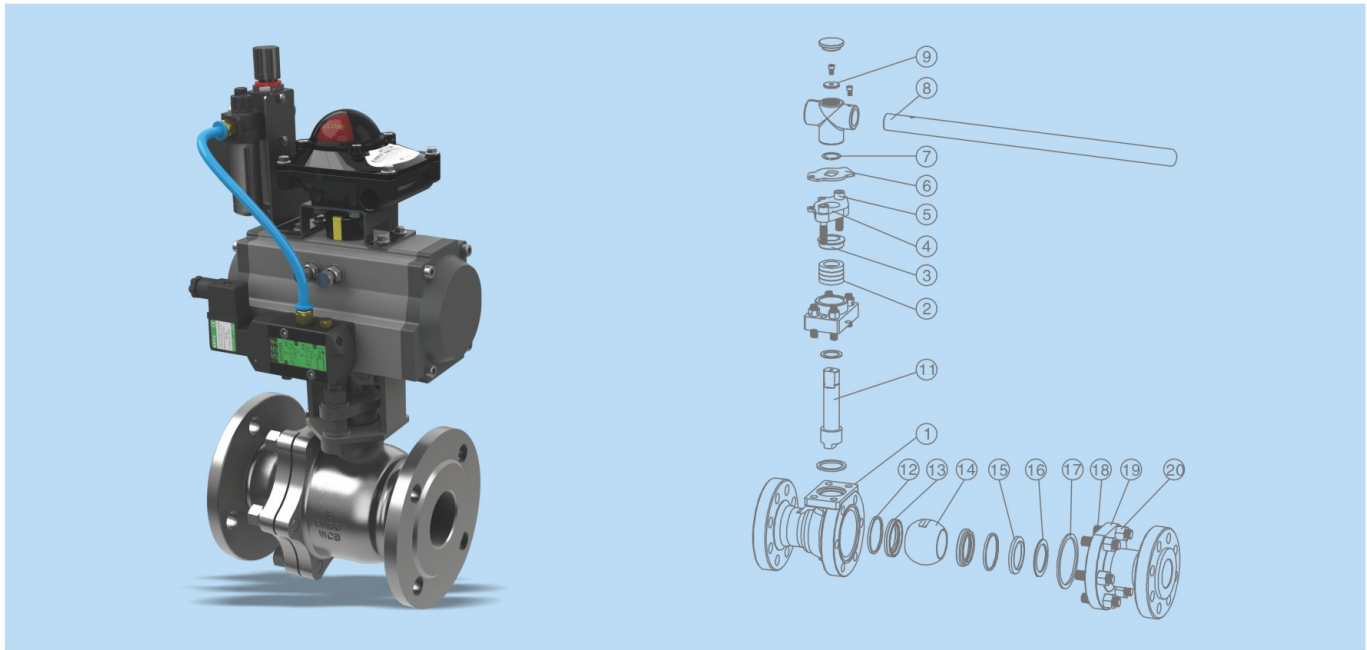
Performance Specification

Pressure rating		1.6-42.0MPa	Class 150-2500
Pressure test (MPa)	Shell Test	1.5 × PN	
	Sealing test	1.1 × PN	
	Low pressure sealing test(Air)	0.6MPa	
Working temperature		Standard: -196℃~+150℃ High-temperature: ~530℃	
Working medium		water、oil、atural gas、 other corrosive media	

Technical Regulation

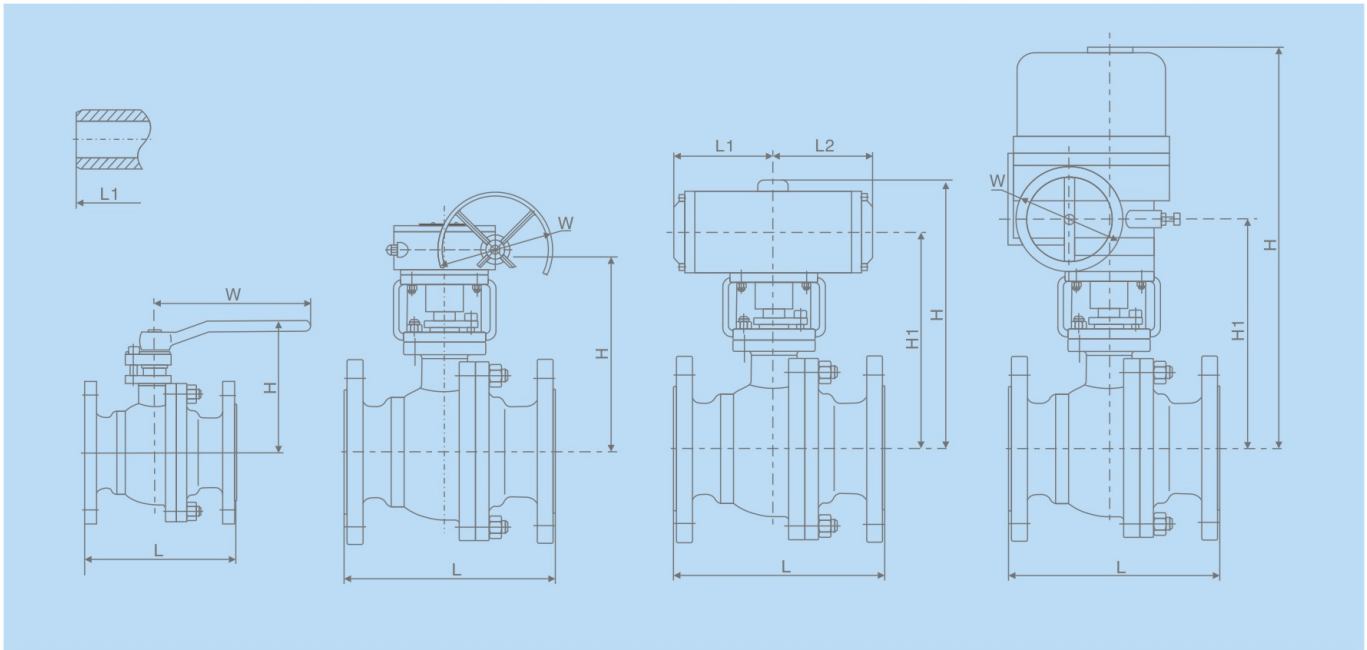
Design & manufacture	GB/T 12237	API 608
Face to face	GB/T 12221	ASME 816.10
End dimension	GB/T 9113 JB/T 79	ASME 816.5
Inspection and testing	JB/T 9092	API 598

Note: Connecting flange and butt weld dimension can be designed and manufactured according to customer requirements.



Parts and Materials

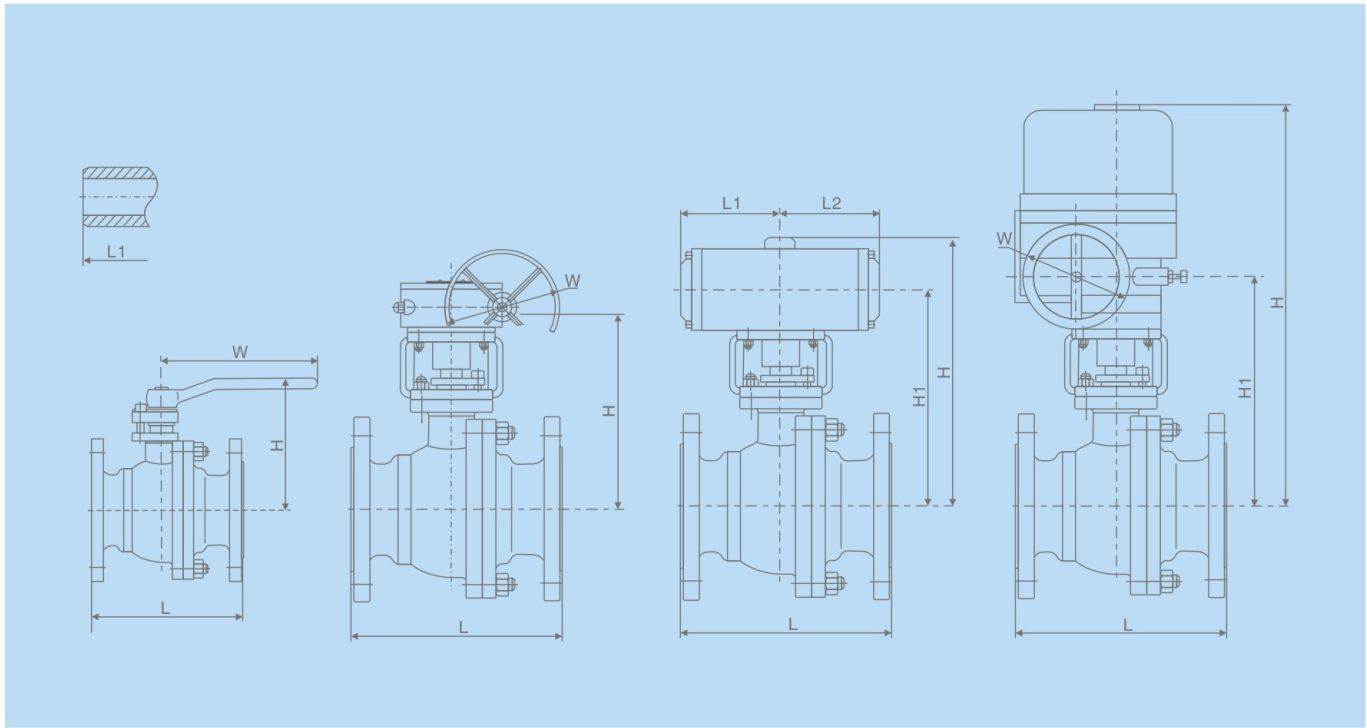
NO.	Part name	Material		
		WCB	304SS	316SS
1	Body	A216-WCB	CF8	CF8M
2	Packing	Flexible graphite	Flexible graphite	Flexible graphite
3	Gasket	A216-420	304SS	316SS
4	Gland	A216-WCB	CF8	CF8M
5	Screw	A194-2H	A193-B7	A193-B7
6	Lock plate	A216-WCB	304SS	316SS
7	Baffle ring	A216-WCB	CF8	CF8M
8	Handle	A47-667 32510	CF8	CF8M
9	Baffle ring	AISI 1566	AISI 1566	AISI 1566
10	Gasket	Flexible graphite	Flexible graphite	Flexible graphite
11	Stem	420SS	304SS/17-4PH	316SS/17-4PH
12	Sealing ring	PTFE or Flexible graphite	PTFE or Flexible graphite	PTFE or Flexible graphite
13	Seat	A105	304SS+Cr or 304SS+Stellite	316SS+Cr or 316SS+Stellite
14	Ball	A105+ENP	304SS+ENP	316SS+ENP
15	O Ring	Inconel X-750	Inconel X-750	Inconel X-750
16	Spring	Spring steel	Spring steel	Spring steel
17	Gasket	Flexible graphite+SS	Flexible graphite+SS	Flexible graphite+SS
18	Body cap	A105	CF8	CF8M
19	Bolt	A193-B7	304SS	316SS
20	Nut	A194-2H	304SS	316SS



Dimensions and Weight

PN1.6MPa CLASS 150

DN	mm	15	20	25	40	50	65	80	100	125	150	200
NPS	in	1/2	3/4	1	1 1/2	2	2 1/2	3	4	5	6	8
Flange	L	108	117	127	165	178	190	203	229	356	394	457
Butt-welded	L1	140	152	165	190	216	241	282	305	381	403	419
Manual	H	59	63	75	95	107	142	152	178	252	272	342
	W	130	130	160	230	230	350	400	500	750	750	900
	Kg	2.3	3.0	4.5	7.0	9.5	15.0	19.0	33.0	58.0	93.0	1600
Worm gear	H	-	-	-	-	-	-	-	-	-	292	398
	W	-	-	-	-	-	-	-	-	-	400	600
	Model	-	-	-	-	-	-	-	-	-	A	B
Pneumatic	Kg	-	-	-	-	-	-	-	-	-	180	240
	H	200	204	257	264	340	370	389	594	646	646	781
	H 1	122	126	162	169	209	239	258	337	437	437	537
	L1	326	326	347	420	426	426	590	523	610	610	885
	L2	136	136	181	181	257	257	257	287	378	378	530
		AG06	AG09	AG09	AG13	AG13	AG13	AG13	AW13	AW17	AW17	AW20
Motor	Kg	6.1	6.3	8.1	14.1	16.6	38	42.1	53	95.3	105.2	207.8
	H	-	-	-	-	472	486	579	595	650	739	799
	H 1	-	-	-	-	377	391	484	500	500	589	649
	W	-	-	-	-	190	190	190	190	400	400	400
	Model	-	-	-	-	Q60-1	Q60-1	Q60-1	Q60-1	Q120-1	Q120-1	Q120-1
	Kg	-	-	-	-	23	25	60	75	97	162	226



Dimensions and Weight

PN2.5 4.0MPa CLASS 300

DN	mm	15	20	25	40	50	65	80	100	125	150	200
NPS	in	1/2	3/4	1	1 1/2	2	2 1/2	3	4	5	6	8
Flange	L	140	152	165	190	216	241	282	305	381	403	502
Butt-welded	L1	140	152	165	190	216	241	282	305	381	403	502
Manual	H	59	63	75	95	167	142	152	178	252	272	342
	W	130	130	160	230	230	350	400	500	750	750	900
	Kg	2.5	3.5	5.5	10.5	14.5	23.5	30	55	81	118	200
Worm gear	H	—	—	—	—	—	—	—	—	—	292	398
	W	—	—	—	—	—	—	—	—	—	400	600
	Model	—	—	—	—	—	—	—	—	—	A	B
	Kg	—	—	—	—	—	—	—	—	—	220	365
Pneumatic	H	200	204	257	264	340	379	452	594	646	744	920
	H 1	122	126	162	169	209	248	295	375	437	500	615
	L1	326	326	347	420	426	426	590	523	610	610	885
	L2	136	136	181	181	257	257	257	287	378	378	530
	Model	AG06	AG09	AG09	AG13	AG13	AG13	AG13	AW13	AW17	AW17	AW20
	Kg	6.2	6.4	8.5	16.9	20.9	42.5	52.7	77.9	107	130	220
Motor	H	—	—	—	—	472	472	579	595	650	739	799
	H 1	—	—	—	—	377	391	484	500	500	589	649
	W	—	—	—	—	190	190	190	190	400	400	400
	Model	—	—	—	—	Q60-1	Q60-1	Q60-1	Q60-1	Q120-1	Q120-1	Q120-1
	Kg	—	—	—	—	23	25	60	75	100	170	240

Product Introduction

Flowtec**al** Metal seat trunnion mounted ball valve is mainly used in natural gas, oil, chemical industry, metallurgy, construction, environmental protection, pharmaceutical, food and other industries, and anti sulfur series products are suitable for natural gas pipelines of medium containing hydrogen sulfide, impurities and high corrosion .

Features

1. Body structure: Trunnion mounted ball valve structure can be divided to three types, casting, forging structure and the fully welded structure, the welded structure is mainly used in for underground service.
2. Varied seat structure design for Flowtec**al** metal seat trunnion mounted ball valve. According to working pressure, working medium and valve sealing request, the valve seat can be design as upstream sealing seat structure, downstream sealing seat structure and double block seat structure.
3. Automatic cavity pressure relief structure design. In case of abnormal pressure rising in the cavity, for upstream seat sealing structure and downstream seat sealing structure it can release the cavity pressure automatically, for double block valve seat structure, the cavity pressure can be release by an additional drain hole in valve body.
4. Emergency injection structure is optional for client, when the valve seat or stem packing was damaged, sealing grease can be inject into the valve to form a sealing instantaneously.
5. Fire safety valve seat design according to API 607 & API 6FA. Once the soft seat is burned in fire, it can prevent the medium leakage by a secondary metal to metal sealing structure, to prevent further fires.
6. Anti-static structure: In order to prevent electrostatic sparks, special anti static device is designed on the valve stem, so the charge accumulation on the ball is derived.
7. Block and bleed: when the valve is closed, the upper and lower side valve seat will block the fluid, the stagnation in cavity can be discharged through the bleeding device.
8. Locking device: manual ball valve is designed with locking device on the fully open, fully closed position , to prevent the incorrect operation and improper switching actions, especially in the production line of combustible medium of petroleum and chemicals.
9. Full bore design for Flowtec**al**'s metal seat trunnion mounted ball, and reduce bore design is optional for client's request.

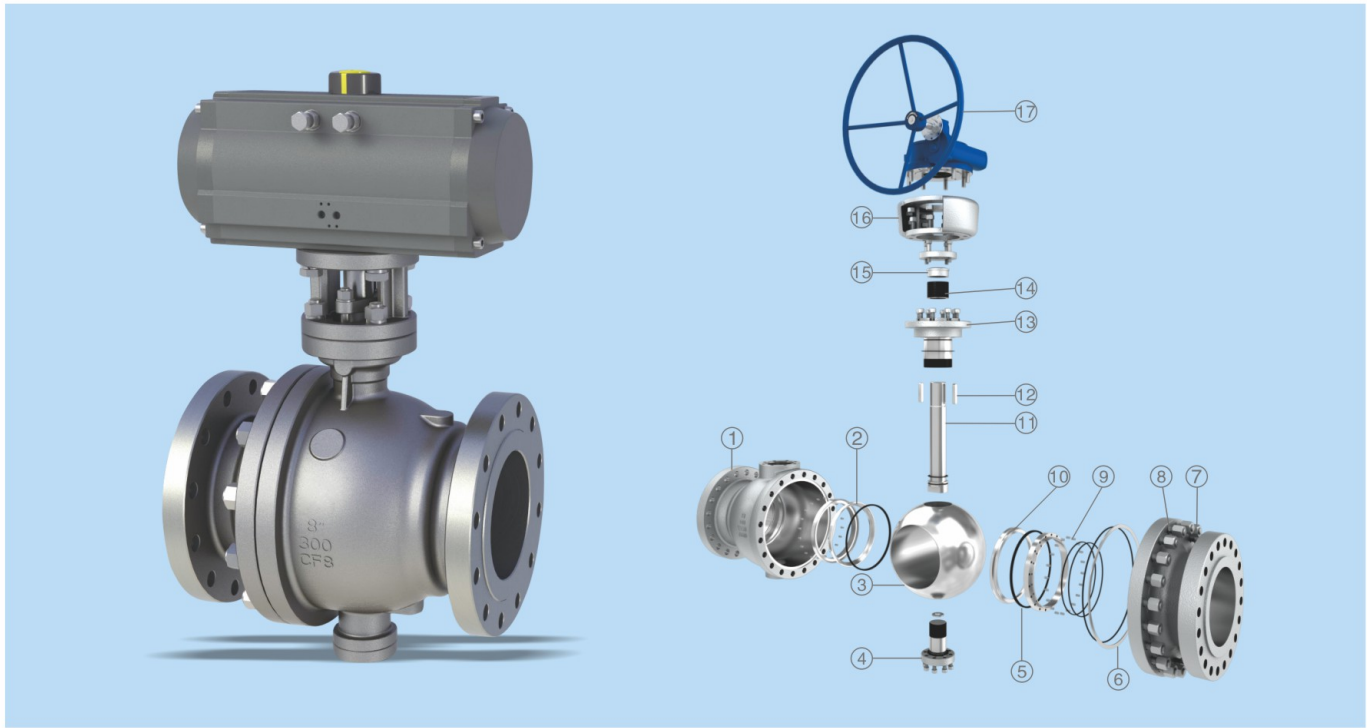
Performance Specification

Pressure rating		1.6~25.0MPa	Class 150~1500
Pressure test (MPa)	Shell Test	1.5 × PN	
	Sealing test	1.1 × PN	
	Low pressure sealing test (Air)	0.6MPa	
Working temperature		Standard: -196℃~+150℃ High-temperature: ~530℃	
Applied medium		Water, oil, atural gas, other corrosive media	

Technical Regulation

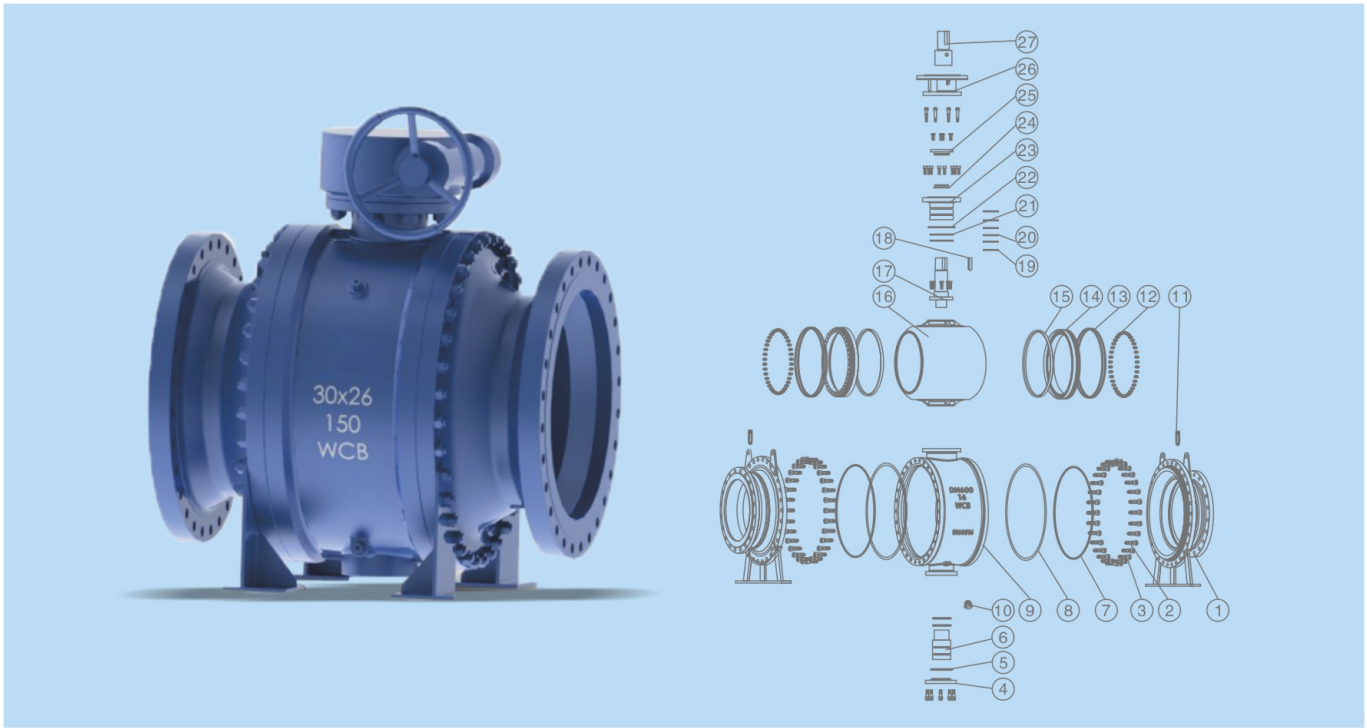
Design & manufacture	GB/T 12237、GB/T 19672	API 6D
Face to face	GB/T 12221	API 6D、ASME B16.10
End dimension	GB/T 9113、JB/T 79	ASME B16.5、ASME B16.47
Inspection and testing	JB/T 9092、GB/T 19672	API 598、API 6D

* Note: 1, Flange dimension can be designed and manufactured according to user' s requirements.



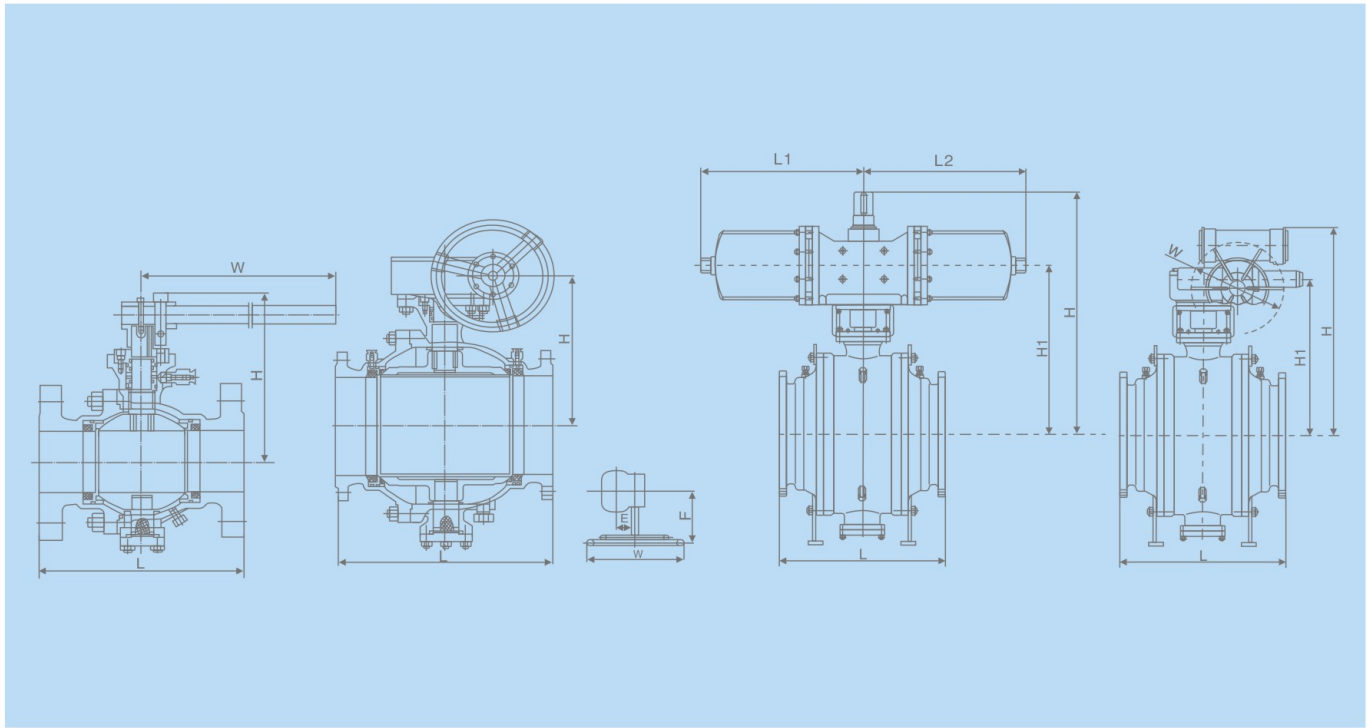
Parts and Materials

NO.	Part name	Material	NO.	Part name	Material
1	Body,Body cap	A216-WCB,CF8,CFM	9	Spring	Inconel X-750
2	Sealing ring	PTFE/Flexible graphite	10	Seat	A105,CF8+Cr or CF8+Stellite CF8M+Cr or CF8M+Stellite
3	Ball	A216-WCB+ENP,304SS,316SS	11	Stem	A182-F6a,420SS,304SS, 316SS,17-4PH
4	Bottom cap	A105,CF8,CFM	12	Key	AISI C1045,420SS,304SS, 316SS,17-4PH
5	O Ring	Fluoro ruber/Flexible graphite	13	Stem sleeve	AISI C1045,CF8,CF8M
6	Gasket	SS+Flexible graphite	14	Packing	SS+Flexible graphite
7	Nut	A194-2H,304SS,316SS	15	Packing gland	A216-WCB
8	Stud	A193-B7,304SS,316SS	16	Yoke	A216-WCB



Parts and Materials

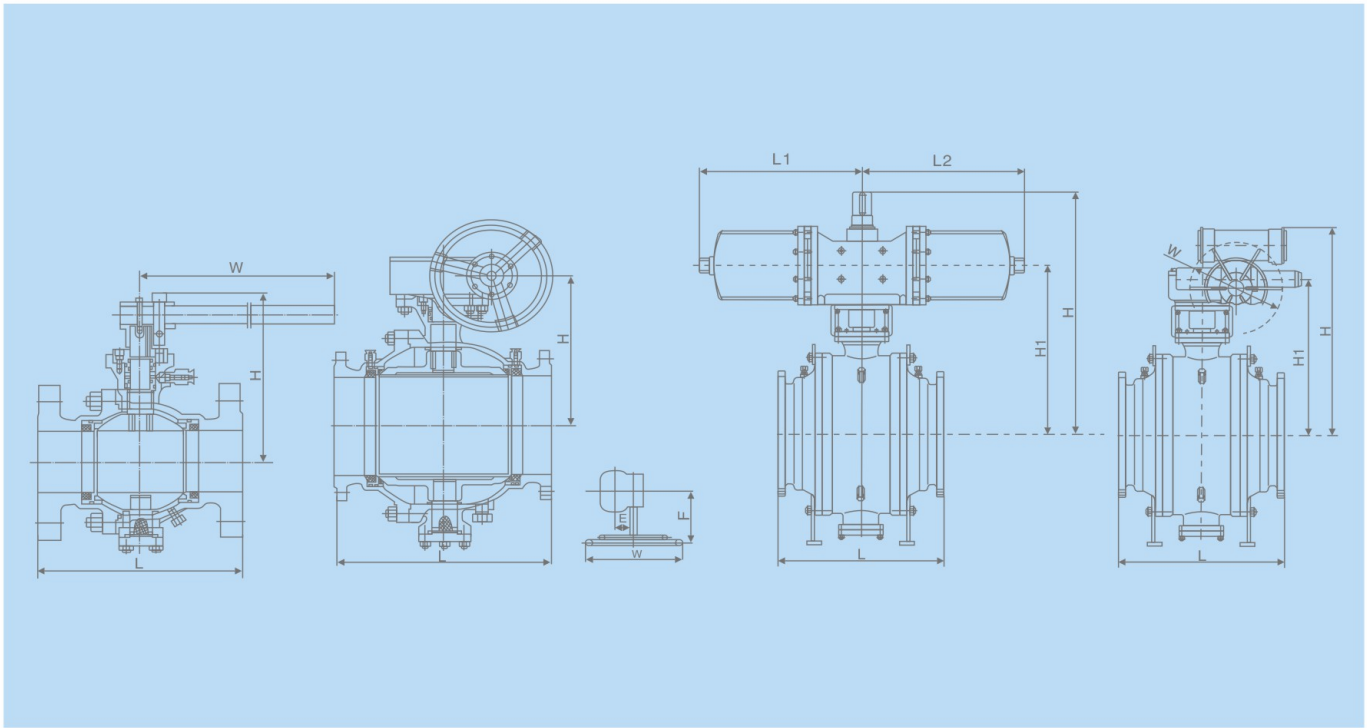
NO.	Part name	Material	NO.	Part name	Material
1	Body cap	A216-WCB,CF8,CF8M	15	Sealing ring	PTFE/Flexible graphite
2	Bolt	A193-B7,304SS,316SS	16	Ball	A216-WCB+ENP,304SS+ENP, 316SS+ENP
3	Nut	A194-2H,304SS,316SS	17	Upper stem	A182-F6a,420SS,304SS,316SS
4	Bottom cap	A105,304SS,316SS	18	Key	AISI C1045,420SS,304SS, 316SS,17-4PH
5	Gasket	SS+Flexible graphite	19	Gasket	A276-420,304SS,316SS
6	Lower stem	A182-F6a,420SS,304SS,316SS	20	Packing	SS+Flexible graphite
7	O ring	Fuoro ruber/Flexible graphite	21	O ring	Fuoro ruber/Flexible graphite
8	Gasket	SS+Flexible graphite	22	Gasket	SS+Flexible graphite
9	Body	A216-WCB,CF8,CF8M	23	Bonnet	A105,304SS,316SS
10	Plug	A105,304SS,316SS	24	O ring	Fuoro ruber/Flexible graphite
11	Grease injection device	Components	25	Packing gland	A216-WCB,CF8,CF8M
12	Spring	Inconel X-750	26	Yoke	A216-WCB,CF8,CF8M
13	O ring	Fuoro ruber/Flexible graphite	27	Adapter	AISI C1045,304SS,316SS
14	Seat*	A105,304SS+Cr or 304SS+Stellite 316SS+Cr or 316SS+Stellite	-	-	-



Dimensions and Weight

PN1.6MPa CLASS 150

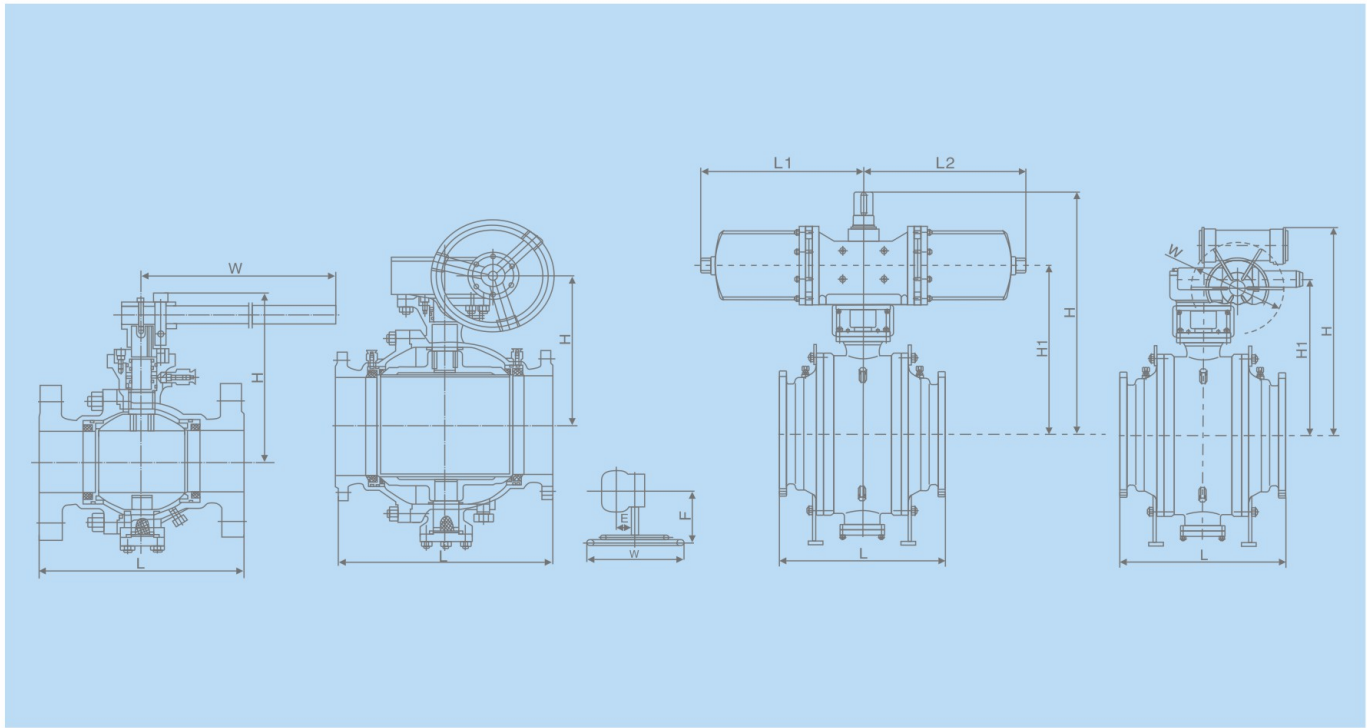
DN	mm	50	65	80	100	125	150	200	250	300	350	400	450	500	600	700	800	900	1000	1050	1200	1400	1500
NPS	in	2	2 1/2	3	4	5	6	8	10	12	14	16	18	20	24	28	32	36	40	42	48	56	60
Flange	L	178	191	203	229	356	394	457	533	610	686	762	864	914	1067	1245	1372	1524	1721	1829	2180	2300	2400
Butt-welded	L1	216	241	283	305	381	457	521	559	635	762	838	914	991	1143	1346	1524	1727	1930	1689	2100	2250	2400
Manual	H	107	125	152	178	300	330	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	W	230	400	400	450	700	750	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	kg	9.5	15	19	33	58	93	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Worm gear	H	-	-	-	-	-	-	398	495	580	625	670	698	840	1050	1100	1150	1230	1320	1480	1610	1780	1865
	W	-	-	-	-	-	-	600	600	800	800	800	800	800	800	800	800	800	800	800	800	800	800
	Model	-	-	-	-	-	-	B	B	C	C	D	D	D	DA	DA	DB	DB	DC	DC	DD	DH	DH
	kg	-	-	-	-	-	-	160	180	240	390	510	750	1190	2600	3000	4490	7800	12560	14280	21900	34100	46200
Pneu-matic	H	269	379	389	479	552	666	804	839	972	1127	1459	1529	1559	1145	1160	1460	1540	1630	-	-	-	-
	H1	174	248	258	322	395	457	595	630	728	883	1154	1224	1294	915	930	1100	1180	1280	-	-	-	-
	L1	89	148	148	287	287	378	378	378	530	530	680	680	680	1455	1455	1665	1665	1960	-	-	-	-
	L2	181	257	257	287	287	378	378	378	530	530	680	680	680	1455	1455	1665	1665	1960	-	-	-	-
	Model	AG09	AG13	AG13	AW13	AW13	AW17	AW17	AW20	AW20	AW28	AW28	AW28	C1-355	C1-355	C2-490	C2-490	C3-600	-	-	-	-	-
	kg	16.6	38	42.1	53	95.3	105.2	207.8	255	409	518	838	1067	1295	2330	3200	4750	8200	13200	-	-	-	-
Motor	H	-	-	-	-	-	554	600	652	761	771	831	921	943	1123	1218	1328	1696	1925	2105	2245	2395	2470
	H1	-	-	-	-	-	337	382	435	480	520	580	670	770	850	945	1055	1130	1240	1420	1560	1710	1785
	W	-	-	-	-	-	200	200	200	280	280	280	305	305	305	400	400	460	460	600	600	600	600
	Model	-	-	-	-	-	SMC-04+H0BC	SMC-04+H0BC	SMC-04+H1BC	SMC-04+H1BC	SMC-03+H2BC	SMC-03+H2BC	SMC-03+H3BC	SMC-03+H3BC	SMC-00+H4BC	SMC-00+H4BC	SMC-00+H5BC	SMC-00+H6BC	SMC-00+H6BC	SMC-00+H7BC	SMC-00+H7BC	SMC-00+H7BC	SMC-00+H7BC
	kg	-	-	-	-	-	127	210	270	420	535	862	1100	1350	2420	3410	5120	9100	14100	15200	22300	36000	47000



Dimensions and Weight

PN2.5、4.0MPa CLASS 300

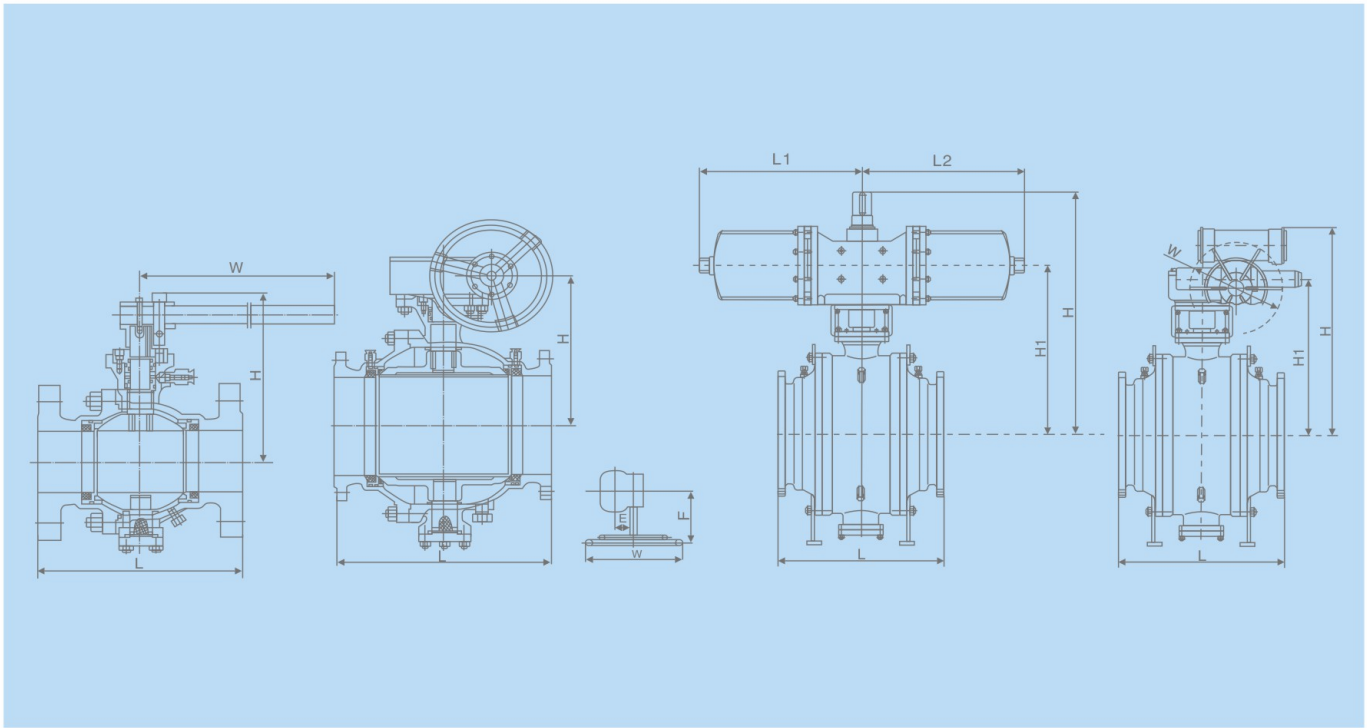
DN	mm	50	65	80	100	125	150	200	250	300	350	400	450	500	600	700	800	900	1000	1050	1200	1400	1500
NPS	in	2	2 1/2	3	4	5	6	8	10	12	14	16	18	20	24	28	32	36	40	42	48	56	60
Butt-welded	L	216	241	283	305	381	403	502	568	648	762	838	914	991	1143	1346	1524	1727	2083	2050	2180	2300	2400
Flange	L1	216	241	283	305	381	457	521	559	635	762	838	914	991	1143	1346	1524	1727	2083	1960	2020	2250	2400
Manual	H	107	125	152	178	300	330	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	W	230	400	400	600	700	800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	kg	20.9	42.5	52.9	92	145	182	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Worm gear	H	-	-	-	-	-	-	398	495	580	625	670	698	840	1050	1100	1150	1230	1320	1480	1610	1780	1865
	W	-	-	-	-	-	-	600	600	800	800	800	800	800	800	800	800	800	800	800	800	800	800
	Model	-	-	-	-	-	-	B	B	C	C	D	D	D	DA	DA	DB	DB	DC	DC	DD	DH	DH
	kg	-	-	-	-	-	-	278	500	733	1029	1418	1592	2195	3460	5770	7932	10093	13775	16105	24060	38155	52350
Pneu-matic	H	269	379	452	579	595	595	736	942	994	1188	1280	1480	1554	1380	1430	1749	1540	1630	-	-	-	-
	H1	209	248	295	322	386	386	527	698	750	883	975	1080	1154	930	980	1149	1180	1280	-	-	-	-
	L1	148	148	287	287	378	378	378	530	530	680	680	680	1455	1455	1665	1665	1960	1960	-	-	-	-
	L2	181	257	287	287	378	378	378	530	530	680	680	680	1455	1455	1665	1665	1960	1960	-	-	-	-
	Model	AG13	AG13	AW13	AW13	AW17	AW17	AW17	AW20	AW20	AW28	AW28	AW28	C1-355	C1-355	C2-490	C2-490	C2-490	C3-600	C3-600	-	-	-
	kg	20.9	42.5	52.7	77.9	107	130	220	280	450	570	920	1140	1360	2450	3360	5800	7900	10200	-	-	-	-
Motor	H	-	-	-	-	-	554	600	652	761	771	831	921	943	1123	1218	1328	1696	1925	2105	2245	2395	2470
	H1	-	-	-	-	-	337	382	435	480	520	580	670	770	850	945	1055	1130	1240	1420	1560	1710	1785
	W	-	-	-	-	-	200	200	200	280	280	280	305	305	305	400	400	460	460	600	600	600	600
	Model	-	-	-	-	-	SMC-04+H0BC	SMC-04+H1BC	SMC-04+H1BC	SMC-04+H2BC	SMC-03+H2BC	SMC-03+H3BC	SMC-03+H3BC	SMC-00+H4BC	SMC-00+H4BC	SMC-00+H5BC	SMC-00+H6BC	SMC-00+H6BC	SMC-00+H7BC	SMC-00+H7BC	SMC-00+H7BC	SMC-00+H7BC	SMC-00+H7BC
	kg	-	-	-	-	-	142	240	320	475	590	1050	1200	1470	2520	3720	6250	8300	1121	1620	2510	3940	5560



Dimensions and Weight

PN6.4MPa CLASS 400

DN	mm	50	65	80	100	150	200	250	300	350	400	450	500	600	700	800	900	1000	1050	1200	1400	1500
NPS	in	2	2½	3	4	6	8	10	12	14	16	18	20	24	28	32	36	40	42	48	56	60
Flange	L	292	330	356	406	495	597	673	762	826	902	978	1054	1232	1397	1651	1880	2300	2057	2400	2400	2700
Butt-welded	L1	292	330	356	406	495	597	673	762	826	902	978	1054	1232	1397	1651	1880	2300	2050	2180	2300	2400
Manual	H	108	155	197	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	W	230	400	400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	kg	25	45	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Worm gear	H	-	-	-	235	300	374	445	512	550	615	750	810	1050	1100	1180	1274	1366	1540	1680	1840	1915
	W	-	-	-	600	600	800	800	800	800	800	800	800	800	800	800	800	1000	1000	1000	1000	1000
	Model	-	-	-	B	C	C	C	D	D	DA	DA	DB	DC	DD	DH	DH	DJ	DJ	DK	DK	DK
	kg	-	-	-	66	145	250	540	780	1000	1300	2100	3400	5000	6520	8350	11250	14100	72500	29500	42100	62500
Pneu-matic	H	269	-	519	636	728	839	1014	1120	1225	1480	-	1480	1365	1430	-	-	-	-	-	-	-
	H1	209	-	295	322	386	527	698	750	883	1080	-	1080	915	980	-	-	-	-	-	-	-
	L1	148	-	287	287	378	378	530	530	680	680	-	680	1665	1665	-	-	-	-	-	-	-
	L2	257	-	287	287	378	378	530	530	680	680	-	680	1665	1665	-	-	-	-	-	-	-
	Model	AG13	-	AW13	AW13	AW17	AW20	AW20	AW28	C1-355	-	C1-355	C2-490	C2-490	-	-	-	-	-	-	-	-
	kg	33.6	-	5.3	81.2	133.6	236.6	480	760	1050	1400	-	2300	3600	5200	-	-	-	-	-	-	-
Motor	H	-	-	-	-	554	600	652	761	771	831	921	943	1123	1218	1328	1815	1925	2164	2324	2474	2544
	H1	-	-	-	-	337	382	480	520	594	632	670	770	850	945	1055	1130	1240	1440	1660	1750	1820
	W	-	-	-	-	200	200	200	280	280	280	305	305	305	460	460	600	600	600	600	600	600
	Model	-	-	-	-	SMC-04 +H1BC	SMC-04 +H1BC	SMC-03 +H2BC	SMC-00 +H3BC	SMC-00 +H4BC	SMC-0 +H4BC	SMC-1 +H5BC	SMC-3 +H6BC	SMC-3 +H6BC	SMC-3 +H7BC	SMC-3 +H7BC	SMC-4 +H7BC	SMC-4 +H7BC	SMC-5 +H6BC	SMC-5 +H7BC	SMC-5 +H7BC	SMC-5 +H7BC
	kg	-	-	-	-	154	240	495	793	1125	1610	1800	2410	3750	5540	7900	12500	15300	18100	31000	45000	65200



Dimensions and Weight

PN10.0MPa CLASS 600

DN	mm	50	65	80	100	150	200	250	300	350	400	450	500	600	700	800	900	1000	1050	1200	1400	1500
NPS	in	2	2½	3	4	6	8	10	12	14	16	18	20	24	28	32	36	40	42	48	56	60
Flange	L	292	330	356	432	559	660	787	838	889	991	1092	1194	1397	1549	1778	2083	2337	2100	2400	2400	2700
Butt-welded	L1	292	330	356	432	559	660	787	838	889	991	1092	1194	1397	1549	1778	2083	2337	2050	2180	2300	2400
Manual	H	108	155	197	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	W	400	650	650	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	kg	31	54	62	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Worm gear	H	-	-	-	235	300	374	445	512	550	615	750	810	1050	1180	1250	1315	1420	1540	1680	1840	1915
	W	-	-	-	600	600	800	800	800	800	800	800	800	800	800	800	800	800	1000	1000	1000	1000
	Model	-	-	-	B	C	C	D	D	DA	DA	DB	DC	DD	DH	DH	DH	DH	DJ	DJ	DK	DK
	kg	-	-	-	113	253	485	758	1067	1083	1525	2095	2638	4736	6758	9138	13298	18335	21356	31195	47483	65200
Pneu-matic	H	269	-	519	636	728	839	1014	1120	1224	1374	-	1490	1615	1760	-	-	-	-	-	-	-
	H1	209	-	295	479	519	595	770	810	1004	1154	-	1210	1335	1410	-	-	-	-	-	-	-
	L1	148	-	287	287	378	530	530	680	1445	1445	-	1665	1665	1960	-	-	-	-	-	-	-
	L2	257	-	287	287	378	530	530	680	1445	1445	-	1665	1665	1960	-	-	-	-	-	-	-
	Model	AG13	-	AW13	AW13	AW17	AW20	AW20	AW28	C1-355	C1-355	-	C2-490	C2-490	C3-600	-	-	-	-	-	-	-
	kg	225	-	325	656	927	1350	1660	1820	2130	2550	-	3500	5300	6800	-	-	-	-	-	-	-
Motor	H	-	-	-	-	600	652	761	771	831	921	943	1123	1218	1328	1458	1855	1960	2164	2324	2474	2544
	H1	-	-	-	-	382	480	520	594	632	670	770	850	945	1055	1135	1170	1285	1440	1660	1750	1820
	W	-	-	-	-	200	200	280	280	280	305	305	305	400	400	600	600	600	600	600	600	600
	Model	-	-	-	-	SMC-04 +H1BC	SMC-03 +H2BC	SMC-00 +H3BC	SMC-00 +H3BC	SMC-0 +H4BC	SMC-0 +H4BC	SMC-1 +H5BC	SMC-3 +H6BC	SMC-3 +H6BC	SMC-3 +H7BC	SMC-4 +H7BC	SMC-4 +H7BC	SMC-4 +H7BC	SMC-5 +H6BC	SMC-5 +H7BC	SMC-5 +H7BC	SMC-5 +H7BC
	kg	-	-	-	-	930	1410	1620	1910	2200	2600	2950	3620	5410	6920	10000	13420	18450	22300	32000	48000	66200

Product Introduction

Double eccentric semi ball structure, equipped with soft seat or metal seat; suitable for corrosion resistance medium, erosion resistance medium, containing slurry, dust, solid particles and other medium. Main applications: Petroleum and natural gas, fine chemicals, metallurgy and air separation, food and beverage, water and waste-water treatment, pulp and paper, power generation systems and power plants, pharmaceutical, light industry.

Features

- 1. Double offset and semi ball design. Semi ball surface and seat surface are machining as wedge, this result to excellent tight sealing performance as that of wedge gate valve.
- 2. Hard Alloy welded on the semi ball sealing area and seat surface, which allow the valve used in more severe application such as; corrosion, abrasion, powder, slurry or high temperature medium.
- 3. Replaceable valve seat design. The valve seat can be removed and replace form the seat retainer. And the seat surface welded is about 2.5 to 3 mm. Which result to long using life.
- 4. Full bore flow channel design, minimized the flow resistance. Wedge seat surface allow the particle flow down to downstream, and minimizing the deposit in valve cavity. When valve closed the wedge shear force will destroy the scaling on seat surface, which will keep the valve tight sealing while application in severe medium.

Testing Pressure

PN	Max. working pressure	Shell test (MPa)	Air seal test (MPa)	Sealing test (MPa)
1.6	1.6	2.4	0.6	1.76
2.5	2.5	3.8	0.6	2.75
4.0	4.0	6.0	0.6	4.4
6.4	6.4	9.6	0.6	7.1
Class150	2.0	3.0	0.6	2.2
Class300	5.0	7.5	0.6	5.5

Parts and Materials

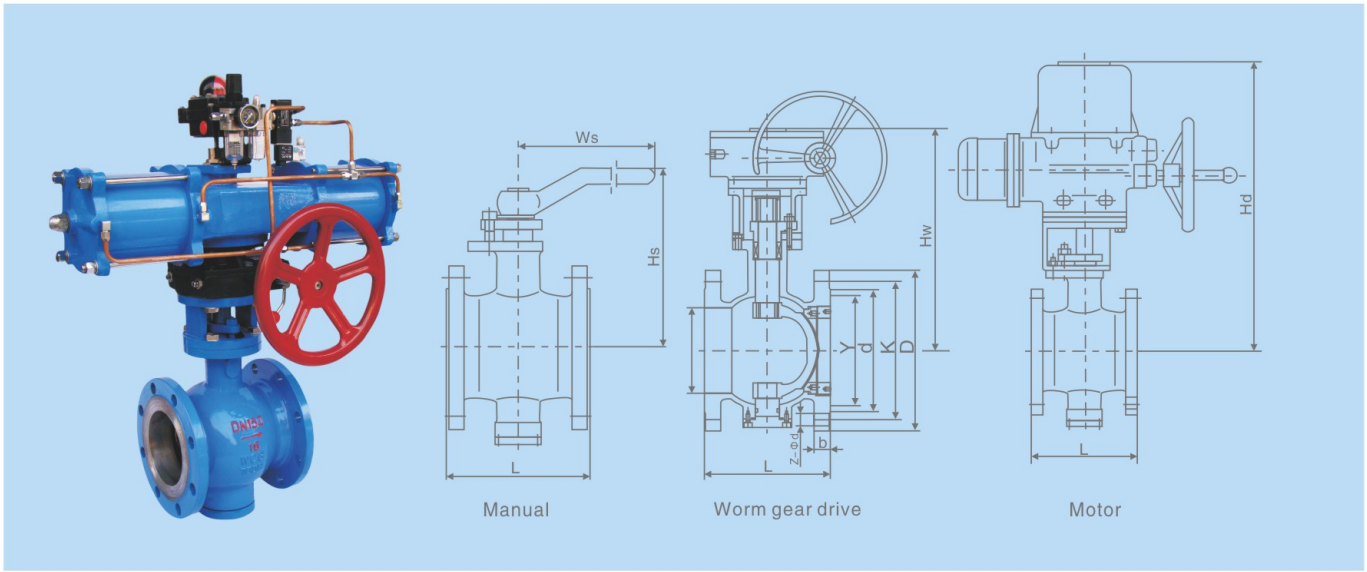
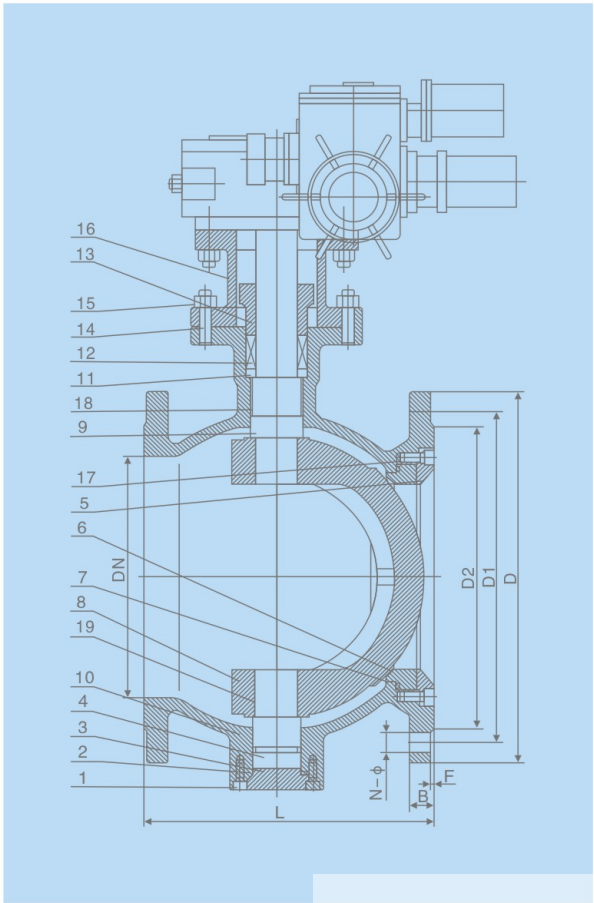
No.	Name	Material	No.	Name	Material
1	Screw	B7、B8	11	Packing Gasket	WCB/304 316SS
2	O Ring	FKM	12	Packing	Flexible graphit
3	Bottom cap	WCB/304/316	13	Packing gland	WCB/CF8 CF8M
4	Lower stem	420/304/316	14	Bolt	B7、B8
5	Gland	WCB/304/316	15	Nut	8A
6	Seat	WCB/304+STL 316	16	Yoke	WCB、CF8M
7	O Ring	FKM	17	Screw	B7、B8
8	Ball	304SS/316SS	18	Bush	304+PTFE, 316SS+PTFE
9	Stem	420/304/316	19	Bush	304+PTFE, 316SS+PTFE
10	Body	WCB/CF8 CF8M	-	-	-

Standard

Design & manufacture: ANSI/ASME B16.34/GB12237
Face to face: ASME B16.10/GB1221
End dimension: ASME B16.5; GB/HG/JIS
Inspection and testing: API 598, API 6D, GB13927

Technical Data

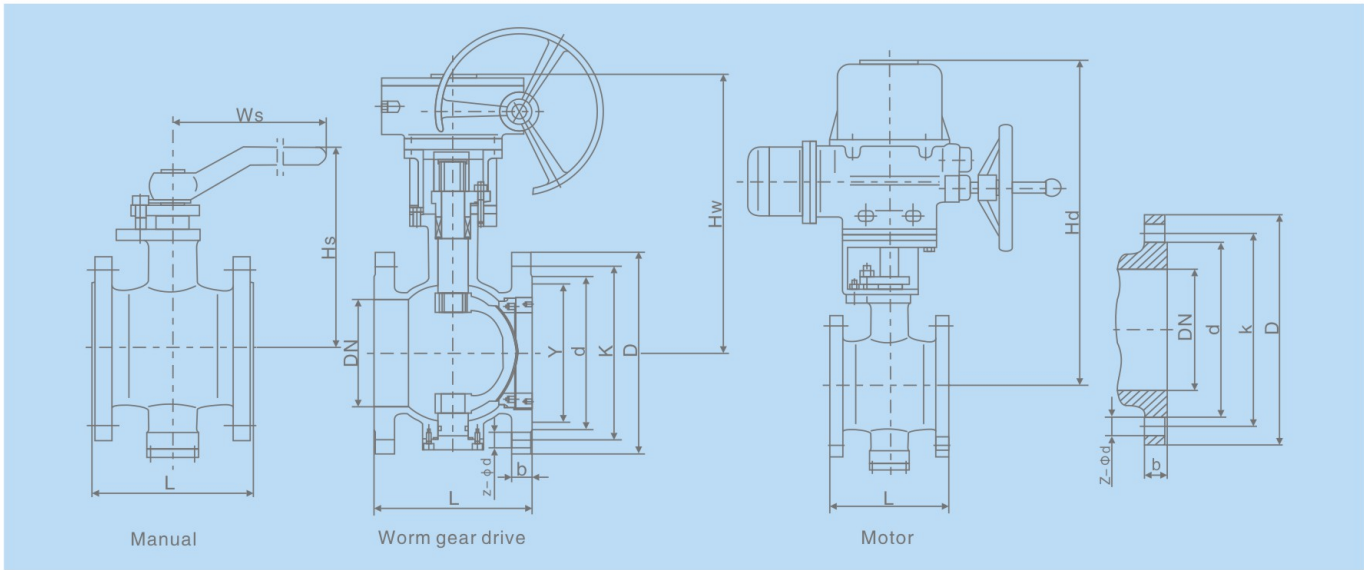
Full bore structure
Valve size: DN50 – DN2000
Pressure rating: PN1.6–6.4MPa
ANSI Class150# to Class300#
Temperature range: Soft seal: –25℃~250℃
Hard seal: –50℃~500℃



Dimensions

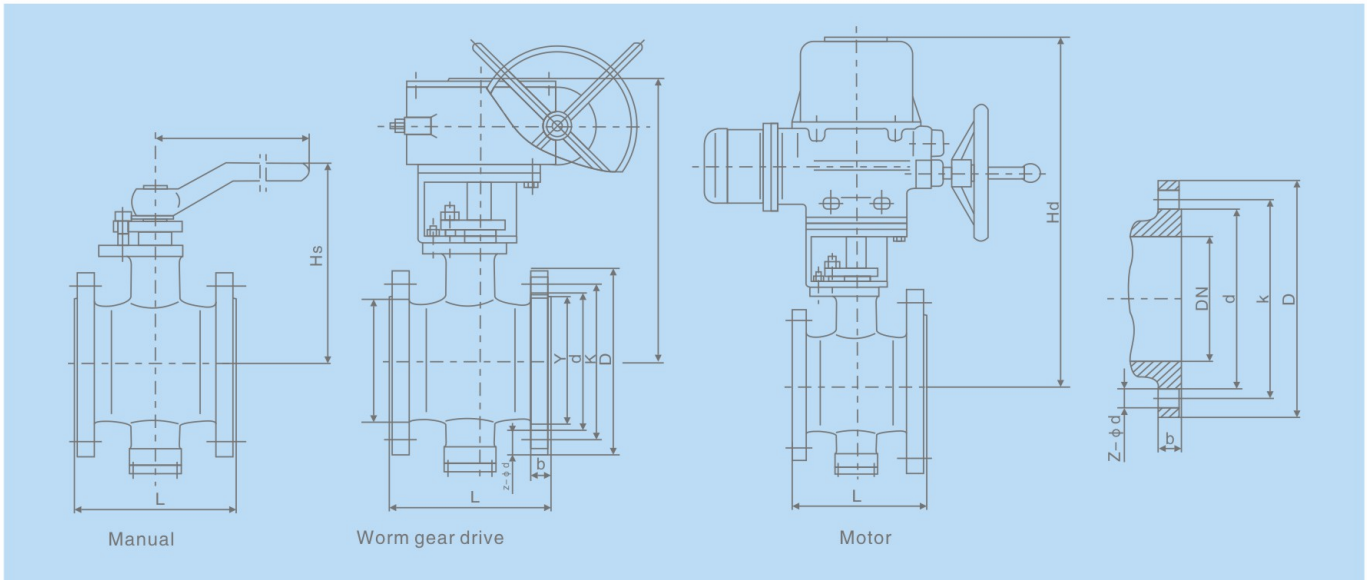
Unit:mm

PN	DN	L	D	K	d	Y	b	Z-Φd	Ws	Hs	Hw	Hd
1.6MPa	50	124	165	125	100	-	16	4-Φ18	230	164	260	310
	65	145	185	145	120	-	18	4-Φ18	250	180	275	330
	80	165	200	160	135	-	20	8-Φ18	300	200	300	360
	100	194	220	180	155	-	20	8-Φ18	320	235	335	390
	125	210	250	210	185	-	22	8-Φ18	400	260	355	405
	150	229	285	240	210	-	24	8-Φ23	500	280	375	440
	200	243	340	295	265	-	26	12-Φ23	800	320	410	470
	250	297	405	355	320	-	30	12-Φ25	1000	355	485	550
	300	338	460	410	375	-	30	12-Φ25	1200	400	530	595
	350	400	520	470	435	-	34	16-Φ25	-	-	580	650
	400	400	580	525	485	-	36	16-Φ30	-	-	650	730
	450	502	640	585	545	-	40	20-Φ30	-	-	710	790
	500	533	715	650	608	-	44	20-Φ34	-	-	760	840
	600	686	840	770	718	-	48	20-Φ41	-	-	870	960
	700	762	910	840	788	-	50	24-Φ41	-	-	910	1080
	800	864	1025	950	898	-	52	24-Φ41	-	-	935	1125
	900	914	1125	1050	998	-	54	28-Φ41	-	-	995	1255
	1000	-	1255	1170	1110	-	56	28-Φ48	-	-	1080	1385
2.5MPa	1200	-	1485	1390	1325	-	58	32-Φ54	-	-	1175	1490
	1400	-	1685	1590	1525	-	60	36-Φ54	-	-	1280	1565
	50	124	165	125	100	-	20	4-Φ18	230	164	260	310
	65	145	185	145	120	-	22	8-Φ18	250	180	275	330
	80	165	200	160	135	-	22	8-Φ18	300	200	300	360
	100	194	230	190	160	-	24	8-Φ23	320	235	335	390
	125	210	270	220	188	-	28	8-Φ25	400	260	355	405
	150	229	300	250	218	-	30	8-Φ25	500	280	375	440
	200	243	360	310	278	-	34	12-Φ25	800	320	410	470
	250	297	425	370	332	-	36	12-Φ30	1000	355	485	550
	300	338	485	430	390	-	40	16-Φ30	1200	400	530	595
	350	400	555	490	448	-	44	16-Φ34	-	-	580	650
	400	400	620	550	505	-	48	16-Φ34	-	-	650	730
	450	502	670	600	555	-	50	20-Φ34	-	-	710	790
	500	533	730	660	610	-	52	20-Φ41	-	-	760	840
	600	686	845	770	718	-	56	20-Φ41	-	-	870	960
	700	762	960	875	815	-	60	24-Φ48	-	-	990	1080
	800	864	1085	990	930	-	64	24-Φ48	-	-	935	1125
	900	914	1185	1090	1025	-	66	28-Φ54	-	-	995	1255
	1000	-	1320	1210	1140	-	68	28-Φ58	-	-	1080	1385
	1200	-	1520	1420	1350	-	72	32-Φ58	-	-	1175	1490
	1400	-	1755	1640	1560	-	78	36-Φ65	-	-	1280	1565



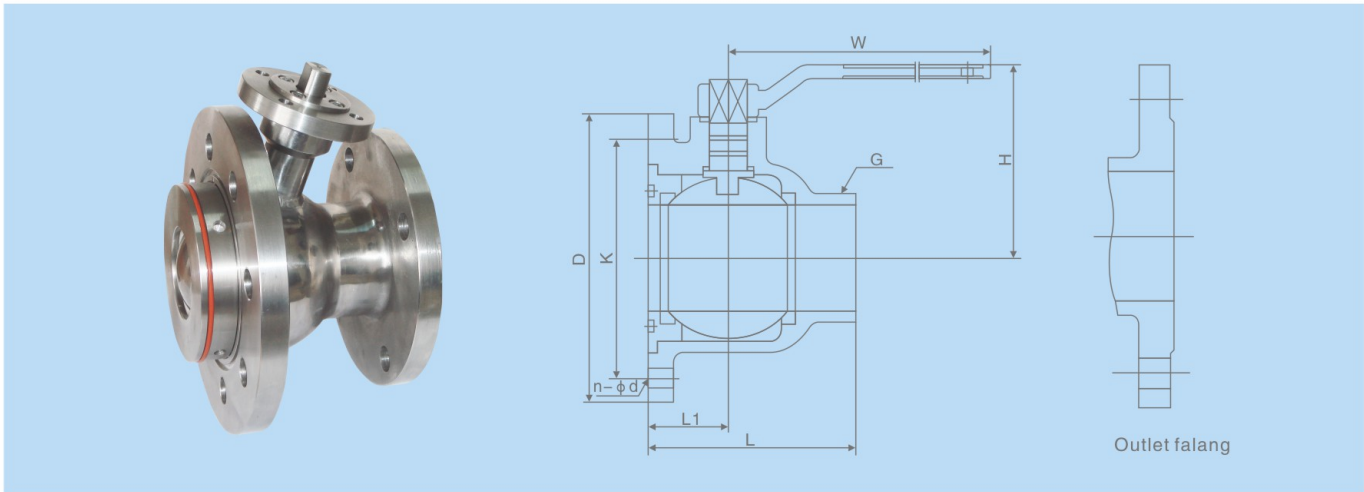
DimensionsUnit:mm

PN	DN	L	D	K	d	Y	b	Z-φd	Ws	Hs	Hw	Hd
4.0MPa	50	124	165	125	100	88	20	4-φ18	250	180	275	325
	65	145	185	145	120	110	22	8-φ18	300	200	290	345
	80	165	200	160	135	121	22	8-φ18	320	220	315	375
	100	194	235	190	160	150	24	8-φ23	400	260	350	405
	125	210	270	220	188	176	28	8-φ25	500	290	370	420
	150	229	300	250	218	204	30	8-φ25	800	310	390	455
	200	245	375	320	282	260	38	12-φ30	100	350	435	495
	250	297	450	385	345	313	42	12-φ34	1200	390	510	575
	300	338	515	450	408	364	46	16-φ34	-	-	555	620
	350	400	580	510	165	422	52	16-φ34	-	-	605	675
	400	400	660	585	535	474	58	16-φ41	-	-	675	755
	450	502	685	610	560	524	60	20-φ41	-	-	735	815
	500	533	755	670	612	576	62	20-φ48	-	-	785	870
6.4MPa	50	124	180	135	105	88	26	4-φ23	400	180	275	325
	65	145	205	160	130	110	28	8-φ23	500	200	290	345
	80	165	215	170	140	121	30	8-φ23	650	220	315	375
	100	194	250	200	168	150	32	8-φ25	800	260	350	405
	125	210	295	240	202	176	36	8-φ30	1000	290	370	420
	150	229	345	280	240	204	38	8-φ34	1200	310	390	455
	200	245	405	345	300	260	44	12-φ34	1400	350	435	495
	250	297	470	400	352	313	48	12-φ41	-	-	510	575
	300	338	530	460	412	364	54	16-φ41	-	-	555	620
	350	400	600	525	475	422	60	16-φ41	-	-	605	675
	400	400	670	585	525	474	66	16-φ48	-	-	675	760



DimensionsUnit:mm

PN	DN	L	D	K	d	Y	b	Z-φd	Ws	Hs	Hw	Hd
Class 150	2"	124	152	120.5	92	-	16	4-φ19	230	164	260	310
	2 1/2"	145	178	139.5	105	-	18	4-φ19	250	180	275	330
	3"	165	190	152.5	127	-	19	4-φ19	300	200	300	360
	4"	194	229	190.5	157	-	24	8-φ19	320	235	335	390
	5"	210	254	216	186	-	24	8-φ22	400	260	355	405
	6"	229	279	241.5	216	-	26	8-φ22	500	280	375	440
	8"	243	343	298.5	270	-	29	8-φ22	800	320	410	470
	10"	297	406	362	324	-	31	12-φ25	1000	355	485	550
	12"	338	483	432	381	-	32	12-φ25	1200	400	530	595
	14"	40	533	476	413	-	35	12-φ29	-	-	580	650
	16"	400	597	540	470	-	37	16-φ29	-	-	650	730
	18"	430	635	578	533	-	40	16-φ32	-	-	710	790
	20"	533	699	635	584	-	43	20-φ32	-	-	760	840
	24"	660	813	749.5	692	-	48	20-φ35	-	-	870	960
	28"	840	927	864	800	-	71	28-φ35	-	-	910	1080
	32"	864	1060	978	914	-	81	28-φ41	-	-	935	1125
	36"	914	1168	1086	1022	-	90	32-φ41	-	-	995	1255
	40"		1289	1200	1124	-	90	36-φ41	-	-	1080	1385
	48"		1511	1422	1359	-	108	44-φ41			1175	1490
	56"		1746	1651	1575	-	124	48-φ48	-	-	1280	1565
Class 300	2"	124	165	127	92	-	23	8-φ19	250	180	275	325
	2 1/2"	145	190	149	105	-	26	8-φ22	300	200	290	345
	3"	165	210	168.5	127	-	29	8-φ22	320	220	315	375
	4"	194	254	200	157	-	32	8-φ22	400	260	350	405
	5"	210	279	235	186	-	35	8-φ22	500	290	370	420
	6"	229	318	270	216		37	12-φ22	800	310	390	455
	8"	245	381	330	270	-	42	12-φ25	100	350	435	495
	10"	297	445	387.5	324		48	16-φ29	1200	390	510	575
	12"	338	521	451	381	-	51	16-φ32	-	-	555	620
	14"	400	584	514.5	413	-	54	20-φ32	-	-	605	675
	16"	400	648	571.5	470	-	58	20-φ35	-	-	675	755
	18"	502	711	628.5	533	-	61	24-φ35	-	-	735	815
	20"	533	775	686	584	-	64	24-φ35	-	-	785	870



Product Introduction

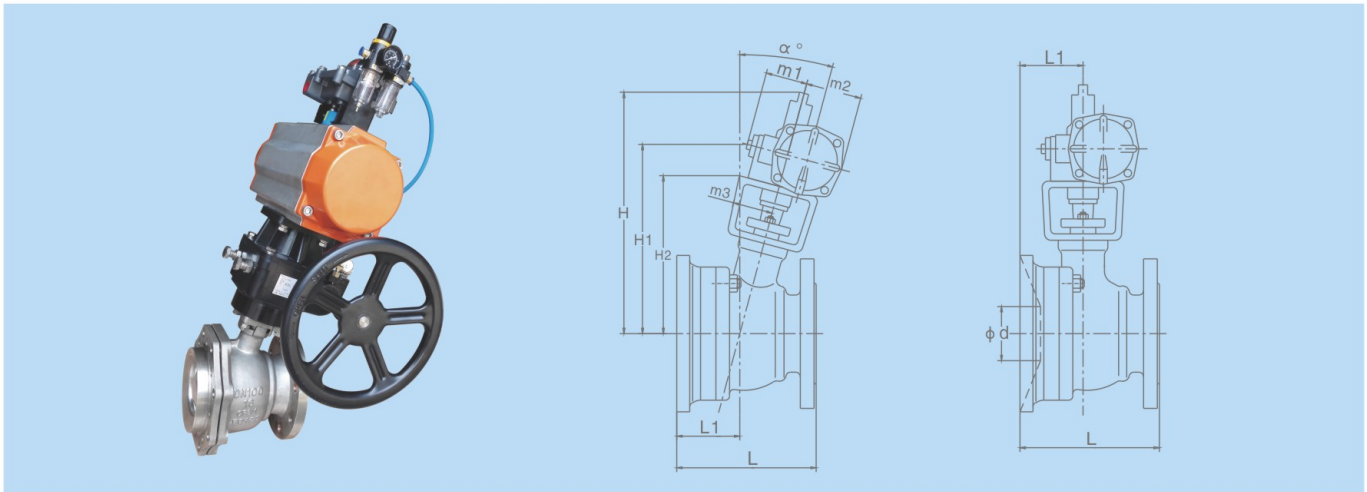
With sort valve seat to flange surface dimension design,lower medium retention,excellent sealing,compact structures,Flowtec BB31** series tank bottom valve can be used as discharge valve installed in reactor tank bottom.Mainly applications:fine chemical,pharmaceutical, chemical industry and light industry,especially used in soft particle mediums.

Parts and Materials

Parts name	Material		
	WCB	304SS	316SS
Body	WCB	CF8	CF8M
Ball	304SS	304SS	316SS
Stem	420SS、304SS	420SS、304SS	316SS、17-4PH
Body cap	WCB	CF8	CF8M
Seat	PTFE、R.PTFE、PPL、PEEK		
Packing	PTFE、R.PTFE、Flexible graphite		

Dimensions

DN		G	L	L1	D	K	n-φd	H	W
mm	in								
25	1"	G1"	72	22	100	780	4-φ10	90	120
40	1 1/2"	G1 1/2"	92	31	130	100	4-φ12	118	220
50	2"	G2"	112	41	160	130	4-φ14	128	230
65	2 1/2"	G2 1/2"	125	46	190	155	4-φ14	140	250
80	3"	G3"	160	57	205	170	4-φ14	160	290
100	4"	G4"	175	68	235	200	4-φ18	185	350

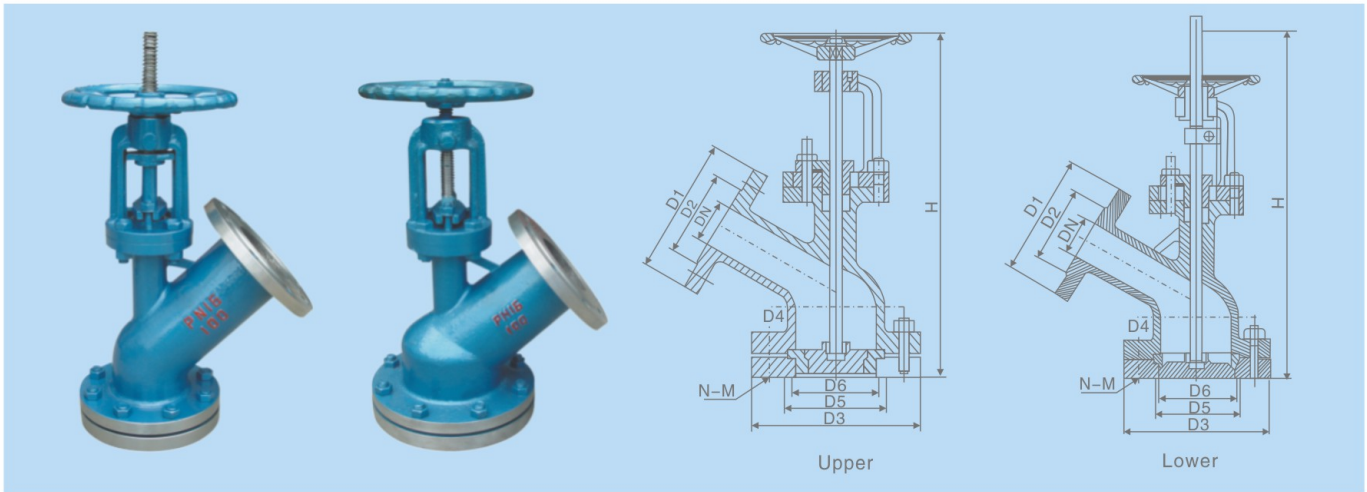


Dimensions

Class 150Lb										
Size	φd	φD	H	L	L1	W	t0	t1	m1	m2
20A	19	92	217	98	47	211	136	75	45	78
25	25	125	233	109	54					
25	25	125	259	109	54					
40	38	150	282	126	60					
50	51	170	290	139	64	288	181	105	50	105
60	51	170	356	139	64					
65	65	185	391	162	72					
80	76	230	410	182	86					
100	102	270	435	216	101	405	257	148	73	155
80	70	230	473	182	86					
100	107	270	498	216	101					
125	122	310	552	260	120					
150	152	360	572	300	140	574	287	287	71	132
125	127	310	646	200	120					
150	152	360	666	300	140					
200	203	440	747	381	176					
250	254	524	791	449	209	756	378	378	98	176
200	203	440	826	381	176					
250	254	524	870	445	209					
250	254	524	870	445	209					
250	254	524	870	445	209	1060	530	530	118	232
250	254	524	870	445	209					
250	254	524	870	445	209					
250	254	524	870	445	209					

Dimensions

Class 300Lb											
Size	H	H1	H2	L	L1	t0	t1	m1	m2	m3	α°
25A	243	176	138	112	57	136	75	45	78	40	15
25	269	187	142	112	57	181	105	50	105	45	15
40	284	203	159	129	62					47	15
50	497	214	171	145	67					47	15
60	362	248	188	145	67					66	15
65	397	283	229	171	76	257	145	73	165	66	15
80	405	292	230	190	89					66	15
100	426	316	252	233	105					66	15
80	467	354	244	190	89					78	15
100	490	377	267	233	105	287	287	71	132	78	15
125	575	455	345	271	125					86	13
150	596	475	365	310	145					86	13
125	665	469	373	271	125					104	13
150	686	489	393	310	145	378	378	98	176	104	13
150	686	489	393	310	145					104	13



Dimensions(Lower Discharge Valve)

BG6D22-**** PN1.6MPa

DN(mm)	Upper flange		Upper flange	Lower flange	Seling seat	
	D1	D2	D3	D4	D5	D6
25	115	85	135	100	70	40
32	135	100	145	110	75	55
40	145	110	160	125	100	65
50	165	125	180	145	85	70
65	180	145	195	160	135	90
80	195	160	215	180	155	130
100	215	180	245	210	195	135
125	245	210	280	245	180	145
150	280	240	335	295	210	185
200	335	295	405	355	—	—

Dimensions(Upper Discharge Valve)

BG6U22-**** PN1.6MPa

DN(mm)	Upper flange		Lower flange		Seling seat	
	D1	D2	D3	D4	D5	D6
25	115	85	115	85	80	60
32	135	100	135	100	85	70
40	145	110	145	110	135	85
50	165	125	180	125	135	95
65	180	145	180	145	160	130
80	195	160	195	160	180	140
100	215	180	215	180	185	165
125	245	210	245	210	—	—
150	280	240	280	245	—	—
200	335	295	335	295	—	—

The code principle of 350 series of 1 pieces, 2 pieces,3 pieces precision ball valve

DN15 B35 A N - 1 1 S P

Valve size

inch: 1/2" or ISO DN15

Flowtec precision ball valve

B35 (1000WOG)ANSI series precision ball valve
Pressure rate 0 ~1000PSI

B36 general precision ball valve
Pressure rate PN10~PN64

Body structure code

- A 1 piece
- B 2 piece
- C 3 piece
- 3 Three way
- W Wafer type ball valve

Valve end connection

- N NPT Screw
 - B BPST Screw
 - D DIN2999 Screw
 - W BW butt-welding connection
 - E Ex-BW Extended butt-welding connection
 - S SW socket welding
 - R RF Raised face flange connection
 - C Clamp connection (quick connect)
- The code is omitted for wafer thin ball valve

Seat material

- P PTFE
- R R.PTFE
- L PPL
- K PEEK
- M Metal seat

Stem material

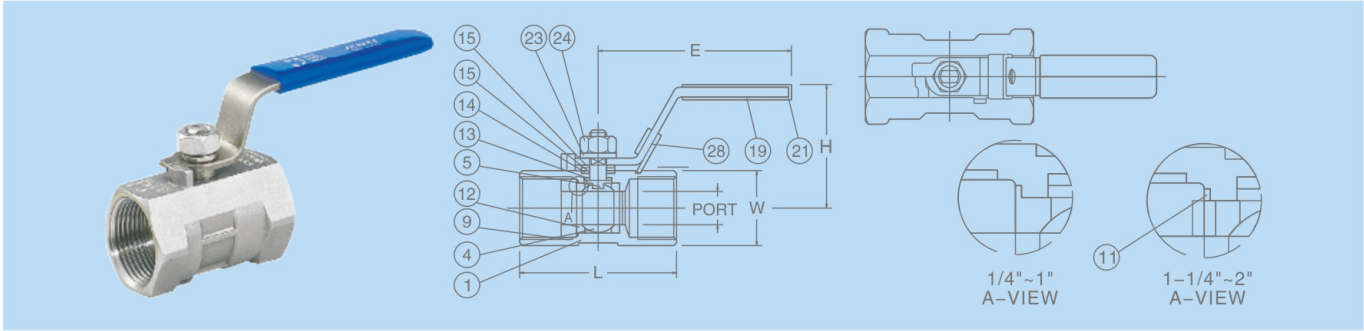
- S 420SSor2Cr13
- H 17-4PH
- 0 304SS/CF8
- 1 316SS/CF8M
- 2 316L/CF3M

Ball material

- 0 CF8/304
- 1 CF8M/316
- 2 316L/CF3M

Body material

- W WCB
- 0 CF8/304
- 1 CF8M/316
- 2 316L/CF3M



Product Introduction

The female screw ball valve and butt welding ball valve are suitable for pipeline of PN1.0 ~ 4.0MPa, with the temperature of -29 to 180 °C (PTFE seat) or -29 to 300°C (PPL seat), Mainly application in medium such as: water, steam, oil, nitric acid, acetic acid and other's. The body of screw end or butt weld end precision ball valve are divided into one piece type (1 PCS), two pieces type (2 PCS) and three pieces type (3 PCS). The body casting is made by advanced technology introduced from Germany, reasonable structure, beautiful appearance. Resilient valve seat designed, reliable sealing, easy to open and close. Back seal down loaded stem structure designed the stem will not be blow out in case of abnormal pressure rise in the valve chamber. Butt welding (BW) and socket welding (SW) end connection, ISO 5211 top flange, lock device, is optional for two pieces and three pieces ball valve. The 1 PCS, 2 PCS, 3 PCS precision ball valve can be driven by manual, motors and pneumatics actuator.

Features

1. Small fluid resistance, and its resistance coefficient is same with the same length pipe's.

2. Simple structure, small size, light weight.

3. Reliable sealing, using PTFE, RTFE, PPL for valve seat which have good sealing, can also be used in the vacuum system.

4. Convenient operation, open and close rapidly, only 90° rotation from fully open to fully closed, facilitate for remote control.
5. Simple structure, easy maintenance, valve seat can be replaced easily.

6. At fully open or fully closed position, the sealing surface of the ball and the seat are separated with flow medium, avoiding the corrosion caused by the passing through medium, and prolong the valve service life.

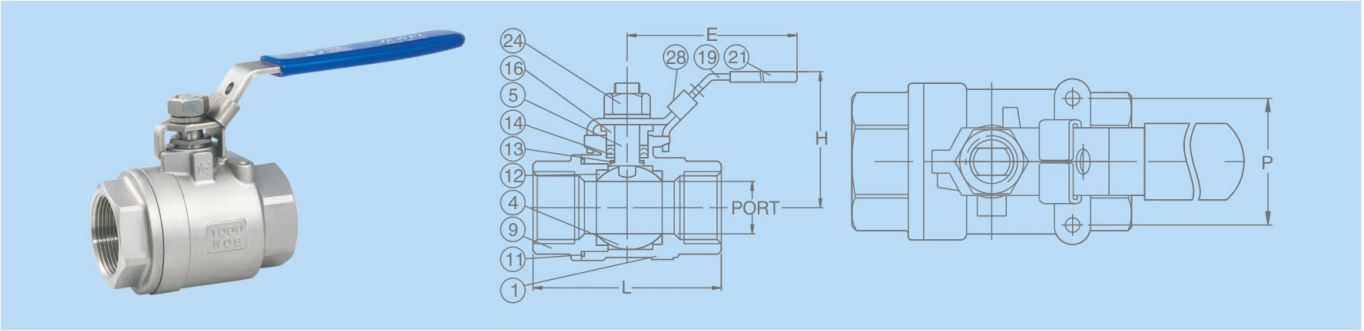
Parts and Materials

NO.	Part name	Material
1	Body	CF8M、CF8、WCB
4	Ball	CF8M、CF8
5	Stem	SS316、SS304
9	Cap	CF8M、CF8、WCB
11	Gasket	PTFE
12	Seat	PTFE
13	Gasket	PTFE
14	Packing	PTFE
15	Gland	SS304
19	Handle	SS304
21	Rubber sleeve	PLASTIC
23	Spring washer	SS304
24	Nut	A194-8
28	Locking plate	SS304

Main Technical Data

Design & manufacture: ASME B16.34, API 608
Inspection and testing: API 598, EN 12266
Blowout proof stem
Working pressure: 1000psi (PN 63bar)
Temperature range: -20 to 180°C
Locking device
Screw end connection: ANSI B1.20.1 (NPT), DIN 259/DIN 2999, ISO 228, BSP, PT

Dimensions PN1.0~PN6.4MPa(1000PSI) Unit: mm						
SIZE		PORT	L	E	H	W
DN8	1/4"	5.0	39.0	69.0	35.0	17.0
DN10	3/8"	7.2	44.0	79.0	36.0	21.0
DN15	1/2"	9.2	56.5	109.0	40.0	25.0
DN20	3/4"	12.5	59.0	109.0	42.0	32.0
DN25	1"	15.0	71.0	111.7	47.0	38.0
DN32	1-1/4"	20.0	78.0	111.7	53.0	48.0
DN40	1-1/2"	25.0	83.0	157.0	62.0	53.0
DN50	2"	32.0	100.0	155.5	67.0	64.0



Technical Data

Design & manufacture: ASME B16.34, API 608

Inspection and testing: API 598, EN 12266

Blowout proof stem

Working pressure: DN8~DN50 1000Psi 、DN65~DN80 800Psi

Temperature range: -20~+180°C

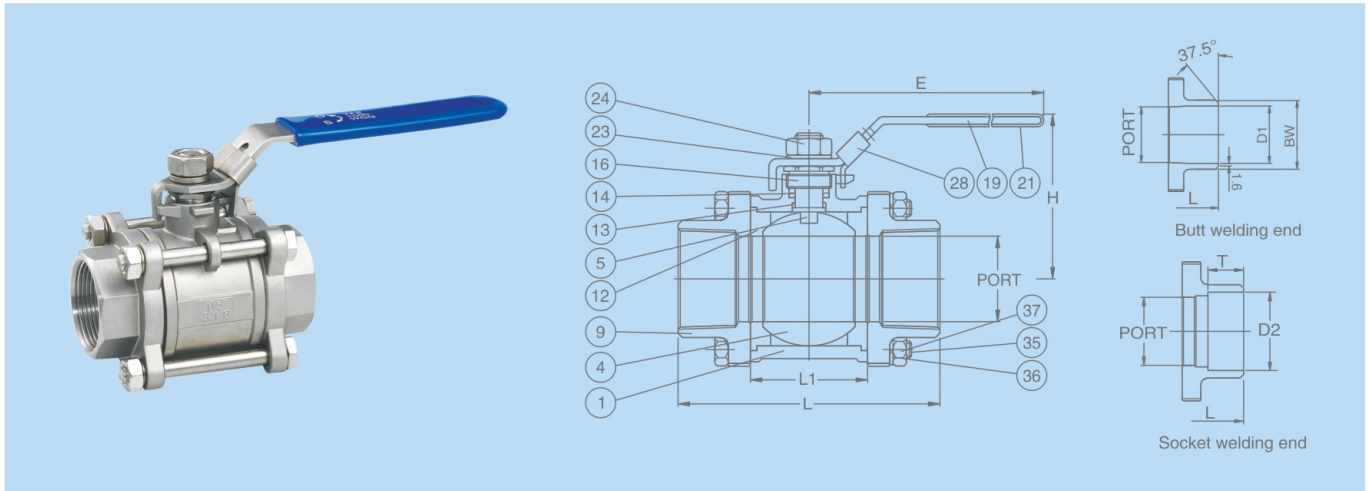
Locking device

Screw end connection: ANSI B1.20.1 (NPT)、DIN 259/DIN 2999、ISO 228、BSP、PT

Parts and Materials

NO.	Part name	Material
1	Body	CF8M、CF8、WCB
4	Steel ball	CF8M、CF8
5	Stem	304SS、316SS
9	Cap	CF8M、CF8、WCB
11	Gasket	PTFE
12	Seat	PTFE
13	Gasket	PTFE
14	Packing	PTFE
16	Packing gland	304SS
19	Handle	304SS
21	Rubber sleeve	PLASTIC
24	Nut	A194-8
28	Locking plate	304SS

Dimensions PN1.0~PN6.4MPa(1000PSI) Unit: mm						
SIZE		PORT	L	E	H	P
DN8	1/4"	11.5	54.4	103.9	50.0	28.0
DN10	3/8"	12.5	54.4	103.9	50.0	28.0
DN15	1/2"	15.0	65.3	123.0	56.5	28.0
DN20	3/4"	20.0	77.3	123.0	60.5	35.0
DN25	1"	25.0	88.7	145.0	69.3	35.0
DN32	1-1/4"	32.0	102.4	145.0	76.0	38.0
DN40	1-1/2"	38.1	109.0	189.0	84.5	38.0
DN50	2"	50.0	125.3	189.0	95.0	38.0
DN65	2-1/2"	65.0	165.0	255.0	131.3	55.0
DN80	3"	80.0	189.5	261.0	140.6	55.0



Technical Data

Design & manufacture: ASME B16.34、API 608
Inspection and testing: API 598、EN 12266
Connection: threaded/ SW/BW
Blowout proof stem

Working pressure: DN8~DN50 1000Psi、DN65~DN80 800Psi
Temperature range: -20~+180℃
Locking device
End connectioin: ANSI B1.20.1(NPT)、DIN259/DIN2999、ISO228、BSP、PT

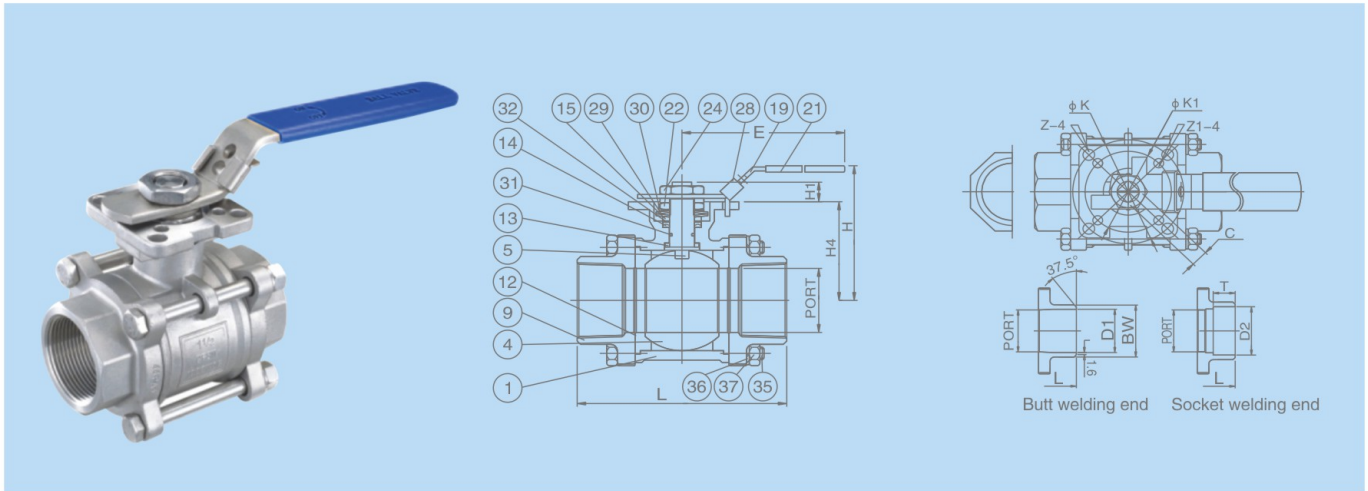
Parts and Materials

NO.	Part name	Material	NO.	Part name	Material
1	Body	CF8M、CF8、WCB	19	Handle	SS304
4	Ball	CF8M、CF8	21	Rubber sleeve	PLASTIC
5	Stem	SS316、SS304	23	Spring washer	SS304
9	Cap	CF8M、CF8、WCB	24	Nut	A194-8
12	Seat	PTFE	28	Locking plate	SS304
13	Gasket	PTFE	35	Bolt	A193-B8、A193-B7
14	Packing	PTFE	36	Spring washer	SS304
16	Packing gland	SS304	37	Nut	A194-8、A194-2H

Dimensions

PN1.0~PN6.4MPa(1000PSI) Unit: mm

SIZE	PORT	L	LB	E	H	L1	BW	D1	D2	T
DN8	1/4"	11.5	60	65	97.4	49.0	19.0	13.7	11.0	10.0
DN10	3/8"	12.5	60	65	97.4	49.0	19.0	17.1	12.5	10.0
DN15	1/2"	15.0	75	71	122.9	58.0	22.5	21.3	15.8	10.0
DN20	3/4"	20.0	81	86	122.9	61.0	27.5	26.7	20.9	13.0
DN25	1"	25.0	91	95	144.9	68.0	34.0	33.4	26.6	13.0
DN32	1-1/4"	32.0	110	112	144.9	73.5	42.5	42.2	35.1	13.0
DN40	1-1/2"	38.0	120	123	188.9	84.5	52.0	48.3	40.9	13.0
DN50	2"	50.0	140	142	188.9	93.2	63.5	60.3	52.5	16.0
DN65	2-1/2"	65.0	184	184	255.3	131.8	85.5	73.0	62.7	16.0
DN80	3"	80.0	203	203	260.8	140.0	102.0	88.9	77.9	16.0
DN100	4"	100.0	260	260	322.2	173.6	128.5	114.3	102.3	22.0



Technical Data

Design & manufacture: ASME B16.34、API 608
Inspection and testing: API 598、EN 12266
Connection: threaded/ SW/BW
Blowout proof stem

Working pressure: DN8~DN50 1000Psi DN65~DN80 800Psi
Temperature range: -20~+180℃
Locking device
End connectioin: ANSI B1.20.1(NPT)、DIN259/DIN2999、ISO228、BSP、PT

Parts and Materials

NO.	Part name	Material	NO.	Part name	Material
1	Body	CF8M、CF8、WCB	22	Nut	SS304
4	Ball	CF8M、CF8	24	Nut	SS304
5	Stem	SS316、SS304	28	Locking plate	SS304
9	Cap	CF8M、CF8、WCB	29	Belleville spring	SS304
12	Seat	PTFE	30	Lock washer	SS304
13	Gasket	PTFE	31	O ring	PTFE
14	Packing	PTFE	32	Gasket	PTFE+25%G.F
15	Packing gland	SS304	35	Bolt	A193-B8、A193-B7
19	Handle	SS304	36	Spring washer	SS304
21	Rubber sleeve	PLASTIC	37	Nut	A194-8、A194-2H

Dimensions

PN1.0~PN6.4MPa(1000PSI) Unit: mm

	SIZE	PORT	L	LB	E	H	H1	H4	C	K	K1	Z-4	Z1-4	D1	BW	D2	T	
	DN8	1/4"	11.5	60	65	112.0	73.0	8.5	37.0	9.0	50.0	36.0	7.0	6.0	11.0	13.7	14.2	10.0
	DN10	3/8"	12.5	60	65	112.0	73.0	8.5	37.0	9.0	50.0	36.0	7.0	6.0	12.5	17.1	17.5	10.0
	DN15	1/2"	15.0	75	71	112.0	73.0	8.5	37.0	9.0	50.0	36.0	7.0	6.0	15.8	21.3	21.8	10.0
	DN20	3/4"	20.0	81	86	112.0	80.8	8.5	45.0	9.0	50.0	36.0	7.0	6.0	20.9	26.7	27.4	13.0
	DN25	1"	25.0	91	95	136.0	90.5	11.4	53.5	9.0	50.0	36.0	7.0	6.0	26.6	33.4	34.1	13.0
	DN32	1-1/4"	32.0	110	112	185.0	98.7	11.4	59.0	9.0	50.0	36.0	7.0	6.0	35.1	42.2	42.7	13.0
	DN40	1-1/2"	38.0	120	123	197.9	115.3	14.0	74.8	14.0	70.0	50.0	9.0	7.0	40.9	48.3	49.0	13.0
	DN50	2"	50.0	140	142	197.9	124.0	13.7	83.5	14.0	70.0	50.0	9.0	7.0	52.5	60.3	61.0	16.0
	DN65	2-1/2"	65.0	184	184	267.0	155.0	18.0	108.8	17.0	102.0	70.0	11.0	9.0	62.7	73.0	77.0	16.0
	DN80	3"	80.0	203	203	267.0	208.5	18.0	118.3	17.0	102.0	70.0	11.0	9.0	77.9	88.9	90.2	16.0
	DN100	4"	100.0	260	260	322.0	216.7	18.0	153.8	17.0	102.0	70.0	11.0	9.0	102.3	114.3	115.3	22.0

Product Introduction

Pneumatic three pieces ball valve is composed of three pieces ball valve and pneumatic actuator , using three parts structure, the left and right valve body are connected with the middle valve body by bolts , featured with simple installation and easy maintenance.itisdivided into double acting and single acting according to the form of action, and the single acting type has a spring reset function which can be automatically transferred to open or closed status in the case of failure of air supply . It has been widely used in various industries,such as: in petroleum, chemical, power generation, paper, architecture,water and wast water,light indusrty,atomic energy, aviation, rockets and other industries.

Features

- 1. Small fluid resistance , and its resistance coefficient is equal with that of the same pipe length.
- 2. Simple structure, small size, light weight;
- 3. Reliable sealing, using PTFE,RTFE,PPL for valve seat which have good sealing, can also be used in the vacuum system.
- 4. Convenient operation, open and close rapidly, only 90° rotation from fully open to fully closed, facilitate for remote control.
- 5. Simple structure,easily mantainance, valve seat can be replaced edsily.
- 6. At fully open or fully closed position,thesealing surface of the ball and seat are separated with flow medium,avoiding the flow corrosion cause by the medium,and prolong the valve service life.
- 7. Three pieces structure,it can be carry on inspection and maintenane directly on line,which can reduce the shutdown frequency of the device and reduce the maintenance cost.
- 8. Single seat design: to eliminate safety problems in case of the abnormal cavity medium pressure rising.
- 9. Low torque and special stem structural design , can easily open and close the valve with a small handle .
- 10. The self-cleaning on sealing surface structure: when the ball leans away from the seat, the fluid in the pipeline can evenly pass through the sealing surface of the ball in 360 degrees , which eliminates the flushing corrosion of high speed fluid on the seat , and washed the sediment away from the sealing face, and achieve the self-cleaning.

Technical Data

Pneumatic actuator	Double acting、single acting
Air supply	5-7Bar compressed air
Pneumatic accessory	Limit switch、Positioner、Solenoid valve、Filter relief valve、Handwheel
Valve size	DN15-100mm
Pressure rating	1.6-6.3MPa
Temperature	PTFE:-30~+180℃；PPL:-30~+250℃
End connection	Screw-type BW,SW,Clamp
Body structure	Three pieces
Body material	304、316、316L
Plate material	304、316、316L
Seat material	PTFE、PPL
Applied medium	Steam,liquid,air and so on



Technical Regulation

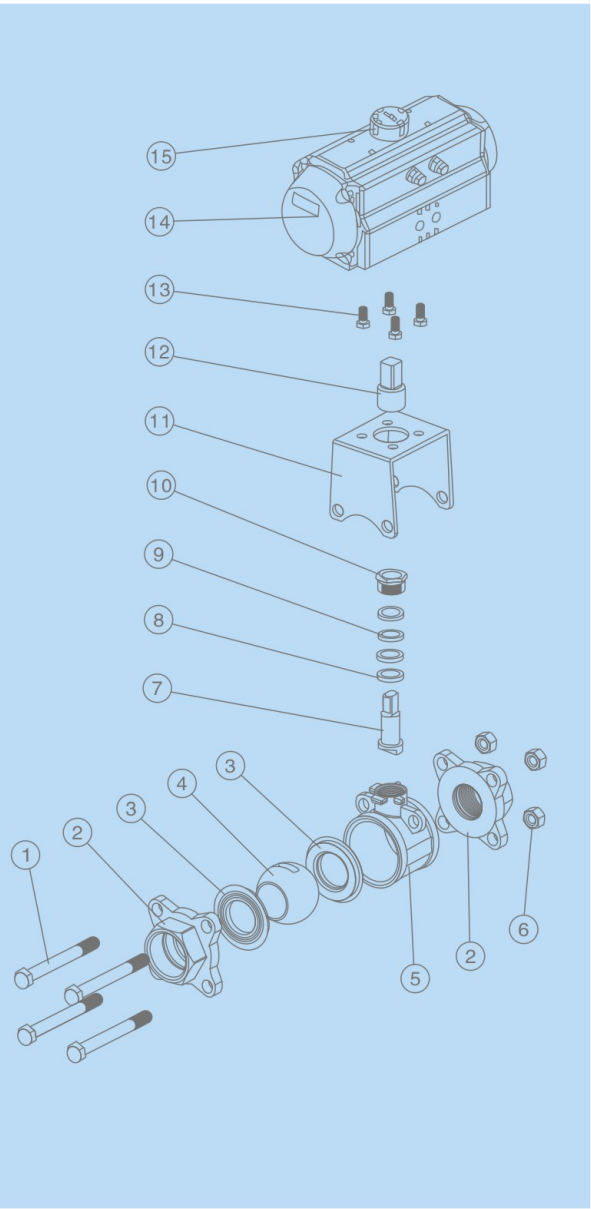
Standard	GB Series	ANSI Series
Design & manufacture	GB/2237	ANSI B16.34
Inspection and testing	JB/T9092	API 598

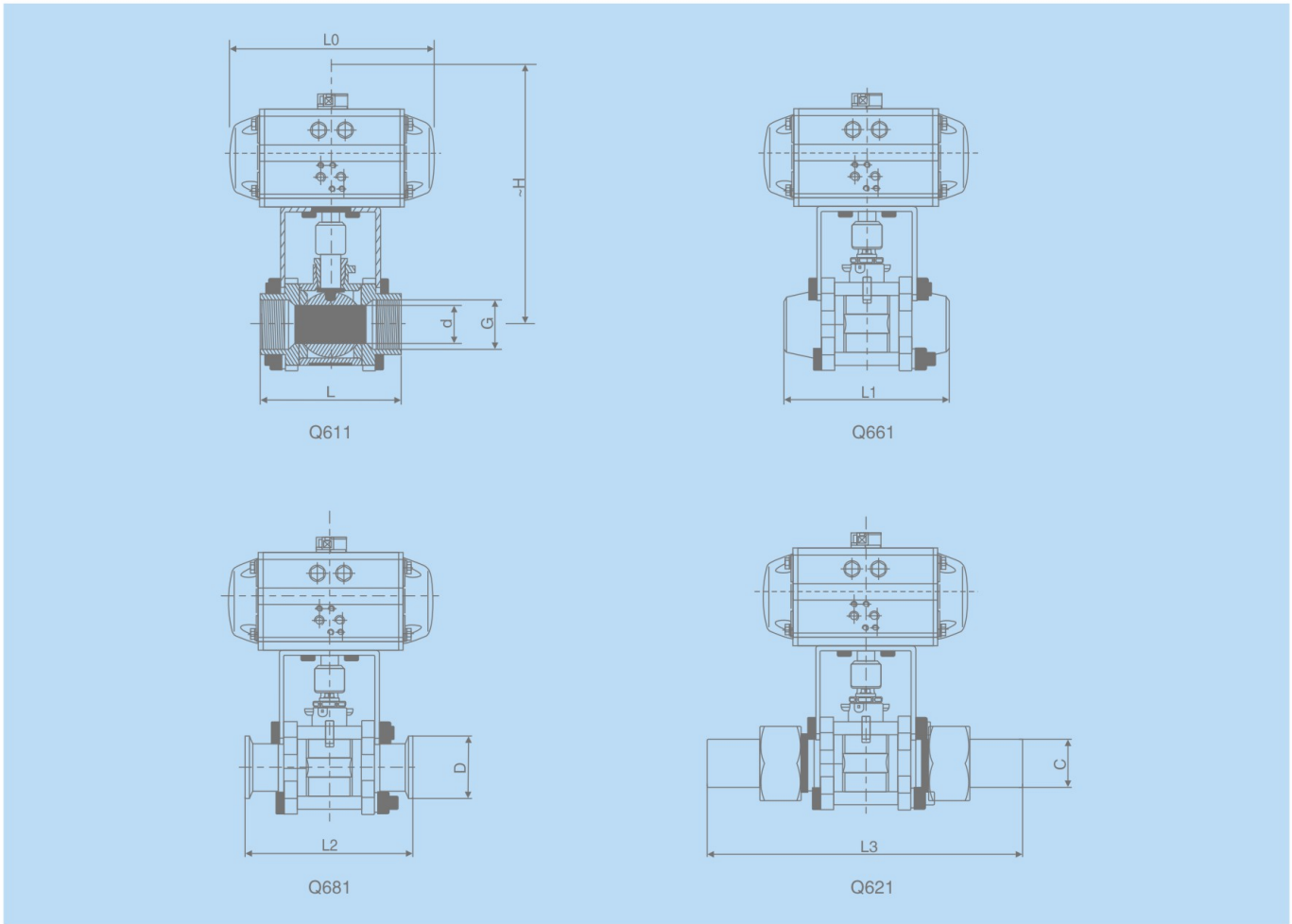
Note: the structural length and connecting flange size of ball valve can be designed and manufactured according to user requirements.

Parts and Materials

NO.	Part name	Material
1	Bolt	SS 304
2	Body Cap	SS CF8、CF8M、CF3、CF3M
3	Seat	PTFE、NYLON、PPL、Hard alloy
4	Ball	SS 304、304L、316、316L
5	Body	SSCF8、CF8M、CF3、CF3M
6	Nut	SS 304
7	Stem	SS 304、304L、316、316L
8	Gasket	SS 304、316
9	Packing	PTFE
10	Gland	SS 304、316L
11	Bracket	SS CF8
12	Adapter	SS 304
13	Bolt	SS 304
14	Pneumatic actuators	FHPseries、FRPseries
15	Position indicator	Plastic

Note: the main components of ball valve and sealing material can be designed according to the actual working conditions or the user's special requirements .

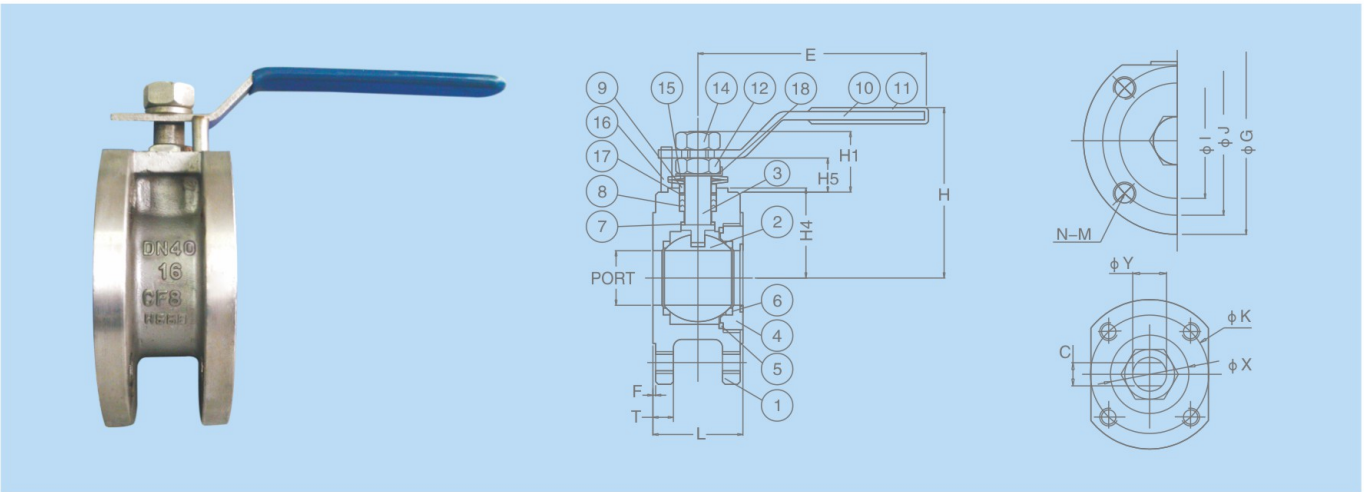




Dimensions PN16~64(1.6~6.4MPa)

DN		Connection dimension										Actuator Model
DN	in	d	L	G	L1	L2	D	L3	C	Lo	~H	
15	1/2	15	72	1/2"	70	100	34	170	21	141/159	159/175	FHP52DA/FHP63S
20	3/4	20	82	3/4"	85	110	50.5	185	26	141/159	167/183	FHP52DA/FHP75S
25	1	25	90	1"	95	120	50.5	200	31	141/211	172/215	FHP63DA/FHP83S
32	1 1/4"	32	112	1 1/4"	110	131	50.5	225	38	159/211	210/230	FHP75DA/FHP92S
40	1 1/2"	40	120	1 1/2"	201/209	98/108	50.5	260	46	211/248	218/248	FHP75DA/FHP105S
50	2	50	145	2"	209/242	108/120	65	300	60	211/269	248/283	FHP83DA/FHP105S
65	2 1/2"	65	185	2 1/2"	242/275	120/132	77.5			248/315	273/320	FHP92DA/FHP125S
80	3	80	210	3"	275/332	132/148	91			269/345	313/335	FHP105DA/FHP140S

Note: 1, the face to face length and flange dimension is designed and manufactured according to the JB/T79 standards or customer' s requirements ;2.The actuator model and size will be different based on different types of valve torque and applied medium; 3, The above actuator configuration and data are used in soft sealing valve, metal seal valve configuration and data please consult our company.



Product Introduction

The wafer type thin ball valve is a new generation of ultra short face to face length ball valve, the shape of the ball core have rectangular, V and O type. with the characteristics of compact structure, small volume, light weight, convenient installation,saving materials structure, reailient valve seat,anti-static and fire safety structure,it can be widely used in petroleum, chemical, metallurgical, power, light industry and other fields.

Features

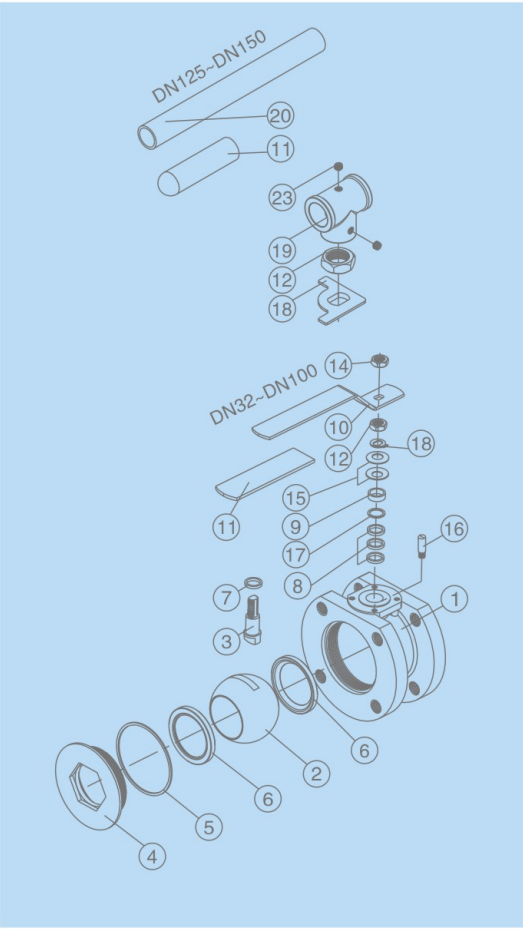
- 1.Small fluid resistance, its resistance coefficient is equal to that of the same pipe length.
- 2.Compact and reasonable structure desing , short face to face length, small volume, especially suitable for the installation of short pipelines and specific space.
- 3.Reliable sealing, using PTFE,RTFE,PPL or flexible graphite(in high temperature application.)for valve seat and stem packing.
- 4.Easy operation, open and close quickly, a limit device is installed to prevent misoperation, safe and reliable.
- 5.Easy maintenance, easy disassembly design. It has a spiral valve cap at one end of the valve, which is used to control the sealing between the valve seat and ball,also the tightness of operation.

Technical Datas

Valve size	DN15–DN200
Pressure rating	10、16、40 MPa
Pressure rating	ANSI Class150, 300
Working temperature	–20~+425℃
Actuator	Manual、Motor、Pneumatic
End connection	Wafer
Manufacturing standard	GB、JB、HG、API、ANSI、BS、JIS、JPI etc
Body material	Cast steel、Carbon steel、WCB、WC6、WC9、20#、25#、forged steel、A105、F11、F22、SS、304、304L、316、316L、Other's according to user's request.

Parts and Materials

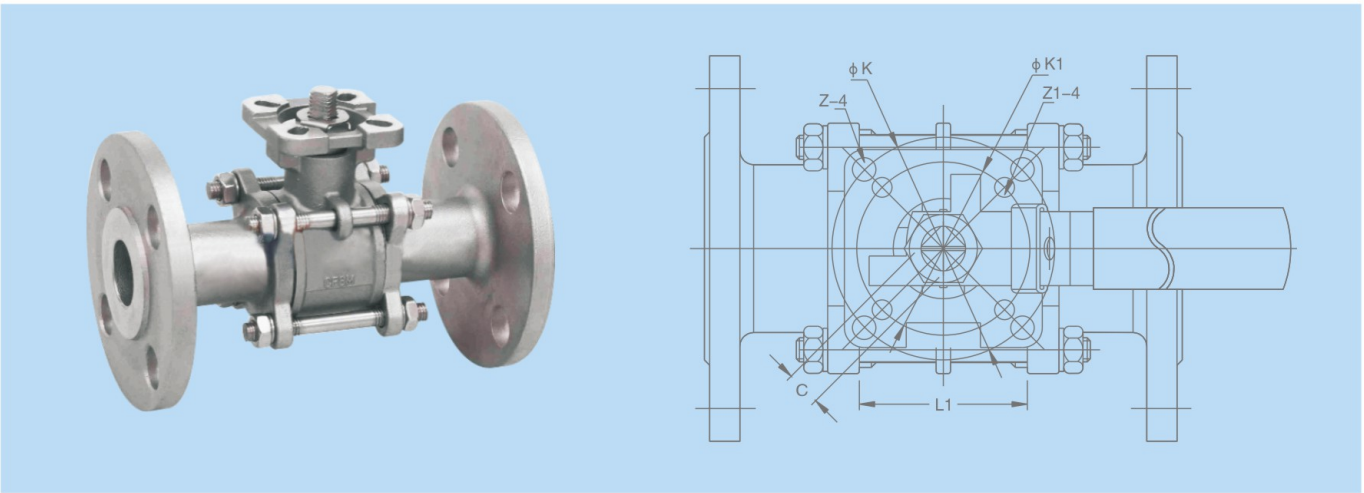
NO.	Part name	材料		
1	Body	CF8M	CF8	WCB
2	Ball	CF8M	CF8	CF8
3	Stem	SS316	SS304	SS304
4	Cap	CF8M	CF8	WCB
5	Gasket	PTFE		PTFE
6	Seat	RTFE		RTFE
7	Gasket	PTFE		PTFE
8	Packing	PTFE		PTFE
9	Packing gland	SS304		SS304
10	Handle	SS304		SS304
11	Rubber sleeve	PLASTIC		PLASTIC
12	Nut	SS304		SS304
14	Nut	SS304		SS304
15	Belleville spring	SS301		SS301
16	Stop pillar	SS304		SS304
17	Gasket	SS304		SS304
18	Stop plate	SS304		SS304
19	Handle joint	CF8		CF8
20	Tube rod	STEEL		STEEL
21	Bushing	PTFE+25%G.F		PTFE+25%G.F
22	Lock washer	SS304		SS304
23	Screw	SS304		SS304



Dimensions

PN16~PN40 Bar Unit: mm

SIZE		PORT	L	E	H	H1	H4	H5	C	φ X	φ Y	φ G	φ J	φ I	T	F	φ K	N
DN15	1/2"	15	35	116	70	19.2	32	10.5	6.35	25	9.6	95	65	45	7.0	2	36	M12
DN20	3/4"	20	38	116	74	16.5	38	7.5	6.35	25	9.6	105	75	58	7.0	2	36	M12
DN25	1"	25	44	165	75	17.5	42	7.5	6.35	25	9.6	115	85	65	7.5	2	36	M12
DN32	1–1/4"	32	54	165	87	24.0	50	12.0	8.0	32	11.2	140	100	78	17.0	2	42	M16
DN40	1–1/2"	38	62	193	90	24.0	54	12.0	8.0	35	11.2	150	110	88	19.0	2	50	M16
DN50	2"	50	80	193	99	24.0	62	12.0	8.0	35	11.2	165	125	102	19.5	2	50	M16
DN65	2–1/2"	64	101	235	141	25.5	82	14.5	9.5	53	16	185	145	122	17.0	2	70	M16
DN80	3"	76	118	235	150	25.5	91	14.5	9.5	53	16	200	160	138	20.0	3.0	70	M16
DN100	4"	96	150	266	172	49.0	107	24.0	17	55	28	220	180	158	21.0	3.0	102	M16
DN125	5"	118	179	400	205	50.0	117	31.0	17	55	28	250	210	188	22.0	3.0	102	M16
DN150	6"	135	202	600	220	50.0	130	31.0	17	60	28	285	240	212	22.0	3.0	125	M20



Product Introduction

Flowtec 3PC ball valve is quarter turn,full bor and low torque structure design, compact structure,easy operation and maintenance, suitable for working medium of water,solvents,acids,natural gas,oxygen,hydrogen peroxide,methane and ethylene etc.

The body casting of 3PC flanged ball valve is produced by advanced technology imported from Taiwan, reasonable structure, beautiful appearance. The Seat is designed with elastic sealing structure, reliable sealing, easy to open and close. The stem is adopting back seal downloaded structure, the stem will not blow out in case of abnormal pressure raise in the valve chamber. Operation mode: manual, electric, pneumatic. It is equipped with 90 degree switch positioning piece, locked according to the needs to prevent misoperation.

Application: applied to pipeline of PN1.0 ~ 4.0MPa and temperature of -29 to 180 ℃ (PTFE seal) or -29 to 300 ℃(PPL seal), with the function of cutting off or connecting medium in line.

Features

- 1、Small fluid resistance,it resistance coefficient is equal to that of the same pipe length.
- 2、Simple structure, small volume, light weight.
- 3、Compact and reliable,resilient valve seat material as PTFE,RTFE,PPL which have good sealing, alsocan be widely used in the vacuum system.
- 4、Easy to operate, open and close quickly, from open to close just rotate 90 ° , is advantageous for the remote control.
- 5、Convenient maintenance, simple structure of ball valve, sealing ring, which can be removed and replacement easily.
- 6、At full open or full close position,the sealing surface of the ball and seat are separated with fflow medium,avoiding the flow corrosion cause by the medium,and prolong the valve service life.

Technical Data

Design and Manufacture: ASME B16.34,API608

Inspection and testing: API 598,EN 12266

ISO 5211 top flange designed

Blowout proof stem

Working pressure: PN16MPa/PN40MPa

Temperature range: -20~+180℃

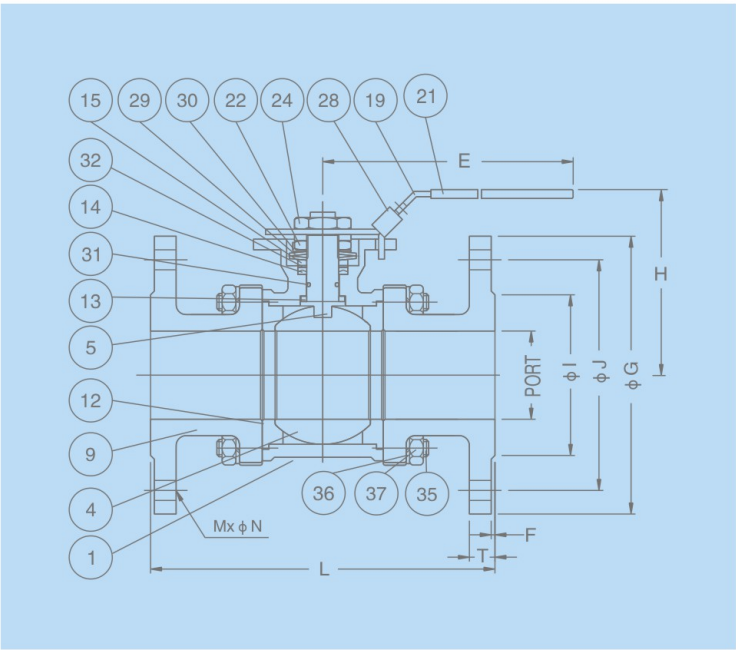
Locking device

End connection: DIN 2543 PN16/DIN 2545 PN40(EN1092-1RF)

Face to Face: EN 558-1/F1

Parts and Materials

NO.	Part name	Material
1	Body	CF8M、CF8、 WCB
4	Ball	CF8M、 CF8
5	Stem	SS316、 SS304
9	Cap	CF8M、 CF8、 WCB
12	Seat	PTFE
13	Gasket	PTFE
14	Packing	PTFE
15	Packing gland	SS304
19	Handle	SS304
21	Rubber sleeve	PLASTIC
22	Nut	SS304
24	Nut	SS304
28	Locking plate	SS304
29	Belleville spring	SS304
30	Lock washer	SS304
31	O ring	PTFE
32	Bushing	PTFE+25%G.F
35	Screw	A193-B8、 A193-B7
36	Spring washer	SS304
37	Nut	A194-8、 A194-2H

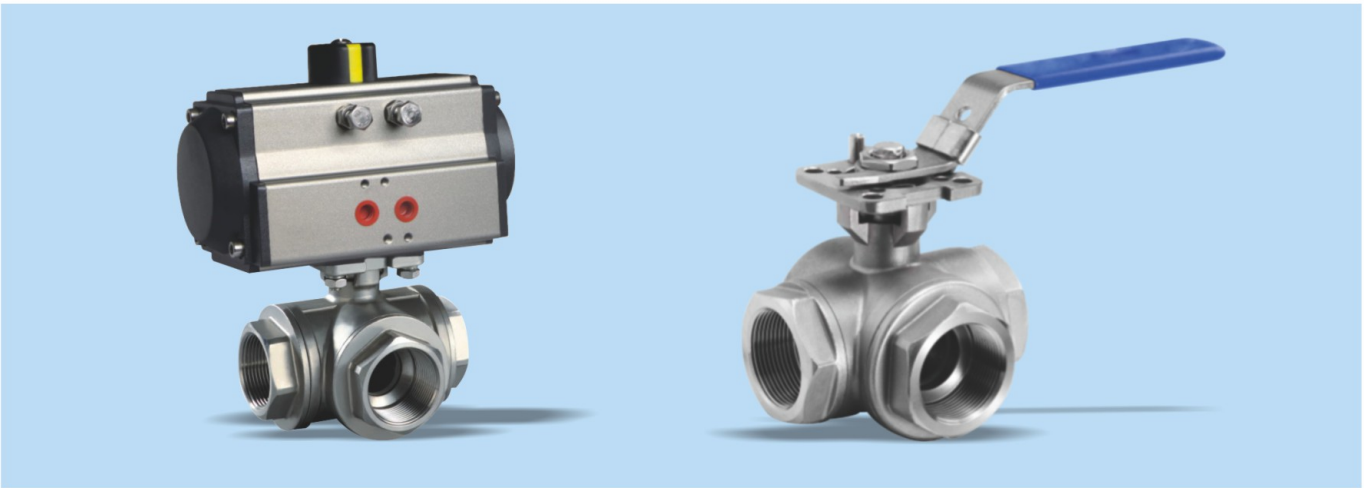


Dimensions

PN16 Unit: mm																	
SIZE	PORT	L	E	H	C	φ G	φ J	φ I	T	F	Mx φ N	φ K	φ K1	Z-4	Z1-4	L1	
DN15	1/2"	15.0	130.0	112.0	74.0	9.0	95.0	65.0	45.0	16.0	2.0	4x φ 14	50.0	36.0	7.0	6.0	22.5
DN20	3/4"	20.0	150.0	112.0	81.0	9.0	105.0	75.0	58.0	18.0	2.0	4x φ 14	50.0	36.0	7.0	6.0	27.5
DN25	1"	25.0	160.0	136.0	90.5	9.0	115.0	85.0	68.0	18.0	2.0	4x φ 14	50.0	36.0	7.0	6.0	34.0
DN32	1-1/4"	32.0	180.0	185.0	98.7	9.0	140.0	100.0	78.0	18.0	2.0	4x φ 18	50.0	36.0	7.0	6.0	42.5
DN40	1-1/2"	38.0	200.0	198.0	115.3	14.0	150.0	110.0	88.0	18.0	3.0	4x φ 18	70.0	50.0	9.0	7.0	52.0
DN50	2"	50.0	230.0	198.0	124.0	14.0	165.0	125.0	102.0	20.0	3.0	4x φ 18	70.0	50.0	9.0	7.0	63.5
DN65	2-1/2"	65.0	290.0	267.0	155.0	17.0	185.0	145.0	122.0	18.0	3.0	4x φ 18	102.0	70.0	11.0	9.0	85.5
DN80	3"	80.0	310.0	267.0	208.5	17.0	200.0	160.0	138.0	20.0	3.0	8x φ 18	102.0	70.0	11.0	9.0	102.0
DN100	4"	100.0	350.0	322.0	216.7	17.0	220.0	180.0	158.0	20.0	3.0	8x φ 18	102.0	70.0	11.0	9.0	128.5

Dimensions

PN40 Unit: mm																	
SIZE	PORT	L	E	H	C	φ G	φ J	φ I	T	F	Mx φ N	φ K	φ K1	Z-4	Z1-4	L1	
DN15	1/2"	15.0	130.0	112.0	74.0	9.0	95.0	65.0	45.0	16.0	2.0	4x φ 14	50.0	36.0	7.0	6.0	22.5
DN20	3/4"	20.0	150.0	112.0	81.0	9.0	105.0	75.0	58.0	18.0	2.0	4x φ 14	50.0	36.0	7.0	6.0	27.5
DN25	1"	25.0	160.0	136.0	90.5	9.0	115.0	85.0	68.0	18.0	2.0	4x φ 14	50.0	36.0	7.0	6.0	34.0
DN32	1-1/4"	32.0	180.0	185.0	98.7	9.0	140.0	100.0	78.0	18.0	2.0	4x φ 18	50.0	36.0	7.0	6.0	42.5
DN40	1-1/2"	38.0	200.0	198.0	115.3	14.0	150.0	110.0	88.0	18.0	3.0	4x φ 18	70.0	50.0	9.0	7.0	52.0
DN50	2"	50.0	230.0	198.0	124.0	14.0	165.0	125.0	102.0	20.0	3.0	4x φ 18	70.0	50.0	9.0	7.0	63.5
DN65	2-1/2"	65.0	290.0	267.0	155.0	17.0	185.0	145.0	122.0	22.0	3.0	8x φ 18	102.0	70.0	11.0	9.0	85.5
DN80	3"	80.0	310.0	267.0	208.5	17.0	200.0	160.0	138.0	24.0	3.0	8x φ 18	102.0	70.0	11.0	9.0	102.0
DN100	4"	100.0	350.0	322.0	216.7	17.0	235.0	190.0	162.0	24.0	3.0	8x φ 22	102.0	70.0	11.0	9.0	128.5



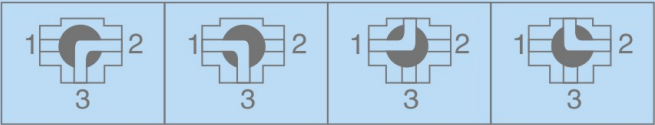
Product Introduction

Three way female screw ball valve is suitable for food, beverage, medicine, chemical industry and other pure pipeline, environmental protection industrial, water treatment, building, water supply and drainage pipeline. These valves are divided into "L type female screw ball valve" and "T type screw ball valve", L type is used to switch medium flow direction ; T type is suitable for diverging, confluence medium flow or switching flow direction . Double stem packing design is in compliance with DIN leakage test requirements, it’s easy to check and maintain without removal of the entire valve body after the system pressure relief . Each port of the valve can be used as an inlet port , and can be made into a L type or a T type channel according to the working condition.

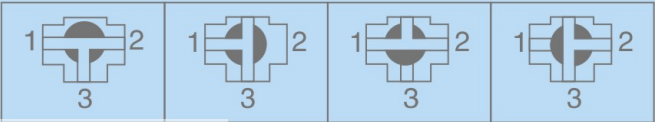
Features

- 1, Three way female screw ball valve has two seats and four seats sealing structure, L and T type ball structure, controlling the ball rotation to change the connection status of ball channel and pipe port , it can control the combination of three different pipeline. Three way female screw ball valve has big flow capacity which is suitable to control the gas, liquid, steam, and especially for the control of high viscosity, fiber granular fluid.
- 2, the two seats sealing three way ball valve has a compact structure, beautiful appearance, good sealing performance, it can switch the flow direction in the pipeline . And also can be used to connect or close the two vertical pipeline.
- 3, four seats three way ball valve has beautiful shape, compact and reasonable structure, which not only enables media flow switch, but also can make the three channels connect with each other, at the mean time it can close any one channel, and connect the other two channels, effectively control the medium diverging or confluence on pipeline .
- 4, The ball of T type ball valve can make the three orthogonal pipes connected or switched to each other in results of diversion or confluence; L type channels connect each two orthogonal pipeline. to cut off one channel and change the direction of the flow of media.

Flow Patterns for L-Port



Flow Patterns for T-Port



Technical Data

Design & Manufacture: ASME B16.34, API 608
Inspection and testing: API 598, EN 12266
Three way female screw ball valve
Blowout proof stem
ISO 5211 top flange designed
Working pressure: 1000Psi PN63MPa
Temperature range: -20~+180℃
Locking device
Four seats
L port or T port can use 360° rotation handle

Technical Regulation

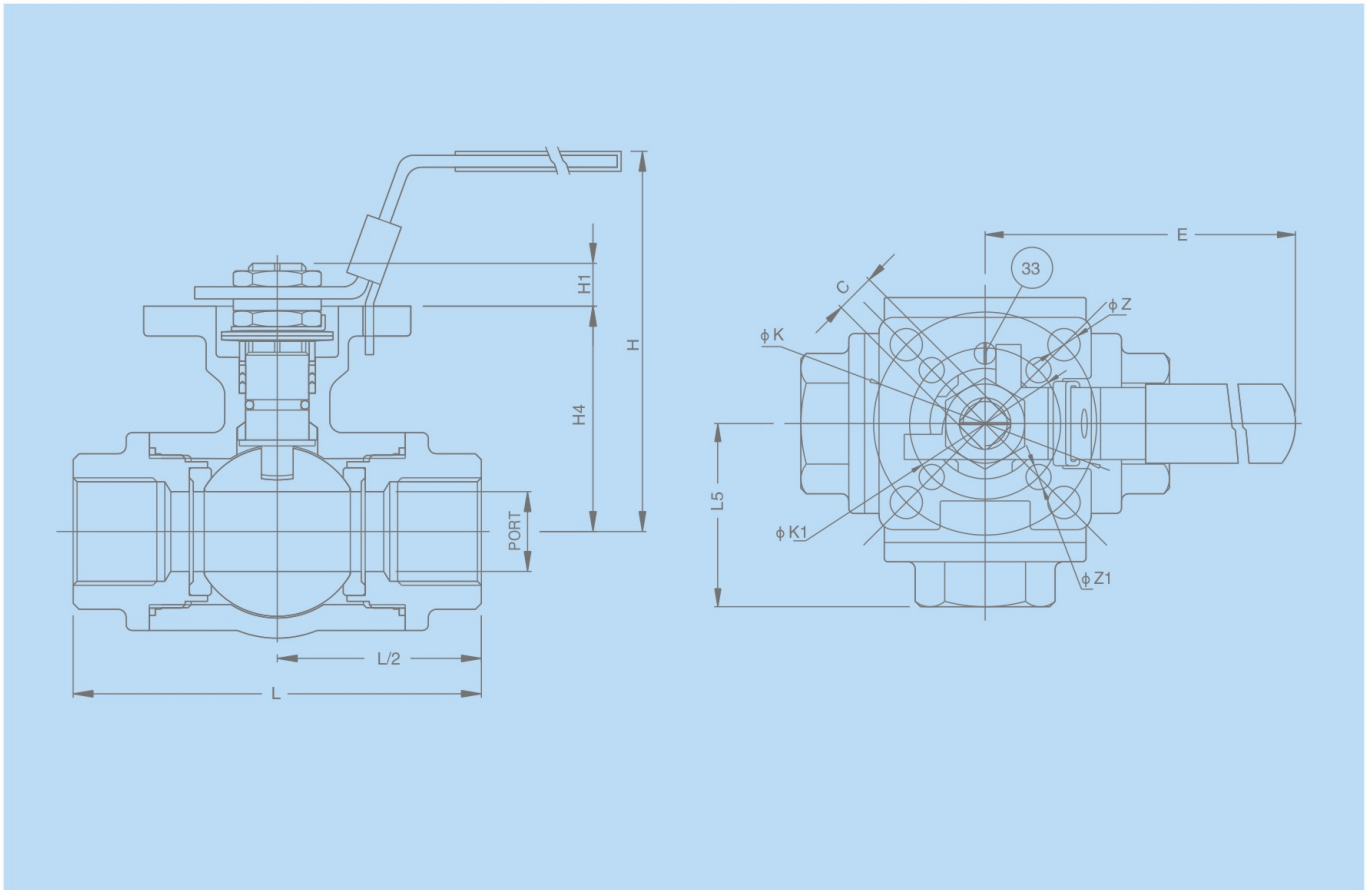
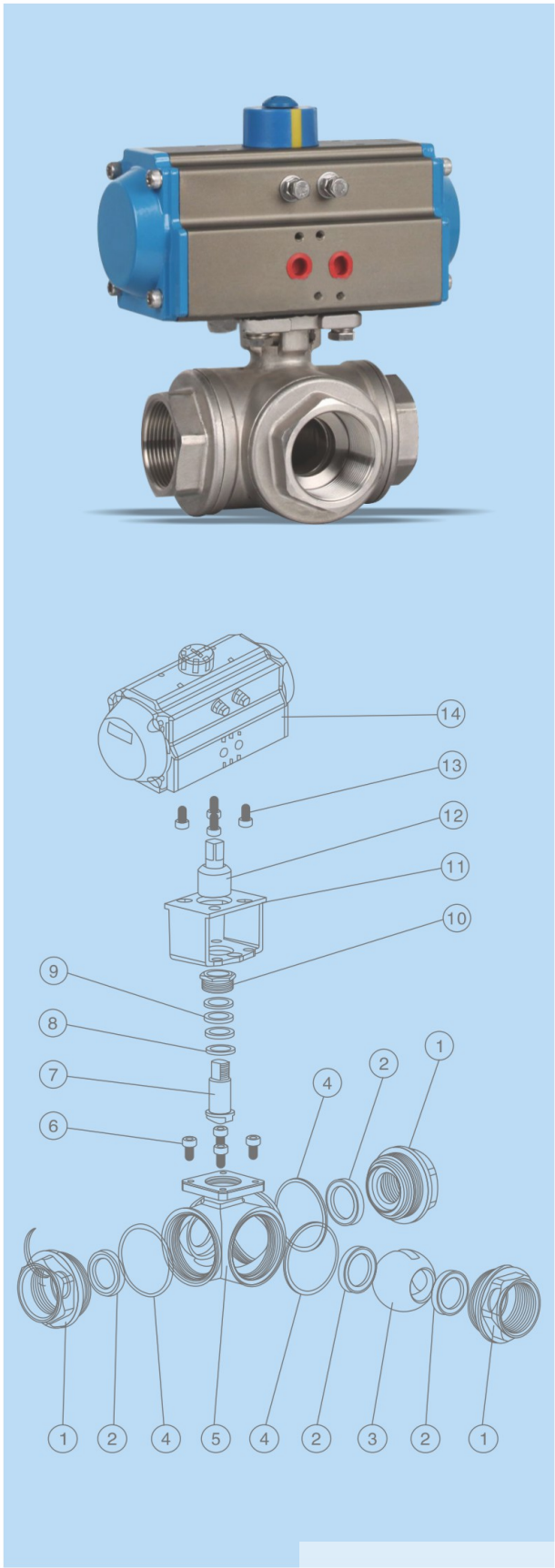
Standard	GB Series	ANSI Series
Design & manufacture	GB/2237	ANSI B16.34
End connection	GB/9113、JB/T79	ANSI B16.5
Inspection and testing	JB/T9092	API 598

Note: the main components of ball valve and sealing material can be designed according to the actual working conditions or the user's special requirements.

Material of Major Parts

NO.	Part name	Material
1	Body Cap	SS、CF8、CF8M、CF3、CF3M
2	Seat	PTFE、NYLON、PPL、PEEK
3	Ball	SS、304、304L、316、316L
4	Gasket	PTFE
5	Body	SS、CF8、CF8M、CF3、CF3M
6	Bolt	SS、304
7	Stem	SS、304、304L、316、316L
8	Gasket	SS、304、316L
9	Packing	PTFE
10	Gland	SS、304、316
11	Bracket	SS、CF8
12	Adapter	SS、304
13	Bolt	SS、304
14	Pneumatic actuator	FHPseries、FRPseries

Note: the main components of ball valve and sealing material can be designed according to the actual working conditions or the user's special requirements.

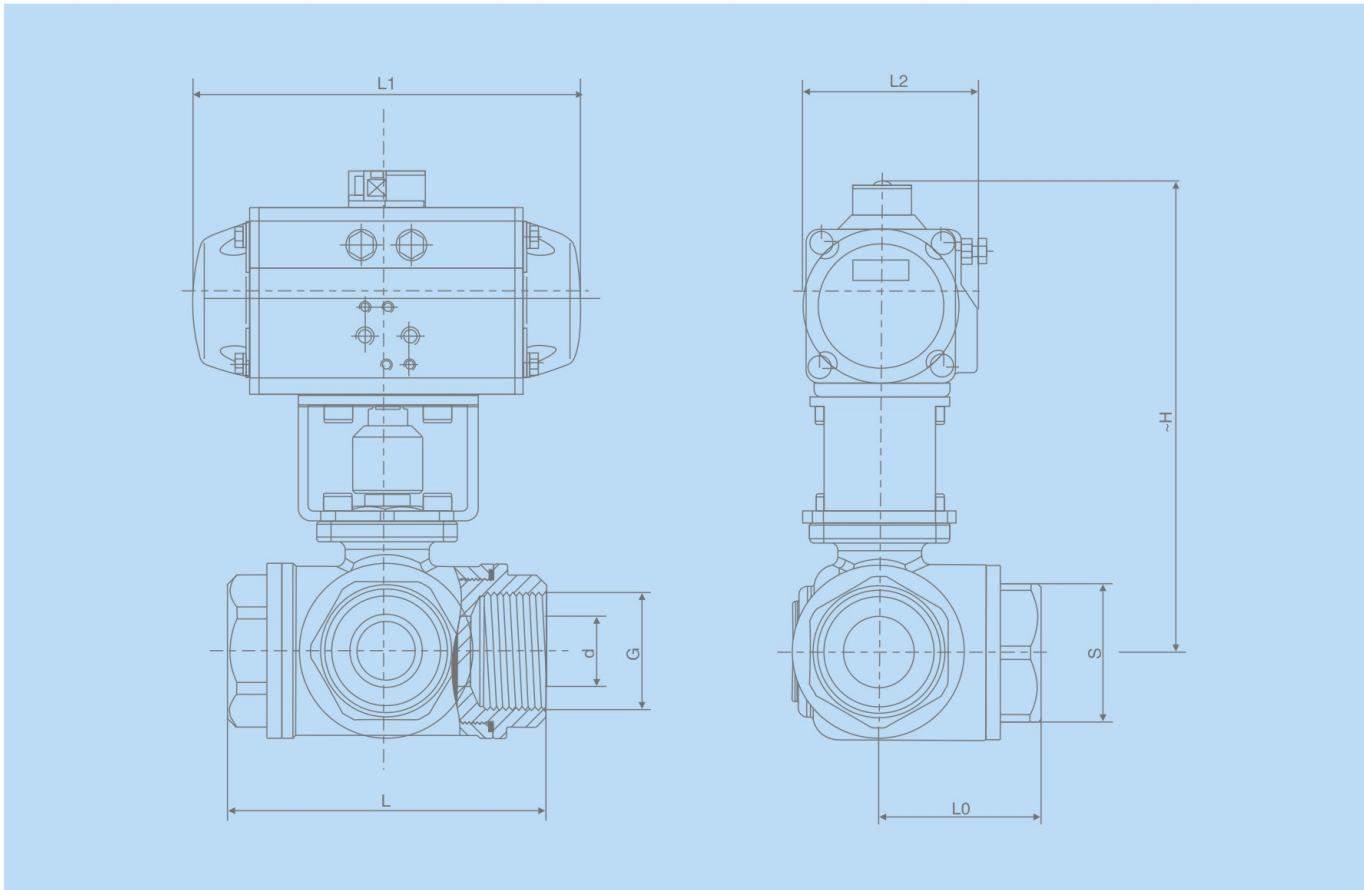


Dimensions

B353*-****-L type、B353*-****-T type Unit: mm

SIZE		PORT	L	L5	E	H	H1	H4	C	Y	ϕ K	ϕ K1	Z	Z1
DN8	1/4"	11.0	75.7	37.3	112.0	77.5	9.0	38.2	9.0	12.0	42.0	F-04	6.0	
DN10	3/8"	11.0	75.7	37.3	112.0	77.5	9.0	38.2	9.0	12.0	42.0	F-04	6.0	
DN15	1/2"	12.7	75.7	37.3	112.0	77.5	9.0	38.2	9.0	12.0	42.0	F-04	6.0	
DN20	3/4"	16.0	86.6	44.7	112.0	82.0	9.0	45.2	9.0	12.0	42.0	F-04	6.0	
DN25	1"	20.0	102.4	51.4	136.5	93.7	11.0	56.5	11.0	15.8	50.0	F-05	7.1	
DN32	1-1/4"	25.0	118.2	57.7	188.0	101.1	11.0	61.9	11.0	15.8	50.0	F-05	7.1	
DN40	1-1/2"	32.0	125.8	62.7	197.5	120.3	14.3	78.3	14.0	20.8	70.0	F-07	50.0	F-05
DN50	2"	38.1	149.0	74.6	197.5	129.9	14.0	87.4	14.0	20.8	70.0	F-07	50.0	F-05

Note:Ball valve face to face length and end flange dimension can be designed and manufactured according to user 's requirements;



Dimensions PN16~64(1.6~6.4MPa)

DN		Connection dimension								Actuator model
DN	in	D	G	L	L0	L1	L2	~H	S	
15	1/2	10	1/2"	68	34	141/159	71/83	177/208	26	FHP52DA/FHP635
20	3/4	15	3/4"	78	39	141/159	71/83	180/211	32	FHP52DA/FHP755
25	1	20	1"	86	43	159/211	83/95	199/227	38	FHP63DA/FHP835
32	1 1/4	25	1 1/4"	111	55.5	211/248	95/107	231/251	49	FHP75DA/FHP925
40	1 1/2	32	1 1/2"	126	63	248/269	107/123	235/265	56	FHP75DA/FHP1055
50	2	38	2"	143	71.5	248/269	107/123	263/298	70	FHP83DA/FHP1055

Note: 1. Ball valve face to face length and end flange dimension can be designed and manufactured according to user's requirements;
2. The actuator model XXX/XXX has two types :pneumatic actuator double acting and single acting (spring return);
3. The actuator model may be different according to the different valve torque and medium , the relevant size will change.

Butterfly Valve Modle Code Principle : DN100 FT112 – D0SP PN10

DN100	F11	2	F	-	D	0	S	P	PN10
Valve size Inch:4" or ISO: DN DN100	Flowtec butterfly Valve Model F11* Resilient seat butterfly valve F12* Double offset butterfly valve F13* Triple offset butterfly valve F14* Low load, ventilation butterfly valve							Pressure rating PN6/ PN10 / PN16 ANSI 150Lb ...	Seat materialP PTFE E EPDM N NBR V VITON / FKM /Fuoro ruber J Ductile iron lined nylon M Metal seat S Stellite, STL
End Connection 2 Wafer connection 3 Lug type connection 4 Flange connection 5 U flange connection 6 Welding connection								Stem material W WCB/Carbon steel or45#steel S 420SS or 2Cr13 H 17-4PH 0 304SS 1 316SS 2 316L/CF3M 3 2205 Duplex 4 2507 Duplex 5 Other material	Disc material B Al Bronze C Cast Iron D Ductile Iron E Ductile iron lined/EPDM/EPR N Ductile iron lined/NBR J Ductile iron lined nylon W WCB 0 304SS 1 316SS 2 316L/CF3M 3 2205 Duplex 4 2507 Duplex 5 Other material
Special valve code code of standard valve omit F PFA Lining F ₄₆ F ₄₆ Lining Y Molded or vulcanized seat structure									
Body material C Cast Iron D Ductile Iron B Al Bronze W WCB 0 304SS/CF8 1 316SS/CF8M 2 316L/CF3M 3 2205 Duplex 4 2507 Duplex 5 Other material									



Product Introduction of Butterfly Valve

Butterfly valve is using the disc to rotate with the stem to open, close and ragulate the medium filw in pipeline . Butterfly valve is divided into resilient seat butterfly valve , double offset butterfly valve and triple offset butterfly valve according to the structure . Due to the rotation movement of the valve disc is a wiping action on valve seat, so that most of the butterfly valve can be used in medium with suspended or particles, such as powder and solid particles, according to the strength of seat materials. Feature with short face to face length, small overall height, open and close quickly, small flow resistance, with characteristic of regulating between 15° ~70° open angle, It is recommend to use butterfly valve for application: 1. On off, throttling or regulating flow control application. 2. Mud slurry or medium with solid particles. 3. Narrow space or requirement for short face to face length application. 4. Fast opening and closing speed requirement. 5. Small pressure drop application.

The resilient seat butterfly valve is suitable for On/Off or regulating function in ventilation and dust cleaning pipeline, gas pipeline and water pipeline, which serve in metallurgy, light industry, power and power station, petroleum and petrochemical industries.

The double offset butterfly valve is used for On/Off or regulating function in heating, steam, water, gas, oil, acid, alkali pipelines.

The triple offset butterfly valve can be used in petroleum, chemical, metallurgy, power & power station, food & beverage, pharmaceuticals, water & waste water, gas transmission industries, especially for large size applications.

Features

Butterfly valve has the advantages of simple structure, small volume, light weight, less material consumption, small installation size, fast switching, rotating 90 ° , small driving torque ,mainly used for closure, connecting, regulation the medium on line , has good fluid control features and sealing performance.

Streamline disc designed, smaller flow resistance and energy-saving.

Through rod structure stem designed, which has been carried with quenching and tempering treatment to get excellent mechanical properties, corrosion resistance and scratch resistance. During valve closing and opening, the stem is only making a rotary movement instead of lifting movement, so that the stem packing will not be damaged or wearing easily, and provide a long service life. Key or pin connection with disc structure and anti-blowout structure designed, to avoid stem blowing out in case of the fracture between the stem and the disc.

End connection of butterfly valve are: Flange connection, Lug connection, wafer connection and butt welding connection.

Actuators driving butterfly valve are: manual, worm gear box, pneumatic actuator, hydraulic and electric actuator (Motor).

Pressure Test

PN(MPa)	Shell test pressure	Sealing test	
		Low pressure air sealing	High pressure liquid sealing
PN 6	0.9MPa	0.6MPa	0.66MPa
PN 10	1.5MPa	0.6MPa	1.1MPa
PN 13	2.4MPa	0.6MPa	1.76MPa
PN 20	3.0MPa	0.6MPa	2.2MPa
PN 25	3.8MPa	0.6MPa	2.75MPa
PN 40	6.0MPa	0.6MPa	4.4MPa
Class150	3.0MPa	0.6MPa	2.2MPa

Feature

- Metal seated design, suitable for severe conditions;
- Triple-Offset disc design with a resilient metal seal ring;
- Completely eliminate all seat-to-seal rubbing throughout the valve ’ s entire 90 degrees of rotation;
- ISO5211 Top flange design, easy to assembly with different actuator;
- Blowout proof stem, fugitive emissions are accordance with API609;
- Two-piece Packing gland, with graphite packing;
- Reinforced flexible graphite bearing protectors for dirty services while extending service life;
- Inherently fire safe design, in accordance with standard API607;
- Optional bi-direction sealing structure design , leakage standard meet ANSI Class VI's reques.

Sevies

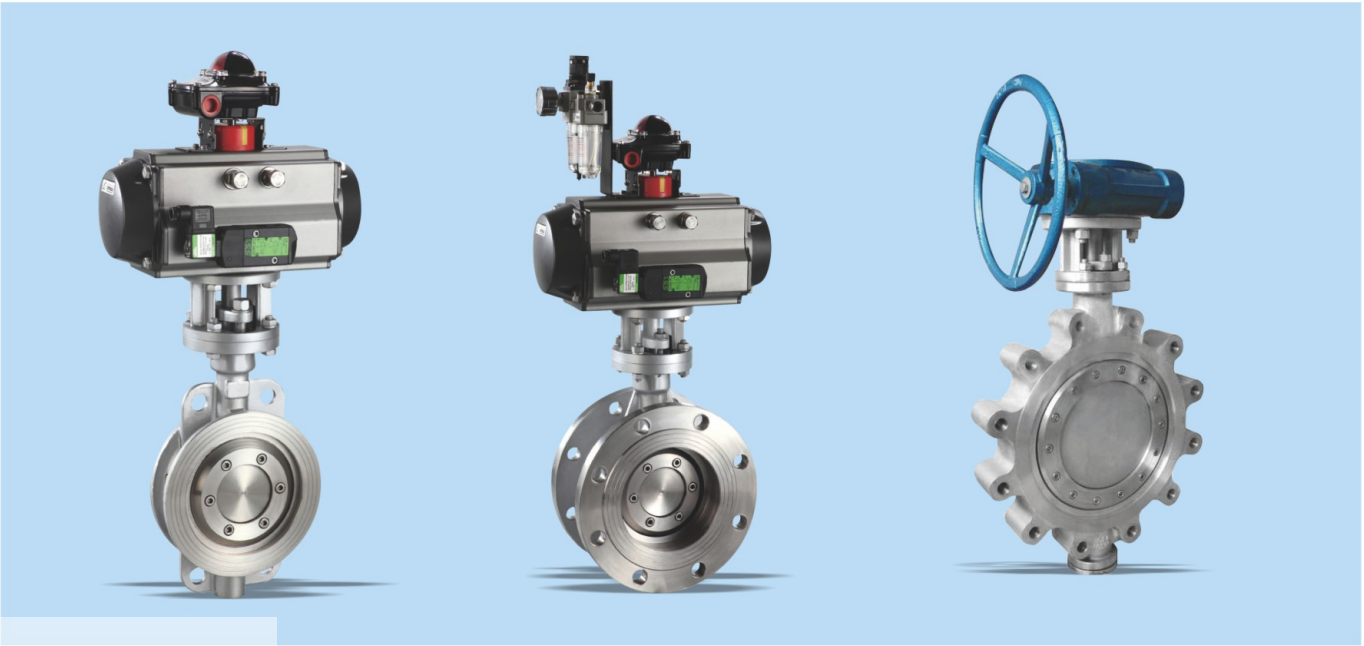
Power & Power stations, Food & Beverage,
Water & Waste water, Steam system,
Metallurgy & Air separation, Oil & Gas,
Fine chemical, Pharmaceuticals,
Slurry & Paper, Light industry

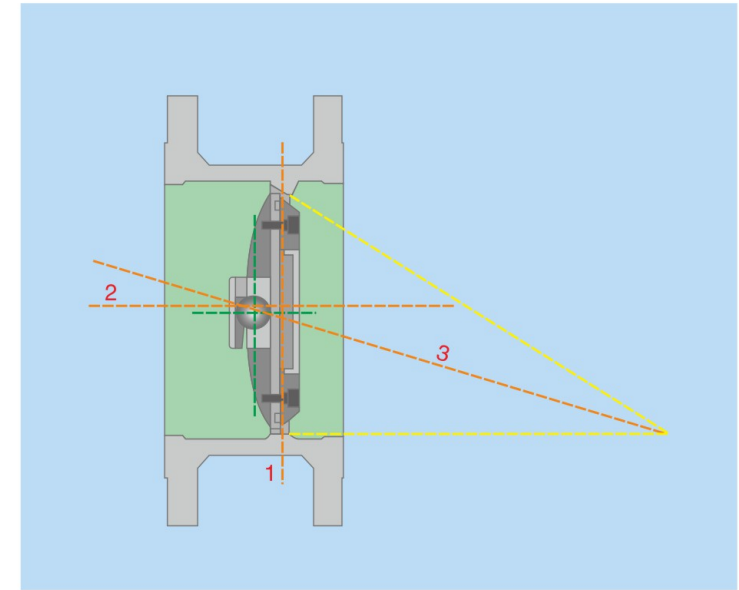
Standard

Design & Manufacture: ANSI/ASME B16.34
Face to Face: ASME B16 .10
End connection: ASME B16.5
Inspection and testing: API 598, API 6D, BS 5146

Technical Data

Triple offset structure
Valve size: DN15-DN3200
Pressure rating: ANSI Class150~Class600Lb; PN16~PN100
FT 132 Wafer
FT 134 Flange
Temperature range: - 25℃~ +550℃
(Note: the applicable temperature range is related with the valve material combination, higher temperature requirements please consult Flowtec.)

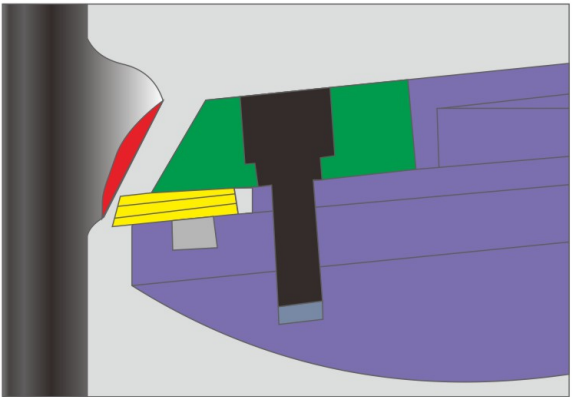




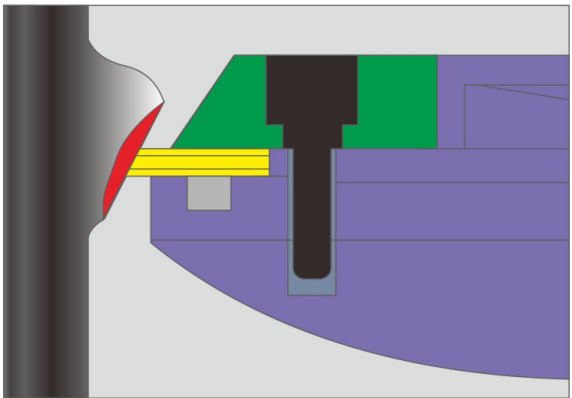
Triple Offset Design

A typical high performance butterfly valve is manufactured with either a single or double offset shaft design. These shaft offsets are created by designing the valve with the shaft located behind the centerline of the sealing surface and slightly to one side of the pipe centerline. The purpose of these offsets is to reduce the rubbing and thus the wear between the seat and seal to approximately 20 degrees of travel.

Flowtec adds a unique third (inclined cone—offset 3) to allow not only camming, but also to completely eliminate all seat-to-seal rubbing throughout the valve's entire 90 degrees of rotation.



Before Sealing ring and valve seat contact



The moment of Sealing ring and valve seat contact

Resilient Metal Seal

Flowtec FT132/134 series butterfly valve utilizes a resilient, duplex stainless steel seal ring installed in the disc assembly to provide true zero leakage*. The resilience of the seal ring is achieved through the radial compression of the seal ring as torque is applied to the valve shaft. The seal and seat contact surface is 'cone-in-cone', where both cones are inclined. The angle of contact between the seal ring and the seat allows the torque applied to the shaft to radially compress the disc seal ring. By maintaining uniformity of contact angles and elasticity in the seal ring, the entire circumference of the seat is evenly loaded to achieve the tightest shutoff with the least amount of torque. Torque seating allows the triple-offset valve to shut-off completely, regardless of the direction of flow or line pressure.



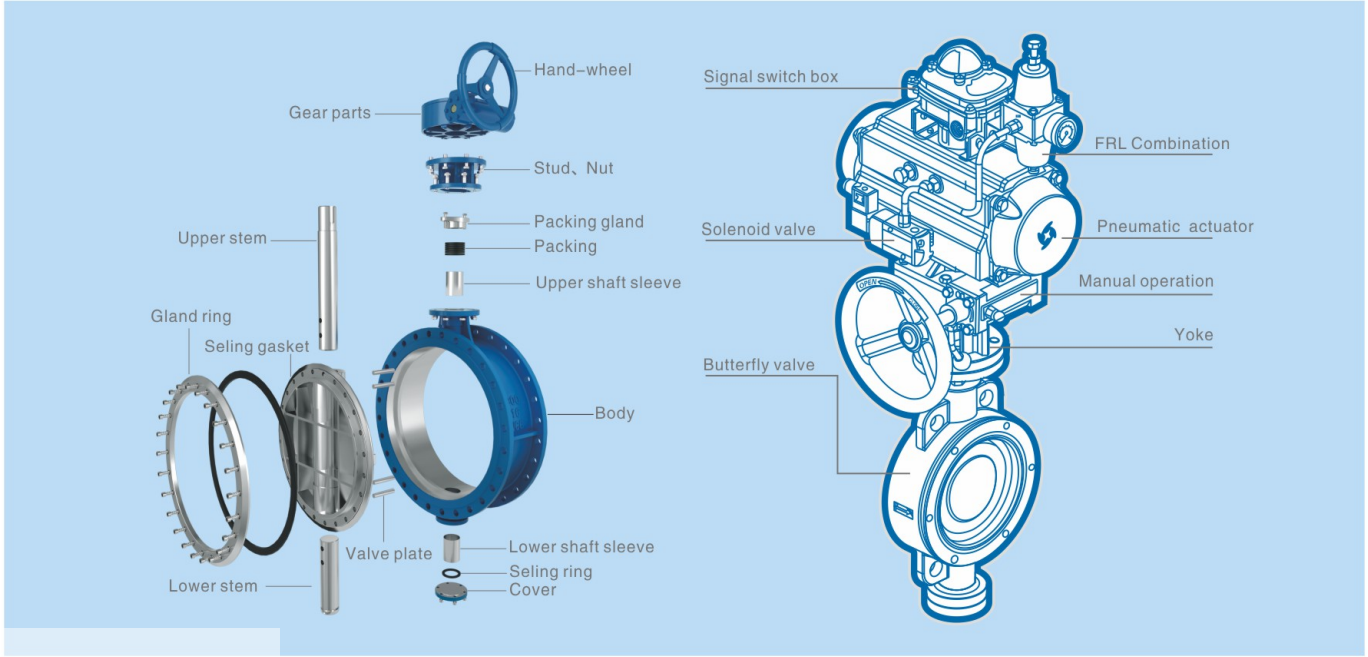
High Performance Thrust Bearing

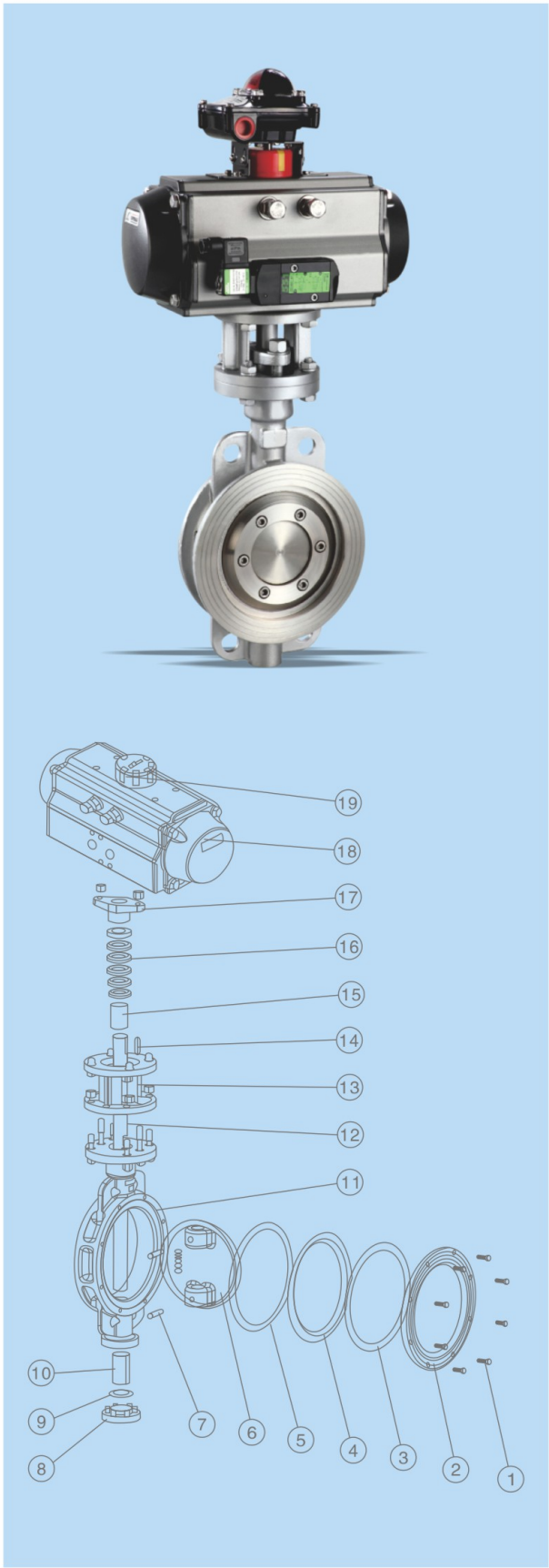
For Flowtec FT132/FT134 series butterfly valve, a super hardened thrust washer is assembly to the shaft while maintaining an intermediate sliding thrust washer, to extend the long service life.

Cv Value

Vale size		Vale opening Cv value								
mm	in	10°	20°	30°	40°	50°	60°	70°	80°	90°
50	2	2.3	4.6	9.8	12	19	34	46	65	73
65	2 1/2	3.6	7.2	15	19	31	52	72	98	109
80	3	10	27	46	64	80	99	121	159	165
100	4	23	61	103	143	179	202	210	216	218
125	5	39	94	158	234	319	401	469	503	516
150	6	55	126	213	324	458	600	727	790	814
200	8	92	214	383	581	826	1086	1362	1530	1545
250	10	155	337	596	906	1295	1735	2201	2480	2589
300	12	196	471	824	1255	1804	2471	3217	3844	3923
350	14	260	571	987	1559	2234	3117	4104	5039	5195
400	16	278	964	1180	1874	2707	3886	5274	6662	6940
450	18	365	820	1459	2279	3373	4922	6837	8660	9116
500	20	464	1043	1738	2781	4056	6026	8459	10890	11590
600	24	528	1407	2463	3870	5805	8619	12490	16540	17590
700	28	840	2240	3640	5880	8680	13160	19320	26040	28010
450	30	977	2605	4558	7163	10754	15954	23118	30606	32560
800	32	1006	2683	4696	7379	11068	16435	23813	31528	33540
900	36	1350	3150	5400	8550	13050	20250	30600	41400	45000
1000	40	1680	3920	6720	10640	16240	25200	38080	51520	56000
1050	42	1851	4319	7404	11720	17890	27770	41960	56760	61700
1100	44	1886	4590	8157	12745	19880	31300	47710	65235	71350
1200	48	1920	4860	8910	13770	21870	34830	53460	73710	81000
1300	52	1959	5427	9450	14878	23424	37896	58701	82314	90455
1350	54	1998	5994	9990	15985	24977	40962	63942	90917	99910
1400	56	2058	6174	10290	16465	25726	42191	65860	93645	102907
1500	60	2556	7668	12780	20450	31950	52400	81790	116300	127800

Structure of Triple Offset Butterfly Valve





Technical Regulation

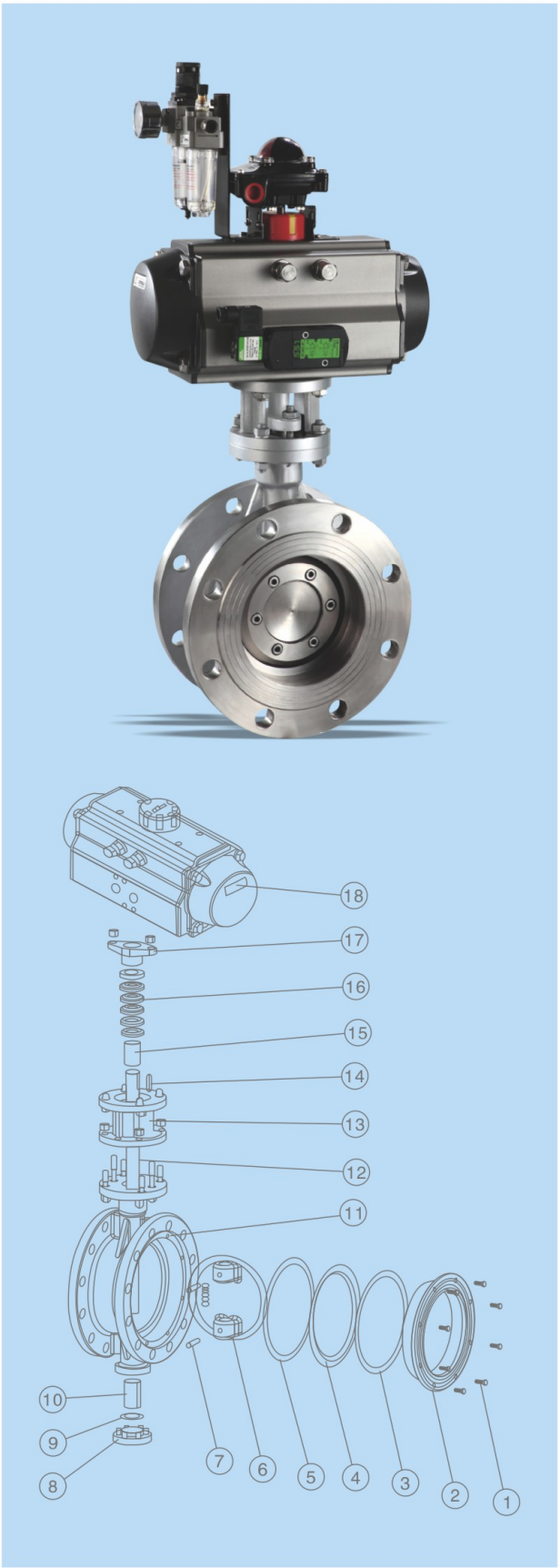
Standard	GB Series	ANSI Series
Design & manufacture	GB/12238	ANSI B16.34,API609
Face to Face	GB/12221	ANSI B16.10
End dimension	GB/9113、JB/T79	ANSI B16.5(2~24") ANSI B16.47(26~32")
Inspection and testing	JB/T9092	API 598

Note: The butterfly valve's face to face length and the end flange dimension can be designed according to user requirements.

Parts and Materials

NO.	Part name	Material		
		WCB	304SS	316SS
1	Screw	304SS	304SS	316SS
2	Retainer flange	WCB	CF8	CF8M
3	Gasket	304SS	304SS	316SS
4	Seal ring	Flexible graphite+SS、PTFE、Stellite		
5	Gasket	304SS	304SS	316SS
6	Disc	WCB	CF8	CF8M
7	Pin	45	304SS	316SS
8	Bottom cap	WCB	CF8	CF8M
9	Gasket	Flexible graphite+SS、PTFE		
10	Bushing	PTFE Composite bearing		
11	Body	WCB	CF8	CF8M
12	Stem	420SS	304SS	316SS
13	Yoke	WCB	WCB	WCB
14	Key	45	45	45
15	Bushing	PTFE Composite bearing		
16	Packing	Flexible graphite、PTFE		
17	Gland	WCB	CF8	CF8M
18	Pneumatic actuator	FHP Series、FRP Series、FAW Series		
19	Position indicator	Plastic		

Note: The material of main parts and the sealing ring can be designed according to the actual working conditions or the user's special requirements.



Technical Regulation

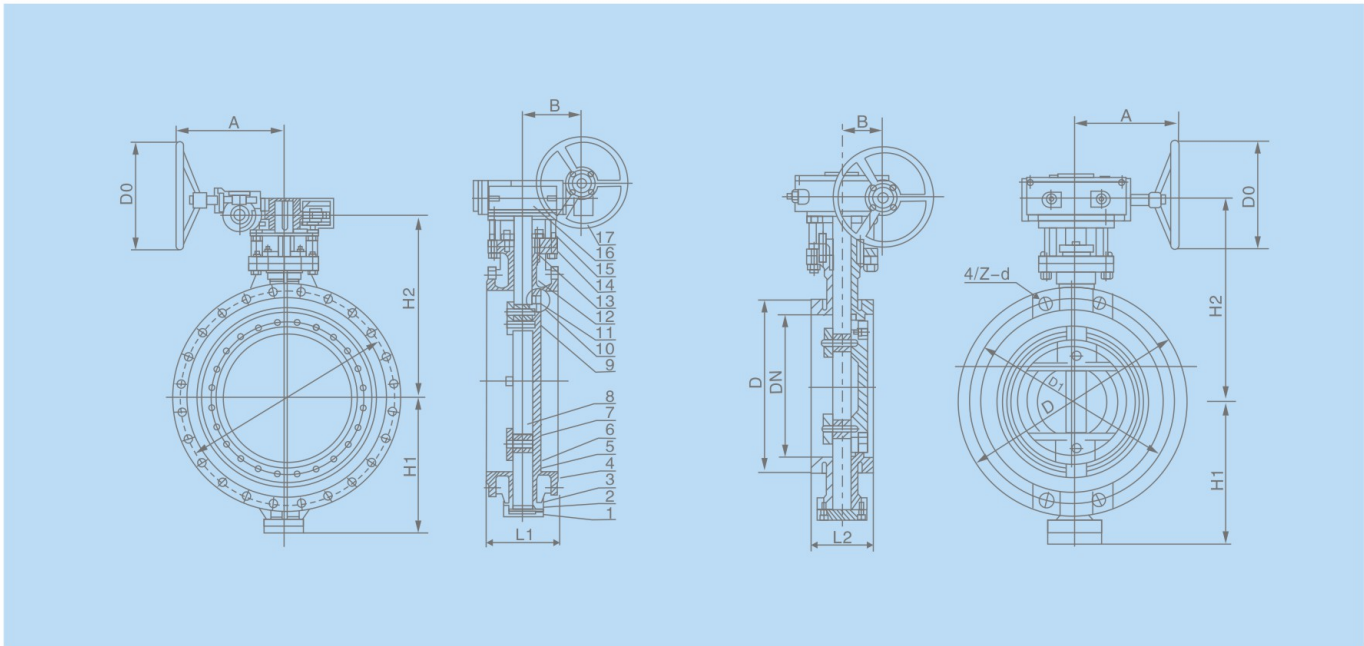
Standard	GB Series	ANSI Series
Design & manufacture	GB/12238	ANSI B16.34,API609
Face to Face	GB/12221	ANSI B16.10
End dimension	GB/9113、JB/T79	ANSI B16.5(2~24") ANSI B16.47(26~126")
Inspection and testing	JB/T9092	API 598

Note: The butterfly valve's face to face length and the end flange dimension can be designed according to user requirements.

Parts and Materials

No.	Part name	Material		
		WCB	304SS	316SS
1	Screw	304SS	304SS	316SS
2	Retainer flange	WCB	CF8	CF8M
3	Gasket	304SS	304SS	316SS
4	Seal ring	Flexible graphite+SS、PTFE、Stellite		
5	Gasket	304SS	304SS	316SS
6	Disc	WCB	CF8	CF8M
7	Pin	45	304SS	304SS
8	Bottom cap	WCB	CF8	CF8M
9	Gasket	Flexible graphite+SS、PTFE		
10	Bushing	Aldary、PTFE Composite bearing		
11	Body	WCB	CF8	CF8M
12	Stem	1Cr13	304SS	316SS
13	Yoke	420SS	WCB	WCB
14	Key	45	45	45
15	Bushing	PTFE Composite bearing		
16	Packing	Flexible graphite、PTFE		
17	Gland	WCB	CF8	CF8M
18	Pneumatic actuator	FHPseries、FRPseries、FAWseries		

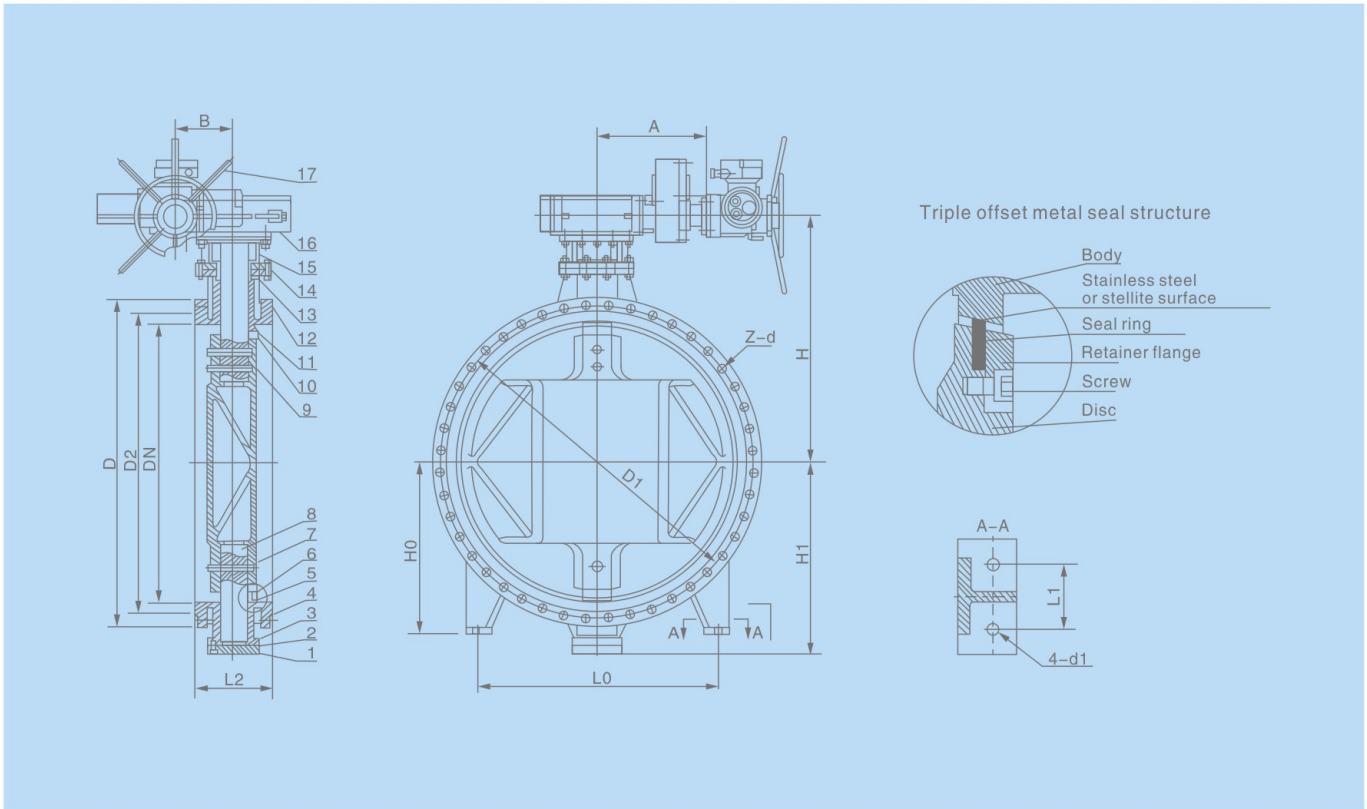
Note: The material of main parts and the sealing ring can be designed according to the actual working conditions or the user's special requirements.



Dimensions and Weight

Wafer: F132-****/Flange connection: F134-****
PN6/10/16/25 Class 150Lb

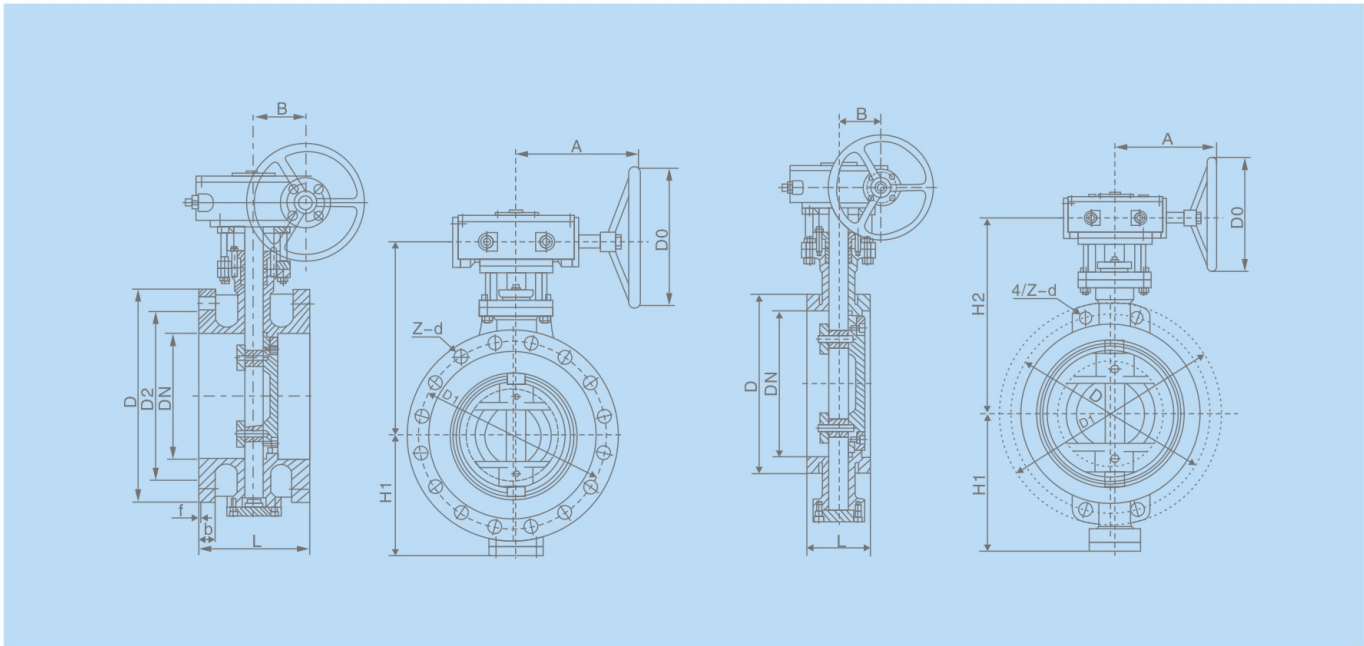
DN (mm)	Overall dimension (mm)							Similar weight(kg)	
DN	Flange L L1	Wafer L L2	H1	H2	A	B	D0	Flange	Wafer
50	108	43	70	235	180	50	150	19	11
65	112	46	75	250	180	50	150	21	13
80	114	64	85	250	180	50	150	23	15
100	127	64	100	260	180	50	150	26	18
125	140	70	110	280	180	50	150	32	21
150	140	76	150	310	185	63	250	43	25
200	152	89	210	380	185	63	250	65	38
250	165	114	235	395	215	80	250	80	60
300	178	114	265	425	215	80	250	100	76
350	190	127	300	480	215	80	350	150	92
400	216	140	355	535	245	125	350	210	102
450	222	152	380	570	245	125	350	266	135
500	229	152	395	590	245	125	350	310	180
600	267	154	450	675	390	242	400	426	280
700	292	165	520	770	390	242	400	590	369
800	318	190	590	840	420	262	400	780	570
900	330	203	660	915	420	262	400	946	750
1000	410	216	730	1050	550	325	500	1190	930
1200	470	254	870	1190	550	325	500	1710	1183
1400	530	279	1015	1350	600	362	500	2750	1415



Dimensions and Weight

Flange connection: F134-**** PN6/10/16/25 Class 150Lb

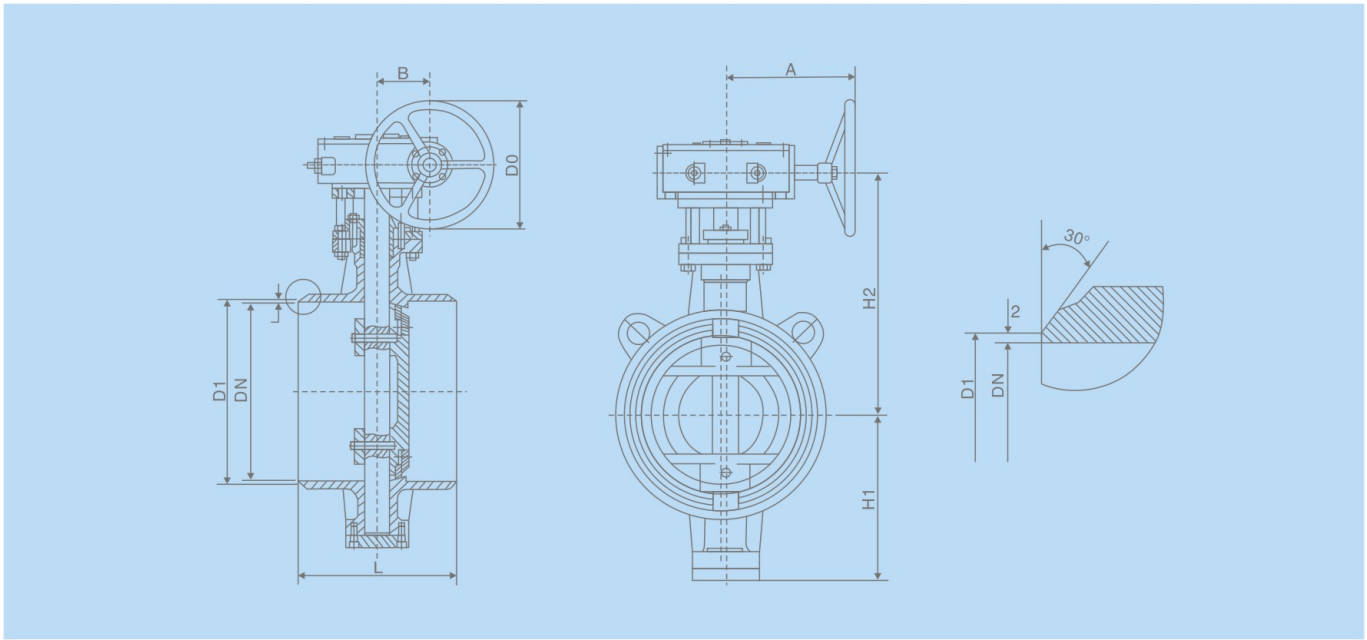
DN (mm)	Overall dimension (mm)						Anchor size(mm)				Weight (kg)
DN	L	H1	H	A	B	D0	H0	L0	L1	d1	W
1600	600	1100	1430	690	395	650	1000	1000	180	41	3150
1800	670	1250	1590	690	395	650	1100	1100	190	41	4491
2000	760	1370	1720	780	580	650	1200	1200	240	43	6154
2200	800	1500	1850	780	580	650	1300	2200	330	43	8031
2400	850	1630	1980	780	580	650	1360	2400	330	45	10046
2600	900	1760	2130	865	620	650	1500	2600	350	45	11910
2800	950	1900	2230	865	620	650	1610	2800	400	48	14400
3000	1000	2030	2370	865	620	650	1690	3000	470	48	15420
3200	1100	2170	2560	865	620	650	1850	3200	500	52	18210



Dimensions and Weight

Wafer: F132-****/Flange connection: F134-****
PN40/64/100 Class 300Lb/Class 600Lb

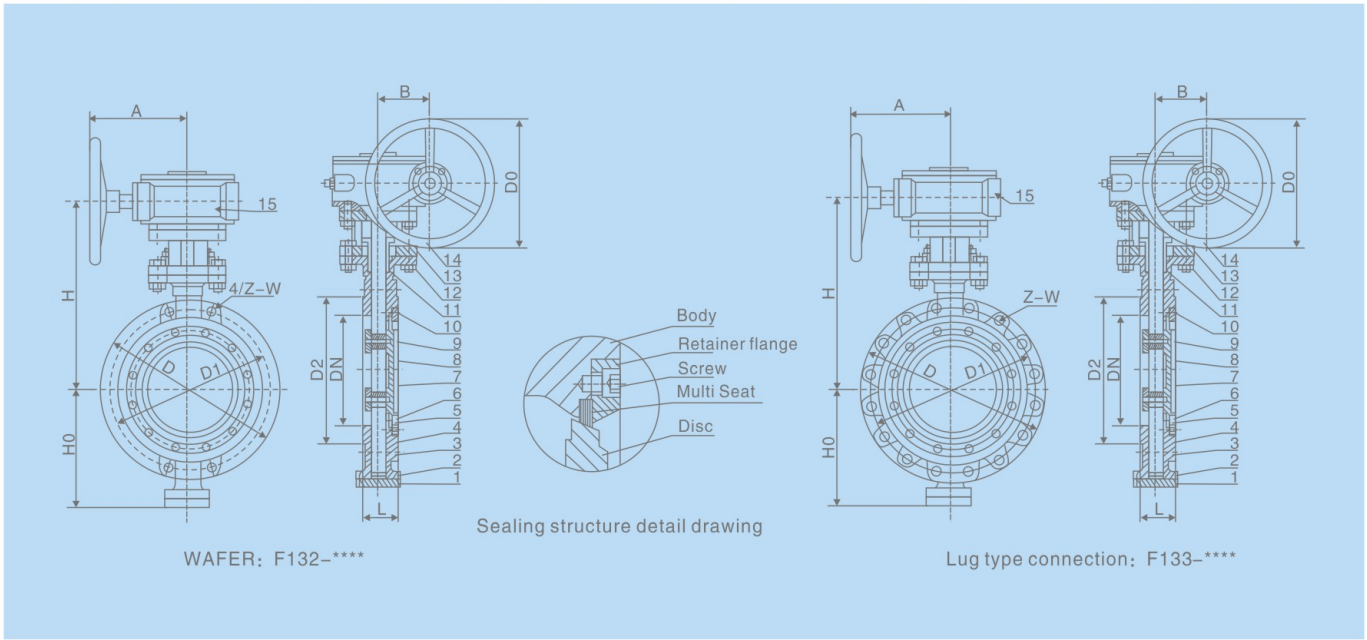
DN(mm)	Face to face length(mm)			Overall dimension(mm)				
	Flange L	Wafer L (PN40/64/300Lb)	Wafer L (PN100/600Lb)	H1	H2	A	B	D0
50	150	—	—	80	250	180	50	150
65	170	—	—	85	265	180	50	150
80	180	48	54	95	26	180	50	150
100	190	54	64	115	275	180	50	150
125	200	59	78	125	295	185	63	250
150	210	59	78	165	330	185	63	250
200	230	73	102	225	395	215	80	305
250	250	83	117	250	410	215	80	305
300	270	92	140	285	450	215	80	400
350	290	117	155	330	510	245	125	300
400	310	133	178	390	570	245	125	300
450	330	149	200	415	410	245	125	300
500	350	159	216	430	625	390	242	400
600	390	181	232	485	710	390	242	400
700	430	—	—	535	810	390	242	400
800	470	—	—	630	890	420	242	400
900	510	—	—	700	948	590	320	500
1000	550	—	—	770	1120	590	320	500



Dimensions and Weight

BW: F136-**** PN40/64/100 Class 300Lb/Class 600Lb

DN(mm)	Face to face length L(mm)	Overall dimension(mm)							Similar weight (kg)
		D1	Dn	H1	H2	A	B	D0	W
80	180	92	85	90	186	180	50	150	27
100	190	114	105	100	217	180	50	150	32
125	200	138	130	113	233	180	50	150	39
150	210	159	152	150	307	185	63	250	40
200	230	219	207	200	341	185	63	250	77
250	250	274	258	231	390	215	80	250	96
300	270	325	313	261	433	215	80	250	125
350	290	377	365	298	470	215	80	350	155
400	310	426	414	331	533	245	125	350	183
450	330	478	466	369	564	245	125	350	226
500	350	529	517	404	598	245	125	350	286
600	390	639	614	473	702	390	242	400	434
700	430	720	702	538	764	390	242	400	769
800	470	820	802	615	836	420	262	400	1038
900	510	920	902	700	948	420	262	400	1339
1000	550	1020	1002	720	971	550	325	500	1776
1200	630	1220	1200	950	1094	550	325	500	1977
1400	710	1420	1400	965	1197	600	362	500	2182
1600	790	1620	1600	1100	1430	690	395	500	3204
1800	870	1820	1800	1250	1590	690	395	650	4090
2000	950	2020	2000	1370	1720	780	580	650	5607
2200	1000	2220	2200	1500	1850	780	580	650	7459
2400	1100	2420	2400	1630	1980	780	580	650	9532
2600	1200	2620	2600	1760	2130	865	620	650	10854
2800	1300	2820	2800	1900	2230	865	620	650	13698
3000	1400	3320	3000	2030	2370	865	620	650	14725



Dimensions and Weight

Lug type connection: F133-**** Class 150Lb/Class 300Lb/Class 600Lb

DN	Face to face length(mm)			Overall dimension(mm)					Similar weight(kg)	
DN(mm)	L(150Lb)	L(300Lb)	L(600Lb)	H1	H2	A	B	D0	Wafer 150Lb	Lug type 150Lb
50	43	43	—	65	180	180	50	150	8	20
65	46	46	—	70	195	180	50	150	11	25
80	48	48	54	85	205	180	50	150	14	30
100	54	54	64	95	235	180	50	150	17	38
125	57	59	78	110	260	180	50	305	20	45
150	57	59	78	125	275	185	63	305	26	48
200	64	73	102	145	205	185	63	305	35	90
250	71	83	117	200	350	215	80	305	42	114
300	81	92	140	215	400	215	80	406	68	148
350	92	117	155	255	460	215	80	406	121	183
400	102	133	178	315	475	245	125	300	136	215
450	114	149	200	381	550	245	125	300	198	266
500	127	159	216	420	600	245	125	300	216	337
600	154	181	232	489	680	390	242	400	467	511
700	165	—	—	502	815	390	242	500	650	905
800	190	—	—	975	920	420	262	400	950	1221
900	203	—	—	1075	1020	420	262	400	1239	1576
1000	216	—	—	1175	1120	550	325	500	1785	2090
1200	254	—	—	1405	1340	550	325	500	1956	2227

Features

- Polished disc edge gives full concentrics sealing, lower torques and long seat life;
- Replaceable seat design, lower maintenance cost;
- Two stage sealing structure, first the valve stem shoulder tightly sealed with the seat, and with the secondary shaft seal provides back up safty;
- Shaft bearing provide optimum support and minimum friction to prolong valves life;
- Self-adjustable V type stem packing. Seal the stem, provent the out side air and dust come into the valve;
- The O-ring is molded-in in the seat edge, which sealing the flange and eliminate the need for gasket;
- Body locating holes easily instolation andcentering between the flanges;
- ISO5211 top flange, can assembly with different actuator, (pneumatics, electrics, hydraulics..).

Services

Food and beverage
Water and waster water
Light industry
Fine chemical
Slurry and paper
Ship and marine
Architecture industry

Technical Data

Temperature range: -40℃ to 120℃
Pressure rating: ANSI 125/ANSI 150
DIN PN10/PN16
GBPN10/PN16
JIS10K

Pressure Rating

Valve size: DN50~DN300
Pressure rating: 1,600 KPa
End of pipeline: maximum up to 1200KPa

Valve size: DN350~DN1000
Pressure rating: 1,000 KPa
End of pipeline: maximum up to 800KPa

Valve size: DN1000—DN3600
Pressure rating: 600 KPa
End of pipeline: maximum up to 400KPa

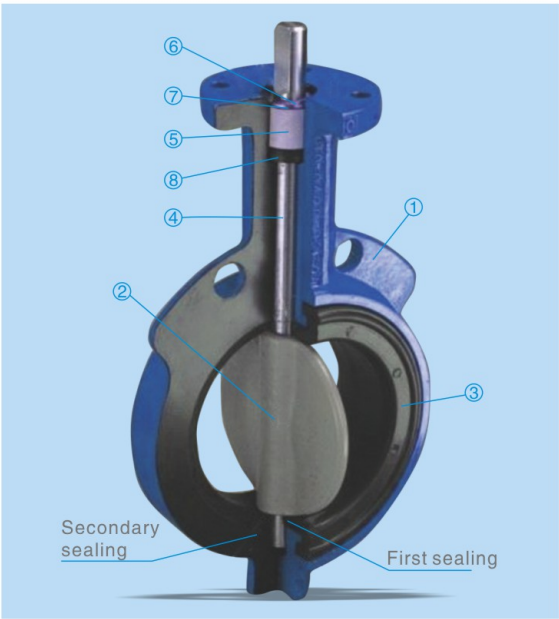


Temperature Rating

EPDM Seat:
-40℃ to 110℃。
NBR Seat:
- 15℃ to 85℃
PTFE/EPDM Seat:
-40℃ to 110℃
Instantaneous temperature:150℃

Parts and Materials

NO.	Parts	Material
1	Body	DI(Ductile iron)、CF8、2205、2507
2	Plate	DI、DINylon layer +、DI+Halar layer、rubber coated DI、304SS、316SS、2205、2507、albronce
3	Seat	EPDM、NBR、FKM、Viton、PTF/NBR、PTFE/EPDM
4	Stem	45、304SS、17-4PH
5	Bushing	PTFE,PVA
6	Spring clip	Spring steel
7	Gland	Albronce
8	Packing	NBR、EPDM



Valve Torque (Nm)

DN		Standard rubber seat(Nm)				Light load valve(Nm)	PTFE Seat(Nm)	
		Working pressure(Bar)				Working pressure(Bar)	Working pressure(Bar)	
in	mm	3.5	7	10	12	3.5	10	12
2	50	14	15	15	16	9	28	32
2.5	65	22	23	24	25	14	35	40
3	80	30	31	33	34	20	51	56
4	100	45	48	51	53	30	82	91
5	125	70	76	82	88	47	118	129
6	150	91	104	114	119	61	193	212
8	200	168	187	207	217	112	331	378
10	250	254	286	318	334	170	556	638
12	300	388	440	491	516	259	782	891
14	350	562	647	733	—	375	912	1130
16	400	727	875	1022	—	485	1346	1537
18	450	897	1124	1352	—	598	1768	2165
20	500	1170	1465	1760	—	780	2327	2716
24	600	1796	1880	2278	—	1280	3589	4282

Note: The torque of the valve larger than DN600 , please consult Flowtec.
Caution:

- 1, The torque in table is the corresponding load torque value in the normal working condition ;
- 2, Normal condition refers to the clean medium, with temperature – 4.5℃ to 93℃, no precipitation or chemical corrosion in valve body, require at least 1 time valve operation per day;
- 3, The rubber seat torque value on table is the torque value of EPDM, NBR, VITON , does not contain dynamic torque;
- 4, Under normal operating conditions, it’ s no need to consider the safety factor on selection of actuators;

- 5, If the conditions is different from the above conditions , please use the following correction factor:
Operate less than once per day x 1.2
Viscous medium (e.g. syrup) x1.5
Drying conditions (including abrasive particles, dry powder) x1.7
The temperature is lower than – 4.5℃ or higher than 93℃x1.2
Other strict works, please consult Flowtec
6, PTFE lined EPDM seat can be used for acne corrosive medium but not suitable for medium containing abrasive particles.

Max. Allowable Stem Torque (Nm)

Valve size	50	65	80	100	125	150	200	250	300	350	400	450	500	600
Max. allowable stem torque	65	110	110	160	260	260	480	970	970	1650	1987	3437	3819	6531

Note: Valve size larger than DN600 consult Flowtec for the Max. allowable stem torque.

Cv Value

DN		Valve open position								
in	mm	10°	20°	30°	40°	50°	60°	70°	80°	90°
2	50	1	7	16	27	43	61	84	114	144
2.5	65	1.5	11	24	43	67	107	163	223	282
3	80	2	15	35	61	96	154	267	364	461
4	100	3	27	62	109	171	274	496	701	841
5	125	5	43	98	170	268	428	775	1146	1376
6	150	6	56	129	225	354	567	1025	1542	1850
8	200	19	102	241	421	680	1081	1862	2842	3316
10	250	27	162	382	667	1076	1710	2948	4525	5430
12	300	34	235	555	1005	1594	2563	4393	6731	8077
14	350	45	299	756	1320	2149	3384	5939	8874	10538
16	400	58	397	1001	1749	2847	4483	7867	11761	13966
18	450	72	507	1281	2237	3643	5736	10065	14496	17214
20	500	132	632	1595	2786	4536	7144	12535	18812	22339
24	600	349	894	1872	3358	5690	9160	14728	26350	30498

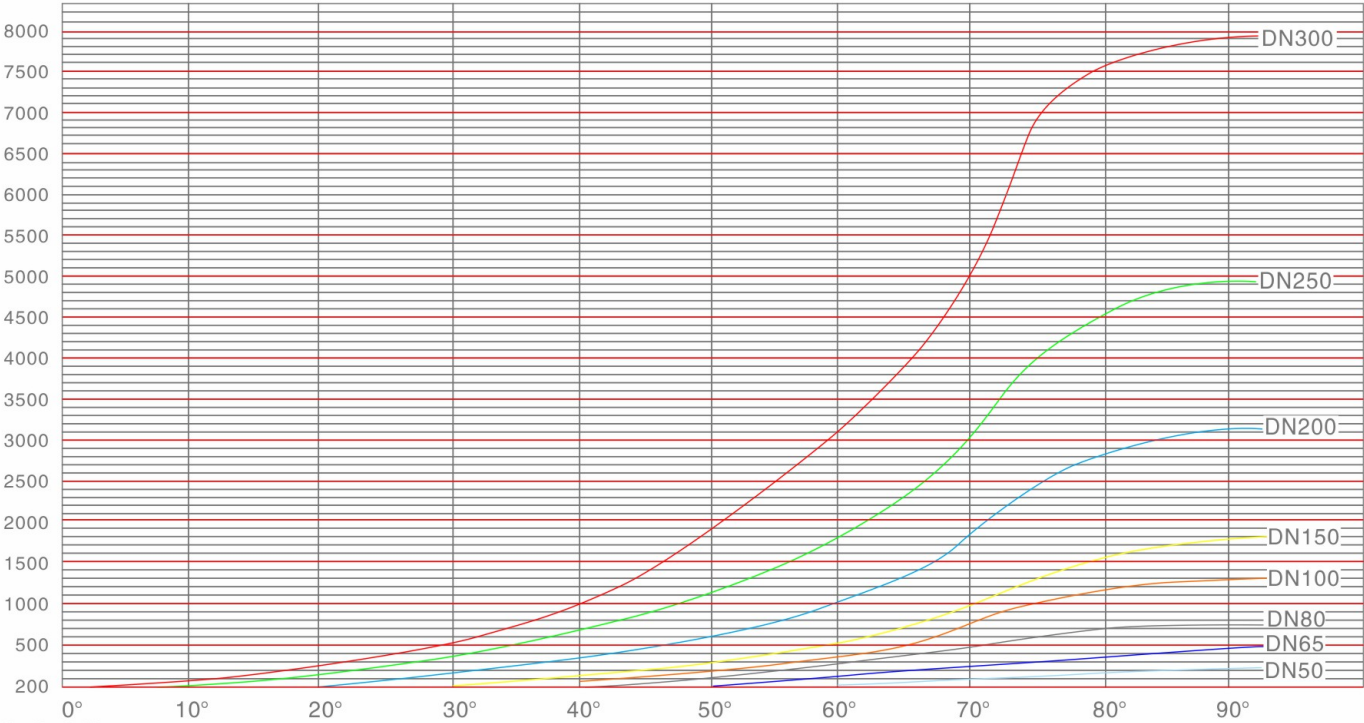
Note: 1. Cv = The volume of water passing through the valve per hour with a pressure drop of 1Bar(100KPa) at 20℃,when the valve is used for regulation function, recommended to control opening between 25~70 degrees, the best adjusting performance section is between 50~65 degrees;
2. The Cv value of valve size larger than the DN600, please consult Flowtec.

Seat and Disc Materials

Material	Working temperature (°C)	Medium type and applicable level													Features	Cost
		Fresh water	Sea water	Salt	Strong alkali	Weak alkali	Strong acid	Weak acid	Natural gas	Alcohols	Air	Steam	Oil	Food		
NBR	-40~93	★	★	★	▲	★	●	▲	★	■	★	●	★	▲	Oil resistance	low
EPDM	-50~135	★	★	★	★	★	■	★	▲	▲	★	★	■	★	Aging resistance	lower
Natural rubber	-20~80	★	★	★	★	★	■	▲	●	■	★	●	●	●	High elasticity	low
Chloroprene rubber	-40~82	★	★	▲	★	★	●	■	●	■	★	●	●	▲	light resistance, aging resistance	low
Silicone rubber	-65~210	★	★	▲	●	▲	●	▲	★	▲	★	★	■	■	High temperature resistant	high
FKM	-23~204	★	★	★	■	★	■	★	★	■	★	★	★	★	High temperature corrosion resistance	expensive
PTFE	-200~160	★	★	★	★	★	★	★	★	★	★	★	★	★	Corrosion resistance, heat resistance	expensive
Ductile iron chrome plated	-30~350	▲	▲	■	●	■	●	■	▲	★	▲	★	★	■	Heat resistance	low
Ductile iron nylon coating	-30~95	★	★	★	★	★	★	★	★	■	★	●	★	★	Corrosion resistance, wear resistance, low friction	lower
Ductile iron Chlorinated polyether coating	-30~130	★	★	★	★	★	★	★	★	★	★	■	★	★	Strong corrosion resistance, wear resistance	lower
Ductile iron PTFE coating	-30~160	★	★	★	★	★	★	★	★	★	★	★	★	★	Strong corrosion resistance, heat resistance	expensive
Albronze	273~232	★	◆	■	●	■	●	▲	★	★	★	★	★	■	Strong corrosion resistance, heat resistance	high
SS	-268~538	◆	◆	■	■	▲	■	★	★	★	★	★	★	★	High temperature corrosion resistance	high
Carbon steel chrome-plating	-29~425	▲	●	■	●	■	■	■	▲	★	▲	★	★	■	High temperature resistant	lower

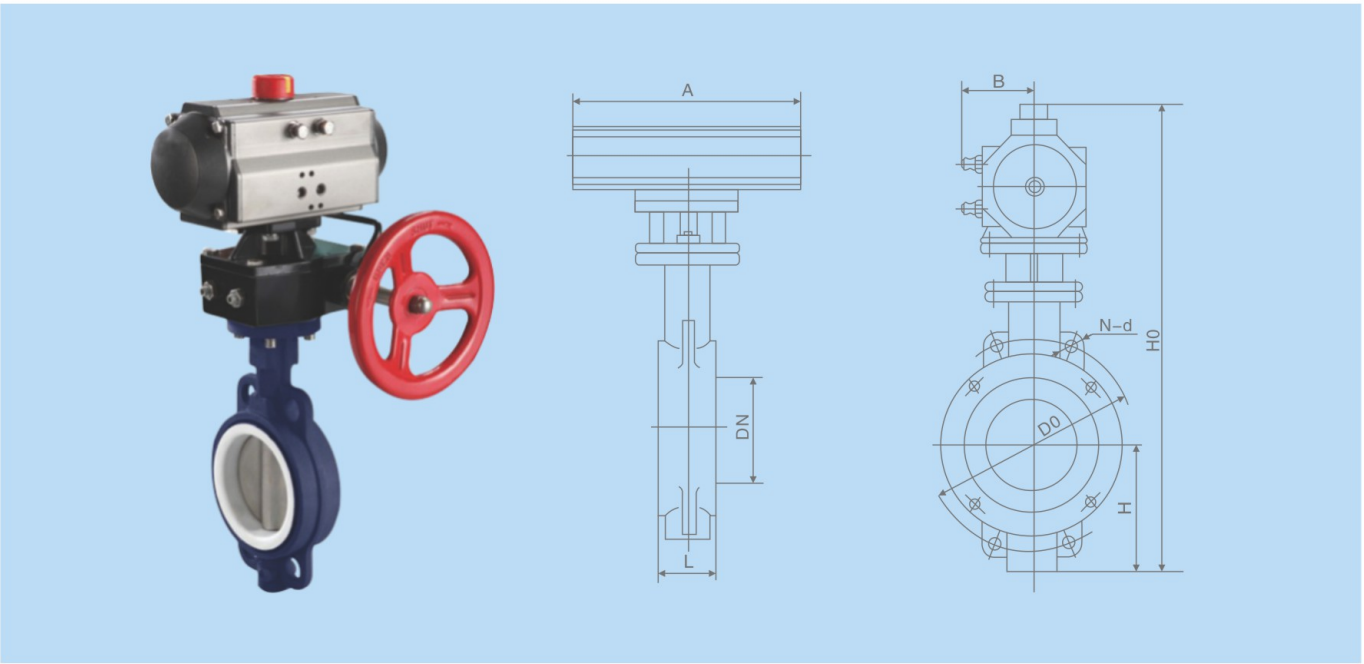
Symbol: ★ Ideally; ▲◆Applicable (including that ◆ is not applicable when the flow rate is greater than 1 5M/S); ■ Limited application; ● Not applicable

Cv value curve



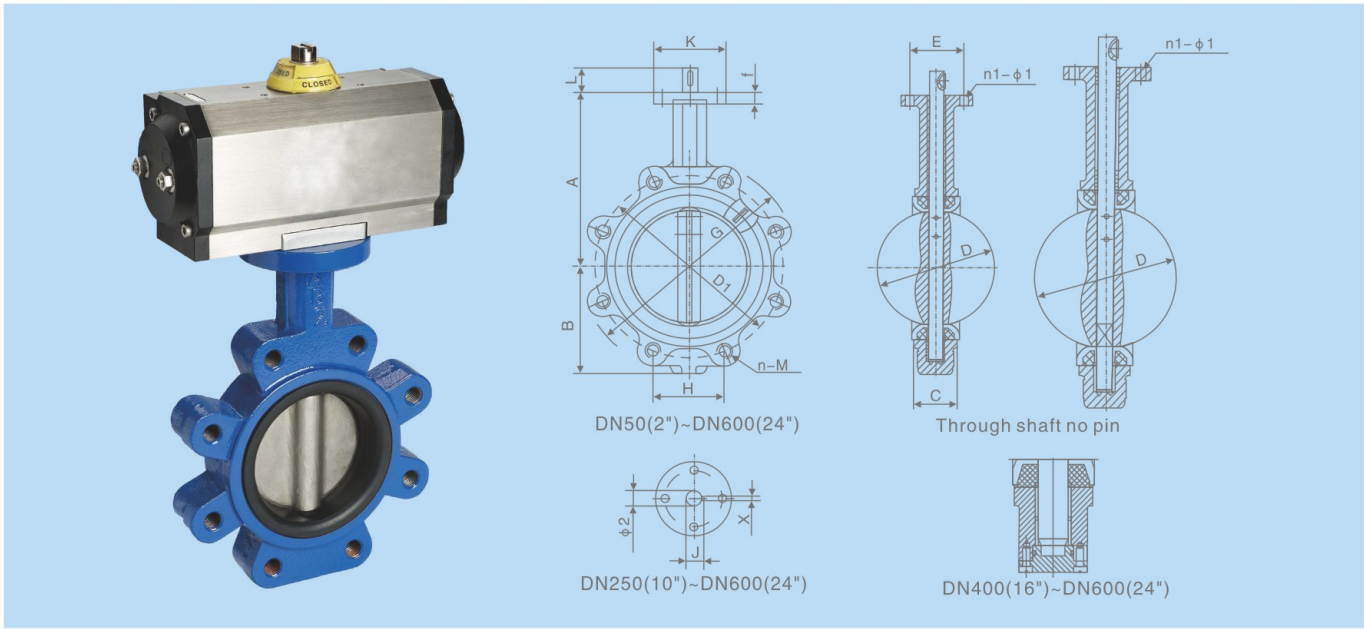
Cv Definition: The flow gallons per minute of water (60 degrees F) passing through the valve when the valve is fully opened, and the pressure difference between the ends of valve is 1 pounds / inch.

$Cv = Q \sqrt{\frac{G}{\Delta P}}$ Q: Maximum flow (gallon/minute)
G: proportion(water=1)
 ΔP : pressure drop (water=1)



Dimensions

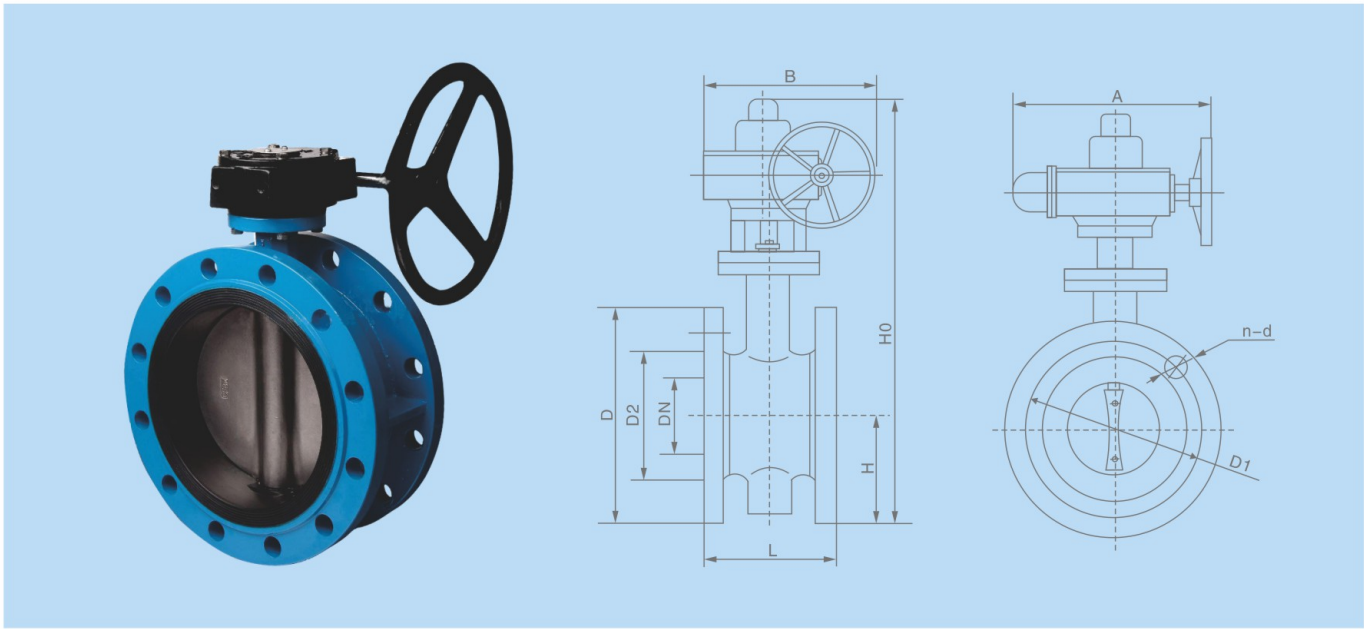
DN(mm)	Overall dimension			Connection dimension							
				0.6MPa		1.0MPa		1.6MPa		150Lb	
	L	H	H0	D0	n-d	D0	n-d	D0	n-d	D0	n-d
50	43	80	315	110	4-14	125	4-18	125	4-18	120.5	4-Φ19
65	44.7	88	330	130	4-14	145	4-18	145	4-18	139.5	4-Φ19
80	46	96	390	150	4-18	160	8-18	160	8-18	152.5	4-Φ19
100	52	115	431	170	4-18	180	8-18	180	8-18	190.5	4-Φ19
125	54.4	130	455	200	8-18	210	8-18	210	8-18	216	4-Φ22
150	55.8	140	626	225	8-18	240	8-22	240	8-22	241.5	4-Φ22
200	62	175	720	280	8-18	295	8-22	295	12-22	298.5	4-Φ22
250	68	200	800	335	12-18	350	12-22	355	12-26	362	4-Φ25
300	76.9	240	860	395	12-22	400	12-22	410	12-26	432	4-Φ25
350	78	265	883	445	12-22	460	16-22	470	16-26	476	4-Φ28
400	102	300	972	495	16-22	515	16-26	525	26-30	540	4-Φ28
450	114	315	1043	550	16-22	565	20-26	585	20-30	578	4-Φ32
500	127	350	1098	600	20-22	620	20-26	650	20-33	635	4-M30
600	154	400	1236	705	20-26	725	20-30	770	20-36	749.5	4-M33
700	165	520	1431	810	24-26	840	24-30	840	24-36	863.5	4-M33
800	190	590	1488	920	24-30	950	24-33	950	24-39	978	4-M39
900	203	660	1615	1020	24-30	1050	28-33	1050	28-39	1086	4-M39
1000	216	670	1765	1120	28-30	1160	28-36	1170	28-42	1200	4-M39
1200	254	780	1976	1340	32-33	1380	32-39	1390	32-48	1422.5	4-M39



Dimensions and Weight

PN1.0/1.6MPa(Class 150Lb)

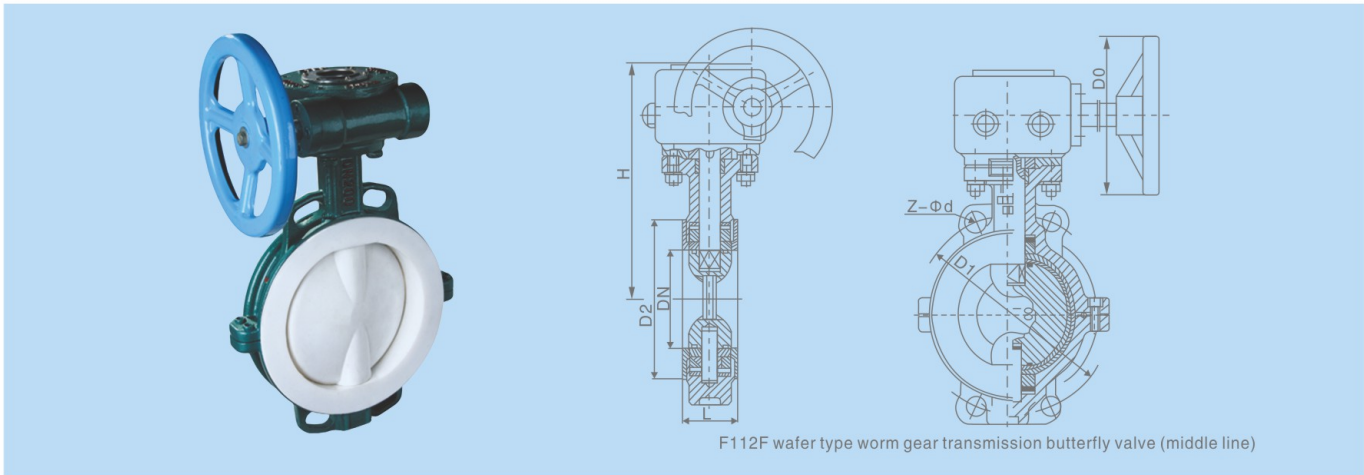
DN (mm)	NPS (in)	A	B	C	D	L	H	D1	n-M	K	E	n1-φ1	φ2	G	J	X	f	WT(Kg)
50	2	161	80	42	52.9	28	88.38	125	4-M16	77	57.15	4-6.7	12.6	155	13.8	3	13	3.5
65	2.5	175	89	44.7	64.5	28	102.54	145	4-M16	77	57.15	4-6.7	12.6	179	13.8	3	13	4.6
80	3	181	95	45.2	78.8	28	61.23	160	8-M16	77	57.15	4-6.7	12.6	190	13.8	3	13	5.6
100	4	200	114	52.1	104	28	68.88	180	8-M16	92	69.85	4-10.3	15.77	220	17.77	5	13	7.6
125	5	213	127	54.4	123.3	28	80.36	210	8-M16	92	69.85	4-10.3	18.92	254	20.92	5	13	10.4
150	6	226	139	55.8	155.6	28	91.84	240	8-M20	92	69.85	4-10.3	18.92	285	20.92	5	13	12.2
200	8	260	175	60.6	202.5	38	112.89	295	8-M20	115	88.9	4-14.3	22.1	339	24.1	5	13	19.7
250	10	292	203	65.6	250.5	38	76.35	350	12-M20	115	88.9	4-14.3	28.45	406	31.45	8	13	31.4
							90.59	350	12-M20									
							91.88	355	12-M24									
300	12	337	242	76.9	301.6	38	103.52	400	12-M20	140	107.95	4-14.3	31.6	477	34.6	8	20	50
							106.12	410	12-M24									
							89.74	460	16-M20									
350	14	368	267	76.5	333.3	45	91.69	470	16-M24	140	107.95	4-14.3	31.6	515	34.6	8	20	71
							100.48	515	16-M24									
							102.42	525	16-M27									
400	16	400	325	86.5	389.6	51	88.38	565	20-M24	197	158.75	4-20.6	33.15	579	36.15	10	20	98
							51	88.38	565									
							57	96.99	620									
450	18	422	345	104.6	440.51	57	101.68	650	20-M30	197	158.75	4-20.6	41.15	696	44.15	10	22	171
							60	91.51	585									
							70	113.42	725									
600	24	562	475	151.36	592.5	75	-	770	20-M33	276	215.9	4-22.2	50.65	821	54.65	16	22	251
700	28	624	535	163	695	66	109.65	840	24-M30	300	254	8-18	63.35	895	71.4	18	30	292
800	32	672	606	188	794.7	66	124	950	24-M33	300	254	8-18	63.35	1015	71.4	18	30	396
900	36	720	670	203	870	118	117.57	1050	24-M33	300	254	8-18	75	1115	84	20	34	520
1000	40	800	735	216	970	142	129.89	1160	24-M36	300	254	8-18	85	1230	95	22	35	668
1200	48	940.7	878	254	1160	150	101.5	1380	32-M39	350	298	8-22	105	1455	117	28	35	1080



Dimensions and Weight

PN0.6/1.0/1.6MPa(Class 150Lb)

DN	NPS	Overall dimension			Connection dimension															
					0.6MPa				1.0MPa				1.6MPa				150Lb			
DN	NPS	L	H1	H2	D	D1	D2	n-Φd	D	D1	D2	n-Φd	D	D1	D2	n-Φd	D	D1	D2	n-Φd
100	4	127	240	120	210	170	140	4-19	220	180	156	4-19	220	180	156	8-19	229	190.5	157	8-19
125	5	140	270	130	240	200	174	8-19	250	210	184	8-19	250	210	184	8-19	254	216	186	8-22
150	6	140	300	150	265	225	199	8-19	285	240	211	8-29	285	240	211	8-23	279	241.5	216	8-22
200	8	152	330	180	320	280	254	8-19	340	295	266	8-29	340	295	266	18-23	343	298.5	270	8-23
250	10	165	400	220	375	335	309	12-19	395	350	319	12-29	405	355	319	12-28	406	362	324	12-25
300	12	178	410	220	440	395	363	12-23	445	400	370	12-23	460	410	370	12-28	483	432	381	12-25
350	14	190	460	270	490	445	413	12-23	505	460	429	16-23	520	470	429	16-28	533	476	413	12-28
400	16	216	510	290	540	495	463	16-23	565	515	480	16-23	580	525	480	16-31	597	540	470	16-28
450	18	222	560	320	595	550	518	16-23	615	565	580	26-28	640	585	548	20-31	635	578	533	16-32
500	20	229	590	360	645	600	568	20-23	670	620	582	20-28	715	650	609	20-34	699	635	584	20-32
600	24	267	660	390	755	705	667	20-26	780	725	682	20-31	840	770	720	20-37	813	749.5	692	20-35
700	28	292	780	460	860	810	772	24-26	895	840	794	24-31	910	840	794	24-37	927	863.5	800	28-35
800	32	318	850	530	975	920	878	24-31	1015	950	901	24-34	1025	950	901	24-40	1061	978	914	28-41
900	36	330	920	570	1075	1020	978	24-31	1115	1050	1001	28-34	1125	1050	1001	28-40	1168	1086	1022	32-41
1000	40	410	990	630	1175	1120	1078	28-31	1230	1160	1112	28-37	1255	1170	1112	28-43	1289	1200	1124	36-41
1200	48	470	1115	750	1405	1340	1295	32-34	1455	1380	1328	32-40	1485	1390	1328	32-49	1511	1422.5	1359	44-41
1400	56	530	1230	850	1630	1560	1510	36-37	1675	1590	1550	36-43	1685	1590	1530	36-49	-	-	-	-
1600	64	790	1340	990	1830	1760	1710	40-37	1915	1820	1750	40-49	1930	1820	1750	40-56	-	-	-	-
1800	72	870	1570	1100	2045	1970	1918	44-40	2115	2020	1950	44-49	2130	2020	1950	44-56	-	-	-	-
2000	80	950	1680	1170	2265	2180	2125	48-43	2325	2230	2150	48-49	2345	2230	2150	48-62	-	-	-	-



Material of major parts

NO.	Part name	Ductile iron	Carbon steel	SS		Low carbon stainless steel	
		DI	WCB	304SS	316SS	304L	316L
1	Upper, Down body	HT 250	WCB	CF 8	CF 8M	CF 3	CF 3M
2	Disc	WCB	35(forged)	CF 8	CF 8M	CF 3	CF 3M
3	Stem	420SS	420SS	304SS	316SS	304L	316L
4	Lining layer/Seat	PTFE(F ₄)、PCTFE(F ₃)、FEP(F ₄₆)、PFA(F ₄)、PO					
5	O Ring	FPM			FPM		
6	Elastic strip (PAD)	SiR			SiR		
7	Gasket	A182 F304	A182 F304	A182 F304	A182 F316	A182 F304L	A182 F316L
8	Bolt	A193 B7	A193 B7	A193 B8M	A193 B8M	A193 B8M	A193 B8M
9	Nut	A194 2H	A194 2H	A194 8	A194 8	A194 8	A194 8
10	Handle	Z1101(Cast aluminum alloy)					

Dimensions and Weight

PN1.0(MPa)

DN		Overall dimensions							Reference		
DN(mm)	NPS(in)	L	D	D ₁	D ₂	f	b	Z-Φd	D0	H	WT(kg)
40	1 1/2	33	145	110	85	3	18	4-Φ18	160	140	3
50	2	43	160	125	100	3	20	4-Φ18	200	145	4
65	2 1/2	46	180	145	120	3	20	4-Φ18	250	155	6
80	3	46	195	160	135	3	22	4/8-Φ18	250	165	8
100	4	52	215	180	155	3	22	8-Φ18	300	180	12
125	5	56	245	210	185	3	24	8-Φ18	300	203	18
150	6	56	280	240	210	3	24	8-Φ23	200*	225	28
200	8	60	335	295	265	3	26	8-Φ23	200*	275	56
250	10	68	390	350	320	3	28	12-Φ23	240*	315	72
300	12	78	440	400	368	4	28	12-Φ23	240*	348	88
350	14	78	500	460	428	4	30	16-Φ23	240*	415	120
400	16	102	565	515	482	4	32	16-Φ25	280*	460	145
450	18	114	615	565	532	4	32	20-Φ25	280*	500	165
500	20	127	670	620	585	4	34	20-Φ25	320*	530	195
600	24	154	780	725	685	5	36	20-Φ30	320*	610	268
700	28	165	895	840	800	5	40	24-Φ30	360*	675	320
800	32	190	1010	950	905	5	44	24-Φ34	360*	805	395

Dimensions and Weight

PN1.6(MPa)

DN		Overall dimensions							Reference		
DN(mm)	NPS(in)	L	D	D ₁	D ₂	f	b	Z-Φd	D0	H	WT(kg)
40	1 1/2	33	145	110	85	3	18	4-Φ18	200	145	4
50	2	43	160	125	100	3	20	4-Φ18	200	150	5
65	2 1/2	46	180	145	120	3	20	4-Φ18	250	160	7
80	3	46	195	160	135	3	22	8-Φ18	250	170	10
100	4	52	215	180	155	3	24	8-Φ18	300	185	14
125	5	56	245	210	185	3	26	8-Φ18	300	210	22
150	6	56	280	240	210	3	28	8-Φ23	200*	230	32
200	8	60	335	295	265	3	30	12-Φ23	240*	285	66
250	10	68	405	355	320	3	32	12-Φ25	240*	325	80
300	12	78	460	410	375	4	34	12-Φ25	280*	360	94
350	14	78	520	470	435	4	38	16-Φ25	280*	430	125
400	16	102	580	525	485	4	40	16-Φ30	320*	475	150
450	18	114	640	585	545	4	44	20-Φ30	320*	525	172
500	20	127	705	650	608	4	46	20-Φ34	320*	565	225
600	24	154	840	770	718	5	54	20-Φ41	360*	620	290
700	28	165	910	840	788	5	54	24-Φ41	360*	686	330
800	32	190	1020	950	898	5	54	24-Φ41	380*	815	425
900	36	203	1120	1050	998	5	54	28-Φ41	400*	1010	495
1000	40	216	1255	1170	1110	5	60	28-Φ48	400*	1185	710

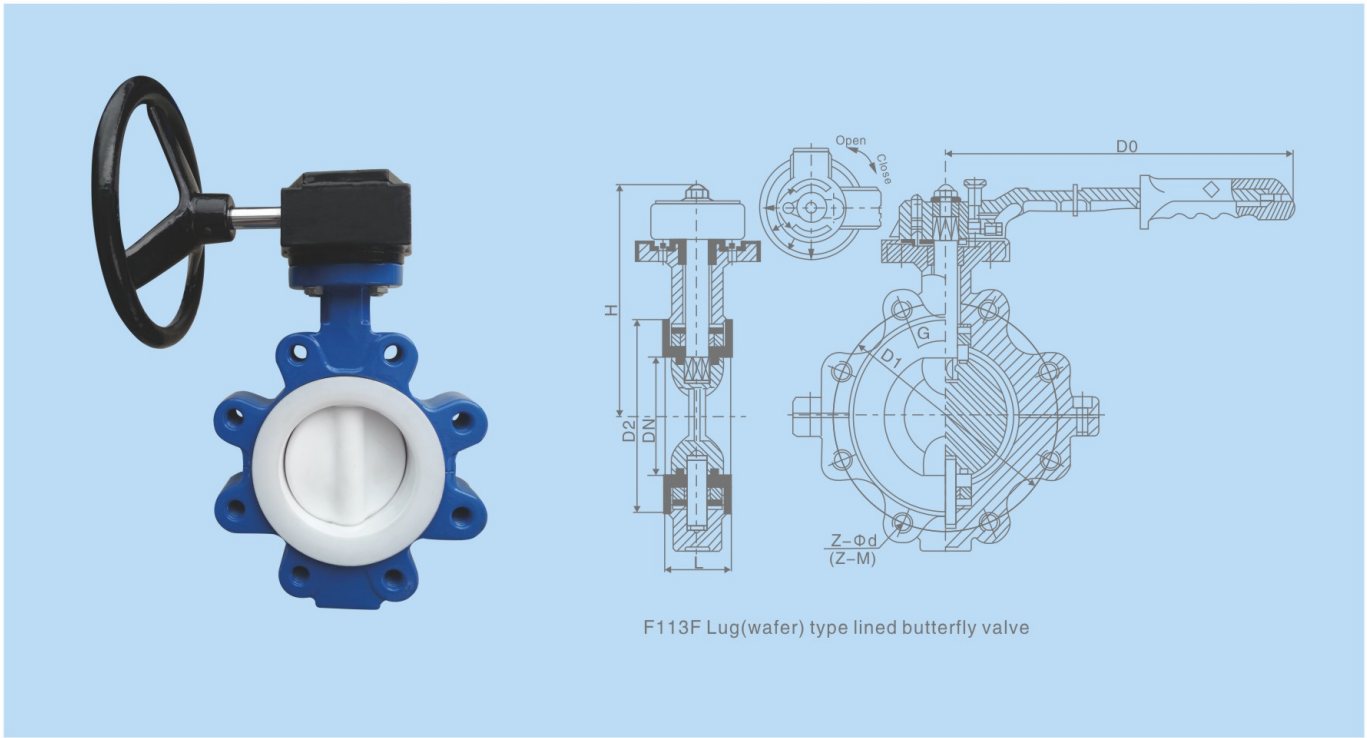
Note: D, D₁, D₂, Z- Φ d, f, b of the flange dimension is the standard flange dimension connected with butterfly valve, the dimension in the diagram is only part of the flange's.

Dimensions and Weight

Class 150Lb

DN		Overall dimensions							Reference		
DN(mm)	NPS(in)	L	D	D ₁	D ₂	f	b	Z-Φd	D0	H	WT(kg)
50	2	43	152	120.5	92	2	16	4-Φ19	200	150	5
65	2 1/2	46	178	139.5	105	2	18	4-Φ19	250	160	7
80	3	46	190	152.5	127	2	19	4-Φ19	250	170	10
100	4	52	229	190.5	157	2	24	8-Φ19	300	185	14
125	5	56	254	216	186	2	24	8-Φ22	300	210	22
150	6	56	279	241.5	216	2	26	8-Φ22	200*	230	32
200	8	60	343	298.5	270	2	29	8-Φ22	240*	285	66
250	10	68	406	362	324	2	31	12-Φ25	240*	325	80
300	12	78	483	432	381	2	32	12-Φ25	280*	360	94
350	14	78	533	476	413	2	35	12-Φ29	280*	430	125
400	16	102	597	540	470	2	37	16-Φ29	320*	475	150
450	18	114	635	578	533	2	40	16-Φ32	320*	525	172
500	20	127	699	635	584	2	43	20-Φ32	360*	565	225
600	24	154	813	749.5	692	2	48	20-Φ35	360*	630	290
800	32	190	941	900	864	2	46.5	48-Φ22	400*	750	380
900	36	200	1057	1009.7	972	2	53	44-Φ26	400*	805	405
1000	40	216	1175	1121	1080	2	56	44-Φ29.5	-	980	450
1200	48	276	1392	1335	1289	2	65	44-Φ32	500*	1170	695

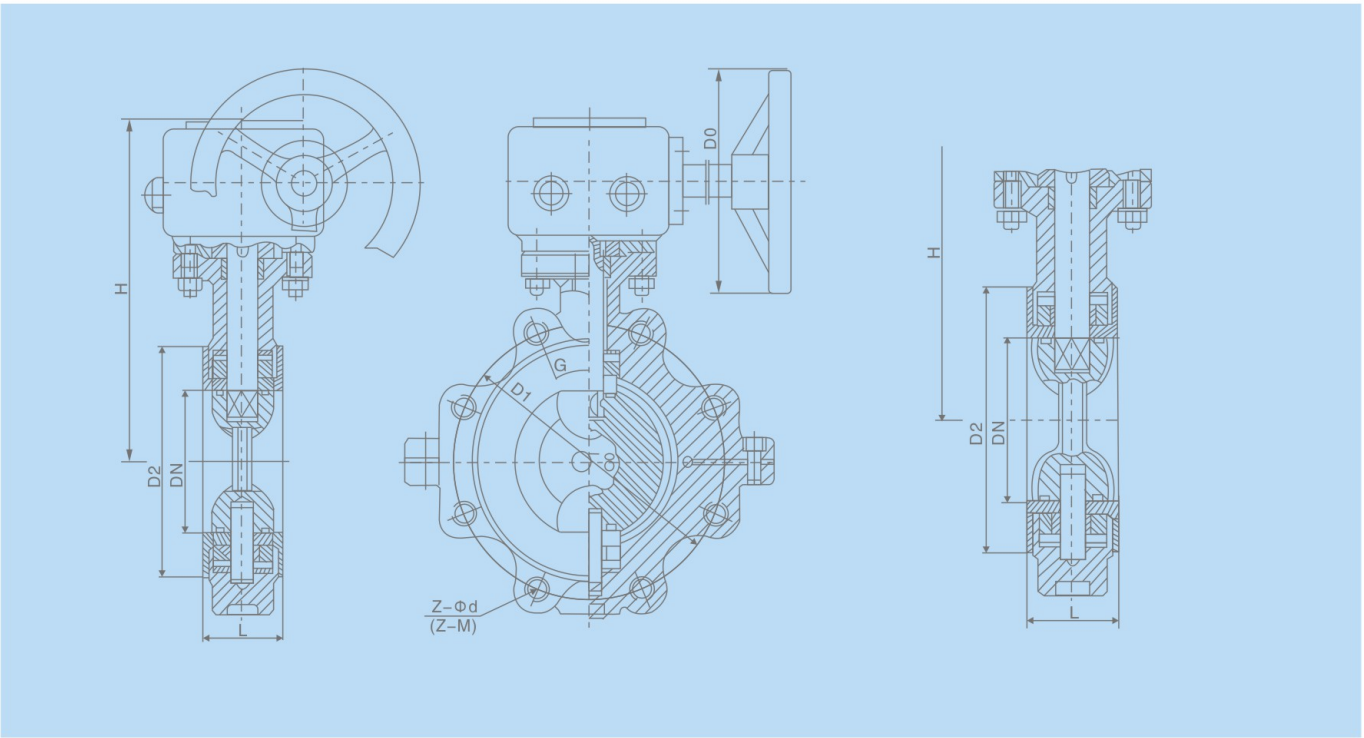
Note: 1. Flange size should follow ANSI B16.5 when valve size smaller or equal to 24 , NPS>24 to API 605; 2. D, D₁, D₂, Z- Φ d, f, b of the flange dimension is the standard flange dimension connected with butterfly valve, the dimension in the diagram is only part of the flange's.



F113F Lug(wafer) type lined butterfly valve

Parts and Materials

NO.	Part name	Ductile iron	Carbon steel	SS		Low carbon stainless steel	
		DI	WCB	304SS	316SS	304L	316L
1	Upper, Downbody	A126 C.135A	A216 WCB	A351 CF 8	A351 CF 8M	A351 CF 3	A351 CF 3M
2	Disc	A216 WCB	A105	A351 CF 8	A351 CF 8M	A351 CF 3	A351 CF 3M
3	Stem	A182 F6	A182 F6	A182 F304	A182 F316	A182 F304L	A182 F316L
4	Lining layer, Seat	PTFE(F ₄)、PCTFE(F ₃)、FEP(F ₄₆)、PFA(solubleF ₄)、PO(polyolefin)					
5	O Ring	FPM			FPM		
6	Elasticstrip (PAD)	SiR			SiR		
7	Gasket	A182 F304	A182 F304	A182 F304	A182 F316	A182 F304L	A182 F316L
8	Bolt	A193 B7	A193 B7	A193 B8M	A193 B8M	A193 B8M	A193 B8M
9	Nut	A194 2H	A194 2H	A194 8	A194 8	A194 8	A194 8
10	Handle	Zl101(Cast aluminum alloy)					

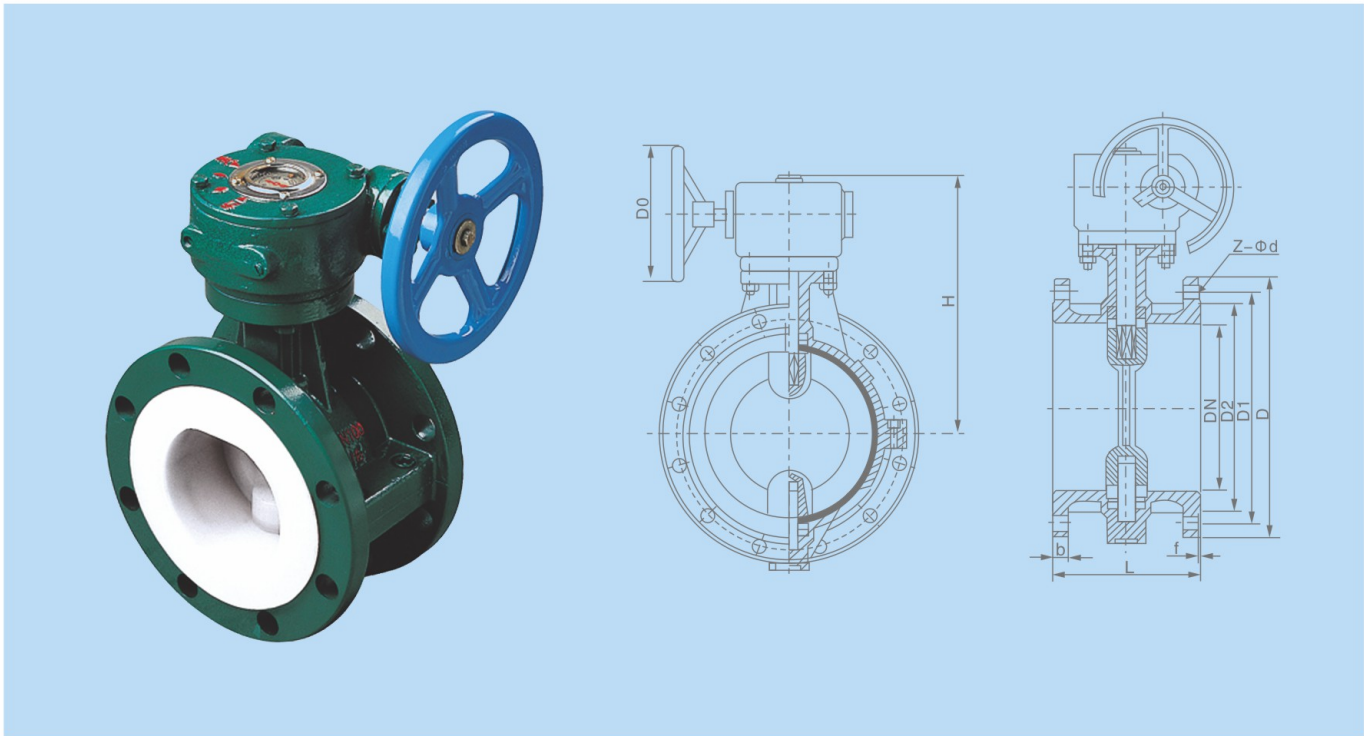


Dimensions and Weight

Class 150Lb

DN(mm)	NPS(in)	Overall dimensions							Reference		
		L	D	D ₁	D ₂	f	b	Z-Φd	D ₀	H	WT(kg)
50	2	43	152	120.5	92	2	16	4-Φ19	200	150	5
65	2½	46	178	139.5	105	2	18	4-Φ19	250	160	7
80	3	46	190	152.5	127	2	19	4-Φ19	250	170	10
100	4	52	229	190.5	157	2	24	8-Φ19	300	185	14
125	5	56	254	216	186	2	24	8-Φ22	300	210	22
150	6	56	279	241.5	216	2	26	8-Φ22	200*	230	32
200	8	60	343	298.5	270	2	29	8-Φ22	240*	285	66
250	10	68	406	362	324	2	31	12-Φ25	240*	325	80
300	12	78	483	432	381	2	32	12-Φ25	280*	360	94
350	14	78	533	476	413	2	35	12-Φ29	280*	430	125
400	16	102	597	540	470	2	37	16-Φ29	320*	475	150
450	18	114	635	578	533	2	40	16-Φ32	320*	525	172
500	20	127	699	635	584	2	43	20-Φ32	360*	565	225
600	24	154	813	749.5	692	2	48	20-Φ35	360*	630	290
800	32	190	941	900	864	2	46.5	48-Φ22	400*	750	380
900	36	200	1057	1009.7	972	2	53	44-Φ26	400*	805	405
1000	40	216	1175	1121	1080	2	56	44-Φ29.5	-	980	450
1200	48	276	1392	1335	1289	2	65	44-Φ32	500*	1170	695

Note: 1. Flange size should follow ANSI B16.5 when valve size smaller or equal to 24 , NPS>24 to API 605; 2. D, D₁, D₂, Z-Φd, f, b of the flange dimension is the standard flange dimension connected with butterfly valve, the dimension in the diagram is only part of the flange's.



Dimensions and Weight

PN1.0(MPa)

DN(mm)	NPS(in)	Overall dimensions							Reference		
		L	D	D ₁	D ₂	f	b	Z-φd	D0	H	WT(kg)
40	1 1/2	106	145	110	85	3	18	4-φ18	160	140	10
50	2	108	160	125	100	3	20	4-φ18	200	160	12
65	2 1/2	112	180	145	120	3	20	4-φ18	250	165	13
80	3	114	195	160	135	3	22	4/8-φ18	250	170	14
100	4	127	215	180	155	3	22	8-φ18	300	180	16
125	5	140	245	210	185	3	24	8-φ18	300	275	18
150	6	140	280	240	210	3	24	8-φ23	200*	295	38
200	8	152	335	295	265	3	26	8-φ23	200*	320	74
250	10	250	390	350	320	3	28	12-φ23	240*	385	105
300	12	270	440	400	368	4	28	12-φ23	240*	390	142
350	14	290	500	460	428	4	30	16-φ23	240*	460	179
400	16	310	565	515	482	4	32	16-φ25	280*	510	220
450	18	330	615	565	532	4	32	20-φ25	280*	540	268
500	20	350	670	620	585	4	34	20-φ25	320*	570	378
600	24	390	780	725	685	5	36	20-φ30	320*	660	608
700	28	430	895	940	800	5	40	24-φ30	360*	710	1050
800	32	470	1010	950	905	5	44	24-φ34	360*	780	1320
900	36	510	1110	1050	1005	5	46	28-φ34	380*	885	1795
1000	40	550	1220	1160	1115	5	50	28-φ34	400*	990	1900
1200	48	630	1450	1380	1325	5	56	32-φ41	400*	1200	2150

Note: Flange size PN1.0 MPa, DN80 bolt hole number JB78, Z = 4, other standard Z = 8.

Dimensions and Weight

PN1.6(MPa)

DN(mm)	NPS(in)	Overall dimensions							Reference		
		L	D	D ₁	D ₂	f	b	Z-φd	D0	H	WT(kg)
40	1 1/2	106	145	110	85	3	18	4-φ18	160	140	10
50	2	108	160	125	100	3	20	4-φ18	200	160	12
65	2 1/2	112	180	145	120	3	20	4-φ18	250	165	13
80	3	114	195	160	135	3	22	8-φ18	260	170	14
100	4	127	215	180	155	3	24	8-φ18	300	180	16
125	5	140	245	210	185	3	26	8-φ18	300	275	18
150	6	140	280	240	210	3	28	8-φ23	200*	295	42
200	8	152	335	295	265	3	30	12-φ23	200*	320	78
250	10	250	405	355	320	3	32	12-φ25	240*	385	120
300	12	270	460	410	375	4	34	12-φ25	240*	390	145
350	14	290	520	470	435	4	38	16-φ25	240*	460	202
400	16	310	580	525	485	4	40	16-φ30	280*	510	235
450	18	330	640	585	545	4	44	20-φ30	280*	540	368
500	20	350	705	650	608	4	46	20-φ34	320*	570	420
600	24	390	840	770	718	5	54	20-φ41	320*	660	760
700	28	430	910	840	788	5	54	24-φ41	360*	710	1028
800	32	470	1020	950	898	5	54	24-φ41	380*	780	1690
900	36	510	1120	1050	998	5	54	28-φ41	400*	885	1815
1000	40	550	1255	1170	1110	5	60	28-φ48	500*	990	2050

Dimensions and Weight

Class 150Lb

DN(mm)	NPS(in)	Overall dimensions							Reference		
		L	D	D ₁	D ₂	f	b	Z-φd	D0	H	WT(kg)
80	3	127	190	152.5	127	2	19	4-φ18	250	170	14
100	4	127	229	190.5	157	2	24	8-φ19	300	180	16
125	5	127	254	216	186	2	24	8-φ22	300	275	18
150	6	127	279	241.5	216	2	26	8-φ22	200*	295	42
200	8	152.4	343	298.5	270	2	29	8-φ22	200*	320	78
250	10	203.2	406	362	324	2	31	12-φ25	240*	385	120
300	12	203.2	483	432	381	2	32	12-φ25	240*	390	145
350	14	203.2	533	476	413	2	35	12-φ29	280*	460	202
400	16	203.2	597	540	470	2	37	16-φ29	280*	510	235
450	18	203.2	635	578	533	2	40	16-φ32	320*	540	368
500	20	203.2	699	635	584	2	43	20-φ32	320*	570	420
600	24	203.2	813	749.5	692	2	48	20-φ35	360*	660	750
800	32	304.8	941	900	864	2	46	48-φ22	370*	750	980
900	35	304.8	1057	1009.7	972	2	53	44-φ26	380*	780	1700
1000	40	304.8	1175	1121	1080	2	56	44-φ29	400*	820	1780
1200	48	381	1392	1335	1289	2	65	44-φ32	400*	990	2060

Product Introduction

Ventilation butterfly valve is using the manual lever or electric actuator to drive the butterfly valve to open and close, to reduce the air supply to the blast furnace while don't shut down the wind turbine, discharge the excess gas into the atmosphere. With the characteristics of short structure, light weight, easy installation and so on. The valve driving torque is small, open and close lexible, easy to operate. A sealing retaining ring is arranged on the valve body, and the clearance between the sealing is not obvious,low leakage rate. The expansion space between the butterfly disc and the valve body is large, which can effectively prevent the valve sticking caused by thermal expansion and contraction. The valve can be driving by various of actuator, suchas handle, worm gear, pneumatic actuator, electric actuator.

Service

The ventilation valve is a non sealing type butterfly valve, widely used in building materials, petroleum, metallurgy, mining, electricity and other production industries, suitable for ventilation pipeline with medium temperature less than 425℃ and working pressure less than 0.1MPa.

Features

- 1. The ventilation valve is made of welded steel plate , short face to face length , small valve volume, light weight, easy installation;
- 2. Small torque, flexible to open and close , easy to operate ;
- 3. the valve body is equipped with a sealing ring, no visible gap on sealing, small leakage rate ;
- 4. The expansion space between the butterfly disc and the valve body is large, can effectively prevent the valve sticking caused by thermal expansion and contraction;
- 5. The valve can be driving by various of actuators, such as handle or worm gear box, electric actuator, pneumatic actuator, etc.;
- 6. Dual plate type and shutter type disc design is optional for different application.

Standard

Design & manufacture	End connection	Face to Face	Inspection and testing
JB/T8692	GB/T9113、JB/T79、HG/T20592	GB/T12221	GB/T13927、JB/T9092

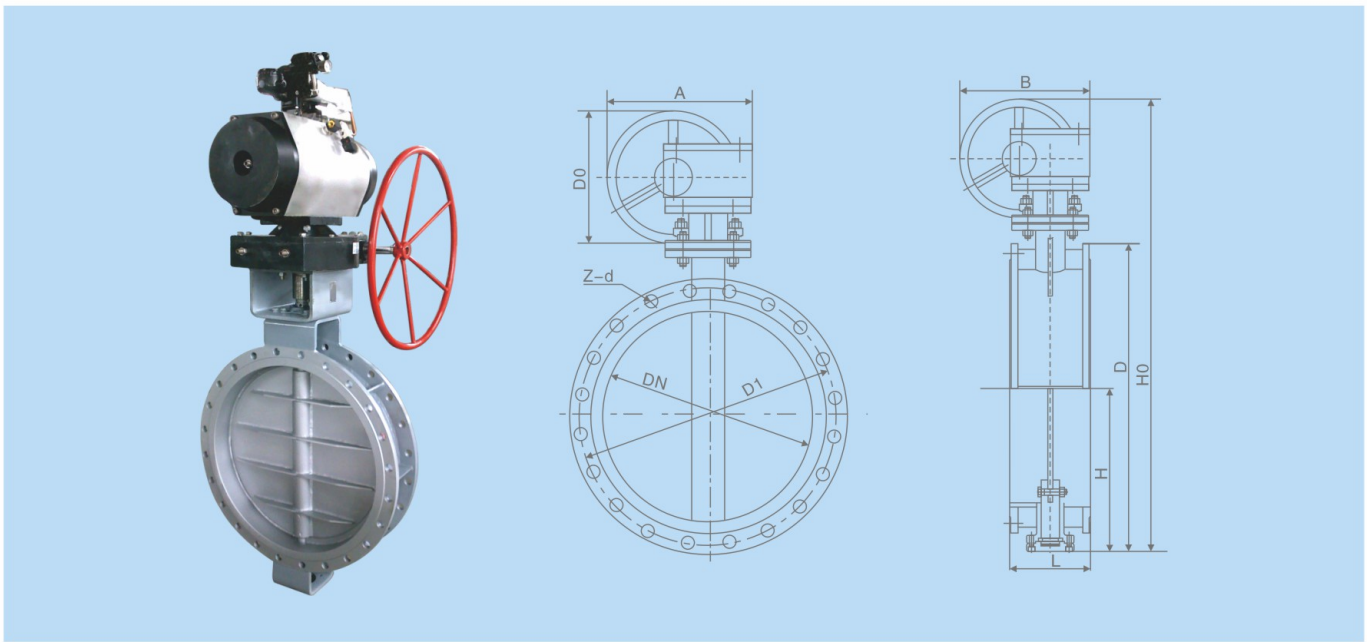
Technical data

DN	DN(mm)	50~2000	
PN	PN(MPa)	0.25	0.6
Pressure test (MPa)	Shell test	0.375	0.9
	Sealing test	0.275	0.66
Applied medium	Gas, dust gas, Flue gas, etc.		
Actuator	Handel、Worm Gear, Pneumatic Actuator, Electric Actuator		

Parts and Materials

Part name	Material
Body	WC8,WC6,WC9,CF8,CF8M,CF3,CF3M,C5,C12
Plate	WC8,WC6,WC9,CF8,CF8M,CF3,CF3M,C5,C12
Sealing ring	WC8,WC6,WC9,CF8,CF8M,CF3,CF3M,C5,C12
Stem	A105,420SS,304SS,316SS,17-4PH
Packing	PTFE

Material	WCB	LCB	WC6or WC9	C5 orC12	304、316	12CrMoV
Max. temperature	425℃	345℃	595℃	650℃	600℃	560℃
Min. temperature	-29℃	-46℃	-29℃	-29℃	-196℃	-40℃
Working temperature	≤425℃	≤345℃	≤595℃	≤650℃	≤600℃	≤560℃



Dimensions

(F144-****- PN0.25、0.6MPa)

DN		Face to Face	Overall dimension				Connection dimension							
							0.25MPa				0.6MPa			
mm	inch	L	H	H0	A	B	D	D1	D2	Z-d	D	D1	D2	Z-d
50	2	108	70	286	125	193	140	110	88	4-14	140	110	88	4-14
65	2 1/2	112	80	306	125	193	160	130	108	4-14	160	130	108	4-14
80	3	114	95	334	125	193	190	150	124	4-18	190	150	124	4-18
100	4	120	105	354	125	193	210	170	144	4-18	210	170	144	4-18
125	5	120	120	384	125	193	240	200	174	8-18	240	200	174	8-18
150	6	120	132	409	125	193	265	225	199	8-18	265	225	199	8-18
200	8	140	160	593	165	183	320	280	254	8-18	320	280	254	8-18
250	10	140	187	650	165	283	375	335	309	12-18	375	335	309	12-18
300	12	170	220	715	165	283	440	395	363	12-22	440	395	363	12-22
350	14	170	245	814	175	334	490	445	413	12-22	490	445	413	12-22
400	16	190	270	863	175	334	540	495	463	16-22	540	495	463	16-22
450	18	190	297	918	175	334	595	550	518	16-22	595	550	518	16-22
500	20	190	322	1016	210	425	645	600	568	20-22	645	600	568	20-22
600	24	210	377	1128	210	425	755	705	667	20-26	755	705	667	20-26
700	28	210	430	1233	210	425	860	810	772	24-26	890	810	772	24-26
800	32	210	487	1344	210	425	975	920	878	24-30	975	920	878	24-30
900	36	250	537	1560	320	620	1075	1020	978	24-30	1075	1020	978	24-30
1000	40	250	587	1660	320	620	1175	1120	1078	28-30	1175	1120	1078	28-30
1200	48	250	687	1890	320	620	1375	1320	1280	32-30	1405	1340	1295	32-33
1400	56	300	760	2670	575	714	1575	1520	1480	36-30	1630	1560	1510	36-36
1600	64	300	895	2810	575	714	1790	1730	1690	40-30	1830	1760	1710	40-36
1800	72	300	995	2020	575	714	1990	1930	1890	44-30	2045	1970	1918	44-39
2000	80	300	1095	3220	656	810	2190	2130	2090	48-30	2265	2180	2125	48-42