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球阀系列

Ball Valve Series



永嘉祺顺流体设备有限公司
Yongjia Transcend Flow Control Co., Ltd



生产装备 Production Equipment

以雄厚的技术力量、精良的设备、完善的工艺不断为顾客提供优质产品。

THE ABUNDANT TECHNICAL FORCE,EXCELLENT EQUIPMENT AND PERFECT TECHNOLOGY PROVIDE CUSTOMERS WITH QUALITY PRODUCTS CONSTANTLY.



采用高精度工艺，利用全面推行计算机辅助制造，确保质量、工效。应用数字技术进行直接对话式编程，实施钻、削、铣、磨等工艺对关键部件进行机械加工，确保极限精度。

High accuracy technology,carries out CAM roundly, and ensures the quality and work efficiency. It applies the digital technology to carry out the direct dialogue type programming, applies the techniques of bore, cutting, mill, abrade,etc.,Carries out the machining for each parts of valves, and ensures the limit precision.



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美标球阀特点/Characteristics of API ball valve

- ① 产品的设计，制造符合美国国家标准ANSI B16.34，美国石油学会标准API 608、API 6D要求。
 ② 所有阀门流体阻力最小。
 ③ 开闭速度快只旋90° 即可完成开关。
 ④ 阀座材料采用聚四氟乙烯或增强聚四氟乙烯、磨擦系数小密封可靠启闭轻松。
 ⑤ 球体在阀座之间的运动带有擦拭作用，故可适用带悬浮颗粒的介质。
 ⑥ 阀杆带有上密封，并采用倒装式结构，可防止在介质压力作用下阀杆冲击。
 ⑦ 根据用户需要可设有防静电，耐火和防止误操作的锁定机构。
 ⑧ 根据开闭力的需要球体可浮动球或固定球，固定球球阀其阀座浮动的，依靠介质压力在阀座上产生的活塞效应实现密封，减轻了开闭力。
- ① Design and manufacture of product according to American state standard ANSI B16.34, American petroleum institute standard API 608 API 6D requir.
 ② Liquid resistance smallest.
 ③ Speed of open valve only turn on 90 degree may finish open and close.
 ④ Seat material use teflon or R-teflon low friction seal logical open and close light.
 ⑤ To ward of ball on the middle of tow seat has wipe function so may suitable medium for suspend granule.
 ⑥ Stem use back seal and hyper static structure which may prevent medium to striking on the condition of pressure.
 ⑦ According to need of consumer may design locked organ anti-static、fire-safeguard prevent wrong operator.
 ⑧ Body of ball has float and running on ball accordance which need of strength for opening and closing、seat of running on ball valve is float and depend on piston seifice on the seat realize seal ease strength of open and close .

标准STD(防火、防静电、Fire-droo、electricity protect)

球阀类型 Ball valve Type	设计与制造 Design And Manufacture	结构长度 Face to face / End to end	法兰尺寸 Flange Dimension	压力-温度 Pressure Temperature Lating	试验-检验 Inspection and test
浮动式法兰球阀 Split flang ball valve 固定式法兰球阀 fixed flinge ball valve 三瓣球阀 上装式球阀 偏心球阀	BS 5351 API 6D API 608	ANSI B16.10 API6D	ANSI B16.5a ANSI B16.47	ANSI B16.34	API 598 API 6D

压力试验/Pressure test

公称压力 PN(Mpa)	强度试验 Shell Test		水密封试验 Water Seal Test		气密封试验 Air Seal Test	
	MPa	Lbf/in ²	MPa	Lbf/in ²	MPa	Lbf/in ²
150	3.0	300	2.2	16.5	0.5~0.7	60~100
300	7.5	450	5.5	300		
600	15.00	900	11.0	660		

主要材料 Main material

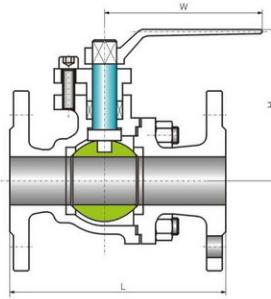
壳体材料	内件材料	密封材料	垫片、填料
WCB,LCB,CF8,CF8M	410,420,304,316,321	PTFE,RPTFE,PEEK,PPG	柔性石墨, PTFE,PPL

备注：1. 若选用PPL阀座，适用温度不超过300°C，代号 “F” 变为 “Fs”。例如：Q41Fs。
 2. 要求防火结构，设计标准参照API 607。
 3. 要求设计为防静电结构。

Note: 1. If choose the PPL valve base , the suitable temperature is not over 300°C, the code F turns into Fs . For example : Q41Fs.
 2. Requiring the fire-proof structure , the design standard refers to API 607 .
 3. Requiring the design is static electricity proof structure .

铸钢浮动球阀材质/Cast Floating Ball Valve

3 H
Q 641F型 PN1.6~10.0
9 Y



主要技术规范

- 设计制造按 GB12237-89, API608, API6D, SB5351
- 结构长度按 GB12221-89, ANSI B16.10, API6D
- 连接法兰: JB79-94, ANSI 16.5
- 阀门检查和试验按 API STD.598 API598, API6D, GB/T9092

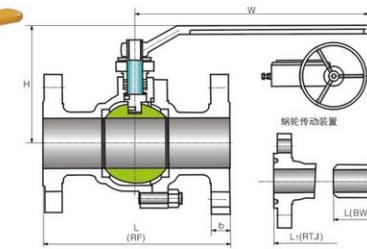
- Design manufacture according to GB12237-89, API608, API6D, SB5351
- Face to face according to GB12221-89, ANSI B16.10, API6D
- End flange dimension according to JB79-94, ANSI 16.5
- Valve check and test according to API STD.598 API598, API6D, GB/T9092

主要零件材料 Main parts and materials

序号 No.	零件名称 Parts name	材料牌号 Standard				序号 No.	零件名称 Parts name	材料牌号 Standard			
		碳钢 Carbon steel		不锈钢 Stainless steel				碳钢 Carbon steel		不锈钢 Stainless steel	
		GB	ASTM	GB	ASTM			GB	ASTM	GB	ASTM
01	阀体 Body	WCB	A216-WCB	ZG1Cr18Ni9Ti ZG1Cr18Ni12Mo2Ti	CF8/CF8M/ CF3/CF3M	10	密封圈 gasket	PTFE			
02	阀盖 Bonnet	WCB	A216-WCB	ZG1Cr18Ni9Ti ZG1Cr18Ni12Mo2Ti	CF8/CF8M/ CF3/CF3M	11	阀杆 Stem	2Cr13	A276-420	1Cr18Ni9Ti 1Cr18Ni12Mo2Ti	F304/F316/ F304L/F316L
03	双头螺栓 Sutd	35CrMoA	A193-B7	1Cr17Ni2	A193-B8M	12	中道垫片 Wafer metal and graphite	PTFE			
04	螺母 Nut	45	A194-2H	0Cr18Ni	A194-B8M	13	填料 packing	石墨 Graphite		PTFE	
05	垫圈 Gasket	金属夹石墨 Wafer metal and graphite				14	填料压环 Stuffing ring	2Cr13	A276-420	1Cr18Ni9Ti 1Cr18Ni12Mo2Ti	F304/F316/ F304L/F316L
06	球体 Ball	2Cr13渗氮 A276-420渗氮	1Cr18Ni9Ti 1Cr18Ni12Mo2Ti	F304/F316 渗氮	F304L/F316L 渗氮	15	填料压盖 Gland	WCB	A216-WCB	ZG1Cr18Ni9Ti ZG1Cr18Ni12Mo2Ti	CF8/CF8M/ CF3/CF3M
07	阀座 Seat	2Cr13渗氮 A276-420渗氮	1Cr18Ni9Ti 1Cr18Ni12Mo2Ti	F304/F316 渗氮	F304L/F316L 渗氮	16	螺钉 Screw nail	35CrMoA	A193-B7	1Cr17Ni2	A193-B8M
08	阀座支承圈 Seat retainer	2Cr13	A276-420	1Cr18Ni9Ti 1Cr18Ni12Mo2Ti	F304/F316/ F304L/F316L	17	定位板 Locating piece	Q235	1025	1Cr18Ni9Ti	304
09	阀座弹簧 Seat spring	17-7PH	17-7PH	17-7PH	17-7PH						

铸钢浮动球阀/Cast Full-welded Underground Ball Valves

3 H
Q 641F型 150Lb~600Lb
9 Y



主要外形尺寸 Main outline size

ANSI Class 150													
尺寸 Dimension	inch DN	1/2"	3/4"	1"	1-1/2"	2"	2-1/2"	3"	4"	5"	6"	8"	10"
		15	20	25	40	50	65	80	100	125	150	200	250
L mm		108	117	127	165	178	190	203	229	256	394	457	533
		59	63	75	97	107	142	152	178	252	272	342	345
W mm		130	130	160	230	230	400	400	700	1100	1100	1500	1500
		ANSI Class 300											
尺寸 Dimension	inch DN	1/2"	3/4"	1"	1-1/2"	2"	2-1/2"	3"	4"	5"	6"	8"	10"
		15	20	25	40	50	65	80	100	125	150	200	1250
L mm		140	152	165	190	216	241	283	305	381	403	502	568
		59	63	75	97	107	142	152	178	252	272	342	345
W mm		130	130	160	230	230	400	400	700	1100	1100	1500	1500
ANSI Class 600													
尺寸 Dimension	inch DN	1/2"	3/4"	1"	1-1/2"	2"	2-1/2"	3"	4"	5"	6"	8"	10"
		15	20	25	40	50	65	80	100	125	150	200	250
L mm		165	190	216	241	292	330	356	432	508	559	660	787
		59	63	75	97	107	142	152	178	252	-	-	-
W mm		160	160	230	400	700	700	700	1100	1100	-	-	-

PN1.6MPa 主要外形尺寸 Main connection dimensions

公称通径DN	15	20	25	32	40	50	65	80	100	125	150	200
L	130	140	150	165	180	200	220	250	280	320	360	400
H	59	63	75	85	95	107	142	152	178	252	272	342
W	130	130	160	180	230	230	400	400	650	1050	1050	1410

PN2.5MPa 主要外形尺寸 Main connection dimensions

公称通径DN	15	20	25	32	40	50	65	80	100	125	150	200
L	130	140	150	165	180	200	220	250	320	400	400	550
H	59	63	75	97	107	142	152	178	252	272	342	345
W	130	130	160	230	230	400	400	700	1100	1100	1500	1500

PN4.0MPa 主要外形尺寸 Main connection dimensions

公称通径DN	15	20	25	32	40	50	65	80	100	125	150	200
L	130	140	150	180	200	220	250	280	320	400	400	550
H	59	63	75	97	107	142	152	178	252	272	342	345
W	130	130	160	230	230	400	400	700	1100	1100	1500	1500

PN6.4MPa 主要外形尺寸 Main connection dimensions

公称通径DN	15	20	25	32	40	50	65	80	100	125	150	200
L	165	190	216	229	241	292	330	356	432	508	559	660
H	59	63	75	97	107	142	152	178	252	272	305	398
W	130	130	160	230	230	400	400	700	1000	1100	1500	1800

PN10.0MPa 主要外形尺寸 Main connection dimensions

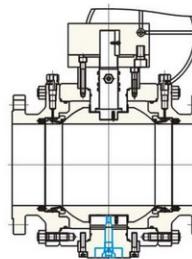
公称通径DN	15	20	25	32	40	50	65	80	100	125	150	200
L	165	190	216	229	241	292	330	356	432	508	559	660
H	59	63	75	97	107	142	152	178	252	272	305	398
W	130	130	160	230	230	400	400	700	1000	1100	1500	1800

固定球阀结构与特点/ Features Of Fixed Ball Valve

结构/功能/特点 Construction/ Function/ Features

一、全通径设计

按照客户的要求可以提供全通径或缩径阀门，全通径阀门具有与管子内径完全一致的通道直径，减少涡流便于清扫管道。



三、阻塞与排泄功能

固定球阀采用弹簧预紧，阀底密封为双活塞，利用活塞原理密封，上下游侧的阀底使流体阻断，阀体中腔放空阀排空，阀底装有排污阀排污，便于管道清洗。

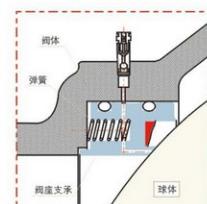


五、自动泄压

阀门中腔停滞的介质由于温度升高而出现异常升压时，阀底出口端具有自动泄压功能，同时根据需要，阀体上可装安全阀，保证阀体具有自动泄压功能，确保管道安全。

Five、Automatic relief

When the medium in the middle cavity unusually raises pressure for the rising of temperature, outlet of seat has automatic relief function. At the same time, according to the demands, the safety valve can be installed on the body to ensure the automatic relief function of body, so that the pipe can be safe.

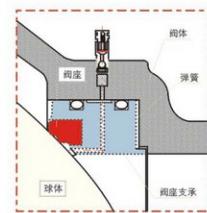


二、防火结构

万一发生火灾或异常升温使PTFE软化烧损时，阀底支撑圈防火密封面可以和球体接触，起到密封作用且符合API607和API6FA规范要求。

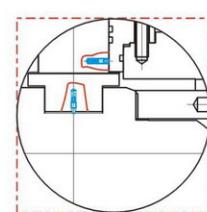
Four、紧急急救

由于介质中的杂质或火灾造成阀底密封意外失效，注脂枪提供了与注脂枪的快速连接，方便快捷地将密封脂注入到阀底密封部位，缓解泄漏。



六、防静电设计

采用铬镍不锈钢的弹簧和小球使球体、阀杆和阀体之间相互导电，从而把静电完全释放。



Six、Anti-static design

Chrome and nickel stainless steel spring and small ball are adopted to make electroconductive among ball, stem and body to completely release static.

七、操作的可靠性

大口径球阀的相对连动部(阀座和阀杆轴承)由于采用了低摩擦系数小的特氟龙，因而操作扭矩小，此外，由于密封润滑脂的长期润滑，使得操作更加灵活。

Seven、Operational Reliability

For large ball valve, the TFE is adopted for seat and stem bearing, the relative movement at bearing portion requires less operational torque force because of less friction of the TFE, in addition, the long time lubrication of the sealants makes the operation more effective.

八、阀座结构

阀座的结构有两种：单密封和双密封结构，一般具有自动泄压机能的是单密封，双密封则由阀体上附加的安全泄压。

Eight、Seat design

There are two kinds of seat design, single seal and double seal. The former normally has self relief function, the latter relieves the pressure through the safety valve on the body.

九、阀杆加长

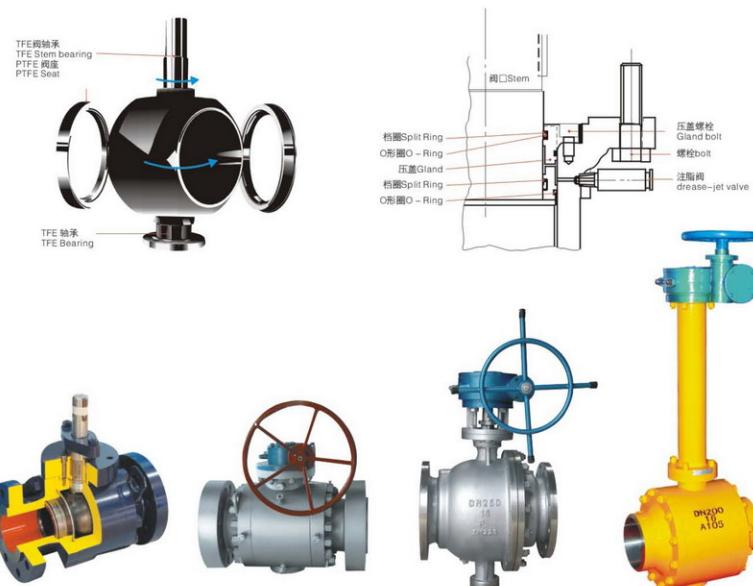
填料压盖部密封如图所示采用了四个O型圈和密封注脂装置。

Nine、Extended Stem

The extended stem is designed for underground and low temperature service. The length of stem depends on the service requirement. The operation methods include manual/pneumatic/hydraulic etc.

Ten、阀杆压盖部密封

填料压盖部密封如图所示采用了四个O型圈和密封注脂装置。



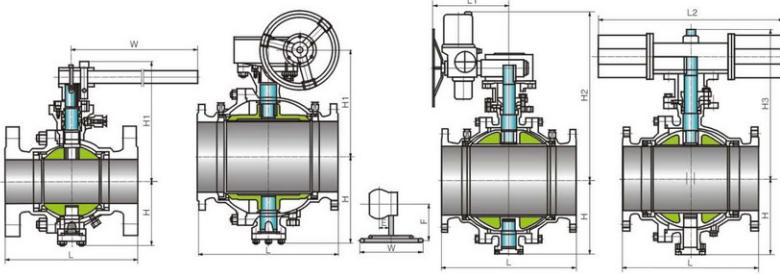
固定球阀材质/Trunnion-mounted Ball Valve Material



主要零件材料 Main parts and materials

序号 No.	零件名称 Parts name	材料牌号 Standard				序号 No.	材料牌号 Standard					
		碳钢 Carbon steel		不锈钢 Stainless steel			碳钢 Carbon steel		不锈钢 Stainless steel			
		GB	ASTM	GB	ASTM		GB	ASTM	GB	ASTM		
01	底盖 Lower cover	35	A105	1Cr18Ni9Ti	F304/F316/ F304L/F316L	18	上阀杆 Stem	2Cr13	A276-420	1Cr18Ni9Ti 1Cr18Ni12Mo2Ti	F304/F316/ F304L/F316L	
02	底盖螺栓 Lower cover screw nail	25CrMoA	A193-B7	1Cr17Ni2	A193-B8M	19	上阀杆轴承 Stem bearing	金属夹 PTFE	金属夹 PTFE	金属夹 PTFE	金属夹 PTFE	
03	垫圈 Gasket	氟橡胶O型圈: PTFE; 金属夹石墨: Wafer metal and graphite				20	止推轴承 Thrust bearing	PTFE	PTFE	PTFE	PTFE	
04	止推轴承 Thrust bearing	金属夹PTFE				21	阀座 Seat	石墨 graphite	石墨 graphite	PTFE	PTFE	
05	下阀杆 Lower stem	2Cr13	A276-420	1Cr18Ni9Ti 1Cr18Ni12Mo2Ti	F304/F316/ F304L/F316L	22	填料O形圈 Packing O-ring	氟橡胶Viton	氟橡胶Viton	氟橡胶Viton	氟橡胶Viton	
06	下阀杆轴承 Lower stem bearing	氟橡胶O型圈: PTFE; 金属夹石墨: Wafer metal and graphite				23	阀杆填料函 Stem Packing Box	25铬 A105镀铬	1Cr18Ni9Ti 1Cr18Ni12Mo2Ti	F304/F316/ F304L/F316L	氟橡胶Viton 金属夹石墨: Wafer metal and graphite	
07	筒体 Body	WCB	A316-WCB	ZG1Cr18Ni9Ti ZG1Cr18Ni12Mo2Ti	CF8/CF8M/ CF3/CF3M	24	垫圈 Gasket	氟橡胶Viton: PTFE; 金属夹石墨: Wafer metal and graphite				
08	螺母 Nut	45	A194-2H	0Cr18Ni	A194-8M	25	阀杆填料 Stem packing	石墨 Graphite				
09	双头螺柱 Sulit	35CrMoA	A193-B7	1Cr17Ni2	A193-B8M	26	双头螺柱 Sulit	35CrMoA	A193-B7	1Cr17Ni2	A193-B8M	
10	垫圈 Gasket	金属夹石墨: Wafer metal and graphite, PTFE				27	螺钉 Screw nail	35CrMoA	A193-B7	1Cr17Ni2	A193-B8M	
11	筒盖 Bonnet	WCB	A316-WCB	ZG1Cr18Ni9Ti ZG1Cr18Ni12Mo2Ti	CF8/CF8M/ CF3/CF3M	28	填料压盖 Gland	WCB	A216-WCB	ZG1Cr18Ni9Ti ZG1Cr18Ni12Mo2Ti	CF8/CF8M/ CF3/CF3M	
12	阀座O型圈 Seat O-ring	氟橡胶Viton 氟橡胶Viton				29	螺母 Nut	45	A194-2H	0Cr18Ni	A194-8M	
13	阀座弹簧 Seat retainer	17~7PH	17~7PH	17~7PH	17~7PH	30	支架 Yoke	WCB	WCB	WCB	WCB	
14	密封圈 gasket	PTFE/PPL	PTFE/PPL	PTFE/PPL	PTFE/PPL	31	键 Key	40Cr	40Cr	1Cr17Ni2	1Cr17Ni2	
15	阀座支撑圈 Seat retainer	25铬 A105镀铬	1Cr18Ni9Ti 1Cr18Ni12Mo2Ti	F304/F316/ F304L/F316L	32	垫圈 Gasket	氟橡胶Viton: PTFE; 金属夹石墨: Wafer metal and graphite				氟橡胶Viton: PTFE; 金属夹石墨: Wafer metal and graphite	
16	球体 Ball	1Cr18Ni9	304	1Cr18Ni9Ti 1Cr18Ni12Mo2Ti	F304/F316/ F304L/F316L	33	排污塞 Drain plug	2Cr13	A276-420	1Cr18Ni9Ti 1Cr18Ni12Mo2Ti	F304/F316/ F304L/F316L	
17	球体键 Ball key	40Cr	40Cr	1Cr17Ni2	1Cr17Ni2							

Q 3
6 47 F 型 PN1.6~10.0
9 Y



主要技术规范

- 设计、制造按 GB/T12237
- 结构长度按 GB/T12221
- 连接法兰 JB/T91.1~79.4 GB/T9113.1~9113.4
- 阀门检查和试验按 GB/T13927

- Design manufacture according to GB/T12237
- Face to face according to GB/T12221
- Flange dimension according to JB/T91.1~79.4 GB/T9113.1~9113.4
- Valve check and test according to GB/T13927

PN1.6MPa 主要外形尺寸 Main outline size

公称通径 DN	25	32	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600	700	
d1	25	32	40	50	65	80	100	125	150	200	250	300	337	387	438	489	591	686	
L	165	180	190	216	241	283	305	356	394	457	533	610	686	762	864	914	1067	1245	
H	50	55	80	102	114	127	152	184	219	273	360	395	430	470	550	580	700	800	
手动 Manual operated	H1	75	85	95	107	125	152	178	300	330	398	495	580	625	670	698	840	1050	1100
E	-	-	-	-	-	-	-	-	-	116	116	171	171	257	257	257	150	83	
F	-	-	-	-	-	-	-	-	-	350	350	400	420	400	420	400	410	650	
W	160	160	230	230	400	400	650	1050	1050	600	600	800	800	800	800	800	800	800	
电动 Electric operated	H2	-	-	-	-	-	-	-	-	554	600	652	760	770	830	-	940	940	1115
L1	-	-	-	-	-	-	-	-	-	235	235	235	259	400	400	-	410	410	410
气动 Pneumatic operated	H3	215	240	264	274	379	389	479	552	666	736	926	1059	1127	1393	1468	1538	1538	1450
L2	200	270	270	270	405	405	576	576	776	776	776	1060	1060	1360	1360	1360	1360	2840	

PN2.5MPa 主要外形尺寸 Main outline size

公称通径 DN	25	32	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600	700	
d1	25	32	40	50	65	80	100	125	150	200	250	300	337	387	438	489	591	686	
L	165	180	190	216	241	283	305	381	403	502	568	648	762	838	914	991	1143	1346	
H	50	55	80	102	114	127	152	184	219	273	360	395	430	470	550	580	700	800	
手动 Manual operated	H1	75	85	95	107	125	152	178	300	330	398	495	580	625	670	698	840	1050	1100
E	-	-	-	-	-	-	-	-	-	116	116	171	171	257	257	257	150	83	
F	-	-	-	-	-	-	-	-	-	350	350	400	420	400	420	400	410	650	
W	160	160	230	230	400	400	650	1050	1050	600	600	800	800	800	800	800	800	800	
电动 Electric operated	H2	-	-	-	-	-	-	-	-	235	235	235	259	400	400	-	420	690	690
L1	-	-	-	-	-	-	-	-	-	74	350	350	420	420	400	-	400	410	650
气动 Pneumatic operated	H3	215	240	264	274	379	389	479	552	666	736	926	1059	1127	1393	1468	1538	1538	1450
L2	200	270	270	270	405	405	576	576	776	776	776	1060	1060	1360	1360	1360	1360	2840	

国标铸钢固定球阀/Trunnion-mounted Ball Valve

PN4.0MPa 主要外形尺寸及重量 Main connection dimensions and weights

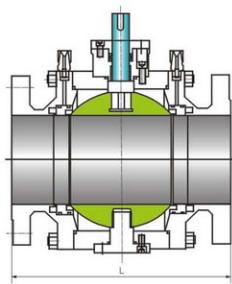
公称通径 DN	25	32	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600	700	
d1	25	32	40	50	65	80	100	125	150	200	250	300	337	387	438	489	591	686	
L	165	180	190	216	241	283	305	381	403	502	568	648	762	838	914	991	1143	1346	
H	50	55	80	102	114	127	152	184	219	273	360	395	430	470	550	580	700	800	
手动 Hand-operated	H1	75	85	95	107	125	152	178	300	330	398	495	580	625	670	698	840	1050	1100
E	-	-	-	-	-	-	-	-	-	116	116	171	171	257	257	257	150	83	
F	-	-	-	-	-	-	-	-	-	350	350	400	420	400	420	400	410	650	
W	160	160	230	230	400	400	650	1050	1050	600	600	800	800	800	800	800	800	800	
电动 Electricactuated	H2	-	-	-	-	-	-	-	-	235	235	235	259	400	400	-	410	420	690
L1	-	-	-	-	-	-	-	-	-	74	350	350	420	420	400	-	400	410	650
Airoperating	H3	215	240	264	274	379	389	479	552	666	736	926	1059	1127	1393	1468	1538	1538	1450
L2	200	270	270	270	405	405	574	574	756	756	1060	1060	1360	1360	2840	2840	3300	3300	

PN10.0MPa 主要外形尺寸及重量 Main connection dimensions and weights

公称通径 DN	50	65	80	100	125	150	200	250	300	350	400	500	600	700	
d1	50	65	80	100	125	150	200	250	300	337	387	489	591	686	
L	292	330	356	406	495	597	673	762	826	902	991	1143	1346	1549	
H	114	124	133	159	250	294	395	445	500	530	660	800	900	900	
手动 Hand-operated	H1	108	155	197	235	300	374	445	512	550	615	810	1010	1180	
E	-	-	-	-	-	116	116	171	171	257	257	150	83	123	
F	-	-	-	-	-	350	350	400	420	400	400	410	650	735	
W	600	600	600	600	600	800	800	800	800	800	800	800	800	800	
电动 Electricactuated	H2	-	-	-	-	554	574	731	771	867	805	979	1085	1148	
L1	-	-	-	-	-	235	235	400	400	410	410	420	690	690	
Airoperating	H3	340	-	-	-	479	666	895	1002	1059	1160	1250	1320	1470	1520
L2	405	-	-	-	-	576	756	1060	1060	1360	1360	2840	2840	3300	3300

锻钢固定式球阀材质/Forged Steel Ball Valve

Q 647 F
9 Y

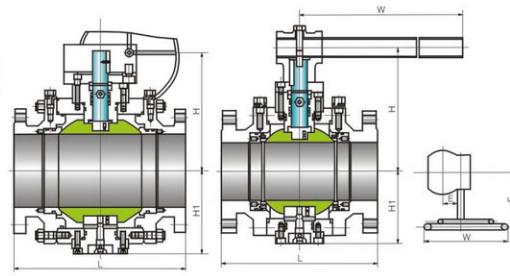


主要零件材料 Main parts and materials

序号 No.	零件名称 Parts name	材料牌号 Standard				序号 No.	材料牌号 standard				
		碳钢 Carbon steel		不锈钢 Stainless steel			碳钢 Carbon steel		不锈钢 Stainless steel		
		GB	ASTM	GB	ASTM		GB	ASTM	GB	ASTM	
01	内六角螺钉	25	A105	1Cr18Ni9Ti 1Cr18Ni2Mo2Ti	F304F316/ F304LF316L	16	球体 Ball	25镀镍磷 A105镀镍磷	1Cr18Ni9Ti 1Cr18Ni2Mo2Ti	304F316/ 304LF316L	
02	固定轴螺钉 fixed haum bolt	35CrMoA	A193-B7	1Cr17Ni2	A193-B8M	17	阀杆 Stem	2Cr13	A276-420	1Cr18Ni9Ti 1Cr18Ni2Mo2Ti	F304F316/ F304LF316L
03	排污塞 Drain plug	2Cr13	A276-420	1Cr18Ni9Ti 1Cr18Ni2Mo2Ti	F304F316/ F304LF316L	18	上阀杆轴承 Stem bearing	金属夹PTFE Metal backed PTFE	金属夹PTFE Metal backed PTFE	金属夹PTFE Metal backed PTFE	金属夹PTFE Metal backed PTFE
04	垫圈 Gasket	氟橡胶; PTFE; 金属夹石墨 VITON; PTFE; metal backed graphite				19	止推轴承 Thrust bearing	PTFE	PTFE	PTFE	PTFE
05	O型圈 O-ring	氟橡胶 VITON	氟橡胶 VITON	氟橡胶 VITON	氟橡胶 VITON	20	压盖 Gland	25	A105	1Cr18Ni9Ti 1Cr18Ni2Mo2Ti	F304F316/ F304LF316L
06	阀体 Body	25	A105	1Cr18Ni9Ti 1Cr18Ni2Mo2Ti	F304F316/ F304LF316L	21	压盖O形圈 Gland "O" ring	氟橡胶 VITON	氟橡胶 VITON	氟橡胶 VITON	氟橡胶 VITON
07	螺母 Nut	45	A194-2H	0Cr18Ni	A194-8M	22	垫圈 Gasket	氟橡胶; PTFE; 金属夹石墨 VITON; PTFE; metal backed graphite			
08	双头螺柱 Stud	35CrMoA	A193-B7	1Cr17Ni2	A193-B8M	23	注脂阀	25镀铬 plating	A105镀铬 plating	1Cr18Ni9Ti 1Cr18Ni2Mo2Ti	F304F316/ F304LF316L
09	阀盖 Body cap	25	A105	1Cr18Ni9Ti 1Cr18Ni2Mo2Ti	F304F316/ F304LF316L	24	阀杆O形圈 Stem "O" ring	氟橡胶 VITON	氟橡胶 VITON	氟橡胶 VITON	氟橡胶 VITON
10	垫圈 Gasket	氟橡胶; PTFE; 金属夹石墨 VITON; PTFE; metal backed graphite				25	垫圈 Gasket	35CrMoA	A193-B7	1Cr17Ni2	A193-B8M
11	固定轴轴承 Fixed shaft bearing	金属夹PTFE Metal backed PTFE	金属夹PTFE Metal backed PTFE	金属夹PTFE Metal backed PTFE	金属夹PTFE Metal backed PTFE	26	阀杆填料 Stem packing	石墨 GRAPHITE			
12	阀座O形圈 Seat "O" ring	氟橡胶 VITON	氟橡胶 VITON	氟橡胶 VITON	氟橡胶 VITON	27	填料压环 Packing ring	25	A105	1Cr18Ni9Ti 1Cr18Ni2Mo2Ti	F304F316/ F304LF316L
13	弹簧 Spring	17-7PH	17-7PH	17-7PH	17-7PH	28	连接板 Connect set	25	A105	1Cr18Ni9Ti 1Cr18Ni2Mo2Ti	F304F316/ F304LF316L
14	阀座 Seat	PTFE+PPL	PTFE+PPL	PTFE+PPL	PTFE+PPL	29	销 Pin	40Cr	40Cr	1Cr17Ni2	1Cr17Ni2
15	阀座支承圆 Seat retainer	25锻铬 25HRc	A105锻铬 A109HRc	1Cr18Ni9Ti 1Cr18Ni2Mo2Ti	F304F316/ F304LF316L	30	键 Key	40Cr	40Cr	1Cr17Ni2	1Cr17Ni2

美标锻钢固定球阀/Forged Trunnion-mounted Ball Valve

Q 647 H
9 Y



主要技术规范 Main technical specifications

- 设计、制造按 API 6D
- 结构长度按 ANSI B16.10。
- 连接法兰 ANSI B16.5 MSS-SP44
- 阀门检查和试验按 API STD.598
- Design manufacture according to API 6D
- Face to face according to ANSI B16.10.
- Flange dimension according to ANSI B16.5 MSS-SP44
- Valve check and test according to API STD.598

Class150主要外形尺寸 Main connection dimensions

公称通径 Nominal diameter	NPS	2"	3"	4"	6"	8"	10"	12"	14"	16"	18"	20"
	DN	50	80	100	150	200	250	300	350	400	450	500
L	d1	51	76	102	152	203	254	305	337	387	438	489
	RF	178	203	229	394	457	533	610	686	762	864	914
	BW	216	283	305	457	521	559	635	762	838	914	991
H1	100	110	130	175	210	274	305	340	395	440	470	
H	165	90	200	270	300	380	420	450	530	560	605	
W	400	700	850	600	600	800	800	800	800	800	800	
E				116	116	116	171	171	257	257	257	
F				350	350	350	420	420	500	500	500	

Class300主要外形尺寸 Main connection dimensions

公称通径 Nominal diameter	NPS	2"	3"	4"	6"	8"	10"	12"	14"	16"	18"	20"
	DN	50	80	100	150	200	250	300	350	400	450	500
L	d1	51	76	102	152	203	254	305	337	387	438	489
	RF	216	283	305	403	502	568	648	762	838	914	991
	BW	216	283	305	457	521	559	635	762	838	914	991
H1	100	110	130	175	210	274	305	340	395	440	470	
H	165	190	200	270	300	380	420	450	530	560	605	
W	400	700	850	600	600	800	800	800	800	800	800	
E				116	116	116	171	171	257	257	257	
F				350	350	350	420	420	500	500	500	

美标锻钢固定球阀/API Forged Trunnion-mounted Ball Valve

Class400主要外形尺寸 Main connection dimensions

公称通径	NPS	2"	3"	4"	6"	8"	10"	12"	14"	16"	18"	20"
	DN	50	80	100	150	200	250	300	350	400	450	500
L	d1	51	76	102	152	203	254	305	337	387	438	489
	RF&BW	292	356	406	495	597	673	762	826	902	978	1054
	RTJ	295	359	410	498	600	676	765	829	905	981	1060
H1		110	120	140	185	220	270	310	345	410	440	480
H		180	200	210	290	320	380	430	450	550	580	630
W		400	700	850	600	600	600	800	800	800	800	800
E					116	116	116	171	171	257	257	257
F					350	350	350	420	420	500	500	500

Class600主要外形尺寸 Main connection dimensions

公称通径	NPS	2"	3"	4"	6"	8"	10"	12"	14"	16"	18"	20"
	DN	50	80	100	150	200	250	300	350	400	450	500
L	d1	51	76	102	152	203	254	305	337	387	438	489
	RF & BW	292	356	432	559	660	787	838	889	991	1092	1194
	RTJ	295	359	435	562	664	791	841	892	994	1095	1200
H1		110	120	140	185	220	270	310	345	410	440	480
H		180	200	210	290	320	380	430	450	550	580	630
W		400	850	1000	600	600	800	800	800	800	800	800
E		-	-	-	116	116	171	171	171	150	83	123
F		-	-	-	350	350	500	420	420	580	650	735

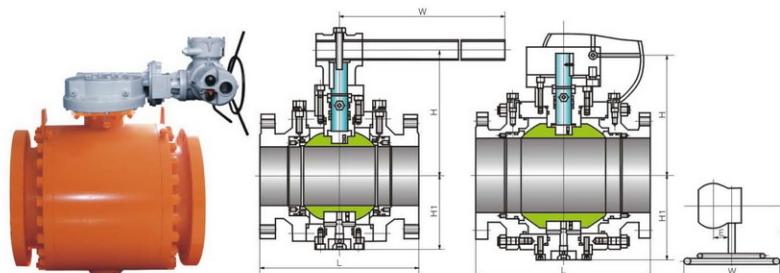
Class900主要外形尺寸 Main connection dimensions

公称通径	NPS	2"	3"	4"	6"	8"	10"	12"	14"	16"	18"	20"
	DN	50	80	100	150	200	250	300	350	400	450	500
L	d1	51	76	102	152	203	254	305	324	375	425	473
	RF&BW	368	381	457	610	737	838	965	1029	1130	1219	1321
	RTJ	371	384	460	613	740	841	968	1038	1140	1232	1334
H1		135	158	190	200	250	285	350	400	480	530	580
H		190	200	230	300	375	420	460	530	600	640	700
W		600	600	600	600	800	800	800	800	800	800	800
E		116	116	116	171	171	83	83	123	123	180	180
F		350	350	350	420	420	650	650	735	735	735	735

Class1500主要外形尺寸 Main connection dimensions

公称通径	NPS	2"	3"	4"	6"	8"	10"	12"	14"	16"	18"	20"
	DN	50	80	100	150	200	250	300	350	400	450	500
L	d1	51	76	102	146	194	241	289	318	362	440	
	RF&BW	368	470	546	705	832	991	1130	1257	1384	1664	
	RTJ	371	473	549	711	841	1000	1146	1276	1407	1686	
H1		140	160	200	210	260	300	365	420	500	500	600
H		200	220	250	320	400	450	490	560	640	790	
W		600	600	600	600	800	800	800	800	800	800	800
E		116	116	171	171	83	83	123	123	180	220	
F		350	350	420	420	650	735	735	735	735	735	

国标锻钢固定球阀/GB Forged Steel Ball Valve



主要技术规范

- 设计、制造按 GB12237-89
- 结构长度按 GB12221-89
- 连接法兰按 JB79-94
- 阀门检查和试验按 GB13927-89

- Design manufacture according to GB12237-89
- Face to face according to GB12221-89
- End flange dimension according to JB79-94
- Valve check and test according to GB13927-89

PN1.6MPa主要外形尺寸 Main connection dimensions

公称通径DN	50	80	100	150	200	250	300	350	400	450	500	
L	RF	216	283	305	394	457	533	610	686	762	864	914
	BW	216	283	305	457	521	559	635	762	838	914	991
H1		100	110	130	175	210	274	305	340	395	440	470
H		165	190	200	270	300	380	420	450	530	560	605
W		400	700	850	600	600	800	800	800	800	800	800
E					116	116	116	171	171	257	257	257
F					350	350	350	420	420	500	500	500

PN2.5MPa主要外形尺寸 Main connection dimensions

公称通径DN	50	80	100	150	200	250	300	350	400	450	500	
L	RF	216	283	305	403	502	568	648	762	838	914	991
	BW	216	283	305	457	521	559	635	762	838	914	991
H1		100	110	130	175	210	274	305	340	395	440	470
H		165	190	200	270	300	380	420	450	530	560	605
W		400	700	850	600	600	800	800	800	800	800	800
E					116	116	116	171	171	257	257	257
F					350	350	350	420	420	500	500	500

PN4.0MPa主要外形尺寸 Main connection dimensions

公称通径DN	50	80	100	150	200	250	300	350	400	450	500	
L	RF	216	283	305	403	502	568	648	762	838	914	991
	BW	216	283	305	457	521	559	635	762	838	914	991
H1		100	110	130	175	210	274	305	340	395	440	470
H		165	190	200	270	300	380	420	450	530	560	605
W		400	700	850	600	600	800	800	800	800	800	800
E					116	116	116	171	171	257	257	257
F					350	350	350	420	420	500	500	500

国标锻钢固定球阀/GB Forged Steel Ball Valve

PN6.4MPa主要外形尺寸 Main connection dimensions

公称通径DN	50	80	100	150	200	250	300	350	400	450	500	
L	RF	292	356	406	495	597	673	762	826	902	978	1054
	BW	292	356	406	495	597	673	762	826	902	978	1054
H1	110	120	140	185	220	270	310	345	410	440	480	
H	180	200	210	290	320	380	430	450	550	580	630	
W	400	700	850	600	600	800	800	800	800	800	800	
E				116	116	116	171	171	257	257	257	
F				350	350	350	420	420	500	500	500	

PN10.0MPa主要外形尺寸 Main connection dimensions

公称通径DN	50	80	100	150	200	250	300	350	400	450	500	
L	FR	292	356	432	559	660	787	838	889	991	1092	1194
	BW	295	359	435	562	664	791	841	892	994	1095	1200
	RTJ	292	356	432	559	660	787	838	889	991	1092	1194
H1	110	120	140	185	220	270	310	345	410	440	480	
H	180	200	210	290	320	380	430	450	550	580	630	
W	400	850	1000	600	600	800	800	800	800	800	800	
E	-	-	-	116	116	171	171	171	150	83	123	
F	-	-	-	350	350	500	420	420	580	650	735	

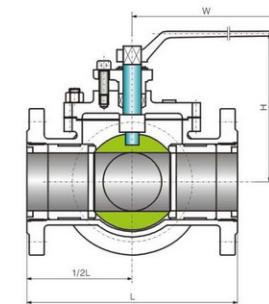
PN16.0MPa主要外形尺寸 Main connection dimensions

公称通径DN	50	80	100	150	200	250	300	350	400	450	500	
L	RF&BW	368	381	457	610	737	838	965	1029	1130	1219	1334
	RTJ	371	384	460	613	740	841	968	1038	1140	1219	1334
H1	135	158	190	200	250	285	350	400	480	530	580	
H	190	200	230	300	375	420	460	530	600	640	700	
W	600	600	600	600	800	800	800	800	800	800	800	
E	116	116	116	171	171	83	83	123	123	180	180	
F	350	350	350	420	420	650	650	735	735	735	735	

PN25.0MPa主要外形尺寸 Main connection dimensions

公称通径DN	50	80	100	150	200	256	300	
L	RF&BW	368	470	546	705	832	991	1130
	RTJ	371	473	549	711	841	1000	1146
H1	140	160	200	210	260	300	365	
H	200	220	250	320	400	450	490	
W	600	600	600	600	800	800	800	
E	116	116	171	171	83	83	123	
F	350	350	420	420	650	650	735	

三通四密封球阀材质/Three Way Type Ball Valve Material

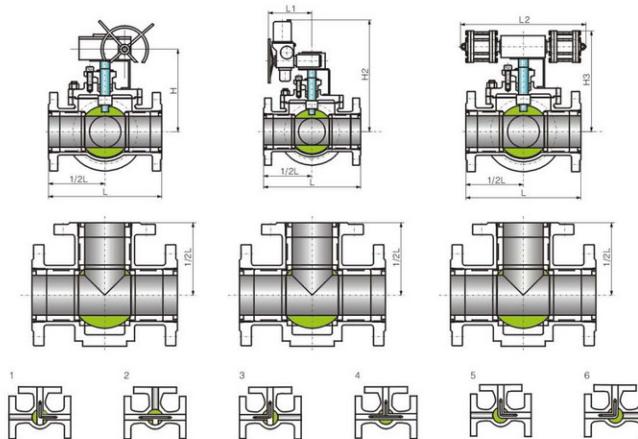


主要零件材料 Main parts and materials

序号 No.	零件名称 Parts name	材料牌号 Standard				序号 No.	零件名称 Parts name	材料牌号 Standard			
		碳钢 Carbon steel	不锈钢 Stainless steel	GB	ASTM			碳钢 Carbon steel	不锈钢 Stainless steel	GB	ASTM
01	排污塞 Drain plug	2Cr13	A276-420	1Cr18Ni9Ti F304/F316 F304L/F316L		14	垫圈 Gasket	氟橡胶 Viton; PTFE; 金属夹石墨 Wafer metal and graphite			
02	阀体 Body	WCB	A216-WCB	ZG1Cr18Ni9Ti ZG1Cr18Ni9Ti2M2Ti	CF8/CF8M/ CF3/CF3M	15	阀盖 Bonnet	WCB	A216-WCB	ZG1Cr18Ni9Ti ZG1Cr18Ni9Ti2M2Ti	CF8/CF8M/ CF3/CF3M
03	阀座O形圈 Seal O-ring	氟橡胶 Viton 氯橡胶 Viton				16	止推轴承 Thrust bearing	PTFE	PTFE	PTFE	PTFE
04	阀芯弹簧 Seat spring	17-7PH	17-7PH	17-7PH	17-7PH	17	压环 Pressure Ring	25锁紧 25HRC	A105锁紧 A105HRC	1Cr18Ni9Ti 1Cr18Ni12M2Ti	F304/F316 F304L/F316L
05	密封圈 gasket	PTFE/PPL	PTFE/PPL	PTFE/PPL	PTFE/PPL	18	填料函O形圈 Packing Box O-ring	氟橡胶 Viton	氟橡胶 Viton	氟橡胶 Viton	氟橡胶 Viton
06	阀座支承座 Seat retainer	25锁紧 25HRC	A105锁紧 A105HRC	1Cr18Ni9Ti 1Cr18Ni12M2Ti	F304/F316 F304L/F316L	19	阀杆O形圈 Stem O-ring	氟橡胶 Viton	氟橡胶 Viton	氟橡胶 Viton	氟橡胶 Viton
07	球体 Ball	1Cr18Ni9Ti	304	1Cr18Ni9Ti 1Cr18Ni12M2Ti	304/316/ 304L/316L	20	阀杆填料 Stem packing	石墨 Graphite			
08	球体键 Ball key	40Cr	40Cr	1Cr17Ni2	1Cr17Ni2	21	填料压盖 Gland	25锁紧 25HRC	A105锁紧 A105HRC	1Cr18Ni9Ti 1Cr18Ni12M2Ti	F304/F316 F304L/F316L
09	上阀杆 Stem	2Cr13	A276-410	1Cr18Ni9Ti F304/F316/ F304L/F316L		22	螺钉 Screw nail	35CrMoA	A193-B7	1Cr17Ni2	A193-B8M
10	侧盖 Side Cover	WCB	A216-WCB	ZG1Cr18Ni9Ti ZG1Cr18Ni9Ti2M2Ti	CF8/CF8M/ CF3/CF3M	23	支架 Yoke	WCB	WCB	WCB	WCB
11	垫圈 Gasket	氟橡胶 Viton; PTFE; 金属夹石墨 Wafer metal and graphite				24	键 Key	40Cr	40Cr	1Cr17Ni2	1Cr17Ni2
12	螺母 Nut	45	A194-2H	0Cr18Ni	A194-BM	25	盲板 Blank cover	WCB	A216-WCB	ZG1Cr18Ni9Ti ZG1Cr18Ni9Ti2M2Ti	CF8/CF8M/ CF3/CF3M
13	双头螺柱 Stud	35CrMoA	A193-B7	1Cr17Ni2	A193-B8M						

三通四密封球阀/Three Way Type Ball Valve

Q 647 F 型 PN1.6MPa



标准 Material

- 设计、制造按 API 600 API 6D
- 结构长度按 ZMV-2002
- 法兰尺寸按 ANSI B16.5
- 试验和检验按 API 598 API 6D

- Design and Manufacture to API 600 API 6D
- Face to face/End to end to ZMV-2002
- Flange Dimension to ANSI B16.5
- Inspection and Test to API 598 API 6D

应用规范 Application norm

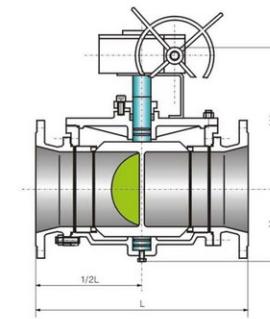
- 设计、制造按 GB12237-89
- 结构长度按 ZMV-2002
- 连接法兰 JB79-94
- 阀门检查和试验按 GB13927-89

- Design manufacture according to GB12237-89
- Face to face according to ZMV-2002
- End flange dimension according to JB79-94
- Valve check and test according to GB13927-89

主要外形尺寸 Main outline size

150Lb-300Lb															
尺寸 Dimension	inch	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"	5"	6"	8"	10"	12"
DN	15	20	25	40	40	50	65	80	100	125	150	200	250	300	
L	mm	140	160	180	200	220	240	260	280	320	380	440	540	-	
H	mm	90	95	105	115	135	140	155	185	210	275	305	335	-	
W	mm	140	140	155	250	250	350	350	420	700	1000	1300	1800	-	
1/2(L)	mm	70	80	90	100	110	120	130	140	160	190	220	270	-	
1.6MPa-4.0MPa															
尺寸 Dimension	inch	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"	5"	6"	8"	10"	12"
DN	15	20	25	40	40	50	65	80	100	125	150	200	250	300	
L	mm	140	160	180	200	220	240	260	280	320	380	440	540	-	
H	mm	90	95	105	115	135	140	155	185	210	275	305	335	-	
W	mm	140	140	155	250	250	350	350	420	700	1000	1300	1800	-	
1/2(L)	mm	70	80	90	100	110	120	130	140	160	190	220	270	-	

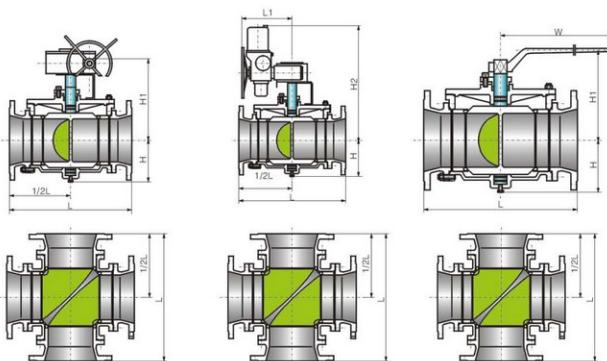
四通四密封球阀材质/Four-way Four-seal Ball Valve



主要零件材料 Main parts and materials

序号 No.	零件名称 Parts name	材料牌号 Standard				序号 No.	零件名称 Parts name	材料牌号 Standard			
		碳钢 Carbon steel	不锈钢 Stainless steel	GB	ASTM			碳钢 Carbon steel	不锈钢 Stainless steel	GB	ASTM
01	底盖 Lower cover	25	A105	1Cr18Ni9Ti 1Cr18Ni12Mo2Ti	F304/F316/ F304LF316L	16	侧盖 Side cover	WCB	A216-WCB ZG1Cr18Ni9Ti ZG1Cr18Ni12Mo2Ti	CF8/CF8M/ CF3/CF3M	
02	底盖螺钉 Lower cover screw nail	35CrMoA	A193-B7	1Cr17N2	A193-B8M	17	垫圈 Gasket	氟橡胶/Viton; PTFE; 金属夹石墨 Wafer metal and graphite			
03	垫圈 Gasket	氟橡胶/Viton; PTFE; 金属夹石墨 Wafer metal and graphite				18	螺母 Nut	45	A194-2H	OCr18Ni	A194-BM
04	止推轴承 Thrust bearing	金属夹PTFE				19	双头螺柱 Stud	35CrMoA	A193-B7	1Cr17N2	A193-B8M
05	下阀杆 Lower stem	2Cr13	A276-420	1Cr18Ni9Ti 1Cr18Ni12Mo2Ti	F304/F316/ F304LF316L	20	垫圈 Gasket	氟橡胶/Viton; PTFE; 金属夹石墨 Wafer metal and graphite			
06	下阀杆轴承 Lower stem bearing	金属夹PTFE				21	阀盖 Bonnet	WCB	A216-WCB ZG1Cr18Ni9Ti ZG1Cr18Ni12Mo2Ti	CF8/CF8M/ CF3/CF3M	
07	排污塞 Drain plug	2Cr13	A276-420	1Cr18Ni9Ti 1Cr18Ni12Mo2Ti	F304/F316/ F304LF316L	22	止推轴承 Thrust bearing	PTFE	PTFE	PTFE	PTFE
08	阀体 Body	WCB	A216-WCB	ZG1Cr18Ni9Ti ZG1Cr18Ni12Mo2Ti	CF8/CF8M/ CF3/CF3M	23	压环 Pressure ring	25铬镍 25NiCr	A105铬镍 A105NiCr	1Cr18Ni9Ti 1Cr18Ni12Mo2Ti	F304/F316/ F304LF316L
09	阀座O形圈 Seat O-ring	氟橡胶/Viton	氟橡胶/Viton	氟橡胶/Viton	氟橡胶/Viton	24	填料函O形圈 Packing box O-ring	氟橡胶/Viton	氟橡胶/Viton	氟橡胶/Viton	氟橡胶/Viton
10	阀座弹簧 Seat spring	17-7PH	17-7PH	17-7PH	17-7PH	25	阀杆O形圈 Stem O-ring	氟橡胶/Viton	氟橡胶/Viton	氟橡胶/Viton	氟橡胶/Viton
11	阀座 Seat	PTFE/PPL	PTFE/PPL	PTFE/PPL	PTFE/PPL	26	阀杆填料 Stem packing	石墨 Graphite			
12	阀座支承圈 Seal retainer	25铬镍 25NiCr	A105铬镍 A105NiCr	1Cr18Ni9Ti 1Cr18Ni12Mo2Ti	F304/F316/ F304LF316L	27	填料压盖 Gland	WCB	A216-WCB ZG1Cr18Ni9Ti ZG1Cr18Ni12Mo2Ti	CF8/CF8M/ CF3/CF3M	
13	球体 Ball	1Cr18Ni9Ti	304	1Cr18Ni9Ti 1Cr18Ni12Mo2Ti	F304/F316/ F304LF316L	28	螺钉 Screw nail	35CrMoA	A193-B7	1Cr17N2	A193-B8M
14	球体键 Ball key	40Cr	40Cr	1Cr17N2	1Cr17N2	29	支架 Yoke	WCB	WCB	WCB	WCB
15	上阀杆 Stem	2Cr13	A276-420	1Cr18Ni9Ti 1Cr18Ni12Mo2Ti	F304/F316/ F304LF316L	30	键 Key	40Cr	40Cr	1Cr17N2	1Cr17N2

四通四密封球阀/four-way Four-seal Ball Valve



标准 Material

- 设计、制造按 API 600 API 6D
- 结构长度按 ZMV-2002
- 法兰尺寸按 ANSI B16.5
- 试验和检验按 API 598 API 6D
- 设计、制造按 GB12237-89
- Face to face/End to end to ZMV-2002
- Flange Dimension to ANSI B16.5
- Inspection and Test to API 598 API 6D

应用规范 Application norm

- 设计、制造按 GB12237-89
- 结构长度按 ZMV-2002
- 连接法兰按 JB79-94
- 阀门检查和试验按 GB13927-89
- Design manufacture according to GB12237-89
- Face to face according to ZMV-2002
- End flange dimension according to JB79-94
- Valve check and test according to GB13927-89

主要外形尺寸 Main outline size

150LB-300LB															
尺寸 Dimension	inch	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"	5"	6"	8"	10"	12"
DN	15	20	25	32	40	50	65	80	100	125	150	200	250	300	
L	mm	160	180	200	230	250	260	320	320	370	400	440	500	-	
H	mm	100	115	125	125	135	145	155	176	180	-	-	-	-	
W	mm	140	140	155	250	250	350	350	420	700	1000	1300	1800	-	
1/2(L)	mm	70	80	90	100	110	120	130	140	160	190	220	270	-	

1.6MPa-4.0MPa															
尺寸 Dimension	inch	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"	5"	6"	8"	10"	12"
DN	15	20	25	32	40	50	65	80	100	125	150	200	250	300	
L	mm	160	180	200	230	250	260	320	320	370	400	440	500	-	
H	mm	100	115	125	125	135	145	155	176	180	-	-	-	-	
W	mm	140	140	155	250	250	350	350	420	700	1000	1300	1800	-	
1/2(L)	mm	70	80	90	100	110	120	130	140	160	190	220	270	-	

低温球阀/low Temperature Ball Valve

用途 Applicability

系列低温球阀主要适用于乙烯、液化天然气等化工装置上，输出的液态低温介质如乙烯、液氧、液氢等。这类介质不但易燃易爆，而且在升温时要气化，气化时，体积膨胀数百倍。而且这些介质渗透力强，易泄漏，加工制造比较困难。

Low temperature ball valves are mainly used in the chemical equipment of ethylene and LNG etc. to handle low temperature liquid medium like ethylene, liquid oxygen, liquid hydrogen and so on. These types of inflammable and explosive medium can be volumetrically expanded by several hundred times when being gasified under temperature rise, and are difficult to manufacture due to their highly penetrative and leaky properties.

结构特性 Structural Properties

1、承压件的材料能承受介质温度的变化而引起的膨胀、收缩、密封部位的结构在温度变化时不会产生永久的变形。用于-100℃以下工况时，阀门零件在精加工前应进行深冷处理，即将零件浸没在液氮箱中进行冷却，当零件温度达到-196℃时，开始保温1-2h，然后取出箱外自然冷却到常温，重复循环次。

2、阀盖采用长颈结构，其目的保护填料函的功能，是填料函处于离低温较远的位置，保证填料的密封效果。同时还可以缠绕保冷材料，防止冷能损失。长颈的颈长（H，见图）可根据使用温度和保冷材料的厚度来选择不同的长度。当填料函密封效果降低时，可以从填料函中间（见组合填料结构）加入润滑脂形成油封层、降低填料函的压差，提高密封性能。

3、使用温度-46℃-196℃时，阀杆材料经过镀铬或氮化处理，提高阀杆表面硬度，提高填料的可靠性。

4、低温球阀具有防止异常升压结构，由于低温阀门介质气化后，其体积急剧膨胀，压力会异常升高，当阀门中腔压力升高时，阀门中腔和进口侧连通，或在阀门进口端安置泄压阀，保证阀门安全使用。

5、低温球阀用的垫片具有在常温下、低温状态及温度变化下能可靠密封性和复原性。

1.The materials of compression parts can endure the expansion and shrinkage resulted from the temperature variation of medium, and seal structure is away from permanent deformation under temperature changes. To work under the conditions below -100°C, the parts of valve shall be subject to deep cooling treatment before precision machining. Namely, have the parts cooled in liquid nitrogen box, when the temperature of parts reaches -196°C, keep the temperature for 1~2h, then take them out to have them to the normal temperature naturally, and do in this way twice.

2.Bonnet is shaped long-necked for the purpose to protect the function of packing box, making packing box somewhat away from low temperature to ensure good seal of packing. Besides, it can be wound with cold insulating materials to prevent loss of cold energy. The length of neck (H, see the drawing) depends on service temperature and the thickness of cold insulating material. When the effect of packing seal turns lower, fill in grease to form up oil seal layer from the middle of packing box (see combined packing structure) to lower the differential pressure of packing box and enhance the dependability of seal.

3.To serve a temperature -46°C-196°C, the material of valve stem shall be treated with chromeplating or nitriding to enhance the surface hardness of valve stem and the sealing dependability of packing.

4.Low temperature ball valve takes a structure to avoid abnormal pressure rise. As the medium in low temperature valve is gasified and rapidly expanded in volume, the pressure will goes extremely high. When the pressure in the middle cavity of valve rises, the middle cavity and the inlet side can be communicated, or a relief can be mounted at the inlet side of valve,thus to ensure the safe use of valves.

5.The gaskets used on low temperature ball valves may function dependable seal and restoration under normal and low temperature or under the conditions of temperature changes.

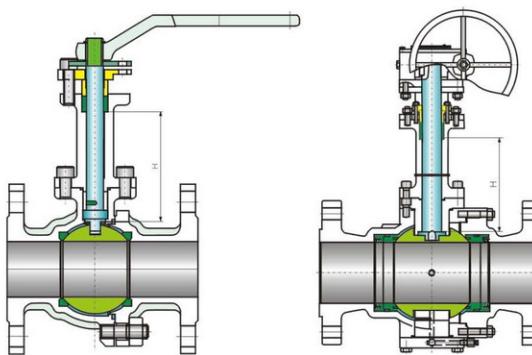
低温球阀制造规范

标准 Standard	API系列	GB系列
基本设计规范 Design codes	ANSI B16.34, JB/T7749	
压力温度等级 Pressure-Temperature Rating	ANSI B16.34	GB/T12224
结构长度 Face to face	ASME B16.10	
连接法兰 Flange ends	ASME B16.5	GB/T9113/HG20596
检验与实验 Inspection & test	API598*	JB/T9092*

*低温球阀在常温压力试验合格后，还需进行低温压力试验，其原理见低温阀门型式图。

Low temperature ball valves shall be subject to pressure test under low temperature after the pressure test under normal temperature, with its principle referred to the type drawing of low temperature ball valves.

低温球阀/low Temperature Ball Valve



主要材料 Main material

序号 NO	零件名称 Part name	材料 Material
		-46°C -196°C -101°C
1	左阀体 Left Body	A352-LCB, LCC, LC3,A351-CF8, CF8M
2	阀座 Seat	PTFE、RPTFE、PEEK、PPL、POM、KARBATE、NYLON、MOLON、DEVLO
3	密封圈 Seat gasket	A182-F304、F316
4	O型圈 O-Ring	VITON
5	垫片 Gasket	Flexible Graphite+304、Flexible Graphite+316、PTFE
6	螺栓 Bolt	A320-L7,A193-B8、B8M
7	螺母 Nut	A194-4、8、8M
8	右阀体 Right Body	A352-LCB, LCC, LC3,A351-CF8, CF8M
9	小弹簧 Small Spring	SS304, SS316
10	小钢球 Small Ball	F316
11	止推垫片 Thrust Washer	A182-F6、F314、F316
12	阀杆 Stem	FlexibleGraphite,PTFE
13	垫片 Gasket	A182-F6、F304、F316
14	填料 Packing	A352-LCB, A351-CF8
15	填料压套 Gland	1025、stainless steel
16	填料压盖 Gland-Flange	A216-WCB
17	定位板 Limited Plate	1025
18	杠杆 Lever	1035,stainless steel
19	紧定螺钉 Screw	A352-LCB, LCC, LC3, A351-CF8, CF8M
20	紧定螺钉 Screw	1035,stainless steel
21	Extend bonnet	A352-LCB, LCC, LC3,A351-CF8, CF8M
22	螺钉 Screw	1035,stainless steel
23	套管 Bushing	A182-F6、F304、F316

低温球阀/low Temperature Ball Valve

低温球阀阀盖加长劲部长度(参考)

The low temperature ball valve valve cover lengthens strength minister a degree(reference)

公称通径 Nominal pressure		劲部长度Strength department length H(mm)		
DN	in	≥-60°C	≥-100°C	<-100°C
15	1/2	90	110	130
20	3/4	100	110	140
25	1	100	120	150
32	11/4	110	120	150
40	11/2	110	130	160
50	2	110	130	170
65	21/2	120	140	180
80	3	120	150	190
100	4	130	160	200
125	5	130	160	200
150	6	140	170	220
200	8	140	170	220
250	10	150	180	240
300	12	150	180	240
350	14	160	190	250
400	16	160	190	250

注：★表示电动操作阀门；表示气动操作阀门；

●表示手柄操作阀门；—表示没有此选项，表中未涉及的可按用户的要求制造。

Note: ★ stands for electrically operated valves; stands for air operated valves;

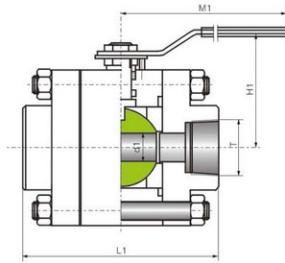
● stands for handle operated valves; —stands for no option of this.Those not covered in the table can be custom made to users'requirements

球阀阀体低温材料最低使用温度 The material lowest usage temperature of the ball valve valve body low temperature

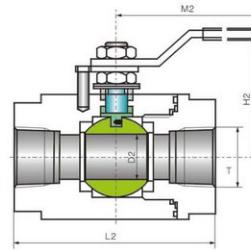
锻件 Forged		铸件 Steel	
标准:材料牌号 Standard:material card number	最低温度 Lowest temperature	标准:材料牌号 Standard:material card number	最低温度 Lowest temperature
ASTMA350LF2	-45.6°C	ASTM A352 LCB, LCC	-46°C
ASTMA350LF2	-59.4°C	ASTM A352 LC1	-59°C
ASTMA350LF9	-73.3°C	ASTM A352LC2	-73°C
ASTMA350LF3	-101.1°C	ASTM A352 LC3	-101°C
ASTMA182F304	-254°C	ASTM A351 CF8	-254°C
ASTMA182F316	-254°C	ASTM A351 CF8M	-254°C
ASTMA182F304L	-254°C	ASTM A351 CF3	-254°C
ASTM A182F316L	-254°C	ASTM A351 CF3M	-254°C

CL150~800

锻钢内螺纹球阀/NPT Ball Valve



球阀 (3PIECE BALL VALVE)



球阀 (2PIECE BALL CALCVE)

特征和应用规范/Features and applications

- ◎ 缩径或全径
- ◎ 结构：浮动球阀
- ◎ 垫片：PTFE
- ◎ 承插焊或螺纹连接
- ◎ 密封副材质：按客户要求而定
- ◎ Reduced or full port
- ◎ Construction: Floating ball
- ◎ Gasket: PTFE
- ◎ Socket welding & threaded ends
- ◎ Sealing material:Determined according to customer requirements
- ◎ Body material:A105、LF2、F304、F316、F304L、F316等
- ◎ 承插焊标准：按客户要求而定
- ◎ 螺纹标准：按客户要求而定
- ◎ 阀门检验和试验：API598
- ◎ Design & manufacture: API608、API6D

全径尺寸/Full port dimensions

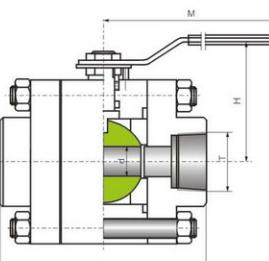
NPS	1/4	3/8	1/2	3/4	1	11/4	11/2	2
L1	73	73	73	96	127	140	152	178
T	1/4NPT	3/8NPT	1/2NPT	3/4NPT	1NPT	11/4NPT	11/2NPT	2NPT
d1	6	9	14	18	23	32	35	50
H1	55	55	55	70	90	92	98	110
M1	135	135	135	160	160	195	195	250

全径尺寸/Full port dimensions

NPS	1/4	3/8	1/2	3/4	1	11/4	11/2	2
L2	70	70	76	85	106	113	128	140
T	1/4NPT	3/8NPT	1/2NPT	3/4NPT	1NPT	11/4NPT	11/2NPT	2NPT
d2	6	9	14	20	25	32	38	49
H2	74	74	83	90	95	105	110	120
M2	140	140	140	170	170	245	245	285

CL150

锻钢内螺纹球阀/NPT Ball Valve



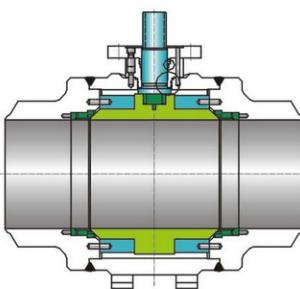
球阀 (3PIECE BALL VALVE)

特征和应用规范/Features and applications

- ◎ 缩径或全径
- ◎ 结构：浮动球阀
- ◎ 垫片：PTFE
- ◎ 承插焊或螺纹连接
- ◎ 密封副材质：按客户要求而定
- ◎ Reduced or full port
- ◎ Construction: Floating ball
- ◎ Gasket: PTFE
- ◎ Socket welding & threaded ends
- ◎ Sealing material:Determined according to customer requirements
- ◎ Body material:A105、LF2、F304、F316、F304L、F316等
- ◎ 承插焊标准：按客户要求而定
- ◎ 螺纹标准：按客户要求而定
- ◎ 阀门检验和试验：API598
- ◎ Design & manufacture: API608、API6D

全径尺寸/Full port dimensions

NPS	1/4	3/8	1/2	3/4	1	11/4	11/2	2
L	92	92	92	112	127	140	152	178
T	1/4NPT	3/8NPT	1/2NPT	3/4NPT	1NPT	11/4NPT	11/2NPT	2NPT
d	8	10	14	20	23	32	35	50
H	65	65	65	73	90	92	98	110
M	123	123	123	160	160	195	195	250



应用规范/Applicable standards

- 压力—温度等级: ASME B16.34
- 壳体壁厚: BS5351、API6D
- 孔口尺寸: API 6D
- 结构长度: ASME B16.10、API 6D
- 连接尺寸: ASME B16.25、BS1560
- 试验和检查: API6D、API598
- 主体材料: A105、LF2、F304、F316、F304L、F316L

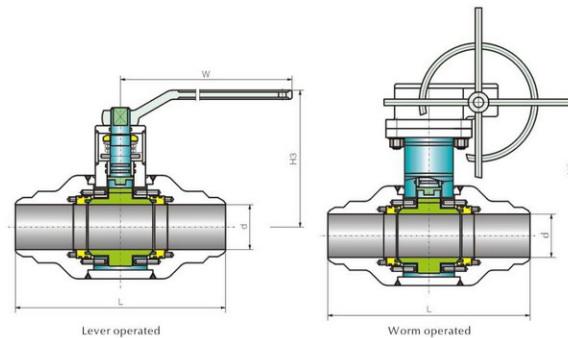
Pressure temperature rating, ASME B16.34
Shell thickness, ASME B16.34, API6D
Pore hole dimension, API 6D, BS5351
Face to face, ASME B16.10
Connection dimension, ASME B16.5, API598
Test and inspection conform to, API 6D, BS5146
Main materials, A105, LF2, F304, F316, F304L, F316L

主要材料/Main materials

壳体材料	内件材料	密封材料	垫片、填料
A105,304,316,321	410,420,304,316,321	PTFE,RPTFE,PEEK,PPL	柔性石墨 PTFE,PPL

尺寸表 Dimensions data

Size	in											
	50	80	100	150	200	250	300	350	400	450	500	600
d	2	3	4	6	8	10	12	13.25	15.25	17.25	19.25	23.25
	50	76.2	101.6	152	203	254	305	337	387	438	489	591
L	8.5	11.125	12	18	20.5	22	25	30	33	36	39	45
	216	283	305	457	521	559	635	762	838	914	991	1143
H1	7.08	7.87	8.86	11.42	12.40	12.99	16.93	18.30	19.49	23.03	24.01	25
	180	200	225	285	315	330	430	465	495	585	610	635
H2	7.48	8.27	8.66	11.42	12.80	16.14	17.13	18.90	19.88	23.81	24.06	25.98
	190	210	220	290	325	410	435	480	505	605	625	660
H3	7.68	8.27	8.46	—	—	—	—	—	—	—	—	—
	195	210	215	—	—	—	—	—	—	—	—	—
W	13.78	15.75	19.69	—	—	—	—	—	—	—	—	—
	350	400	500	—	—	—	—	—	—	—	—	—

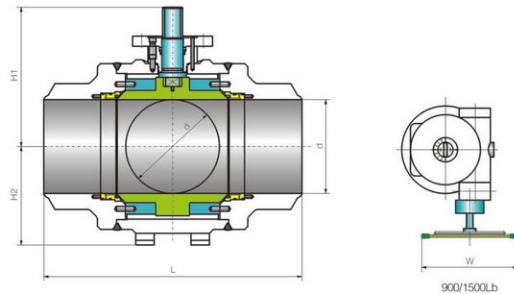


主要材料/Main materials

壳体材料	内件材料	密封材料	垫片、填料
A105,304,316,321	410,420,304,316,321	PTFE,RPTFE,PEEK,PPL	柔性石墨 PTFE,PPL

尺寸表 Dimensions data

Size	in	2	3	4	6	8	10	12	14	16	18	20	24
	mm	50	80	100	150	200	250	300	350	400	450	500	600
d	in	2	3	4	6	8	10	12	13.25	15.25	17.25	19.25	23.25
	mm	50	76.2	101.6	152	203	254	305	337	387	438	489	591
L	in	11.5	14	17	22	26	31	33	35	39	43	47	55
	mm	292	356	432	559	660	787	838	889	991	1092	1194	1397
Class 600LB	H1	7.08	7.87	8.86	11.42	12.40	12.99	16.93	18.30	19.49	23.03	24.01	25
	mm	180	200	225	315	330	430	465	495	585	610	635	
H2	in	7.48	8.27	8.66	11.42	12.80	16.14	17.13	18.90	19.88	23.81	24.06	25.98
	mm	190	210	220	325	410	435	480	505	605	625	660	
H3	in	7.68	8.27	8.46	—	—	—	—	—	—	—	—	—
	mm	195	210	215	—	—	—	—	—	—	—	—	—
W	in	23.62	39.37	59.05	—	—	—	—	—	—	—	—	—
	mm	600	1000	1500	—	—	—	—	—	—	—	—	—



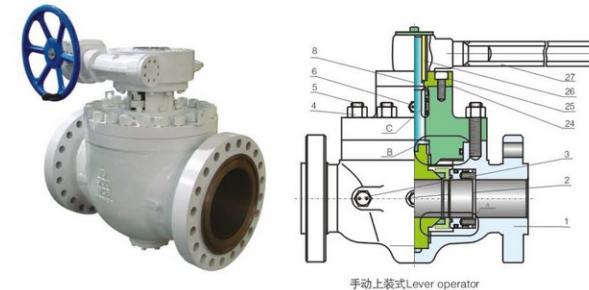
尺寸表 Dimensions data

Size	in	2	3	4	6	8	10	12	14	16	18	20	24	
	mm					150	200	250	300	350	400	450	500	600
d	in				6	8	10	12	12.75	14.75	16.75	18.625	22.5	
	mm				152	203	254	305	324	375	425.5	473	571.5	
L	in				24	29	33	38	405	44.5	48	52	61	
	mm				610	737	838	965	1029	1130	1219	1321	1549	
H1	in				12	15.6	16.93	18.3	21.45	24.21	26.97	29.52	35.23	
	mm				305	395	430	465	545	615	685	750	895	
H2	in				11.81	15.74	16.93	17.91	24.45	24.21	23.39	26.97	30.51	
	mm				300	400	430	455	545	615	645	685	775	
W	in				27.8	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	
	mm				705	800	800	800	800	800	800	800	800	
重量WT(kg)		330	595	935	1485	1955	2975	4010	4710	5285	5950	6625	7285	

Size	in	2	3	4	6	8	10	12	14	16	-	-	-	
	mm					150	200	250	300	350	400	-	-	-
d	in				5.75	7.625	9.5	11.375	12.5	14.25	-	-	-	
	mm				146	194	241	289	317.5	362	-	-	-	
L	in				27.75	32.75	39	44.5	49.5	54.5	-	-	-	
	mm				705	832	991	1130	1257	1384	-	-	-	
H1	in				14.96	19.29	20.07	22.05	25	26.97	-	-	-	
	mm				380	490	510	560	635	685	-	-	-	
H2	in				11.81	15.75	16.93	18.11	21.65	24.40	-	-	-	
	mm				300	400	430	460	550	620	-	-	-	
W	in				31.5	31.5	31.5	31.5	31.5	31.5	-	-	-	
	mm				800	800	800	800	800	800	-	-	-	
重量WT(kg)		503	795	1615	1945	3350	4615	-	-	-				

上装式球阀/Top Entry Ball Valve

阀门结构示意图(手动上装式球阀)/Structural drawing (lever operator)



结构特点/Structural features

上装式球阀是我厂消化吸收国外先进技术，并结合我公司多年的设计制造经验研制开发出来的新产品，技术水平达到国内一流，产品可与国际同行相媲美。它除了具有侧装固定球阀的特点外(见固定球阀)，还有以下几个特点：

- 1、整体式两段设计，上装式耳轴固定支持，法兰或对接焊结构。
- 2、因球体波纹弹簧使密封的金属阀座向球移动，具有进口和出口双向密封功能。
- 3、采用独特的阀座可缩回技术，在线可更换内件。
- 4、便于维修，安装方便，使用寿命长。阀门无需从管线上拆下来，即可实现在线维修和更换内件，延长了使用寿命。
- 5、力矩小，密封可靠，球形结构的阀座与普通球阀不一样，可以自动调整密封位置。
- 6、预置驱动装置平台及螺孔，并符合ISO5211的要示，根据用户不同的要求，随时可装配驱动装置。
- 7、阀门具有DBB双阻塞泄放功能。
- 8、手动上装式球阀采用高强度整体式球杆结构，确保了球体的精确定位。
- 9、阀杆采用防吹出保护结构，提高阀门操作的安全性。

Top entry ball valves are new products developed upon the advanced technology abroad and through many years of the designing and manufa cting experience of ours. With technology up to domestic leading level, these products can compete with international counterparts. Besides the features borne by the side entry fixed ball valve (see fixed ball valve), they are also given the features below:

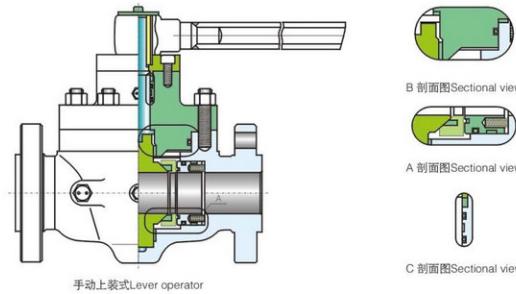
1. One-piece valve body, top entry trunnion to fix and support, flanged or butt welded structure.
2. Inconel bellow spring makes the sealed metal seat moving toward the ball, providing the two way seal function of inlet and out let.
3. Adopting distinctive technology of retractable valve seat, on side replace stem, valve stem sealing ring, metal seat and bellow spring, and torque down to the minimum for the ease of operation.
4. Easy to repair and install, long performance life. Access for repair and replacement of trims can be done without removing the valve from the pipeline, thus to lengthen the service life.
5. Low torque, reliable sealing, and spherical seat different from ordinary ball valves, which can automatically adjust the position of seal.
6. Preset platform and bolt holes for drive device, and to ISO5211. Drive device can be installed according to users' different requirements.
7. DBB (double block and bleed) function.
8. Hand operated top entry ball valve adopts high strength one-piece stem structure to ensure the precise positioning of the ball.
9. Anti-blowout protective structure of valve stem to enhance the operational safety of the valve.

球阀技术规范/Ball valve technical specifications

技术规范 Technical specification	API系列 Series
设计标准 Design codes	API6D, API608, BS3531
压力温度等级 Pressure/Temperature rating	ASME B16.34
结构长度 Face to face dimension	ASME B16.10
法兰连接 Flange ends	ASME B16.5, ASME B16.47
对焊端连接 Butt weld ends	ASME B16.25
检验与试验 Inspection and test	API598/API6D
防火试验 Firesafe test	API 607
铸钢件质量检验 Inspection of castings quality	MSS-SP-55

上装式球阀/Top Entry Ball Valve

阀门结构示意图(手动上装式球阀)/Structural drawing (lever operator)



产品性能规范/Product function specification

性能规范/Function specification	CLASS												
	150	300	400	600	900	1500	2500						
试验压力 Test pressure (MPa)	强度试验Shell test	3.0	7.5	10.2	150	22.5	39.0	63.0					
	密封试验Seat test	2.2	7.5	7.48	11	16.5	28.6	46.2					
	气压试验Air test	0.6MPa											
适用温度Applicable temperature	-196°C~550°C (注: 不同工况温度, 选用不同的材质) -196°C~550°C (Note: Choosing a suitable material based on different working temperature in service)												
适用介质 Applicable medium	水、蒸汽、石油、液化气、天然气等 Water, Steam, Petroleum, LPG, Natural gas etc.												
尺寸范围 Size range	DN50~1200 (NP2~48")。可根据客户的要求制造DN50~1200(NP2~48") Design and manufacture on customer's requirements												
主体/内体材料 Body/Trim material	碳钢、不锈钢、双相不锈钢、镍合金、钛材 Carbon steel, Stainless steel, Duplex SS, Nickel alloy, Titanium alloy												
端部连接 Ends connection	法兰连接、对接焊连接 Flange ends, Butt weld ends												
驱动装置 Operator	手动、蜗轮蜗杆传动、电动、气动 Lever, Gear, Electric, Pneumatic												

主要材料/Main materials

壳体材料	内件材料	密封材料	垫片、填料
WCB,LCB,CF8,CF8M	410,420,304,316,321	PTFE,RPTFE,PEEK,PPL	柔性石墨, PTFE,PPL

上装式球阀/Top Entry Ball Valve

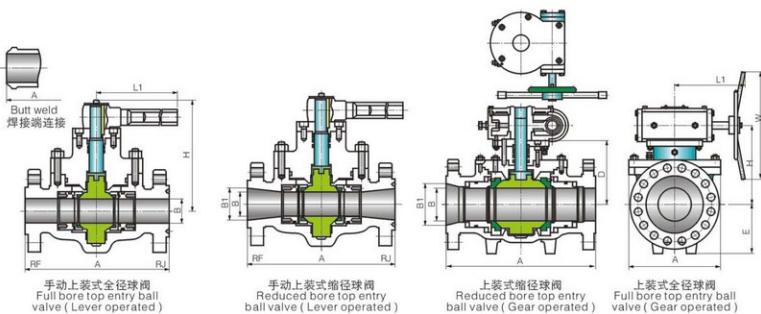
力矩表(N.M)/Torque table

下表所列的扭矩值供选择驱动装置时参考, 介质的特性, 内件及阀门的开启频率尚需作额外因素考虑。使用防腐内件, 用于清洁润滑介质的阀门, 扭矩可降低20%。而对开苛刻介质, 如料浆、颗粒性介质, 以及用于氧气、扭矩可能要增加50%。对于缩径阀门的操作扭矩按其缩口所对应的通径的阀门操作扭矩选用。(具体选择按实际为准)。

The torque figure listed below are for the reference to choose a drive device. The properties of medium, trims and valve open frequency shall be considered as extra factors. For instance, valves with corrosion-resistant trims to deal with clean lubricating mediums, their torque may be lowered by 20%. However, to deal with stringent mediums like slurry, granular medium and oxygen, the torque may be increased by 50%. The operating torque for reduced bore valves is subject to the corresponding full bore valve diameter. (Specific options as per the actual).

通径 Nominal	CLASS								
	DN	in	150	300	400	600	900	1500	2500
50×40	11/2		61	81	85	102	149	/	/
50	2		68	108	97	136	203	333	562
80×50	3×2		68	108	97	136	203	333	562
80	3		149	244	204	305	422	811	1460
100×80	4×3		149	244	204	305	422	811	1460
100	4		244	407	422	453	583	1505	1923
150×100	6×4		244	407	422	453	583	1505	5840
150	6		323	544	647	1006	1299	2940	5840
200×150	8×6		323	544	647	1006	1299	2940	12181
200	8		647	955	1157	2532	2766	6489	12181
250×200	10×8		647	955	1157	2532	2766	6489	15281
250	10		882	1822	2178	3941	5446	12181	15281
300×250	12×10		882	1822	2178	3941	5446	12181	15281
350×250	14×10		882	1822	2178	3941	5446	12181	19834
300	12		1577	2591	3064	6893	7909	15564	/
350×300	14×12		1577	2591	3064	6893	7909	15564	/
400×300	16×12		1577	2591	3064	6893	7909	15564	/
350	14		1873	3224	3853	3205	10948	23512	/
400×350	16×14		1873	3224	3853	3205	10948	23512	/
400	16		3050	5447	6529	8817	13682	27039	/
450×400	18×16		3050	5447	6529	8817	13682	27039	/
500×400	20×16		3050	5447	6529	8817	13682	27039	/
450	18		3819	6197	7461	11231	17705	37085	/
500	20		4508	7830	9348	14919	29866	40309	/
550	22		5490	9453	11302	16058	39324	/	/
600×500	24×20		4508	7830	9348	15140	29866	40309	/
600	24		6723	11457	15535	21840	40810	64671	/
650	26		9289	15139	17869	24889	51322	/	/
700	28		11647	18067	21063	28767	53515	/	/
750×600	30×24		6723	11457	15535	21840	40810	/	/
750	30		13558	19207	24966	34398	57057	/	/
800	32		15224	24095	28235	38880	61123	/	/
850	34		17846	30249	33291	41789	70277	/	/
900×750	36×30		13558	19207	24966	34398	57057	/	/
900	36		22032	33331	36277	51521	81349	/	/
1000	40		25972	36490	45269	60368	/	/	/
1050	42		27034	40425	53515	70277	/	/	/
1200	48		42606	64985	79311	112293	/	/	/

上装式球阀/Top Entry Ball Valve

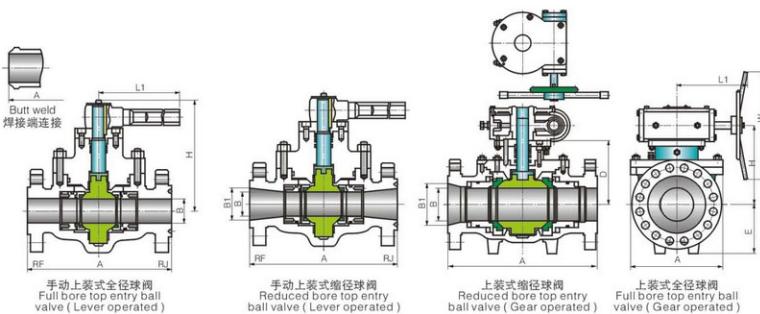


主要外型尺寸/Main appearance and connection size

CLASS150

DN	NPS	A	RJ	BW	B	B1	D	E	F	H	L1	W	重量 Weight kg/RF
50 × 40	2 × 11/2	292	295	292	38	51	/	85	180	212	450	/	25
50	2	292	295	295	51	51	/	85	180	212	450	/	28
80 × 50	3 × 2	356	395	356	51	77	/	85	180	212	450	/	37
80	3	356	395	356	77	77	/	112	230	228	600	/	55
100 × 80	4 × 3	432	435	432	77	102	/	112	230	228	600	/	75
100	4	432	435	432	102	102	/	145	283	272	600	/	105
150 × 100	6 × 4	559	562	559	102	152	/	145	283	272	600	/	140
150	6	559	562	559	152	152	281	220	325	333	297	350	235
200 × 150	8 × 6	660	664	660	152	203	281	220	325	333	297	350	265
200	8	660	664	660	203	203	320	260	405	384	360	500	430
250 × 200	10 × 8	787	791	787	203	254	320	260	405	384	360	500	480
250	10	787	791	787	254	254	360	311	490	424	360	500	475
300 × 250	12 × 10	838	841	838	254	305	360	311	490	424	360	500	510
350 × 250	14 × 10	889	892	889	254	337	360	311	490	424	360	500	690
300	12	838	841	838	305	305	403	366	570	467	340	700	610
350 × 300	14 × 12	889	892	889	305	337	403	366	570	467	340	700	820
400 × 300	16 × 12	991	994	991	305	387	403	366	570	467	340	700	970
350	14	889	892	889	337	337	453	428	660	517	340	700	795
400 × 350	16 × 14	991	994	991	387	337	453	428	660	517	340	700	955
400	16	991	994	991	387	387	459	450	700	549	545	700	1160
450 × 400	18 × 16	1092	1095	1092	387	438	450	450	700	549	545	700	1295
500 × 400	20 × 16	1194	1200	1194	387	489	459	450	700	549	545	700	1590
450	18	1092	1095	1092	438	438	502	473	755	577	575	700	1570
500 × 450	20 × 18	1194	1200	1194	438	489	502	473	755	577	575	700	1800
500	20	1194	1200	1194	489	489	551	580	870	626	575	700	2000
600 × 500	24 × 20	1397	1406	1397	489	591	551	580	870	626	575	700	2440
550	22	1295	1305	1295	540	540	578	590	955	653	575	700	2830
600	24	1397	1406	1397	591	591	606	600	1030	696	579	700	3300
750 × 600	30 × 24	1651	1664	1651	591	736	606	600	1030	696	579	700	4100
650	26	1448	1460	1448	635	635	675	635	1075	765	570	700	3970
700	28	1549	1562	1549	686	686	735	700	1165	825	579	700	4755
750	30	1651	1664	1651	736	736	795	775	1250	865	579	700	5820
900 × 750	36 × 30	2083	2098	2083	736	876	795	775	1250	865	579	700	7200
800	32	1778	1794	1778	781	840	825	1325	1012	605	620	7240	
850	34	1930	1946	1930	832	832	875	880	1410	1047	605	620	7960
900	36	2083	2098	2083	876	876	931	938	1475	1103	605	620	9300
1000	40	2337	2337	2337	978	978	1015	1025	1640	1170	950	1400	12950
1050	42	2437	2437	2437	1022	1022	1065	1080	1710	1220	950	1400	15200
1200	48	2540	2540	2540	1168	1168	1225	1940	1335	950	1400	22750	

上装式球阀/Top Entry Ball Valve

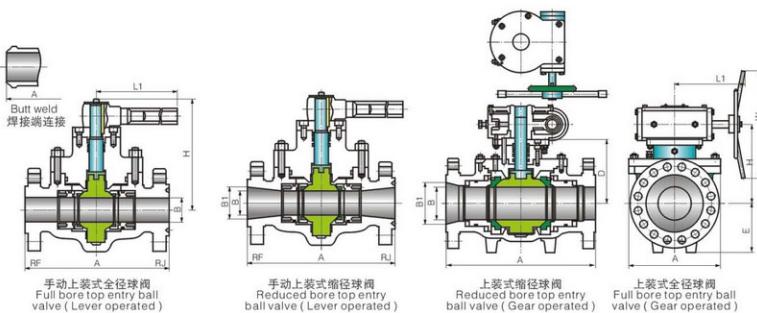


主要外型尺寸/Main appearance and connection size

CLASS300

DN	NPS	A	RJ	BW	B	B1	D	E	F	H	L1	W	重量 Weight kg/RF
50 × 40	2 × 11/2	292	295	292	38	51	/	85	180	212	450	/	29
50	2	292	295	295	51	51	/	85	180	212	450	/	33
80 × 50	3 × 2	356	395	356	51	77	/	85	180	212	450	/	43
80	3	356	395	356	77	77	/	112	230	228	600	/	64
100 × 80	4 × 3	432	435	432	77	102	/	112	230	228	600	/	88
100	4	432	435	432	102	102	/	145	283	272	600	/	123
150 × 100	6 × 4	559	562	559	102	152	/	145	283	272	600	/	164
150	6	559	562	559	152	152	281	220	325	345	360	500	275
200 × 150	8 × 6	660	664	660	152	203	281	220	325	333	297	350	311
200	8	660	664	660	203	203	320	260	405	384	360	700	505
250 × 200	10 × 8	787	791	787	203	254	320	260	405	384	360	700	563
250	10	787	791	787	254	254	360	311	490	424	360	700	557
300 × 250	12 × 10	838	841	838	254	305	360	311	490	424	360	700	598
350 × 250	14 × 10	889	892	889	254	337	360	311	490	424	360	700	809
300	12	838	841	838	305	337	403	366	570	467	340	700	715
350 × 300	14 × 12	889	892	889	305	337	403	366	570	467	340	700	9630
400 × 300	16 × 12	991	994	991	305	387	403	366	570	467	340	700	1135
350	14	889	892	889	337	337	453	428	660	530	545	700	932
400 × 350	16 × 14	991	994	991	387	337	453	428	660	530	545	700	1120
400	16	991	994	991	387	387	459	450	700	537	545	700	1360
450 × 400	18 × 16	1092	1095	1092	387	438	450	450	700	537	545	700	1518
500 × 400	20 × 16	1194	1200	1194	387	489	459	450	700	537	545	700	1865
450	18	1092	1095	1092	438	438	502	473	755	577	575	700	1840
500 × 450	20 × 18	1194	1200	1194	438	489	502	473	755	577	575	700	2110
500	20	1194	1200	1194	489	489	551	580	870	573	580	880	2340
600 × 500	24 × 20	1397	1406	1397	489	591	551	580	870	626	575	700	2860
550	22	1295	1305	1295	540	540	578	590	955	653	575	700	3320
600	24	1397	1406	1397	591	591	606	600	1030	696	579	700	3870
750 × 600	30 × 24	1651	1664	1651	591	736	606	600	1030	696	579	700	4810
650	26	1448	1460	1448	635	635	675	635	1075	765	577	700	4655
700	28	1549	1562	1549	686	686	735	700	1165	825	579	700	5575
750	30	1651	1664	1651	736	736	795	775	1250	865	579	700	6825
900 × 750	36 × 30	2083	2098	2083	736	876	795	775	1250	865	579	700	8440
800	32	1778	1794	1778	781	840	825	1325	1012	605	620	7240	
850	34	1930	1946	1930	832	832	875	880	1410	1047	605	620	9335
900	36	2083	2098	2083	876	876	931	938	1475	1103	605	620	9090
1000	40	2337	2337	2337	978	978	1015	1025	1640	1170	950	1400	15185
1050	42	2437	2437	2437	1022	1022	1065	1080	1710	1220	950	1400	17820
1200	48	2540	2540	2540	1168	1168	1225	1940	1335	950	1400	26675	

上装式球阀/Top Entry Ball Valve



主要外型尺寸/Main appearance and connection size

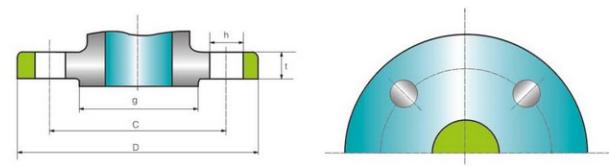
CLASS600

DN	NPS	A	RJ	BW	B	B1	D	E	F	H	L1	W	重量 Weight kg/RF
50 x 40	2 x 11/2	292	295	292	38	51	/	85	180	212	450	/	33
50	2	292	295	295	51	51	/	85	180	212	600	/	37
80 x 50	3 x 2	356	395	356	51	77	/	85	180	212	600	/	48
80	3	356	395	356	77	77	/	112	230	228	1000	/	72
100 x 80	4 x 3	432	435	432	77	102	/	112	230	228	1000	/	97
100	4	432	435	432	102	102	/	145	283	250	1000	/	137
150 x 100	6 x 4	559	562	559	102	152	/	145	283	250	1000	/	181
150	6	559	562	559	152	152	281	220	325	336	340	700	302
200 x 150	8 x 6	660	664	660	152	203	281	220	325	336	340	700	340
200	8	660	664	660	203	203	340	260	425	395	340	700	560
250 x 200	10 x 8	787	791	787	203	254	340	260	425	395	340	700	625
250	10	787	791	787	254	254	355	311	505	415	545	700	710
300 x 250	12 x 10	838	841	838	254	305	355	311	505	415	545	700	760
350 x 250	14 x 10	889	892	889	254	337	355	311	505	415	545	700	1030
300	12	838	841	838	305	305	401	366	585	461	545	700	910
350 x 300	14 x 12	889	892	889	305	337	401	366	585	461	545	700	1230
400 x 300	16 x 12	991	994	991	305	387	401	366	585	461	545	700	1450
350	14	889	892	889	337	337	451	428	680	526	575	700	1190
400 x 350	16 x 14	991	994	991	387	337	451	428	680	526	575	700	1430
400	16	991	994	991	387	387	493	450	730	568	575	700	1735
450 x 400	18 x 16	1092	1095	1092	387	438	493	450	730	568	575	700	1940
500 x 400	20 x 16	1194	1200	1194	387	489	493	450	730	568	575	700	2380
450	18	1092	1095	1092	438	438	539	473	784	626	579	700	2350
500 x 450	20 x 18	1194	1200	1194	438	489	539	473	784	629	579	700	2700
500	20	1194	1200	1194	489	489	592	580	900	682	579	700	3000
600 x 500	24 x 20	1397	1406	1397	489	591	592	580	900	682	579	700	3660
550	22	1295	1305	1295	540	540	621	590	890	711	579	700	4240
600	24	1397	1406	1397	591	591	653	600	1070	808	950	1400	4950
750 x 600	30 x 24	1651	1664	1651	591	736	653	600	1070	808	950	1400	6150
650	26	1448	1460	1448	635	635	725	635	1115	880	950	1400	5950
700	28	1549	1562	1549	686	686	790	700	1210	945	950	1400	7130
750	30	1651	1664	1651	736	736	850	775	1300	1005	950	1400	8730
900 x 750	36 x 30	2083	2098	2083	736	876	850	775	1300	1005	950	1400	10800
800	32	1778	1794	1778	781	781	900	825	1380	1055	950	1400	10850
850	34	1930	1946	1930	832	832	940	880	1460	1095	950	1400	11930
900	36	2083	2098	2083	876	876	1000	938	1535	1155	950	1400	13950
1000	40	2337	2337	2337	978	978	1090	1025	1700	1360	1045	1400	19420
1050	42	2437	2437	2437	1022	1022	1140	1080	1775	1410	1045	1400	22350
1200	48	2540	2540	2540	1168	1168	1270	1225	2015	1570	1080	1400	32340

Class 150lb

美标法兰尺寸/ANSI Flange Dimensions

ASME B16.5



Class 150 steel pipe flange dimensions

Nominal Size		D	C	g	t	(H)Bolt hole*	Bolt	
in	mm	mm	mm	mm	mm	mm	Number	Diam
1/2	15	90	60.5	35	11.2	16	4	1/2
3/4	20	100	70.0	43	12.7 (11.2)	16	4	1/2
1	25	110	79.5	51	14.3 (11.2)	16	4	1/2
1 1/4	32	115	89.0	64	15.9 (12.7)	16	4	1/2
1 1/2	40	125	98.5	73	17.5 (14.3)	16	4	1/2
2	50	150	120.5	92	19.1 (15.9)	19	4	5/8
2 1/2	65	180	139.5	105	22.3 (17.5)	19	4	5/8
3	80	190	152.5	127	23.9 (19.1)	19	4	5/8
4	100	230	190.5	157	23.9	19	8	5/8
5	125	255	216.0	186	23.9	22	8	3/4
6	150	280	241.5	216	25.4	22	8	3/4
8	200	345	298.5	270	28.6	22	8	3/4
10	250	405	362.0	324	30.2	25	12	7/8
12	300	485	432.0	381	31.8	25	12	7/8
14	350	535	476.5	413	35.0	29	12	1
16	400	595	539.5	470	36.6	29	16	1
18	450	635	578.0	533	39.7	32	16	1 1/8
20	500	700	635.0	584	42.9	32	20	1 1/8
24	600	815	749.5	692	47.7	35	20	1 1/4

Height of raised face is 0.06 inch(1.6mm)each.Dimensions in ()are for valve flanges.Size 2",3"and 4" of Class 150 trunnion mounted ball valves are provided with tapped holes which are allowed by API 6D.