H64Y
Power Station Check Valve

Main shape size and connection size

Size: mm

H64Y-1500Lb				
Specifications	D	L	H	Weight (Kg)
in		(mm)		
$2_{1/2}$	56	254	282	57
3	64	305	325	57
4	84	406	350	80
5	100	483	425	115
6	126	559	400	180
8	158	711	490	270
10	200	864	540	430
12	250	991	650	630
14	280	1067	710	1400
H64Y-2000Lb				
Specifications	D	L	H	Weight (Kg)
in		(mm)		
$2_{1/2}$	50	330	240	40
3	60	368	305	60
4	80	457	315	95
5	96	533	409	170
6	118	610	465	186
8	147	762	528	415
10	180	914	613	658
12	222	1041	680	1200
14	254	1118	745	1638
H64Y-2500Lb				
Specifications	D	L	H	Weight (Kg)
in		(mm)		
3	54	368	297	44
4	70	457	385	110
5	86	533	410	130
6	104	610	455	192
8	130	762	557	466
10	162	914	615	730
12	210	1041	715	1120
14	234	1118	790	1495
16	264	1245	815	1950
18	304	1397	815	2400

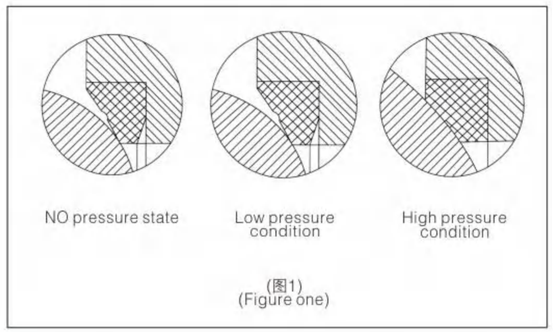
Ball Valve Series

Valve seat sealing structure

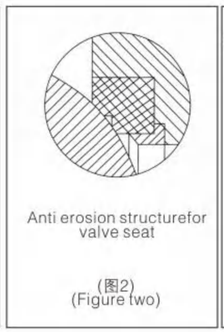
Floating ball valve with a special design of the double inclined elastic sealing ring , effectively reducing the friction between the ball and the sealing ring, reducing the operating torque. When the medium pressure is small, the sealing ring and ball contact area is small, so there is a greater pressure than the seal, to ensure reliable sealing. When the medium pressure is large, the contact area between the sealing ring and the sphere increases correspondingly. Therefore, the sealing ring can withstand greater thrust of the medium without damage, to ensure reliable sealing. (as shown in Figure I)

When the medium erosion force is larger, the special design of the valve seat erosion prevention structure can effectively prevent the medium erosion, ensure the sealing ring life. (Figure 2)

For the low pressure, ultra low pressure or vacuum conditions with the valve, not because of the pressure of the medium itself to ensure reliable sealing seat, and preload after long-term use will decay, the spring loaded valve seat specially designed to ensure that the valve sealing structure, reliable and long-term use. (as shown in Figure 3)

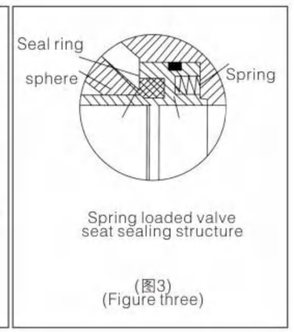


(图1)
(Figure one)



Anti erosion structurefor valve seat

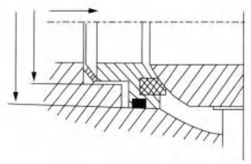
(图2)
(Figure two)



Spring loaded valve seat sealing structure

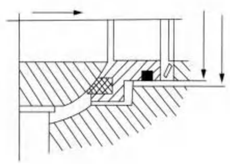
(图3)
(Figure three)

Fixed ball valve can be selected according to the size of the different forms of sealing: A, inlet seal B, outlet seal C, inlet and outlet end of the two-way seal (Figure 4)



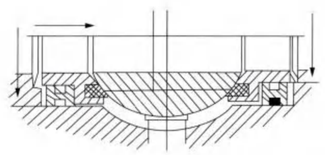
Inlet seal

Because of the difference of the d1.d area, the piston effect is formed under the pressure of the upstream medium Close contact with the ball and seal.



Outlet seal

Due to the poor area of the d.d1, in the valve body under the pressure of the medium to form a piston effect, so that the valve seat and the ball close contact and seal.



Fwo-way seal

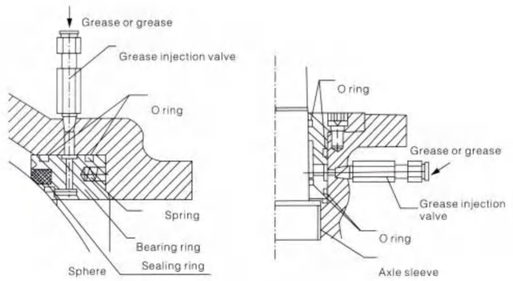
Due to the d1>d2>d3, D1 and D2, D2 and D3 between the area difference, in the upper reaches of the medium and the medium pressure effect of the formation of the piston effect, so that the valve seat and the ball close contact and seal

(Figure four)

Ball Valve Series

Auxiliary sealing structure

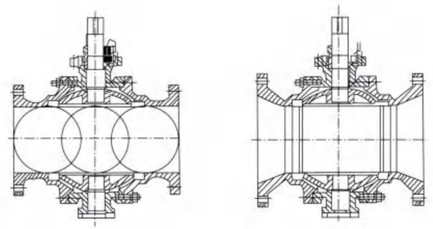
According to the needs of the user, the ball valve seat and valve stem seal parts, can be added grease injection valve. When the sealing parts due to abrasions caused by leakage, through the injection of grease into the grease seal, can play a role in the instantaneous seal. (Figure 5)



(Figure five)

Full bore and reduced bore structure

In order to meet the different needs of customers, with full size and reduced diameter ball valve two series. Consistent with the inner diameter of the inner diameter of pipeline passage full bore ball valve, can not only minimize the fluid resistance for pipeline cleaning. Shrink diameter ball valve fluid resistance than the same caliber as the valve fluid resistance is much lower, the weight ratio of ball valve with the same caliber is 30% lighter, reduce the production cost and price, which has gradually been widely used. (Figure 6)

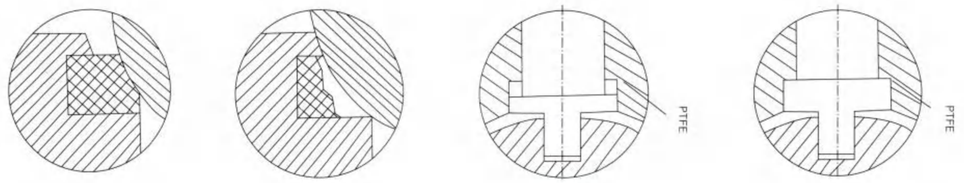


Full bore ball valve Reducing ball valve

(Figure six)

Fire safe structure

According to the needs of users, the ball valve can be designed into a fire-resistant structure. In case of a fire and the sealing ring is damaged, the ball valve can form various sealing parts of metal to metal seal structure, effectively prevent the medium diffus'on , prevent fire expansion . (figure 7)



Usual seal The burning of the soft seal seal Structure of valve stem reverse sealing Stem reverse sealing refractory structure

(figure Seven)

Ball Valve Series

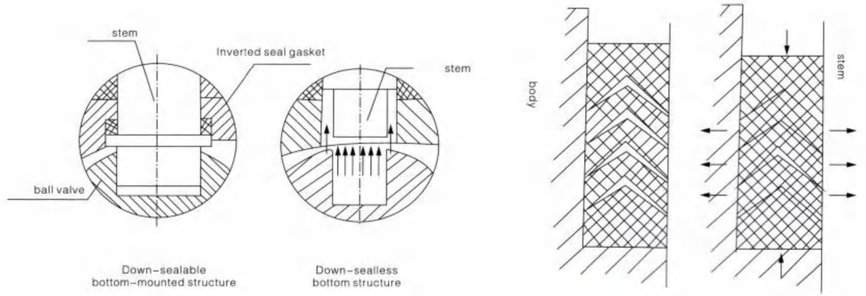
Performance specifcation

Design Basis		GB/T		API		ASME
Design Standard		GB/T 12237	GB/T19672	AP1608	AP16D	ASME B16.34
Face-to-Face		GB/T 12221	GB/T19672	ASME B16.10	AP16D	ASME B16.10
Connection End	Flanged	GB/T 9124		ASME B16.5/MSS SP-44/ASME B16.47[a]		
	Butt-Welding	GB/T12224		ASME B16.25		
Material		NACE MR0175				
Test and Inspection		GB/T 13927	GB/T 19672	API 598	API6D	ASME B16.34
Fire Test		JB/T 6899		API 6FA/API 607		
the dimension of welded end connection can be designed and manufactured according to the buyers's request.						

a.MSS SP-44 for size 22.
ASME B16.47 Series A for size 26 & over.

Valve stem breakout and effective sealstructure

The valve stem adopts an inverted sealing structure with a sealed gasket. The inverted seal knife increases with the pressure of the medium of the valve cavity, thus ensuring the sealing effect of the stem. When the valve cavity is abnormal raised, the stem will not be washed out. The packing is designed with reasonable V structure, which can effectively convert the medium pressure inside the valve cavity and the locking force of external gland to the sealing force of the stem. (for example , figure eight)

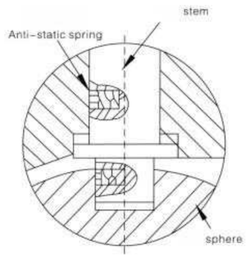


Down-sealable bottom-mounted structure Down-sealless bottom structure Before packing is not compacted After packing is pressed

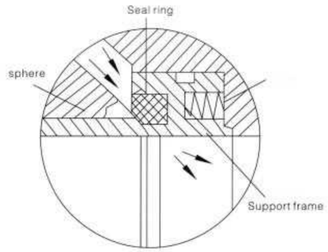
(figure eight)

The Main Structure, Function And Characteristics of The Ball Valve

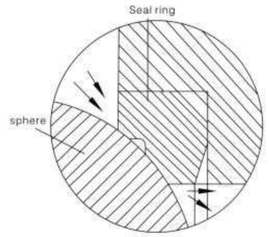
Antistatic structure



Anti static structure of ball valve



Automatic pressure relief structure of a fixed ball



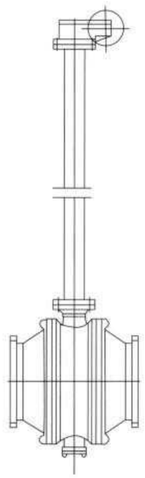
Automatic pressure relief structure of floating ball

Figure nine

Figure eleven

Buried structure

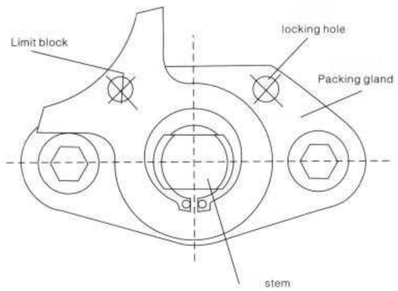
According to the needs of users, the ball valve can be designed as a valve stem extension structure, which is suitable for places where pipelines are buried and installed. (figure ten)



(Figure ten)

Automatic pressure reliefstructure

When the liquid medium which is retained in the valve cavity causes the pressure of the middle cavity to rise abnormally as the temperature rises, the medium can rely on its own thrust to push the valve seat back and automatically release the pressure to ensure the safety of the valve body. (for example, figure eleven)



(Figure twelve)

Prevention of misoperation

For the valve installed in the field or to prevent the misoperation of non workers, and in some large vibration situations, the handle is prone to misoperation. The lock holes are set in the position of the full opening or all off of the valve, and the safety insurance can be played when the valve is needed. (for example, figure twelve)

API Floating ball valve

Performance standard

Design specification	Face to face dimension	Connecting flange	Test and inspection	Product identification	Supply specification
API608 API6D	ANSI B16.10 API6D	ANSI B16.5	API598 API6D	MSS SP-25 API6D	API608 API6D

Performance specif cation

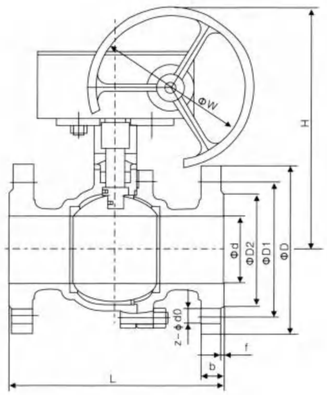
PN	150Lb	300Lb	400Lb	600Lb
Shell pressure	3.1	7.5	10.2	15.0
Sealing test (liquid)	2.2	5.5	7.48	11.0
Seal test (gas)	0.5~0.7			
Applicable medium	C Water,oil,steam		P Nitric acid	R Acetic acid
Applicable temperature	≤200℃			

Materials of main parts

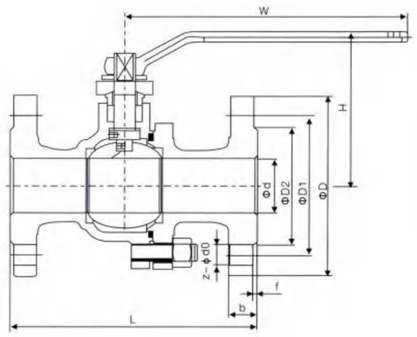
Part name		WCB Class	CF8 Class	CF3 Class	CF8M Class	CF3M Class
Body		A216-WCB	A315-CF8	A35-CF3	A315-CF8M	A35-CF3M
Ball valve	B2-B8	A105-1025	A182-F304L	A182-F304L	A132-F304	A182-F316L
	B8 above	A216-WGB	A351-CF8M	A351-CF3	A351-CF8M	A351-CF3M
Stem		A182-F6a	A182-F304	A182-F304L	A182-F336	A182-F316L
Seat		PTFE/PTFE/NYLIN				
Seat bearing ring		A105-1025	A182-F304	A182-F304L	A182-F316	A182-F316L
Spring		3yc-7/17-49H				
O-rings		NBR	Fluorine rubber			
Stud		A193-B7	A193-B8			
Nut		A194-2H	A194-8			

Q41/341/641/941F

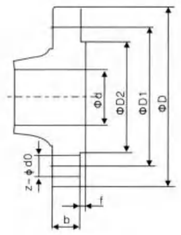
API Floating ball valve



Gear box



Hand wheel



600Lb~1500Lb
Flange

Main shape size and connection size

Size		Dimensions(mm)													Weight(kg)	
DN	NPS	L		d	D	D1	D2	b	f	Z-Φdo	W		H			
		RF	RTJ								Hand wheel	Gear bos	Hand wheel	Gear bos	Hand wheel	Gear bos
150Lb																
15	1/2	108	119	13	89	60.5	35	11.5	1.6	4-15	140	–	85	–	3	–
20	3/4	117	130	19	98	70	43	11.5	1.6	4-15	140	–	90	–	4	–
25	1	127	140	25	108	79.5	51	11.5	1.6	4-15	150	–	99	–	5	–
32	1 1/4	140	153	32	117	89	64	13	1.6	4-15	180	–	105	–	7	–
40	1 1/2	165	178	38	127	98.5	73	14.5	1.6	4-15	200	–	126	–	8	–
50	2	178	191	51	152	120.5	92	16	1.6	4-19	250	–	140	–	12	–
65	2 1/2	190	203	64	178	139.5	105	17.5	1.6	4-19	300	–	165	–	18	–
80	3	203	216	76	190	152.5	127	19.5	1.6	4-19	350	–	178	–	24	–
100	4	229	242	102	229	190.5	157	24	1.6	8-19	500	305	230	380	38	53
125	5	356	369	127	254	216	186	24	1.6	8-22	800	305	280	405	60	79
150	6	394	407	152	279	241.5	216	25.5	1.6	8-22	800	305	310	460	82	102
200	8	457	470	203	343	298.5	270	29	1.6	8-22	1000	305	350	550	145	185
250	10	533	546	254	406	362	324	31	1.6	12-25	–	400	–	706	–	280

Q41/341/641/941F

API Floating ball valve

Main shape size and connection size

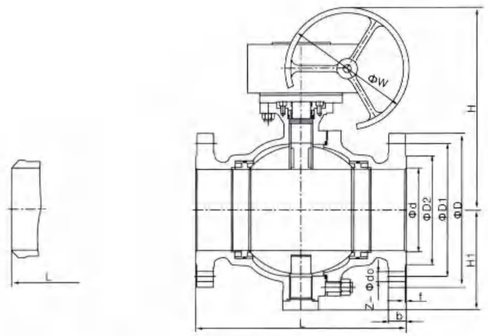
Size: mm

DN	NPS	Size(mm)													Weight(kg)	
		L		d	D	D1	D2	b	f	Z-Φdo	W		H			
		RF	RTJ								Hand wheel	Gear bos	Hand wheel	Gear bos	Hand wheel	Gear bos
300Lb																
15	1/2	140	151	13	95	66.5	35	14.5	1.6	4-16	140	140	85	85	3	–
20	3/4	152	165	19	115	82.5	43	16	1.6	4-19	140	140	90	90	5	–
25	1	165	178	25	125	89	51	17.5	1.6	4-19	150	150	99	99	6	–
32	1 1/4	178	191	32	135	98.5	64	19.5	1.6	4-19	180	180	105	105	8	–
40	1 1/2	190	203	38	155	114.5	73	21	1.6	4-23	200	200	126	126	11	–
50	2	216	232	51	165	127	92	22.5	1.6	8-19	250	250	142	142	16	–
65	2 1/2	241	257	64	190	149	105	25.5	1.6	8-23	300	300	165	165	24	–
80	3	283	299	76	210	168.5	127	29	1.6	8-23	350	350	178	178	34	52
100	4	305	321	102	255	200	157	32	1.6	8-23	500	500	230	230	56	76
125	5	381	397	127	280	235	186	35	1.6	8-23	800	800	280	280	86	124
150	6	403	419	152	320	270	216	37	1.6	12-23	800	800	310	310	125	163
200	8	419	435	203	380	330	270	41.5	1.6	12-26	1000	1000	350	350	222	267
600Lb																
15	1/2	165	164	13	95	66.5	35	14.5	6.4	4-16	140	–	79	–	5	–
20	3/4	190	190	19	115	82.5	43	16	6.4	4-19	140	–	83	–	7	–
25	1	216	216	25	125	89	51	17.5	6.4	4-19	200	–	114	–	9	–
32	1 1/4	229	229	32	135	98.5	64	21	6.4	4-19	200	–	120	–	13	–
40	1 1/2	241	241	38	155	114.5	73	22.5	6.4	4-22	250	–	125	–	17	–
50	2	292	295	51	165	127	92	25.5	6.4	8-19	300	–	156	–	25	–
65	2 1/2	330	333	64	190	149	105	29	6.4	8-22	350	–	172	–	42	–
80	3	356	359	76	210	168	127	32	6.4	8-22	500	305	220	370	56	76
100	4	432	435	102	275	216	157	38.5	6.4	8-25	650	305	250	400	85	123
900Lb																
15	1/2	216	216	13	120	82.5	35	22.5	6.4	4-23	150	–	98	–	9	–
20	3/4	229	229	19	130	88.9	43	25.5	6.4	4-23	150	–	105	–	13	–
25	1	254	254	25	150	101.6	51	29	6.4	4-26	200	–	110	–	16	–
32	1 1/4	279	279	32	160	111.1	64	29	6.4	4-26	250	–	120	–	24	–
40	1 1/2	305	305	38	180	123.8	73	32	6.4	4-29	250	–	125	–	31	–
50	2	368	371	49	215	165.1	92	38.5	6.4	8-26	350	–	160	–	45	–
1500Lb																
15	1/2	216	216	13	120	82.5	35	22.5	6.4	4-23	182	–	98	–	10	–
20	3/4	229	229	19	130	88.9	43	25.5	6.4	4-23	200	–	105	–	14	–
25	1	254	254	25	150	101.6	51	29	6.4	4-26	250	–	110	–	17	–
32	1 1/4	279	279	32	160	111.1	64	29	6.4	4-26	300	–	120	–	25	–
40	1 1/2	305	305	38	180	123.8	73	32	6.4	4-29	350	–	125	–	33	–
50	2	368	371	49	215	165.1	92	38.5	6.4	8-26	500	–	160	–	48	–

BALL VALVE SERIES

Q347/647/947F

API Trunion Mounted Ball Valve



Butt-welding ends　　Gear box　　600Lb~1500Lb Flange

Main shape size and connection size

Size: mm

DN	NPS	L		d	D	D1	D2	b	f	Z-Φdo	H	H1	W	Weight (kg)
		RF	BW											
150Lb														
100	4	229	305	102	230	190.5	157	24	1.6	8-19	330	135	300	60
125	5	356	381	127	255	216	186	24	1.6	8-23	360	165	300	80
150	6	394	457	152	280	241.5	216	25.5	1.6	8-23	392	193	300	101
200	8	457	521	203	345	298.5	270	29	1.6	8-23	492	240	300	166
250	10	533	559	254	405	362	324	31	1.6	12-26	548	293	300	283
300	12	610	635	305	485	432	381	32	1.6	12-26	688	340	400	463
350	14	686	762	337	535	476	413	35	1.6	12-29	722	372	400	622
400	16	762	838	387	595	540	470	37	1.6	16-29	722	415	400	900
450	18	864	914	438	635	578	533	40	1.6	16-32	804	462	500	1150
500	20	914	991	489	700	635	584	43	1.6	20-32	952	511	600	1360
600	24	1067	1143	591	815	749.5	692	48	1.6	20-35	1154	601	750	2514
650	26	1143	1245	633	785	744.5	711	40	1.6	36-22	1300	700	750	3200
700	28	1245	1346	684	835	795.5	762	43	1.6	40-22	1550	780	750	4000
750	30	1295	1397	735	885	846	813	43	1.6	44-22	1650	830	750	4800
800	32	1372	1524	779	940	900	864	44	1.6	48-22	1740	870	750	5800
900	36	1524	1727	874	1055	1009.5	972	51	1.6	44-26	1950	970	750	8000
300Lb														
100	4	305	305	102	255	200	157	32	1.6	8-23	340	140	300	70
125	5	381	381	127	280	235	186	35	1.6	8-23	370	170	300	95
150	6	403	457	152	320	270	216	37	1.6	12-23	402	192	300	128
200	8	502	521	203	380	330	270	41.5	1.6	12-26	498	246	300	234
250	10	568	559	254	445	387.5	324	48	1.6	16-29	655	303	400	403
300	12	648	635	305	520	451	381	51	1.6	16-32	658	348	400	602
350	14	762	762	337	585	514.5	413	54	1.6	20-32	686	378	400	803
400	16	838	838	387	650	571.5	470	58	1.6	20-35	880	429	600	1273
450	18	914	914	438	710	628.5	533	61	1.6	24-35	1050	518	750	1450
500	20	991	991	489	775	686	584	64	1.6	24-35	1110	540	750	1700
600	24	1143	1143	591	915	813	692	70	1.6	24-41	1400	650	750	3100
650	26	1245	1245	633	867	803.5	737	87	1.6	32-35	1500	750	750	4500
700	28	1346	1346	684	924	857	787	87	1.6	36-35	1600	800	750	6000
750	30	1397	1397	735	991	921	845	92	1.6	36-39	1720	860	750	7500
800	32	1524	1524	779	1054	978	902	102	1.6	32-42	1800	900	750	9000
900	36	1727	1727	874	1172	1089	1010	102	1.6	32-45	2200	1020	600	12000

Q347/647/947F

API Trunion Mounted Ball Valve

Main shape size and connection size

Size: mm

DN	NPS	Dimensions(mm) L			d	D	D1	D2	b	f	Z-Φdo	H	H1	W	Weight (kg)
		RF	RTJ	BW											
600Lb															
50	2	292	295	295	49	165	127	92	26	6.4	8-19	240	94	300	32
65	2 1/2	330	333	330	62	190	149	105	29	6.4	8-23	290	115	300	47
80	3	356	359	356	74	210	168	127	32	6.4	8-23	340	136	300	68
100	4	432	435	432	100	275	216	157	38	6.4	8-26	358	152	300	106
125	5	508	511	508	127	330	266.5	186	45	6.4	8-29	400	180	300	170
150	6	559	562	559	150	335	292	216	48	6.4	12-29	445	209	400	241
200	8	660	664	660	201	420	349	270	56	6.4	12-32	498	263	400	444
250	10	787	791	787	252	510	432	324	64	6.4	16-35	653	312	400	668
300	12	838	841	838	303	560	489	381	67	6.4	20-35	665	354	500	1050
350	14	889	892	889	334	605	527	413	70	6.4	20-38	738	389	600	1317
400	16	991	994	991	385	685	603	470	77	6.4	20-41	920	440	750	1800
450	18	1092	1095	1092	436	745	654	533	83	6.4	20-45	1100	530	750	2400
500	20	1194	1200	1194	487	815	724	584	89	6.4	24-45	1200	560	750	3000
600	24	1397	1407	1397	538	940	838	692	102	6.4	24-51	1480	670	750	5400
900Lb															
50	2	368	371	368	49	215	165.1	92	38.5	6.4	8-26	250	98	300	45
65	2 1/2	419	422	419	62	245	190.5	105	41.5	6.4	8-29	300	120	300	55
80	3	381	384	381	74	240	190.5	127	38.5	6.4	8-26	345	140	300	94
100	4	457	460	457	100	290	234.9	157	44.5	6.4	8-32	415	162	300	141
125	5	559	562	559	125	350	279.4	186	51	6.4	8-35	446	188	300	230
150	6	610	613	610	150	380	317.5	216	56	6.4	12-32	477	213	400	325
200	8	737	740	737	201	470	393.7	270	63.5	6.4	12-38	520	270	400	580
250	10	838	841	838	252	545	469.9	324	70	6.4	16-38	628	322	400	850
300	12	965	968	965	305	610	533.4	381	79.5	6.4	20-38	680	360	500	1330
350	14	1029	1038	1029	322	640	558.8	413	86	6.4	20-41	750	400	600	1660
400	16	1130	1140	1130	373	705	615.9	470	89	6.4	20-45	940	460	750	2280
1500Lb															
40	1 1/2	305	305	305	38	180	123.8	73	32	6.4	4-29	280	100	300	44
50	2	368	371	368	49	215	165.1	92	38.5	6.4	8-26	320	113	300	67
65	2 1/2	419	422	419	62	245	190.5	105	41.5	6.4	8-29	340	125	300	80
80	3	470	473	470	74	265	203.2	127	48	6.4	8-32	385	138	300	130
100	4	546	549	546	100	310	241.3	157	54	6.4	8-35	415	171	300	192
125	5	673	676	673	120	375	292.1	186	73.5	6.4	8-41	480	200	400	335
150	6	705	711	705	144	395	317.5	216	83	6.4	12-38	580	222	400	475
200	8	832	841	832	192	485	393.7	270	92	6.4	12-45	584	280	400	820
250	10	991	1000	991	239	585	482.6	324	108	6.4	12-51	650	340	500	1320
300	12	1130	1146	1130	287	675	571.5	381	124	6.4	16-54	700	370	600	2050
2500Lb															
40	1 1/2	384	387	384	38	205	146	73	44.5	6.4	4-32	290	105	300	72
50	2	451	454	451	42	235	171.4	92	51	6.4	8-29	320	120	300	104
65	2 1/2	508	514	508	52	265	196.8	105	57.5	6.4	8-32	350	130	300	140
80	3	578	584	578	62	305	228.6	127	67	6.4	8-35	400	150	300	202
100	4	673	683	673	87	355	273	157	76.5	6.4	8-41	425	180	400	305
125	5	794	807	794	100	420	323.8	186	92.5	6.4	8-48	500	210	400	530
150	6	914	927	914	131	485	368.3	216	108	6.4	8-54	590	230	500	760
200	8	1022	1038	1022	179	550	438.1	270	127	6.4	12-54	610	290	500	1200
250	10	1270	1292	1270	223	675	539.7	324	165.5	6.4	12-67	660	350	600	2080

Note: 1. RF is expressed in a prominent face flange, RJ is expressed in the ring flange.

2. For NPS is less than or equal to 24 of the valve, the flange is connected to the ASME B16.5 standard size table. According to user requirements, the flange can be GB/T9112-9124, HG2065-20626, SH3406 design and manufacturing.

3. For NPS is less than or equal to 26 of the valve, the table size of flange connection standard ASME B16.47 Series B, API605 standard and GB/T 13402 standard , according to the requirements of users, the flange size also can accoraing to ASME B16.47 standard a series and MSS sp-44 standard.

BALL VALVE SERIES

Q41/Q341/Q641/Q941F

Floating Ball Valve

Product features

Our company produces floating ball valve with a single inclined plane elastic sealing ring or V shaped groove elastic sealing ring structure design, when the medium pressure, sealing ring and the contact area is smaller, so there is a greater sealing pressure, to ensure reliable sealing, medium pressure, sealing ring and sphere contact area increases, so the sealing ring can withstand greater media thrust and will not damage. Because of the PTFE sealing ring material has good self lubrication, and the ball of the friction loss is small, so long life.

Performance standard

Design basis	GB Series	API Series	
Design standard	GB/T 12237	API6D	ANSI B16.34
Flange connection structure length	GB/T 12221	API6D	ANSI B16.10
Face to face dimension (welding)	GB/T 15188.1	API6D	ANSI B16.10
Connecting ffange	GB/T9113 JB/T79 HG20592	ANSI B16.5	
Butt welding ends	GB/T12224	ANIS B16.25	
Test and inspection	GB/T13927	API6D	API598

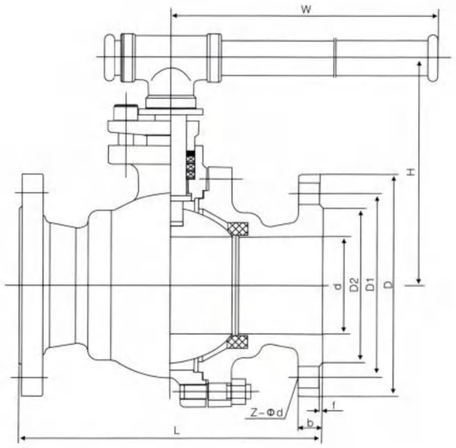
Performance specifcation

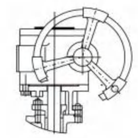
Pressure grade		PN(MPa)					Class(Lb)			
		1.6	2.5	4.0	6.4	100	150	300	400	600
Test pressure	Shell test	2.4	3.75	6.0	9.6	15.0	3.03	7.5	10.2	15.0
	Seal test	1.76	2.75	4.4	7.04	11.0	2.2	5.5	7.48	11.0
Applicable condition	Applicable medium	Pulp,slurry,dust and medium containing various solid particles								
	Applicable temperature	−196~≤550℃								

Part name	Material	
	GB	ASTM
Body	WCB	A216-WCB
Sealing ring	PTFE/PEEK	PTFE/PEEK
Ball	1Cr18Ni9Ti	SS304
Nut	35	A194-2H
Stud	35CrMoA	A193-B7
Right	WCB	A216-WCB
Shim	Flexible graphite+ stainless steel	B12.10-304/F.G
Packing	PTFE	PTFE
Packing gland	WCB	A216-WCB
Locating piece	25	A105
Ring	65Mn	AISI 1066
Handle	WCB	A216-WCB
Stem	2Cr13	A276-410
Screw	35	A193-B7
Thrust washer	PTFE	PTFE

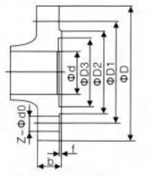
Q41/Q341/Q641/Q941F

Floating Ball Valve





Worm gear drive



PN40~PN100 flange

Main shape size and connection size

Size: mm

DN(mm)	PN1.6MPa												
	L	d	D	D1	D2	D3	b	f	Z-Φd0	W		H	
										Manual	Worm gear	Manual	Worm gear
15	130	15	95	65	45	–	14	2	4-14	140	–	85	–
20	140	20	105	75	55	–	14	2	4-14	140	–	90	–
25	150	25	115	85	65	–	14	2	4-14	160	–	99	–
32	165	32	135	100	78	–	16	2	4-18	180	–	105	–
40	180	40	145	110	85	–	16	3	4-18	235	–	126	–
50	200	50	160	125	100	–	16	3	4-18	250	–	140	–
65	220	65	180	145	120	–	18	3	4-18	285	–	165	–
80	250	80	195	160	135	–	20	3	8-18	320	–	178	–
100	280	100	215	180	155	–	20	3	8-18	350	–	230	380
125	320	125	245	210	185	–	22	3	8-18	800	–	280	405
150	360	150	280	240	210	–	24	3	8-23	1000	–	310	460
200	400	200	335	295	265	–	26	3	12-23	1200	–	350	550
250	457	250	405	355	320	–	30	3	12-25	1400	–	–	–

Q41/Q341/Q641/Q941F

Floating Ball Valve

Main shape size and connection size

DN(mm)	PN2.5MPa												
	L	d	D	D1	D2	D3	b	f	Z-Φd0	W		H	
										Manual	Worm gear	Manual	Worm gear
15	130	15	95	65	45	–	16	2	4-14	140	–	85	–
20	140	20	105	75	55	–	16	2	4-14	140	–	90	–
25	150	25	115	85	65	–	16	2	4-14	150	–	99	–
32	165	32	135	100	78	–	18	2	4-18	180	–	105	–
40	180	40	145	110	85	–	18	3	4-18	200	–	126	–
50	200	50	160	125	100	–	20	3	4-18	250	–	140	–
65	220	65	180	145	120	–	22	3	8-18	300	–	165	–
80	250	80	195	160	135	–	22	3	8-18	350	–	178	–
100	280	100	230	190	160	–	24	3	8-23	500	–	230	380
125	320	125	270	220	188	–	28	3	8-25	800	–	280	405
150	360	150	300	250	218	–	30	3	8-25	1000	–	310	460
200	400	200	360	310	278	–	34	3	12-25	1200	–	350	550
250	457	250	425	370	332	–	36	3	12-30	1400	–		
PN4.0MPa													
15	130	16	95	65	45	40	16	2	4-14	140	–	85	–
20	140	20	105	75	55	51	16	2	4-14	140	–	90	–
25	150	25	115	85	65	58	16	2	4-14	150	–	99	–
32	180	32	135	100	78	66	18	2	4-18	180	–	105	–
40	200	40	145	110	85	76	18	3	4-18	200	–	126	–
50	220	50	160	125	100	88	20	3	4-18	250	–	142	–
65	250	65	180	145	120	110	22	3	8-18	300	–	165	–
80	280	80	195	160	135	121	22	3	8-18	350	305	178	330
100	320	100	230	190	160	150	24	3	8-23	500	305	230	380
125	380	125	270	220	188	176	28	3	8-25	800	305	280	420
150	400	150	300	250	218	204	30	3	8-25	800	305	310	480
200	502	200	375	320	282	260	38	3	12-30	1000	400	350	560
PN6.4MPa													
15	140	15	105	75	55	40	18	2	4-14	140	–	79	–
20	152	20	125	90	68	51	20	2	4-18	140	–	83	–
25	165	25	135	100	78	58	22	2	4-18	200	–	114	–
32	200	32	150	110	82	66	24	2	4-23	200	–	120	–
40	220	40	165	125	95	76	24	3	4-23	250	–	125	–
50	250	58	175	135	105	88	26	3	4-23	300	–	156	–
65	280	65	200	160	130	110	28	3	8-23	350	–	172	–
80	320	80	210	170	140	121	30	3	8-23	500	305	220	390
100	360	100	250	200	168	150	32	3	8-25	650	305	250	440

Q47/Q647/Q947F

Trunnion Mounted Ball Valve

Product overview

The fixed ball valve is a new generation of high performance ball valves. It is suitable for long distance pipeline and general industrial pipeline. ItS strength, safety, and bad environment resistance are considered in the design. It is suitable for various corrosive and non corrosive medium. Compared with the floating ball valve, the force generated by the fluid pressure before the valve is all transferred to the bear'lng, and the ball will not move to the seat, so the seat will not bear the pressure, so the torque of the valve is small, the valve seat is small, the sealing performance is stable and the service life is long, suitable for high pressure and large size. Caliber occasions. The fixed ball valve has two block and three block type body structure. The middle flange is bolted with the bolt. The seal is inlaid with the reinforced PTFE into the stainless steel ring. The rear part of the steel ring is eq uipped with a spring to keep the seat close to the ball and keep the seal.

Performance standard

DN(mm)	Driving mode	Applicable temperature	Applicable medium
DN15-800mm 1/2"-32"	Manual, pneumatic, electric, hydraulic, etc	-196℃-350℃	Water, gas, oil, natural gas and acid and caustic media.

Performance standard

Design basis	GB Series	API Series	
Design standard	GB/T 12237	API6D	ANSI B16.34
Flange connection structure length	GB/T 12221	API6D	ANSI B16.10
Face to face dimension (welding)	GB/T 15188.1	API6D	ANSI B16.10
Connecting ffange	GB/T9124 JB/T79 HG20592	ANSI B16.5、B16.47	
Butt welding ends	GB/T12224	ANIS B16.25	
Test and inspection	GB/T13927	API6D	API598

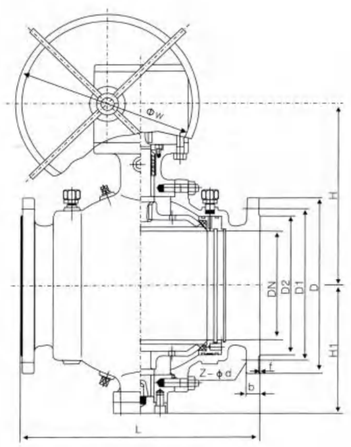
Performance standard

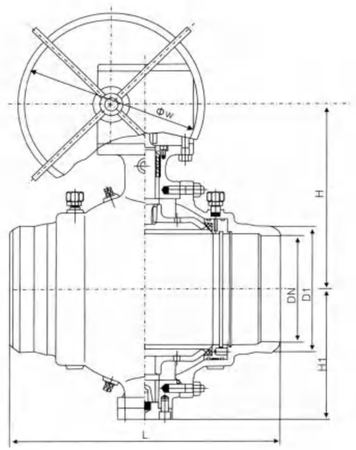
Pressure grade		Test pressure (MPa)	
PN(MPa)	Class(Lb)	Shell test	Seal test
1.0	–	1.5	1.1
1.6	–	2.5	1.76
2.5	–	3.8	2.75
4.0	–	60	4.4
6.4	–	96	7.04
–	150	3	2.2
–	300	7.6	5.6
–	600	16	11
–	10K	2.4	1.5
–	20K	5.8	4

Materials of main parts

Part name	Material	
	GB	ASTM
End cap	WCB	A216-WCB
Nut	35	A193-B7
Bottom cover	WCB	A216-WCB
Shim	PTFE Flexible graphite+SS	PTFE,B12.10-304/F.G
Screw	35CrMo	A194-2H
Lower stem	2Cr13	A276-410
O type ring	NBR	NBR
Shim	PTFE; Flexible graphite+SS	PTFE,B12.10-304/F.G
valve body	WCB	A216-WCB
Blowdown plug	25	A105
Spring	60Si2Mn	AISI 9260
Valve seat	25	A105
Seal ring	PTFE	PTFE
O type ring	NBR	NBR
Fat injection valve	Assembly	Assembly
Sphere	WCB+Har	WCB+HCr
The stem	2Cr13	A276-410
key	45	AISI C 1045
Shim	PTFE+SS	PTFE+304
O type ring	NBR	NBR
Packing box	25	A105
Screw	35CrMo	A194-2H
Stuffing pad	1Cr13	A276-410
Filler	PTFE Carbon fiber; flexible graphite	
Packing gland	WCB	A216-WCB
Bracket	Q235A	Carbon steel
Connection sleeve	45	AISI C 1045

Q47/Q647/Q947F
Trunnion Mounted Ball Valve





Main shape size and connection size

Size: mm

DN(mm)	PN1.6MPa										
	L	d1	D	D1	D2	b	f	Z-Φd0	W	H	
									Manual	347 Type	647 Type
15	140	15	95	65	45	14	2	4-14	130	–	–
20	152	20	105	75	55	14		4-14	170	–	–
25	165	25	115	85	65	14		4-14	170	–	–
32	178	32	135	100	78	16		4-18	200	–	–
40	190	40	145	110	85	16	3	4-18	25	–	–
50	220	50	160	125	100	16		4-18	25	–	–
65	241	65	180	145	120	18		4-18	350	–	–
80	283	80	195	160	135	20		8-18	350	–	–
100	305	100	215	180	155	20		8-18	420	–	–
125	381	125	245	210	185	22		8-18	700	–	542
150	394	150	280	240	210	24		8-23	100	305	672
200	457	200	335	295	265	26		12-23	1300	398	736
250	533	250	405	355	320	30		12-25	1800	495	890
300	610	300	460	410	375	30	4	12-25	–	580	910
350	686	350	520	470	435	34		16-25	–	625	1020
400	762	400	580	525	485	36		16-30	–	720	1080
450	864	450	640	585	545	40		20-30	–	770	1120
500	914	500	705	650	608	44		20-34	–	840	1150
600	1067	600	840	770	718	48	5	20-41	–	920	1230
700	1245	700	910	840	788	50		24-41	–	990	1310

Q47/Q647/Q947F
Trunnion Mounted Ball Valve

Main shape size and connection size

单位(Size): mm

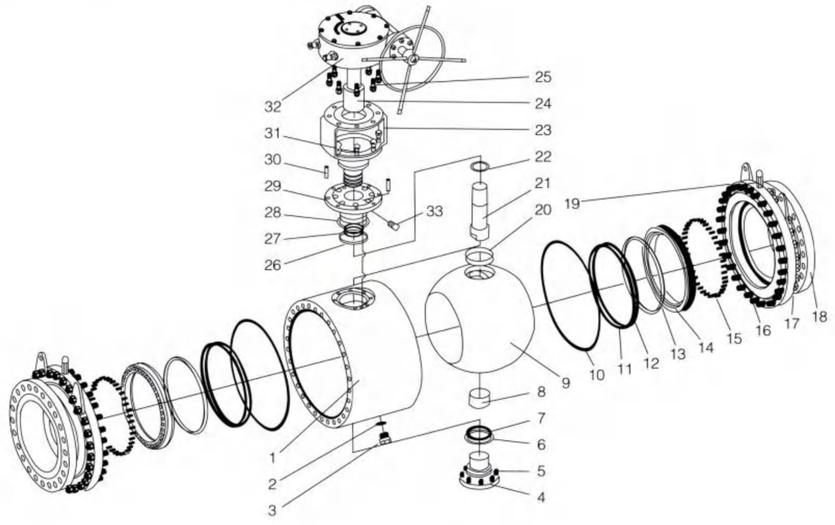
DN(mm)	PN2.5MPa										
	L	d1	D	D1	D2	b	f	Z-Φd0	W	H	
									Manual	347 Type	647 Type
15	152	15	95	65	45	16	2	4-14	130	–	–
20	165	20	105	75	55	16		4-14	170	–	–
25	178	25	115	85	65	16		4-14	170	–	–
32	190	32	135	100	78	18		4-18	200	–	–
40	220	40	145	110	85	18	3	4-18	250	–	–
50	241	50	160	125	100	20		4-18	250	–	–
65	283	65	180	145	120	22		8-18	350	–	–
80	305	80	195	160	135	22		8-18	350	–	–
100	381	100	230	190	160	24		8-23	420	–	418
125	403	125	270	220	188	28		8-25	720	–	542
150	502	150	300	250	218	30		8-25	1000	305	572
200	568	200	360	310	278	34		12-25	1300	398	736
250	648	250	425	370	332	36		12-30	1800	495	890
300	762	300	485	430	390	40		16-30	–	580	910
350	838	350	550	490	448	44	4	16-34	–	625	1020
400	914	400	610	550	505	48		16-34	–	720	1080
450	991	450	660	600	555	50		20-34	–	770	1120
500	1143	500	730	660	610	52		20-41	–	840	1150
600	1346	600	840	770	718	56	5	20-41	–	920	1230
700		700	955	875	815	60		24-48	–	990	1310

DN(mm)	PN4.0MPa									W	H	
	L	d1	D	D1	D2	D6	b	f/f1	Z-Φd0			
										Manual	347 Type	647 Type
15	140	15	95	65	45	40	16	2/4	4-14	130	–	–
20	152	20	105	75	55	51	16		4-14	170	–	–
25	165	25	115	85	65	58	16		4-14	170	–	–
32	178	32	135	100	78	66	18		4-18	200	–	–
40	190	40	145	110	85	76	18	3/4	4-18	250	–	–
50	220	50	160	125	100	88	20		4-18	250	–	–
65	241	65	180	145	120	110	22		8-18	350	–	–
80	283	80	195	160	135	121	22		8-18	350	–	–
100	305	100	230	190	160	150	24	3/4.5	8-23	420	–	479
125	381	125	270	220	188	176	28		8-25	700	–	646
150	403	150	300	250	218	204	30		8-25	1000	305	666
200	502	200	375	320	282	260	38		12-30	1300	398	814
250	568	250	445	385	345	313	42		12-34	–	495	890
300	648	300	510	450	408	364	46	4/4.5	16-34	–	580	910
350	782	350	570	510	465	422	52		16-34	–	625	1020
400	838	400	655	585	535	474	58	4/5	16-41	–	720	1080
450	914	450	680	610	560	524	60		20-41	–	770	1120
500	991	500	755	670	612	576	62		20-48	–	840	1150
600	1143	600	890	795	730	678	62	5/6	20-54	–	920	1230
700	1346	700	995	900	835	768	68		24-54	–	990	1310
PN6.4MPa												
15	165	15	105	75	55	40	18	2/4	4-14	170	–	–
20	149	20	125	90	68	51	20		4-18	200	–	–
25	216	25	135	100	78	58	22		4-18	200	–	–
32	229	32	150	110	82	66	24		4-23	250	–	–
40	241	40	165	125	95	76	24	3/4	4-23	350	–	–
50	292	50	175	135	105	88	26		4-23	350	–	360
65	330	65	200	160	130	110	28		8-23	420	–	379
80	356	80	210	170	140	121	30		8-23	420	–	452
100	432	100	250	200	168	150	32	3/4.5	8-25	700	–	479
125	508	125	295	240	202	176	36		8-30	1000	340	646
150	559	150	340	280	240	204	38		8-34	1300	435	666
200	660	200	405	345	300	260	44		12-34	–	530	736
250	787	250	470	400	352	313	48		12-41	–	515	790
300	838	300	530	460	412	364	54	4/4.5	16-41	–	680	870
350	889	350	595	525	475	422	60	4/5	16-41	–	720	1020
400	991	400	670	585	525	474	66		16-48	–	640	1080
500	1054	500	800	705	640	576	70		20-54	–	925	1200
600	1232	600	930	820	750	678	76	5/6	20-58	–	980	1295

BALL VALVE SERIES

QD47F/QD647/Q9D47F

Fixed Forging Steel Ball Valve



Materials of main parts

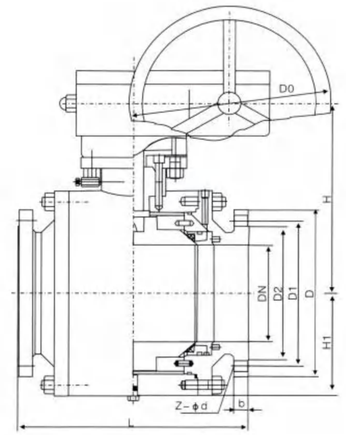
NO.	Part name	Material		
		Carbon steel	SS	Low temperature steel
1	body	ASTM A105	A182 F304	A350 LF2
2	Shim	Flexible graphite +SS wire		
3	Discharge valve	ASTM A105	A182 F304	A350 LF2
4	Bottom cover	ASTM A105	A182 F304	A350 LF2
5	Stud	A193 B7	A193 B8	A320 L7
6	Shim	Flexible graphite +SS wire		
7	O type ring	Fluorine rubber		
8	Under the bushes	PTFE+CS	PTFE+SS	PTFE+SS
9	Sphere	ASTM A105+ENP	A182 F304	A182 F304
10	Medium flange gasket	Flexible graphite +SS wire		
11	O type ring	Fluorine rubber		
12	Fire protection ring	Fluorine rubber		
13	Seal ring	PTFE、NYLON、PEEK、MOLON、PCTFE		
14	Seat	ASTM A105+ENP	A182 F304	A182 F304
15	Spring	INCONEL X-750		
16	Stud	A193 B7	A193 B8	A320 L7
17	Nut	A194 2H	A194 8	A194 7

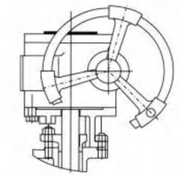
NO.	Part name	Material		
		carbon steel	SS	Low temperature steel
18	Cap	ASTM A105	A182 F304	A350 LF2
19	Filling valve	ASTM A105	A182 F304	A350 LF2
20	Upper bushing	PTFE+CS	PTFE+SS	PTFE+SS
21	Stem	A182 F6a	A182 F304	A182 F304
22	Bushing	PTFE+CS	PTFE+SS	PTFE+SS
23	Bracket	A216 WCB		
24	Connection sleeve	ANSI 1025		
25	Bolt	A193 B7		
26	O type ring	Fluorine rubber		
27	O type ring	Fluorine rubber		
28	Shim	Flexible graphite +SS wire		
29	Upper seat	ASTM A105	A182 F304	A350 LF2
30	Positioning pin	A182 F6a		
31	Bolt	A193 B7		
32	Worm gear and worm gear	–		
33	Valve stem injecting valve	1025+Hzn	SS316/SS304	SS304

Note:1、Choose different sealing ring materials according to the temperature and pressure of industrial and mining medlum
2、in addition to the materials listed in the table, materials can be selected according to user requirements

QD47F/QD647/Q9D47F

Fixed Forging Steel Ball Valve





Worm gear drive

Main shape size and connection size

Size: mm

DN(mm)	L	D	D1	D2	b	Z-Φd	H	H1	D0
PN1.6MPa									
50	200	160	125	100	16	4-18	160	85	–
65	191	180	145	120	18	4-18	170	95	–
80	203	195	160	135	20	8-18	200	110	–
100	229	215	180	155	20	8-18	210	120	–
125	356	245	210	185	22	8-18	350	215	–
150	394	280	240	210	24	8-23	530	190	–
200	457	335	295	265	26	12-23	575	230	600
250	533	405	355	320	30	12-25	585	260	600
300	610	460	410	375	30	12-25	730	300	600
350	686	520	470	435	34	16-25	860	350	800
400	762	580	525	485	36	16-30	935	395	800
450	864	640	585	545	40	20-30	975	440	800
500	914	705	650	608	44	20-34	1060	485	800
600	1067	840	770	718	48	20-41	1170	591	800
700	1245	910	840	788	50	24-41	1270	686	800

BALL VALVE SERIES

QD47F/QD647/Q9D47F

Fixed Forging Steel Ball Valve

Main shape size and connection size

Size: mm

DN(mm)	L	D	D1	D2	b	Z-Φd	H	H1	D0
PN2.5MPa									
50	216	160	125	100	20	4-18	160	85	-
65	241	180	145	120	22	8-18	170	95	-
80	283	195	160	135	22	8-18	200	110	-
100	305	230	190	160	24	8-23	210	120	-
125	381	270	220	188	28	8-25	350	215	-
150	403	300	250	218	30	8-25	530	190	-
200	502	360	310	278	34	12-25	575	230	600
250	568	425	370	332	36	12-30	585	260	600
300	648	485	430	390	40	16-30	730	300	600
350	762	550	490	448	44	16-34	860	350	800
400	838	610	550	505	48	16-34	935	395	800
450	914	660	600	555	50	20-34	975	440	800
500	991	730	660	610	52	20-41	1060	485	800
600	1143	840	770	718	56	20-41	1170	591	800
700	1346	955	875	815	60	24-48	1270	686	800
PN4.0MPa									
50	216	160	125	100	20	4-18	160	85	-
65	241	180	145	120	22	8-18	170	95	-
80	283	195	160	135	22	8-18	200	110	-
100	305	230	190	160	24	8-23	210	120	-
125	381	270	220	188	28	8-25	350	215	-
150	403	300	250	218	30	8-25	530	190	-
200	502	375	320	282	38	12-30	575	230	600
250	568	445	385	345	42	12-34	585	260	600
300	648	510	450	408	46	16-34	730	300	600
350	762	570	510	465	52	16-34	860	350	800
400	838	655	585	535	58	16-41	935	395	800
450	914	680	610	560	60	20-41	975	440	800
500	991	755	670	612	62	20-48	1060	485	800
600	1143	890	795	730	62	20-54	1170	591	800
700	1346	995	900	835	68	24-54	1270	686	800
PN6.4MPa									
50	292	175	135	105	88	4-23	160	85	-
65	330	200	160	130	110	8-23	170	95	-
80	356	210	170	140	121	8-23	200	110	-
100	432	250	200	168	150	8-25	210	120	-
125	508	295	240	202	176	8-30	350	215	600
150	559	340	280	240	204	8-34	530	190	600
200	660	405	345	300	260	12-34	575	230	600
250	787	470	400	352	313	12-41	585	260	800
300	838	530	460	412	364	16-41	730	300	800
350	889	595	525	475	422	16-41	860	350	800
400	991	670	585	525	474	16-48	935	395	800
450	1092	670	630	570	524	20-48	975	440	800
500	1194	800	705	640	576	20-54	1060	485	800
600	1397	930	820	750	678	20-58	1170	591	800

Full Welded Ball Valve

Product features

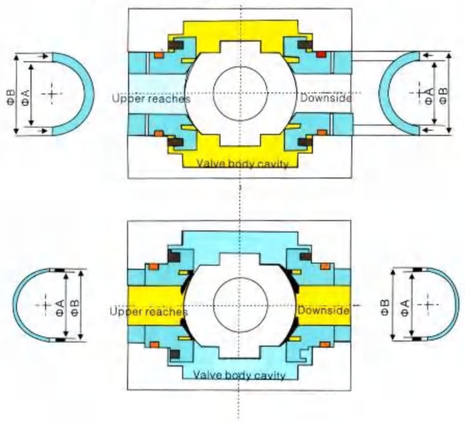
The advanced spherical valve body and longitudinal single weld combination structure design, provide the valve sufficient stiffness and strength, effectively overcome the stress of the construction and terrain changes, the advanced technology of PE steel plastic conversion, the standard pipe directly set on the valve, convenient for the user construction; highly adjustable operating extension rod, It is a more reliable and Safe product for gas transmission and distribution of PE pipelines, which is suitable for different buried depth conditions.

Product features

Nominal path	DN50-1500
Nominal pressure	PN6-420
Use of temperatur	-29~80℃(ordinary temperature)
Applicable medium	Natural gas,iquefied gas,oil products
Multiple connection forms	Flange-Welded pipe

>Full path structure
>Reliable seal
>Double intercepting and pressure relief (DBB)
>Double isolation and pressure relief (DIB-1,DIB-2)
>API607 fire prevention design
>Barrel shaped forging steel body
>Special structure valve seat
>Valve stem compound seal
>On-line replacement of seals
>Lengthening stem, discharge, release, and fat injection
>Low operating torque
>Cooperate with the cathodic protection of the pipeline and strengthen the antisepsis
>Steel plastic conversion
>Valve stem independent sealing seat
>Highly adjustable operation extension rod
>Pipe discharge

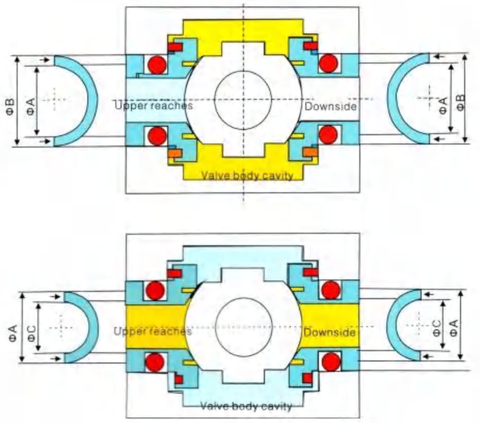
Standard structure
Single piston effect (self pressure relief valve seat)



Performance standard

Design standards	AP16D、GB/T 19672、GB/T12237
Face to face dimension	AP16D、ASME B16.10、GB/T12221
Connecting flange	ASME B16.5、ASME B16.47、GB/T9113、JB/T79、HG/T20592
Welding connec Don standard	ASME B16.25、GB/T12234
Fire protection standard	API 607
Inspection and test	API 6D、API 598、GB/T13927、GB/T26480

Double piston effect of optional structure



Technical characteristics

Double current and pressure relief (DBB) – General Purpose

The upper and lower parts-are combinations of single piston structural seats. Each valve seat can isolate the pipe from the valve chamber, that is to achieve two-way seal. The higher the pressure on both sides of the valve,the greater the sealing force. When the pressure inside the valve cavity exceeds the relief-value, every valve seat can be released. The valve seat is pushed away from the sphere when the medium pressure of the medium is more than the sum of the spring pretension and the medium pressure. The high pressure cavity to the valve in the fully open or fully closed position,are automatically released.