SWEK® 球 阀

史威阀 Ball valves











-40℃~570℃

3/8"~36"

150Lb~4500Lb

网址（Web）：www.swekvalve.com

SWEK

史威阀工业阀门公司成立于1955年，总部位于美国德克萨斯州休斯敦。史威阀是阀门行业的领先制造企业，具有四个生产厂。在世界各地20多个国家和地区有史威阀的独立办公室和代理销售网络。史威阀具有丰富的、独一无二的阀门设计制造经验，其产品广泛应用于电力、石化、环境工程、采暖制冷、供水、排水工程、建筑、造船以及食品及饮料企业。

史威阀按照ANSI、ASME、API等先进标准设计制造阀门，主要产品有闸阀、截止阀、止回阀、调节阀、球阀、蝶阀、仪表阀、伺服阀等；主要零件采用WCB、WC6、WC9、CF8、CF8M、CF3、CF3M、A105、F22、WB36、F91、F92、321、316SS、316L、316H、347H等；驱动形式有手动、齿轮传动、电动、气动和液动；阀门规格从DN10～DN2000（3/8″～80″）；公称压力从1.0MPa～42.0MPa（150～4500Lb）；适用温度从-196℃～700℃。史威阀以优异的品质、合理的性价比，受到用户的普遍欢迎。

SWEK Industrial Valves Inc . was founded in 1955, is headquartered in Houston Texas. SWEK is the world's regions have their own offices and agent network. Design and production of its rich experience and unique design features of the valves, are widely used in Power plants, petrochemical, environmental engineering, heating refrige -ration, water supply and drainage engineering, buildings, shipbuilding, such as food and beverage industry.

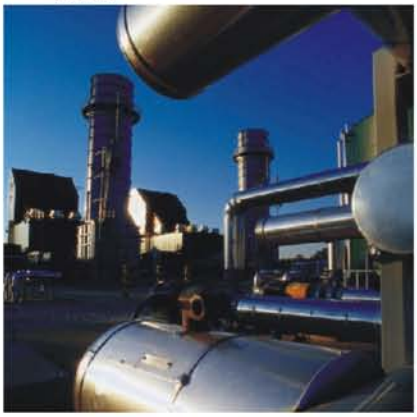
SWEK valves manufacture standards are ANSI, ASME, API and etc. The whole products of Gate valve, Globe valve, Check valve, Control valve, Ball valve, Butterfly valve, Instrument valve ,Servo valve and etc. The main ma -terial is WCB, WC6, WC9,CF8, CF8M,CF3, CF3M,A105,F22, WB36, F91, F92,321,316SS,316L,316H,347H and etc. The drive type is manual, gear, electric, pneumatic and hydraulic. Nominal diameter is from 3/8″to 80″, nominal pressure is from 150lb to 4500lb,applicable temperature is from -196℃ to 700℃. SWEK valves received the prai -se of the users because the excellent quality and reasonable price.





球阀具有流阻小，启闭迅速，易于自动化控制的特点，而得到了越来越广泛的应用。但由于普通球阀的阀座一般采用聚四氟乙烯等非金属材料制作，受阀座密封材料的限制，普通球阀不能在高温工况下使用，也无法适用于含颗粒性或固物类等管线，故普通球阀的使用范围受到限制。为此，我们研制开发了浮动球与固定球两大系列的金属密封球阀，并在石油、化工、电力、冶金等行业得到广泛的应用。

- 金属密封球阀采用选进的球体和阀座硬化技术，针对用户不同使用工况和要求，球体与阀座可采用喷涂镍基合金、碳化钨、碳化铬及其他特殊硬化处理，能够适用于绝大多数的苛刻工况条件。
- 为了防止球阀在高温状况下的胀死现象，采用碟簧或弹簧加载的密封结构，在高温下零部件的热胀可以被吸收，故能保证球阀在高温下灵活启用。
- 采用独特的研磨工艺，使球面达到极高的圆度和光洁度，以及与密封阀座匹配研磨达到100%吻合，故密封性能完全达到和超过现有的检验标准。
- 完全的防火结构设计，金属密封本质安全。
- 自然的防静电结构设计，因为金属密封材料已形成了静电导流通道。
- 金属密封固定球阀一般采用阀前密封结构，当球阀关闭时，即使阀门进出口两端同时受压，阀门中腔和两端通道也可以被相互阻断，中腔内的剩余介质可以通过泄放阀排出。金属密封浮动球阀一般为阀后密封结构。
- 阀体可制作铸钢或锻钢，有全通径及缩径可供选择。
- 具备防止阀杆飞出、设置执行器安装平台等结构。
- 连接形式有法兰、对焊连接，可按客户需求制作螺纹、承插焊、卡箍连接。
- 可选配蜗轮传动、气动、电动、液动以及气液联动执行器。



The ball valves pay more and more important role in many industries because it has small flow resistance and quick to open and close and easy to automatic control. However, the general ball valves fail to apply to the pipeline under high temperature working condition and the pipeline with grain medium and solid medium because their valve seats are made of non-metal materials like PTFE. Therefore, we specially has developed two series metal seal ball valves like floating and fixed ball mounted, which are widely used in petroleum, chemical, power and metallurgy etc.

- The metal sealed ball valves are suitable for most severe working conditions because their bodies and seats apply hardening-technology treatments like painting Ni-base alloy, Tungsten carbide and Chromium carbide according to different working conditions of customers' requirement.
- To avoid losing flexibility caused by metal expansion under high temperature working condition, the seal structure of ball valve applies disc spring and spring-loaded. Therefore, the heat expansion of the parts can be absorbed, which ensures the ball valve run flexibly under high temperature.
- The ball face has high roundness and smoothness due to special grinding process, hereby making it 100% fit close to seal valve seat, so the seal function has reached current test standards even advanced.
- Complete Fire Protection Design & Construction, Intrinsic Safety of Metal Seal.
- Natural static guide path is formed in metal seal due to anti-static design and construction.
- Generally, metal seated trunnion mounted ball valves adopt valve-front seal structure, the lumen and channels of two end can be separated and the rest mediums in lumen can be discharged by relief valves when the ball valves are close even the two end of inlet and outlet receive pressure at the same time. While, the metal seal floating ball valves are general to apply valve-back seal structure.
- The valve body can be made of cast steel and forged steel, and the full bore and reduced bore are available to choose.
- It is equipped with the assistant structures like stem fly-off protection devices and actuator mounting platform.
- The connection modes include flange and butt-weld, meanwhile the threaded, socket and clamp can also be offered according to the requirements of customers.
- Worm-gearing, pneumatic, electric, hydraulic and pneumatic-hydraulic actuators are available.

外形图

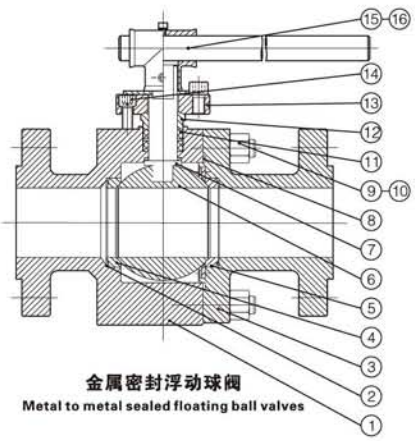






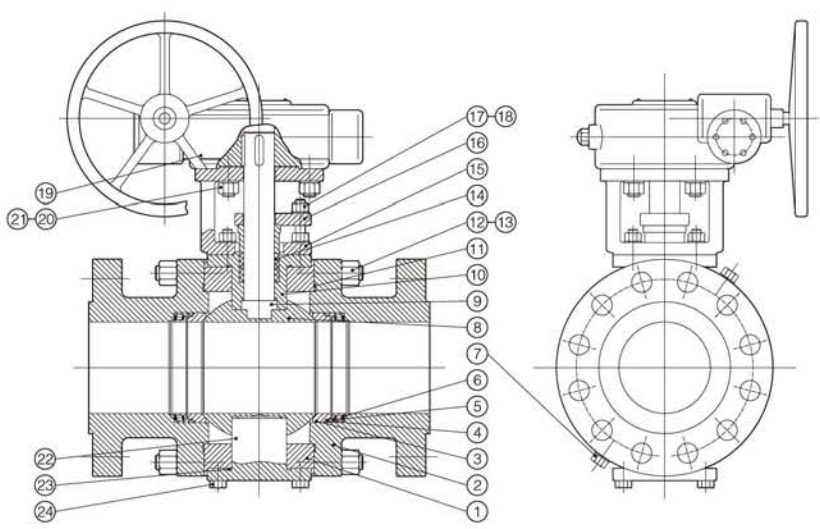


典型结构图
Typical structure drawing



金属密封浮动球阀
Metal to metal sealed floating ball valves

1	阀体 Body
2	碟簧 Disc spring
3	连接体 Connector
4	支撑阀座 Supported valve seat
5	密封阀座 Sealing seat
6	球体 Sphere
7	阀杆 Stem
8	密封垫 Gasket
9	螺柱 Bolt
10	螺母 Nut
11	填料 Packing
12	填料压圈 Packing gasket
13	填料压盖 Packing gland
14	螺钉 Screw
15	手柄 Handle
16	手柄套筒 Handle sleeve



金属密封固定球阀
Metal to metal sealed trunnion ball valves

1	阀体 Body
2	连接体 Connector
3	阀座 Seat
4	阀座密封圈 Seat sealing ring
5	压圈 Clamping ring
6	弹簧 Spring
7	泄放阀 Relief valve
8	球体 Sphere
9	阀杆 Stem
10	填料函 Packing block
11	密封垫 Gasket
12	螺柱 Bolt
13	螺母 Nut
14	填料 Packing
15	支架 Yoke
16	填料压盖 Packing gland
17	螺柱 Bolt
18	螺母 Nut
19	蜗轮 Worm wheel
20	螺柱 Bolt
21	螺母 Nut
22	固定轴 Fixed axle
23	密封垫 Sealing gasket
24	螺钉 Screw

主要零件材料 Main parts materials

阀体 Valve body	WCB A105	CF8 304	ZG1Cr18Ni9Ti 1Cr18Ni9Ti	CF3 304L	CF8M 316	ZG1Cr18Ni12Mo2Ti 1Cr18Ni12Mo2Ti	CF3M 316L
球体 Sphere	2Cr13/304	304	1Cr18Ni9Ti	304L	316	1Cr18Ni12Mo2Ti	316L
阀座 Valve seat	2Cr13/304	304	1Cr18Ni9Ti	304L	316	1Cr18Ni12Mo2Ti	316L
密封材料 Seal materials	根据使用工况的不同可选用钴基合金、镍基合金、碳化钨、碳化铬等 Co-based alloy, Ni-base alloy, Tungsten carbide and Chromium carbide are available to choose according to different working conditions.						

注: 根据不同的工况，阀体及内件可选用其他材料，如：双相不锈钢、蒙乃尔合金、哈氏合金、因科镍合金、钛合金等。

Note: according to different working conditions, the valve body and inner parts can be made of other materials like duplex stainless steel, Monel alloy, Hastelloy, Inconel alloy and Titanium alloy and so on.

设计参照标准与规范
Reference standards and specifications for design

ANSI/ASME B16.5	管道法兰和法兰管件	Pipe flanges and flanged fittings
ANSI/ASME B16.10	阀的面对面及端对端尺寸	Face-to-face and end-to-end dimensions of valves
ANSI/ASME B16.25	对接焊端	Buttwelding ends
ANSI/ASME B16.34	法兰、螺纹和焊接连接的阀门	Valves – Flanged, threaded, and welding end
MSS SP-44	钢制管道法兰	Steel pipeline flanges
API 598	阀门的检查与试验	Valve inspection and testing
API 607	转1/4周软阀座阀门的耐火试验	Fire test for soft-seated quarter-turn valves
NACE MR0103	油田设备用抗硫化应力裂纹的材料	Materials resistant to sulfide stress cracking in corrosive petroleum refining Environments
NACE MR0175	油田设备用抗硫化应力裂纹的金属材料	Petroleum and natural gas industries-Materials for use in H2S-containing Environments in oil and gas production
GB/T 12221	金属阀门 结构长度	Metal valves-Face to face,end to end,center to face and center to end dimensions
GB/T 12224	钢制阀门 一般要求	General requirements for industrial steel valves
GB/T 13927	通用阀门 压力试验	Pressure testing for general purpose valves
GB/T 9113.1	平面、凸面整体钢制管法兰	Integral steel pipe flanges with flat face orraised face
GB/T 9113.2	凹凸面整体钢制管法兰	Integral steel pipe flanges with male and female face
GB/T 9113.4	环连接面整体钢制管法兰	Integral steel pipe flanges with ring-joint face
JB/T 6899	阀门的耐火试验	Fire test for valves

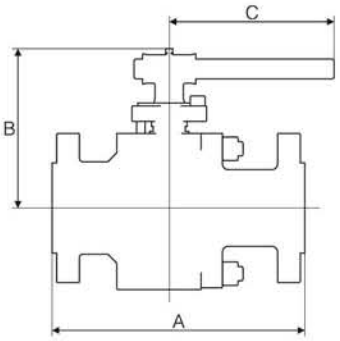
操作扭矩 Operation torque

类别 Type	口径		PN 16	PN 25	PN 40	PN 63	PN 100	PN 160	Class 150 PN 20	Class 300 PN 50	Class 600 PN 110	Class 900 PN 150	Class 1500 PN 260	Class 2500 PN 420
	NPS	DN												
金属密封浮动球阀 Metal seated floating ball valves	1/2	15	20	27	33	50	57	82	24	35	62	80	120	190
	3/4	20	30	40	49	66	80	117	35	57	85	115	170	270
	1	25	45	60	76	116	132	220	53	88	145	215	350	580
	1-1/4	32	70	92	102	165	198	330	80	117	210	320	520	865
	1-1/2	40	120	132	147	232	295	395	127	165	320	380	620	1050
	2	50	145	195	240	280	350	550	160	255	370	540	760	1280
	2-1/2	65	235	300	315	450	600	940	285	355	640	900	1370	2170
	3	80	340	470	540	720	1120	1780	410	580	1250	1720	2590	4100
	4	100	480	680	810	1160	1650	2950	530	1000	1780	2870	3850	6200
	5	125	750	1080	1650	1850	2800	4350	–	–	–	–	–	–
	6	150	1470	1850	2700	3750	3620	5820	1550	3000	3800	5770	8800	14000
	8	200	2320	2820	3380	5070	6800	12900	2580	3820	7200	12550	19100	–
	10	250	3870	5350	6470	–	–	–	4290	7200	–	–	–	–
金属密封固定球阀 Trunnion ball valves	2	50	105	140	170	207	240	370	115	180	245	350	510	860
	2-1/2	65	170	220	225	320	410	620	205	255	420	600	915	1450
	3	80	245	335	390	520	790	1200	295	410	840	1150	1720	2760
	4	100	345	485	580	830	1150	1750	380	690	1190	1650	2590	4140
	5	125	520	780	980	1200	1870	2950	–	–	–	–	–	–
	6	150	940	1150	1280	1800	2300	4020	970	1400	2400	3850	5860	9350
	8	200	1550	1900	2250	3900	5800	8700	1720	2550	5980	8500	12770	20350
	10	250	2590	3570	4310	6000	8000	14950	2860	4850	8400	14220	21390	34100
	12	300	4000	5250	6200	8700	11900	22250	4200	7000	12600	21100	31400	51050
	14	350	6250	7870	8400	11700	16200	–	6600	9300	17400	28200	49000	–
	16	400	8100	10040	12900	18200	21300	–	8970	14400	22500	39500	59000	–
	18	450	10500	13800	16500	–	–	–	11100	18300	33680	56000	–	–
	20	500	13500	18000	20400	–	–	–	14400	22500	50400	71200	–	–
	22	550	–	–	–	–	–	–	17080	28200	60800	–	–	–
	24	600	19500	28200	32350	–	–	–	22580	38800	73600	132800	–	–

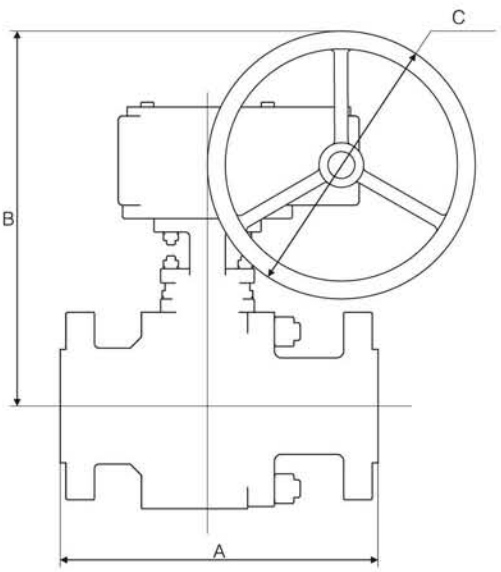
注: 1.表中的扭矩是阀门在最大压差下的开启扭距，供选择驱动装置时作参考。
2.在选用执行机构应考虑不小于1.25倍的安全系数。
3.由于介质性质，内件及启闭速度的不同，可能需要考虑额外的扭距要求。

Note: 1. the torque in table is open torque under Max. differential pressure, which is only for reference to choose driven devices.
2. Choose the actuator with safety coefficient more than 1.25 times.
3. Additional torque maybe required, which caused by the difference of medium nature, inner parts and on/off speed.

金属密封浮动球阀外形尺寸 Figure size of metal seated floating ball valves



手动 Manual

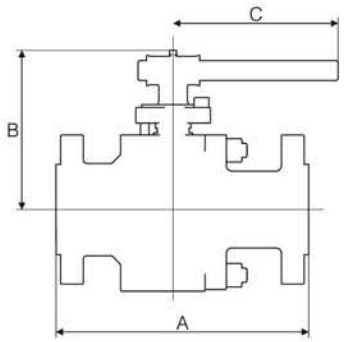


蜗轮传动 Drive by Worm Wheel

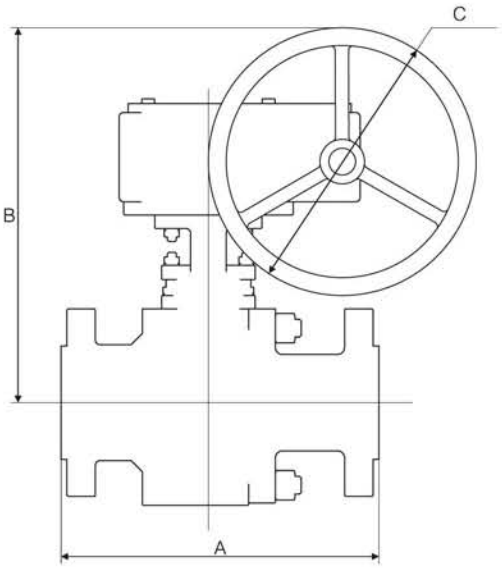
压力等级 Pressure Class	口径 DN	尺寸 Size（mm）					
		A		B		C	
		RF法兰	BW对焊	手动 Manual	蜗轮传动 Drive by Worm Wheel	手动 Manual	蜗轮传动 Drive by Worm Wheel
PN 16	15	108	140	80	–	210	–
	20	117	152	84	–	210	–
	25	127	165	92	–	210	–
	32	140	178	102	–	300	–
	40	165	190	123	–	400	–
	50	178	216	145	–	580	–
	65	190	241	165	–	580	–
	80	203	283	186	–	700	–
	100	229	305	206	380	700	300
	125	356	381	248	405	1100	300
	150	394	457	280	460	1100	300
	200	457	521	–	550	–	300
	250	533	559	–	706	–	400
PN 25	15	140	140	80	–	210	–
	20	152	152	84	–	210	–
	25	165	165	92	–	210	–
	32	178	178	102	–	300	–
	40	190	190	123	–	400	–
	50	216	216	145	–	580	–
	65	241	241	165	–	580	–
	80	283	283	186	–	700	–
	100	305	305	206	380	700	300
	125	381	381	248	405	1100	300
	150	403	457	280	460	1100	300
	200	502	521	–	550	–	300
	250	568	559	–	706	–	400

压力等级 Pressure Class	口径 DN	尺寸 Size（mm）					
		A		B		C	
		MF法兰	BW对焊	手动 Manual	蜗轮传动 Drive by Worm Wheel	手动 Manual	蜗轮传动 Drive by Worm Wheel
PN 40	15	140	140	80	–	210	–
	20	152	152	84	–	210	–
	25	165	165	92	–	210	–
	32	178	178	102	–	300	–
	40	190	190	123	–	400	–
	50	216	216	145	–	580	–
	65	241	241	165	–	580	–
	80	283	283	186	330	700	300
	100	305	305	206	380	700	300
	125	381	381	248	420	1100	300
	150	403	457	280	480	1100	300
	200	502	521	–	560	–	300
	250	568	559	–	716	–	400
PN 63	15	165	165	92	–	210	–
	20	190	190	98	–	300	–
	25	216	216	104	–	400	–
	32	229	229	118	–	580	–
	40	241	241	142	–	580	–
	50	292	292	165	–	700	–
	65	330	330	188	–	700	–
	80	356	356	210	390	1100	300
	100	406	406	232	440	1100	300
	125	457	457	–	498	–	300
	150	495	495	–	655	–	400
	200	597	597	–	678	–	400
PN 100	15	165	165	92	–	210	–
	20	190	190	98	–	300	–
	25	216	216	104	–	400	–
	32	229	229	118	–	580	–
	40	241	241	142	–	580	–
	50	292	292	165	–	700	–
	65	330	330	188	–	700	–
	80	356	356	210	390	1100	300
	100	432	432	232	440	1100	300
	125	508	508	–	498	–	300
	150	559	559	–	655	–	400
	200	660	660	–	678	–	400
PN 160	15	216	216	92	–	210	–
	20	229	229	98	–	300	–
	25	254	254	104	–	400	–
	32	279	279	118	–	580	–
	40	305	305	142	–	580	–
	50	368	368	165	–	700	–
	65	419	419	188	–	700	–
	80	381	381	210	390	1100	300
	100	457	457	232	440	1100	300
	125	559	559	–	498	–	300
	150	610	610	–	655	–	400
	200	737	737	–	678	–	400

金属密封浮动球阀外形尺寸 Figure size of metal seated floating ball valves



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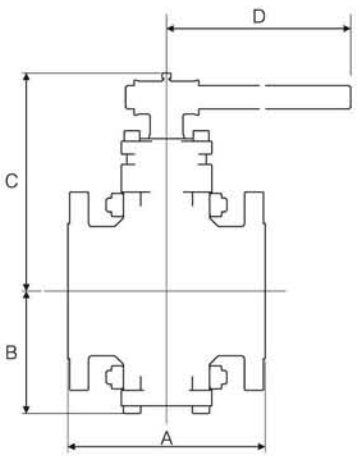


蜗轮传动 Drive by Worm Wheel

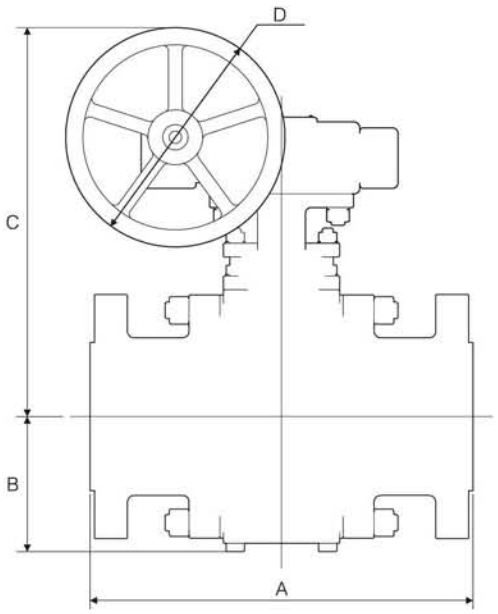
压力等级 Pressure Class	口径		尺寸 Size（mm）					
			A		B		C	
	NPS	DN	RF法兰	BW对焊	手动 Manual	蜗轮传动 Drive by Worm Wheel	手动 Manual	蜗轮传动 Drive by Worm Wheel
Class 150 PN 20	1/2	15	108	140	80	–	210	–
	3/4	20	117	152	84	–	210	–
	1	25	127	165	92	–	210	–
	1–1/4	32	140	178	102	–	300	–
	1–1/2	40	165	190	123	–	400	–
	2	50	178	216	145	–	580	–
	2–1/2	65	190	241	165	–	580	–
	3	80	203	282	186	–	700	–
	4	100	229	305	206	380	700	300
	6	150	394	457	280	460	1100	300
	8	200	457	521	–	550	–	300
	10	250	533	559	–	706	–	400
Class 300 PN 50	1/2	15	140	140	80	–	210	–
	3/4	20	152	152	84	–	210	–
	1	25	165	165	92	–	210	–
	1–1/4	32	178	178	102	–	300	–
	1–1/2	40	190	190	123	–	400	–
	2	50	216	216	145	–	580	–
	2–1/2	65	241	241	165	–	580	–
	3	80	282	282	186	330	700	300
	4	100	305	305	206	380	700	300
	6	150	403	457	280	480	1100	300
	8	200	502	521	–	560	–	300
	10	250	568	559	–	716	–	400

压力等级 Pressure Class	口径		尺寸 Size（mm）						
			A			B		C	
	NPS	DN	RF法兰	RJ法兰	BW对焊	手动 Manual	蜗轮传动 Drive by Worm Wheel	手动 Manual	蜗轮传动 Drive by Worm Wheel
Class 600 PN 110	1/2	15	165	163	165	92	-	210	-
	3/4	20	190	190	190	98	-	300	-
	1	25	216	216	216	104	-	400	-
	1-1/4	32	229	229	229	118	-	580	-
	1-1/2	40	241	241	241	142	-	580	-
	2	50	292	295	292	165	-	700	-
	2-1/2	65	330	333	330	188	-	700	-
	3	80	356	359	356	210	390	1100	300
	4	100	432	435	432	232	440	1100	300
	6	150	559	562	559	-	655	-	400
	8	200	660	663	660	-	678	-	400
Class 900 PN 150	1/2	15	216	216	216	92	-	210	-
	3/4	20	229	229	229	98	-	300	-
	1	25	254	254	254	104	-	400	-
	1-1/4	32	279	279	279	118	-	580	-
	1-1/2	40	305	305	305	142	-	580	-
	2	50	368	371	368	165	-	700	-
	2-1/2	65	419	422	419	188	-	700	-
	3	80	381	384	381	210	390	1100	300
	4	100	457	460	457	232	440	1100	300
	6	150	610	613	610	-	655	-	400
	8	200	737	740	737	-	678	-	400
Class 1500 PN 260	1/2	15	216	216	216	92	-	210	-
	3/4	20	229	229	229	98	-	300	-
	1	25	254	254	254	104	-	400	-
	1-1/4	32	279	279	279	118	-	580	-
	1-1/2	40	305	305	305	142	-	580	-
	2	50	368	371	368	165	310	700	300
	2-1/2	65	419	422	419	195	340	700	300
	3	80	470	473	470	220	400	1100	300
	4	100	546	549	546	-	455	-	300
	6	150	705	711	705	-	665	-	400
	8	200	832	842	832	-	685	-	400
Class 2500 PN 420	1/2	15	264	264	264	98	-	210	-
	3/4	20	273	273	273	105	-	300	-
	1	25	308	308	308	115	-	400	-
	1-1/4	32	349	352	349	128	-	580	-
	1-1/2	40	384	387	384	155	-	580	-
	2	50	451	454	451	178	320	700	300
	2-1/2	65	508	514	508	210	350	700	300
	3	80	578	584	578	235	410	1100	300
	4	100	673	683	673	-	465	-	400
	6	150	914	927	914	-	720	-	500

金属密封浮动球阀外形尺寸 Figure size of metal seated floating ball valves



手动 Manual

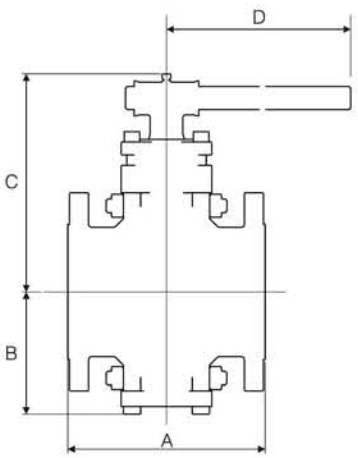


蜗轮传动 Drive by Worm Wheel

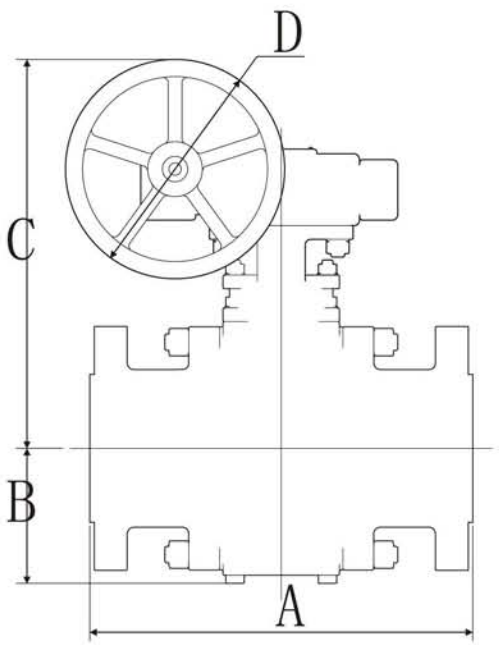
压力等级 Pressure Class	口径 DN	尺寸 Size（mm）						
		A		B	C		D	
		RF法兰	BW对焊		手动 Manual	蜗轮传动 Drive by Worm Wheel	手动 Manual	蜗轮传动 Drive by Worm Wheel
PN 16	50	178	216	105	145	–	580	–
	65	190	241	125	165	–	580	–
	80	203	283	139	186	–	700	–
	100	229	305	152	206	380	700	300
	125	356	381	184	248	405	1100	300
	150	394	457	219	280	460	1100	300
	200	457	521	273	–	550	–	300
	250	533	559	364	–	706	–	300
	300	610	635	395	–	852	–	400
	350	686	762	430	–	895	–	400
	400	762	838	470	–	927	–	400
	450	864	914	550	–	1130	–	500
	500	914	991	580	–	1450	–	600
	600	1067	1143	670	–	1650	–	750
PN 25	50	216	216	105	145	–	580	–
	65	241	241	125	165	–	580	–
	80	283	283	139	186	–	700	–
	100	305	305	152	206	380	700	300
	125	381	381	184	248	405	1100	300
	150	403	457	219	280	460	1100	300
	200	502	521	273	–	550	–	300
	250	568	559	364	–	706	–	300
	300	648	635	395	–	852	–	400
	350	762	762	430	–	895	–	400
	400	838	838	470	–	927	–	400
	450	914	914	550	–	1130	–	500
	500	991	991	580	–	1450	–	600
	600	1143	1143	670	–	1650	–	750

压力等级 Pressure Class	口径 DN	尺寸 Size（mm）						
		A		B	C		D	
		MF法兰	BW对焊		手动 Manual	蜗轮传动 Drive by Worm Wheel	手动 Manual	蜗轮传动 Drive by Worm Wheel
PN 40	50	216	216	105	145	-	580	-
	65	241	241	125	165	-	580	-
	80	283	283	139	186	300	700	300
	100	305	305	152	206	380	700	300
	125	381	381	184	248	420	1100	300
	150	403	457	219	280	480	1100	300
	200	502	521	273	-	560	-	300
	250	568	559	364	-	716	-	400
	300	648	635	395	-	865	-	400
	350	762	762	430	-	900	-	400
	400	838	838	470	-	935	-	600
	450	914	914	550	-	1140	-	750
	500	991	991	580	-	1490	-	750
	600	1143	1143	670		1680		750
PN 63	50	292	292	114	165	-	700	-
	65	330	330	128	188	-	700	-
	80	356	356	145	210	390	1100	300
	100	406	406	159	232	440	1100	300
	125	457	457	210	-	498	-	300
	150	495	495	250	-	655	-	400
	200	597	597	294	-	678	-	400
	250	673	673	395	-	795	-	400
	300	762	762	445	-	1035	-	600
	350	826	826	500	-	1140	-	750
	400	902	902	530	-	1220	-	750
PN 100	50	292	292	114	165	-	700	-
	65	330	330	124	188	-	700	-
	80	356	356	133	210	390	1100	300
	100	432	432	159	232	440	1100	300
	125	508	508	210	-	498	-	300
	150	559	559	250	-	655	-	400
	200	660	660	294	-	678	-	400
	250	787	787	395	-	795	-	400
	300	838	838	445	-	1035	-	600
	350	889	889	500	-	1140	-	750
	400	991	991	530	-	1220	-	750
PN 160	50	368	368	122	165	-	700	-
	65	419	419	134	188	-	700	-
	80	381	381	144	210	390	1100	300
	100	457	457	168	232	440	1100	300
	125	559	559	226	-	498	-	300
	150	610	610	270	-	655	-	400
	200	737	737	317	-	678	-	400
	250	838	838	426	-	795	-	400
	300	965	965	480	-	1035	-	600

金属密封浮动球阀外形尺寸 Figure size of metal seated floating ball valves



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蜗轮传动 Drive by Worm Wheel

压力等级 Pressure Class	口径		尺寸 Size（mm）						
			A		B	C		D	
	NPS	DN	RF法兰	BW对焊		手动 Manual	蜗轮传动 Drive by Worm Wheel	手动 Manual	蜗轮传动 Drive by Worm Wheel
Class 150 PN 20	2	50	178	216	105	145	-	580	-
	2-1/2	65	190	241	125	165	-	580	-
	3	80	203	282	139	186	-	700	-
	4	100	229	305	152	206	380	700	300
	6	150	394	457	219	280	460	1100	300
	8	200	457	521	273	-	550	-	300
	10	250	533	559	364	-	706	-	300
	12	300	610	635	395	-	852	-	300
	14	350	686	762	430	-	895	-	400
	16	400	762	838	470	-	927	-	400
	18	450	864	914	550	-	1130	-	500
	20	500	914	991	580	-	1450	-	600
	22	550	991	1092	615	-	1520	-	750
	24	600	1067	1143	670	-	1650	-	750
Class 300 PN 50	2	50	216	216	105	145	-	580	-
	2-1/2	65	241	241	125	165	-	580	-
	3	80	282	282	139	186	330	700	300
	4	100	305	305	152	206	380	700	300
	6	150	403	457	219	280	480	1100	300
	8	200	502	521	273	-	560	-	300
	10	250	568	559	364	-	716	-	400
	12	300	648	635	395	-	865	-	400
	14	350	762	762	430	-	900	-	400
	16	400	838	838	470	-	935	-	600
	18	450	914	914	550	-	1140	-	750
	20	500	991	991	580	-	1490	-	750
	22	550	1092	1092	615	-	1550	-	750
	24	600	1143	1143	670	-	1680	-	750

压力等级 Pressure Class	口径		尺寸 Size（mm）							
			A			B	C		D	
	NPS	DN	RF法兰	RJ法兰	BW对焊		手动 Manual	蜗轮传动 Drive by Worm Wheel	手动 Manual	蜗轮传动 Drive by Worm Wheel
Class 600 PN 110	2	50	292	295	292	114	165	-	700	-
	2-1/2	65	330	333	330	124	188	-	700	-
	3	80	356	359	356	133	210	330	1100	300
	4	100	432	435	432	159	232	380	1100	300
	6	150	559	562	559	250	-	530	-	400
	8	200	660	663	660	294	-	610	-	400
	10	250	787	790	787	395	-	716	-	400
	12	300	838	841	838	445	-	915	-	500
	14	350	889	892	889	500	-	1000	-	600
	16	400	991	994	991	530	-	1025	-	750
	18	450	1092	1095	1092	575	-	1140	-	750
	20	500	1194	1200	1194	630	-	1490	-	750
	22	550	1295	1305	1295	670	-	1550	-	750
	24	600	1397	1407	1397	720	-	1680	-	750
Class 900 PN 150	2	50	368	371	368	122	165	-	700	-
	2-1/2	65	419	422	419	134	188	-	700	-
	3	80	381	384	381	144	210	330	1100	300
	4	100	457	460	457	168	232	380	1100	300
	6	150	610	613	610	270	-	530	-	400
	8	200	737	740	737	317	-	610	-	400
	10	250	838	841	838	426	-	716	-	400
	12	300	965	968	965	480	-	965	-	500
	14	350	1029	1039	1029	530	-	1000	-	600
	16	400	1130	1140	1130	555	-	1025	-	750
	18	450	1219	1232	1219	590	-	1140	-	750
	20	500	1321	1334	1321	670	-	1490	-	750
	24	600	1549	1568	1549	760	-	1680	-	750
Class 1500 PN 260	2	50	368	371	368	134	165	328	700	300
	2-1/2	65	419	422	419	147	195	335	700	300
	3	80	470	473	470	158	220	340	1100	300
	4	100	546	549	546	185	-	400	-	300
	6	150	705	711	705	297	-	550	-	400
	8	200	832	842	832	348	-	650	-	400
	10	250	991	1001	991	468	-	805	-	500
	12	300	1130	1146	1130	528	-	1050	-	600
	14	350	1257	1276	1257	570	-	1090	-	600
	16	400	1384	1406	1384	590	-	1130	-	750
Class 2500 PN 420	2	50	451	454	451	147	178	338	700	300
	2-1/2	65	508	514	508	158	210	345	700	300
	3	80	578	584	578	185	235	355	1100	300
	4	100	673	683	673	248	-	470	-	400
	6	150	914	927	914	348	-	635	-	500
	8	200	1022	1038	1022	468	-	720	-	500
	10	250	1270	1292	1270	528	-	875	-	600
	12	300	1422	1444	1422	570	-	1080	-	600

注: 更大规格尺寸的球阀外形尺寸可与公司联系。
If it requires bigger torque of ball valves, please contact Our Company.

管线球阀使用聚合材料作为阀座密封，密封座用弹簧加载，在较广的温度变化和压力变化范围内具有优良的密封性能，确保在关闭压差作用下达到无气泡泄漏的密封，且在最大压差下仍可保持最小操作扭矩。

球阀的规格和压力等级符合美国石油学会AP16D/ISO 14313标准、中国GB/T19672标准及美国 ASME标准的要求。根据客户要求，阀门可采用符合美国腐蚀工程师协会标准NACE MR 0175或NACE MR 0103的材料。

球阀的设计和制造质量体系是以 ISO 9001质量体系标准和 API Q1的质量大纲规范为模式，并分别经DNV船级社和美国API石油学会认可，符合ISO 9001质量体系标准，符合AP1 Q1和API 6D规范，并授权使用API会标，证书号为 API 6D-0652。

管线球阀有多种材料可选择，规格和压力等级齐全，全通径和缩径兼备，是石油、天然气、化工原料等输送管路广泛应用的理想阀门。

The pipeline ball valves have excellent seal function under wide temperature variety and pressure variety because pipe ball valves use polymers compounding as seat seal which uses spring loaded, therefore no air bulb leakage will be retained under closing differential pressure and Min. operation torque will be attained under Max. differential pressure.

The specification and pressure class of ball valve meet the requirements stipulated in the standards like API 6D/ISO 14313, GB/T19672 and ASME. The valve can be made of the materials involving NACE (National Association of Corrosion Engineers) MR0175 or NACE MR 0103 according to the requirements of customers.

The quality system of the design and manufacturing of ball valve is performed on the basis of ISO 9001 quality system and API Q1 Quality Program Norm, and certificated by DNV and API, it meets the standard of ISO9001 quality system and API Q1 and API 6D Norm, it is authorized to apply API mark certification no. API 6D-0652.

Pipeline ball valve has many options of materials,which is complete of specification and pressure class, including full bore and reduced bore types, It is an ideal product for transmitting pipelines of petroleum, natural gas and chemical materials.

外形图





设计特点
Feature of design

锻钢结构
球阀的阀体和连接体采用锻钢材料，阀门内件经过精心选择，确保在各种工况下能可靠地工作。阀体的壁厚和阀体螺栓的连接强度按美国标准ASME B16.34的要求，经过严密计算，确保相应的阀体压力等级和结合部的可靠强度。

Forged steel structure
The valve body and connector of ball valve are made of forged steel while its inner parts are exquisitely selected, so as to ensure the product to operate reliably under various work conditions. The wall thickness of the body and the connection strength of valve bolts is performed as per ASME B16.34, the relating pressure class and reliable strength of joint is insured through strict calculation.

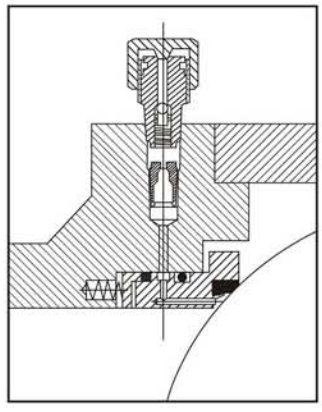
操作扭矩低
球阀采用固定球结构，浮动阀座，在操作压力下达到较小的扭矩。采用了具有自润PTFE的金属轴套，与高强度、高光洁度的阀杆配合，使摩擦系数降到最低。

Low operating torque
Fixed ball and floating seat is applied in ball valve, by which low torque can be attained under operating pressure. Self-lubricating PTFE metal axle sleeve is used with high-strength and high-polished stem to enable friction coefficient smallest.

密封可靠
镶嵌有适合不同压力级的聚合材料密封座是浮动的，并由弹簧加载，在关闭位置时，始终与球体保持紧密接触，达到可靠的密封。每台阀门在出厂前均按API 6D进行全面验收，也可按API 598或GB/T 13927进行验收，在确保其结果完全符合要求并出具试验报告后才可出厂。

Reliable sealing
The polymeric sealing seat suitable for various pressure classes is floating and loaded by spring, keep close contact with the body at Off position, thus reliable sealing is reached. Before delivery, each valve is wholly examined as per API 6D, API598 or GB/T 13927 and test qualified in the written test report..

辅助阀座密封
通经大于等于6英寸（DN 150）的球阀设计有辅助阀座密封系统，如下图所示。当软阀座密封受到一定的损伤，出现微量泄露时，通过向辅助密封系统注射的密封剂可辅助密封。辅助密封系统在必要时也可用来对阀座区域进行冲洗润滑，以保持其清洁。
(见1)
注：小于等于4英寸（DN100）的球阀阀体上设有一个清洗阀，该清洗阀为注射清洁剂而用，无辅助密封功能。



(1)

Auxiliary valve seat sealing
Shown in the following diagram, the ball valve its diameter is greater than and equal to 6 inches (DN150) is provided with auxiliary valve seat sealing system. When soft sealing is damaged for a certain degree and minor leakage is occurred, the auxiliary is obtained by the sealant injected by auxiliary sealing system. The system also can wash and lubricate the seat as necessary in order to retain the cleanness.
Note: (As shown in Diagram 1) a cleaning valve is set at ball valve body its diameter is less than and equal to 4 inches (DN100), this cleaning valve is available for injecting cleaner and has no sealing function.

可靠的阀杆和阀体密封
球阀使用符合国际先进标准的氟橡胶O形圈和石墨垫片作为阀杆密封和阀体密封材料，确保了阀门在各种工况下均有可靠的密封。根据工况或用户的要求，还可提供防止减压爆裂的氟橡胶O形圈作为密封材料，以保证在压力剧烈波动的情况下达到更为可靠的阀杆和阀体密封。此外，大部分阀门的阀杆安装有辅助密封装置。

Reliable sealing to stem and body
The stem and body sealing materials respectively employ fluorubber O-ring and graphite gasket meeting the requirements of international advanced standards, to ensure reliable sealing under various work conditions. Fluorubber O-ring preventing from pressure reduction explosion can also be applied for sealing materials in order to ensure the sealing of stem and body under severe fluctuation. Besides, most of stems are installed with auxiliary sealing device.

阀腔压力的自动排放

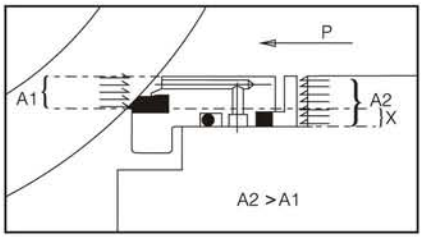
ASME-B16.34中对双密封座阀门体腔的积压有专门的陈述。球阀由于使用了弹簧加载的独立上下游密封座，确保阀腔内的积压可自动地向下游泄放，从而避免由于体腔积压而产生的危险性。(见2-3)

Auto discharge of cavity pressure

The specialized explanation is given for the overstocking of dual-sealing-seat valve cavity in ASME-B16.34. Because the separate spring-loaded upper/lower seat ring is set in ball valve, the stocking in the cavity can be discharged downwards automatically so as to avoid the danger arisen from overstocking. (As shown in diagram 2-3)

上游侧：阀座沿阀门轴向运动，施加与A2上的上游（进口）压力P，在A1上产生一个反向力，由于A2大于A1，A2-A1=X，因此X上的力将阀座推向球体达到上游的紧密密封。

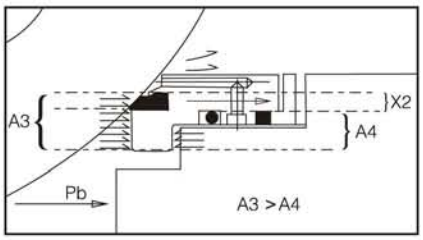
Upper side: the seat is axially moved along the valve, one reverse force is produced at A1 while upper inlet pressure P is exerted on A2, because A2 is greater than A1, X is equal to the value of A2 minus A1, and the force on X will pull the seat onto upper close sealing of ball.



(2)

下游侧：一旦阀腔内的压力Pb增高，作用在A3上的力大于A4上的力，因为A3-A4=X2，故在X2上的压差就克服弹簧力使阀座与球体脱离，这样阀腔的压力向下游排放。之后在弹簧的作用下阀座重新与球体密合。

Lower side: Once Pb (pressure in cavity) is enhanced, the force exerted on A3 is greater than that on A4, X2 is equal to the valve of A3 minus A4, the pressure difference of X2 will separate the seat and ball by eliminating spring force, then the cavity pressure is discharged downwards, the contact between the seat and the ball can be conducted under the action of spring.



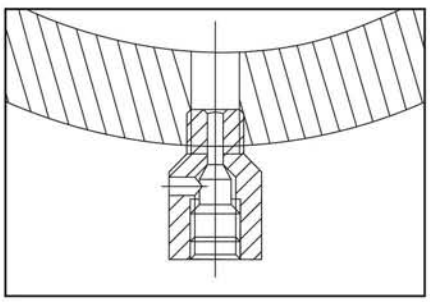
(3)

阀体泄放装置

球阀的阀体上安装有排泄阀。阀门关闭状态下，当中腔通过排泄阀放空时，可截断来自阀门两端的流体，因此阀门具有双截止与泄放（DBB）功能。排泄阀的另一种功能是通过它可对阀体内的沉积物进行冲洗与排放。(见4)

Body discharge device

The discharge valve is installed at the body of ball valve. When the discharge-off action is performed through discharge valve under Off status, the fluids come from both sides of valve can be stopped, therefore, the valve enjoys the functions of stop and discharge(DBB). The other function is to wash and discharge the sediment in the body through the device. (As shown in Diagram 4)



(4)

防火与防静电设计

防火是管线球阀的标准设计。该阀门的防火结构按API 607标准进行了火烧试验，其性能完全符合API 607的要求，该球阀还可以根据用户要求，提供防静电结构。

Fireproof and staticproof design

Fireproof design is one of characteristics available in pipeline ball valve. The fireproof structure can be tested by burning as per API 607, its performance meets the requirements stipulated in API 607, staticproof structure is also offered according to the requirements of customers.

防腐蚀

阀体壁厚留有一定的腐蚀余量，碳钢阀杆、固定轴、球体、阀座及底座均按美国材料试验协会的标准ASTM B733和B656进行化学镀镍。此外尚有多种防腐蚀材料供用户选用。

抗硫化应力

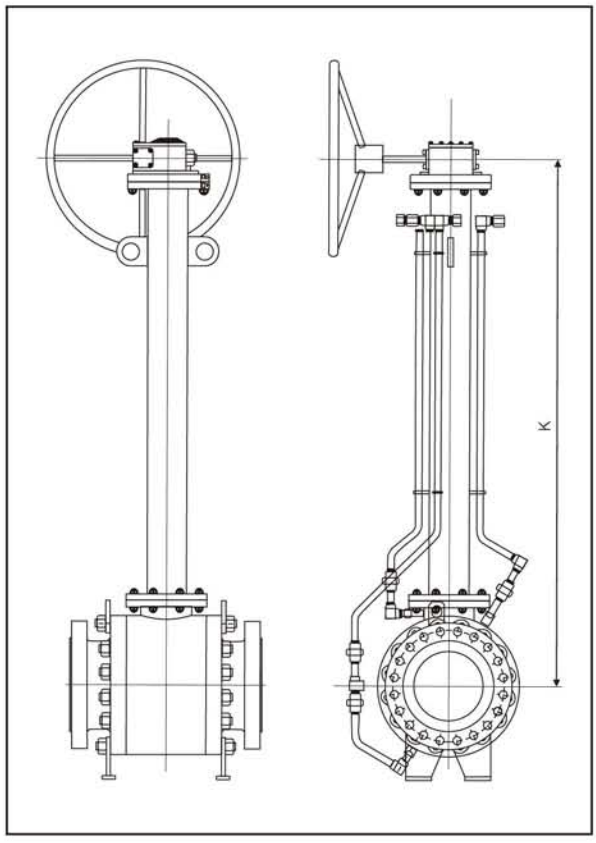
根据客户要求，阀门材料可按美国腐蚀工程师协会标准NACE MR0175或NACE Mr0103的要求进行选择，并在制造过程中作严格的质量控制和质量检测，以期完全符合标准的要求，满足硫化环境工况。

手动或自动操作

2-4英寸（DN50-100）的150级，300级，400级和600级；2和3英寸（DN50和DN80）的900级；
2英寸（DN50）的1500级阀门为手柄操作，更大尺寸的阀门用蜗轮操作。也可安装气动、电动、液动和气液联动等装置进行自动控制。

接长装置

对于安装在地下的球阀，如须在地面操作，可提供接长装置。接长装置包括阀杆、注油阀、排泄阀等接长，用户订货时应在订单中说明接长要求和长度。对于蜗轮箱传动的球阀，接长长度为球阀管道中心到蜗轮箱手轮中心的长度尺寸。对于电动、气动、气液联动传动的球阀，接长长度为球阀管道中心到接长杆连接法兰平面的长度尺寸。(见5)



(5)

Corrosion-proof

Certain corrosion margin is reserved for wall thickness of body, chemical nickelplating is done on carton steel stem, fixed shaft, ball, seat and base seat as per ASTM B733 and B656. Besides, there are other various corrosion materials for customers.

Sulfide stress

According to the requirements of customers, the materials of valve can be selected as per NACE MR0175 or NACE MR0103, strictly quality controlled and tested during the processing, with a view to meeting the requirements of the standard and the work conditions of sulfide.

Manual or auto operation

Manual handle operation is suitable for Class 150, 300, 400 and 600 of 2-4 inches(DN50-100); Class 900 of 2 & 3 inches (DN50 and DN80) ; Class 1500 of 2 inches (DN50), while worm operation mode is suitable for larger sizes, besides, other operation modes involving pneumatic, electric, hydraulic and pneumatic-hydraulic combination are fit for auto control.

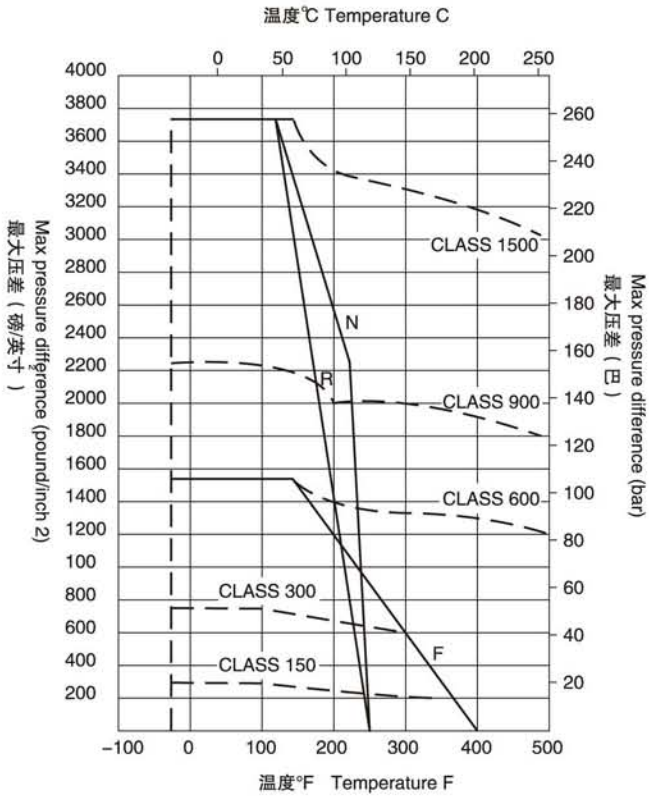
Extension device

The extension device is offered to the ball valve mounted and operated on the ground. It contains stem, grease injector, discharge valve and so on, the requirements and length must be illustrated in the order as ordering. The extension length of ball valve driven by worm box is the distance between the center of ball valve pipeline and that of worm box handwheel. The extension of ball valve driven electrically, pneumatically and pneumatically-hydraulically is the distance between the center of ball valve pipeline and the connection flange surface of extension rod.(as shown in Diagram 5)

阀门温度–压力额定值
Temperature–pressure rated valve of valve

如下图实线所示的密封额定值是根据阀门全闭时的压差决定的，且只对密封座而言。虚线表示碳钢(A105)阀体的最大工作压力。两线的交点表示阀门在相应温度和压力下的最大额定值。

The sealing rated value indicated in full line in the following diagram, only for sealing seat, is determined by the pressure difference under full close of valve, the max work pressure of carton steel (A105) body is indicated in dotted line. The intersection point of both lines indicates the max rated value under relative temperature and pressure.



F=聚四氟乙烯 PTFE
R=旦林 DENIER
N=尼龙 NYLON

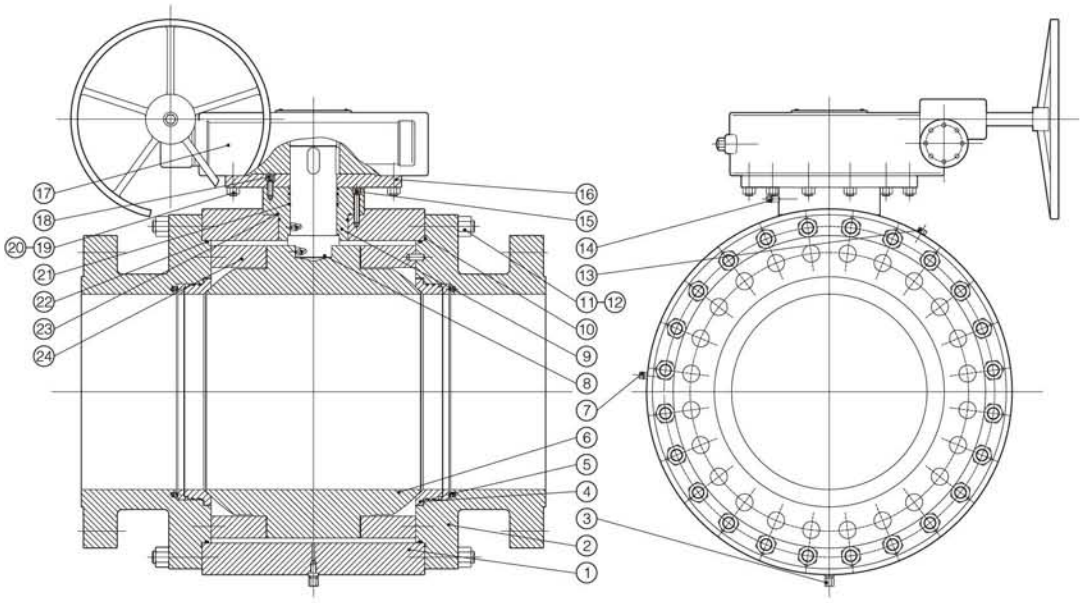
阀体温度–压力额定值
Temperature–pressure rated value of body

如下表列出了主要阀体材料的温度压力额定值，它是按照美国标准ASME B16.34，实际使用的压力限制值根据上面所述的密封座额定值。

The rated values of main body materials are listed in the following table as per ASME B16.34, the actual pressure limit as per rated value of sealing seat stated above.

温度 Temperature		压力等级 Pressure Class																							
		Class 150				Class 300				Class 400				Class 600				Class 900				Class 1500			
℃	°F	A105,LF2		ASTM A182 F316		A105,LF2		ASTM A182 F316		A105,LF2		ASTM A182 F316		A105,LF2		ASTM A182 F316		A105,LF2		ASTM A182 F316		A105,LF2		ASTM A182 F316	
Up to	Up to	bar	pai	bar	pai	bar	pai	bar	pai	bar	pai	bar	pai	bar	pai	bar	pai	bar	pai	bar	pai	bar	pai	bar	pai
38	100	19.7	285	19	275	51	740	49.6	720	68.3	990	66.2	960	102	1480	99.3	1440	153.1	2220	148.9	2160	255.5	3705	248.2	3600
93	200	17.9	260	16.5	240	46.5	675	42.7	620	62.1	900	56.9	825	93.1	1350	85.5	1240	139.6	2025	128.2	1860	232.7	3375	213.4	3095
149	300	15.9	230	14.8	215	45.2	655	38.6	560	60.3	875	51.4	745	90.7	1315	77.2	1120	135.8	1970	115.8	1860	226.1	3280	192.7	2795
204	400	13.8	200	13.4	195	43.8	635	35.5	515	58.3	845	47.2	685	87.6	1270	71.0	1030	131	1900	106.2	1540	218.6	3170	177.2	2570
260	500	11.7	170	11.7	170	41.4	600	33.1	480	55.2	800	43.8	635	82.7	1200	65.8	955	123.8	1795	98.9	1435	206.5	2995	164.8	2390

典型结构图
Typical structural diagram



1	2	3	4	5	6	7	8	9	10	11	12
阀体 Valve body	连接体 Connector	阀座 Valve seat	泄放阀 Relief valve	弹簧 Spring	球体 Sphere	阀杆 Valve rod	注射阀(阀座) Injection valve (Valve seat)	填料函 Packing block	密封垫 Gasket	螺柱 Bolt	螺母 Nut
13	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**
螺塞 Threaded plug	注射阀(阀杆) Injection valve (Valve rod)	螺钉 Screw	连接板 Connection plate	蜗轮 Worm wheel	螺钉 Screw	螺柱 Bolt	螺母 Nut	O形圈 O ring	O形圈 O ring	密封垫 Gasket	固定板 Fixed plate

主要零件材料 Main components

阀体 Valve body	ASTM A105	ASTM A350 LF2	ASTM A182 F316
球体 Sphere	ASTM A105注 Note	ASTM A350 LF2注 Note	ASTM A182 F316或 or17–4PH
阀杆 Valve rod	AISI 4140注 Note	AISI 4140注 Note	ASTM A182 F316或 or17–4PH
密封座 Seal seat	聚四氟乙烯、旦林、尼龙 PTFE, Denier, Nylon		

注：化学镀镍
根据客户要求也可提其它材料，如：双相不锈钢、蒙乃尔合金等。

Note: Chemical nickel–plating
The other can be adopted according to the requirements of customers like duplex stainless steel, Monel alloy etc.
Reference Standards and Specifications for Design

设计参照标准与规范
Reference standards and specifications for design

API Q1	石油和天然气工业用质量纲要规范	Specification for quality programs for the petroleum, Petrochemical and natural gas industry
API 6D	管线阀门	Pipeline valves
API 598	阀门的检查与试验	Valve inspection and testing
API 607	转1/4周软阀座阀门的耐火试验	Fire test for soft-seated quarter-turn valves
ISO 14313	石油和天然气工业 管线输送系统 管线阀门	Petroleum and natural gas industries – Pipeline transportation systems – Pipeline valves
ANSI/ASME B16.5	管道法兰和法兰管件	Pipe flanges and flanged fittings
ANSI/ASME B16.10	阀门的结构长度	Face-to-face and end-to-end dimensions of valves
ANSI/ASME B16.25	对接焊端	Buttwelding ends
ANSI/ASME B16.34	法兰、螺纹和焊连接的阀门	Valves – Flanged, threaded, and welding end
ANSI/ASME B16.47	大直径钢制法兰	Large diameter steel flanges
MSS SP-44	钢制管道法兰	Steel pipeline flanges
NACE MR0103	油田设备用抗硫化应力裂纹的材料	Materials resistant to sulfide stress cracking in corrosive petroleum refining Environments
NACE MR0175	油田设备用抗硫化应力裂纹的金属材料	Petroleum and natural gas industries–Materials for use in H2S-containing Environments in oil and gas production
GB/T 9113.1	平面、凸面整体钢制管法兰	Integral steel pipe flanges with flat face orraised face
GB/T 9113.4	环连接面整体钢制管法兰	Integral steel pipe flanges with ring-joint face
GB/T 12224	钢制阀门 一般要求	General requirements for industrial steel valves
GB/T 13927	通用阀门 压力试验	Pressure testing for general purpose valves
GB/T 19672	管线阀门技术条件	Specification of pipeline valves
JB/T 6899	阀门的耐火试验	Fire test for valves

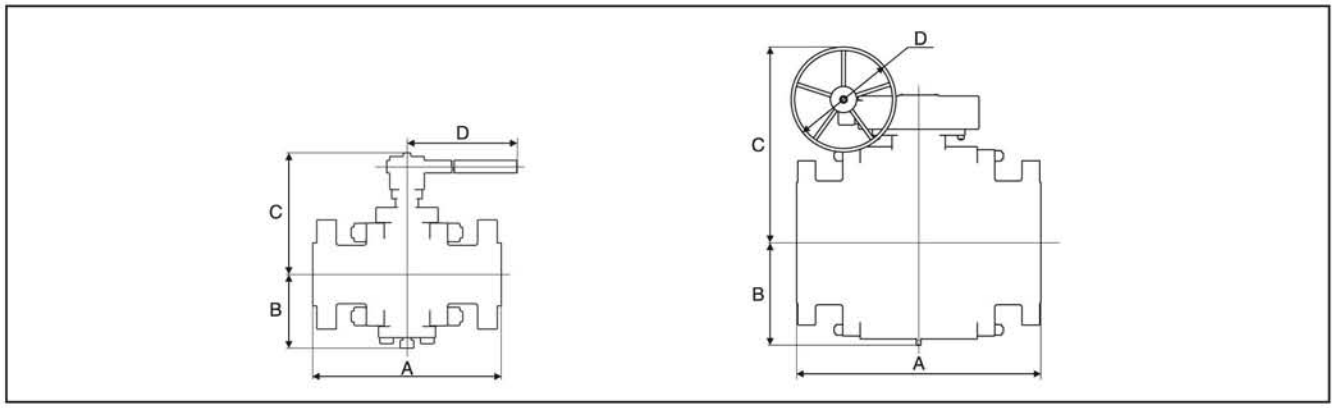
操作扭矩 Operating torque

口径		压力等级 Pressure Class								
NPS	DN	Class 150 PN 20	Class 300 PN 50	Class 400 PN 64	Class 600 PN 100	Class 900 PN 150	Class 1500 PN 250	PN 16	PN 25	PN 40
2	50	57	99	118	168	228	390	52	72	91
2-1/2	65	95	170	205	292	402	687	86	119	156
3	80	122	212	254	360	512	813	110	155	195
4	100	192	335	467	575	946	1524	171	240	308
6	150	324	544	647	912	1784	2934	292	405	500
8	200	647	995	1206	2177	4116	7215	583	809	915
10	250	1105	1736	2638	3093	5910	11128	995	1382	1597
12	300	1502	2388	2929	4282	10137	16103	1352	1878	2196
14	350	1946	3224	3971	7458	14141	24518	1752	2431	2966
16	400	3164	5139	6307	9310	18866	29630	2848	3955	4727
18	450	3793	6194	7609	11233	22400	-	3412	4742	5698
20	500	4769	7826	9623	16815	28544	-	4292	5962	7199
22	550	5695	9454	11651	20333	-	-	-	-	-
24	600	7529	12958	15900	24554	53163	-	6778	9412	11921
26	650	8693	14394	17727	32488	-	-	-	-	-
28	700	9832	15620	20182	37558	-	-	8842	12290	-
30	750	11172	18703	23086	44293	-	-	-	-	-
32	800	12494	21030	25985	49598	-	-	11245	15618	-

注: 1.表中的扭矩是阀门在最大压差下的开启扭距，供选择驱动装置时作参考。
2.在选用执行机构应考虑不小于1.25倍的安全系数。
3.由于介质性质，内件及启闭速度的不同，可能需要考虑额外的扭距要求。

Notes: 1. The torque indicated in the table is the starting torque under maximum pressure difference, only for reference as selecting driving device.
2. Please consider the safety coefficient not less than 1.25 times when selecting executing organs.
3. The extra requirements on torque may be required because of different nature of mediums, inner parts and start/close speed.

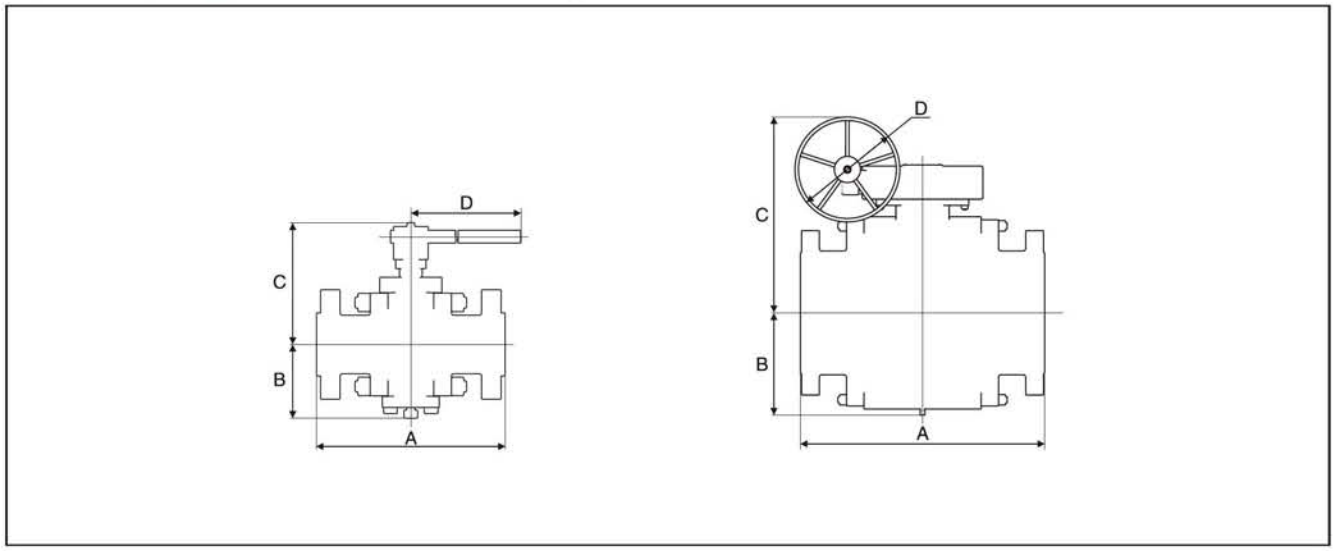
外形尺寸及重量 Overall sizes and weight



压力等级 Pressure Class	口径		尺寸 Size（mm）							重量(kg)
			A		B	C		D		
	NPS	DN	RF法兰	BW对焊		手动 Manual	蜗轮 Worm Wheel	手动 Manual	蜗轮 Worm Wheel	
Class 150 PN 20	2	50	178	216	165	153	-	580	-	28
	2-1/2	65	191	241	182	165	-	580	-	40
	3	80	203	283	204	195	-	700	-	54
	4	100	229	305	217	213	-	700	-	80
	6	150	394	457	185	-	534	-	460	185
	8	200	457	521	226	-	575	-	460	289
	10	250	533	559	259	-	608	-	460	433
	12	300	610	635	311	-	770	-	705	588
	14	350	686	762	348	-	808	-	705	1035
	16	400	762	838	390	-	937	-	800	1580
	18	450	864	914	540	-	995	-	800	2150
	20	500	914	991	578	-	1030	-	800	2600
	22	550	991	1092	610	-	1075	-	800	3180
	24	600	1067	1143	660	-	1134	-	800	4200
	26	650	1143	1245	695	-	1353	-	800	5112
	28	700	1245	1346	735	-	1392	-	800	6262
	30	750	1295	1397	775	-	1433	-	800	7343
	32	800	1372	1524	820	-	1471	-	800	8908
Class 300 PN 50	2	50	216	216	165	153	-	580	-	30
	2-1/2	65	241	241	182	165	-	580	-	45
	3	80	283	283	204	195	-	700	-	60
	4	100	305	305	217	213	-	700	-	100
	6	150	403	403	185	-	534	-	460	204
	8	200	502	521	226	-	575	-	460	322
	10	250	568	559	271	-	732	-	705	535
	12	300	648	635	311	-	770	-	705	775
	14	350	762	762	348	-	808	-	705	1155
	16	400	838	838	390	-	937	-	800	1870
	18	450	914	914	540	-	995	-	800	2754
	20	500	991	991	578	-	1030	-	800	2895
	22	550	1092	1092	610	-	1075	-	800	3360
	24	600	1143	1143	660	-	1137	-	800	4684
	26	650	1245	1245	695	-	1353	-	800	5655
	28	700	1346	1346	735	-	1392	-	800	6773
	30	750	1397	1397	775	-	1433	-	800	7900
	32	800	1524	1524	820	-	1471	-	800	9549

压力等级 Pressure Class	口径		尺寸 Size（mm）								重量(kg)
			A			B	C		D		
	NPS	DN	RF法兰	RJ法兰	BW对焊		手动 Manual	蜗轮 Worm Wheel	手动 Manual	蜗轮 Worm Wheel	
Class 400 PN 64	2	50	292	295	292	141	167	-	700	-	32
	2-1/2	65	330	333	330	151	182	-	700	-	52
	3	80	356	359	356	167	208	-	1100	-	64
	4	100	406	410	406	202	244	-	1100	-	110
	6	150	495	498	495	192	-	542	-	460	232
	8	200	597	600	597	226	-	575	-	460	354
	10	250	673	676	673	271	-	732	-	705	580
	12	300	762	765	762	322	-	782	-	705	834
	14	350	826	829	826	348	-	808	-	800	1236
	16	400	902	905	902	390	-	936	-	800	2057
	18	450	978	981	978	555	-	998	-	800	3029
	20	500	1054	1060	1054	590	-	1052	-	800	3412
	22	550	1143	1153	1143	620	-	1075	-	800	3864
	24	600	1232	1241	1232	700	-	1137	-	800	5594
	26	650	1308	1321	1308	720	-	1353	-	800	6503
	28	700	1397	1410	1397	750	-	1392	-	800	7789
	30	750	1524	1537	1524	820	-	1433	-	800	9085
	32	800	1651	1667	1651	850	-	1471	-		10981
Class 600 PN 100	2	50	292	295	292	141	167	-	700	-	32
	2-1/2	65	330	333	330	151	182	-	700	-	52
	3	80	356	359	356	167	208	-	1100	-	64
	4	100	432	435	432	202	244	-	1100	-	122
	6	150	559	562	559	192	-	542	-	460	267
	8	200	660	664	660	250	-	711	-	705	521
	10	250	787	791	787	290	-	762	-	705	773
	12	300	838	841	838	342	-	875	-	800	1072
	14	350	889	892	889	378	-	902	-	800	1563
	16	400	991	994	991	423	-	972	-	800	2400
	18	450	1092	1095	1092	570	-	1032	-	800	3190
	20	500	1194	1200	1194	610	-	1086	-	800	4536
	22	550	1295	1305	1295	650	-	1306	-	800	4899
	24	600	1397	1407	1397	720	-	1373	-	800	6620
	26	650	1448	1461	1448	750	-	1420	-	800	7337
	28	700	1549	1562	1549	780	-	1471	-	800	9482
	30	750	1651	1664	1651	820	-	1516	-	800	10263
	32	800	1778	1794	1778	900	-	1580	-	800	12334

外形尺寸及重量 Overall sizes and weight



压力等级 Pressure Class	口径		尺寸 Size（mm）								重量(kg)
			A			B	C		D		
	NPS	DN	RF法兰	RJ法兰	BW对焊		手动 Manual	蜗轮 Worm Wheel	手动 Manual	蜗轮 Worm Wheel	
Class 900 PN 150	2	50	368	371	368	141	167	-	700	-	48
	2-1/2	65	419	422	419	152	182	-	700	-	60
	3	80	381	384	381	167	208	-	1100	-	78
	4	100	457	460	457	202	-	508	-	460	138
	6	150	610	613	610	200	-	656	-	705	390
	8	200	737	740	737	259	-	792	-	800	700
	10	250	838	841	838	293	-	828	-	800	1100
	12	300	965	968	965	359	-	908	-	800	1750
	14	350	1029	1038	1029	500	-	943	-	800	2300
	16	400	1130	1140	1130	550	-	1201	-	800	3500
	18	450	1219	1232	1219	590	-	1243	-	800	4727
	20	500	1321	1334	1321	650	-	1329	-	800	5542
	24	600	1549	1568	1549	750	-	1443	-	800	9745
Class 1500 PN 250	2	50	368	371	368	141	167	-	700	-	55
	2-1/2	65	419	422	419	152	182	-	700	-	80
	3	80	470	473	470	167	-	492	-	460	97
	4	100	546	549	546	202	-	508	-	460	162
	6	150	705	711	705	200	-	656	-	705	592
	8	200	832	841	832	259	-	792	-	800	932
	10	250	991	1000	991	455	-	894	-	800	1900
	12	300	1130	1146	1130	500	-	950	-	800	2282
	14	350	1257	1276	1257	520	-	1175	-	800	3939
	16	400	1384	1407	1384	600	-	1258	-	800	5433

压力等级 Pressure Class	口径 DN	尺寸 Size（mm）							重量(kg)
		A		B	C		D		
		RF法兰	BW对焊		手动 Manual	蜗轮 Worm Wheel	手动 Manual	蜗轮 Worm Wheel	
PN 16	50	178	216	165	153	-	580	-	28
	65	191	241	182	165	-	580	-	40
	80	203	283	204	195	-	700	-	54
	100	229	305	217	213	-	700	-	80
	150	394	457	185	-	534	-	460	185
	200	457	521	226	-	575	-	460	289
	250	533	559	259	-	608	-	460	433
	300	610	635	311	-	770	-	705	588
	350	686	762	348	-	808	-	705	1035
	400	762	838	390	-	937	-	800	1580
	450	864	914	540	-	995	-	800	2150
	500	914	991	578	-	1030	-	800	2600
	600	1067	1143	660	-	1134	-	800	4200
	700	1245	1346	735	-	1392	-	800	6262
	800	1372	1524	820	-	1471	-	800	8908
PN 25	50	216	216	165	153	-	580	-	29
	65	241	241	182	165	-	580	-	42
	80	283	283	204	195	-	700	-	58
	100	305	305	217	213	-	700	-	95
	150	403	457	185	-	534	-	460	197
	200	502	521	226	-	575	-	460	310
	250	568	559	259	-	608	-	460	520
	300	648	635	311	-	770	-	705	745
	350	762	762	348	-	808	-	705	1100
	400	838	838	390	-	937	-	800	1730
	450	914	914	540	-	995	-	800	2550
	500	991	991	578	-	1030	-	800	2700
	600	1143	1143	660	-	1134	-	800	4380
	700	1346	1346	735	-	1392	-	800	6200
	800	1524	1524	820	-	1471	-	800	9000
PN 40	50	216	216	165	153	-	580	-	30
	65	241	241	182	165	-	580	-	43
	80	283	283	204	195	-	700	-	59
	100	305	305	217	213	-	700	-	98
	150	403	457	185	-	534	-	460	200
	200	502	521	226	-	575	-	460	315
	250	568	559	271	-	732	-	705	525
	300	648	635	311	-	770	-	705	760
	350	762	762	348	-	808	-	705	1120
	400	838	838	390	-	937	-	800	1750
	450	914	914	540	-	995	-	800	2600
	500	991	991	578	-	1030	-	800	2810
	600	1143	1143	660	-	1137	-	800	4580

注: 以上重量以RF法兰为准.

Note: the above weight is subject to RF flanges

Eccebtric segmental ball valves
偏心半球阀

偏心半球阀是一种新型阀门，是为了解决溶液及矿浆等两相流介质输送的技术难题以及全固物类管线，而研制开发的新型产品。它的开发成功，为石油、化工、冶金、电力、燃气等工业部门的溶液工艺流程中，易沉淀结垢、结晶析出而影响流程，提供了可靠的控制阀门。本产品具有结构新颖、性能稳定、开启迅速、耐磨性强、密封可靠、易于调整维修及直通式结构流通快等特点；较闸阀、截止阀与蝶阀等阀门流阻小、系统降压小、能自行破除结垢、方便启闭及无"死区"等优点；克服了普通球阀易堵塞等弊端，显示其独特的优越性。

Eccentric segmental ball valves is a new type valve applied to solve technical problems during the transmission of mediums like duplex solvent and sludge, and the pipelines for all solids. This valve offer one control valve for the industries easily subsided, fouled and crystallized like petroleum, chemicals, metallurgy, power supply, gas, the product has the merits of novel structure, stable performance, prompt switching, strong friction resistance, reliable sealing, easy adjustment, maintenance, quick delivery, besides, small flow resistance, low system reduction, eliminating fouls by itself, easy switching and no dead area compared with gate valve, stop valve and butterfly valve, the distinguished excellence is shown out by solving the

- 偏心半球阀非常适用于浆料及全固物类的管线，如喷煤粉类、卸灰类、泥浆类等管线。故可称为喷煤粉球阀或卸灰球阀。
- 固定半球结构，在全关闭或全开启状态下没有所谓普通球阀的副腔，所以不会出现堵死现象。
- 中小口径整体式构造，大口径二片式构造，构件结构坚固，可消除管道系统压力效应及连接处渗漏的危险。装有轴承使其操作扭矩小，保证了阀门在苛刻工况下工作过程无故障。
- 可选配蜗轮传动、气动、电动或液动执行器。

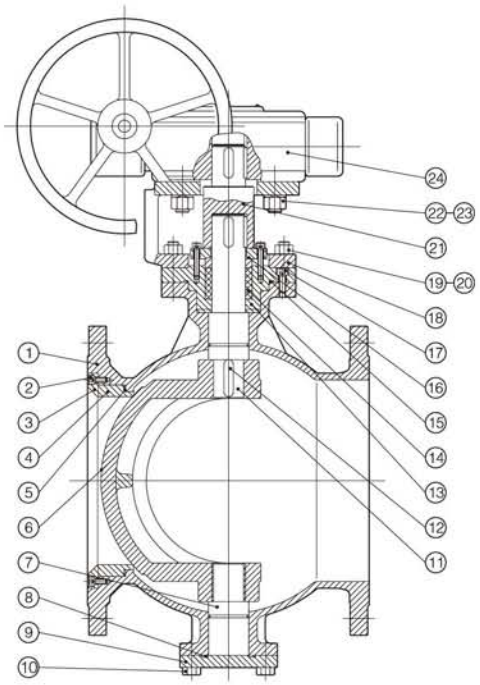
- The eccentric segmental ball valves is very suitable for the piping of sludge and all solids, like pulverized coals, ashes and mud sludge. Therefore, it can also be called as coal-pulverized or ash-discharging ball valve.
- Fixed semi structure has no auxiliary cavity of common ball valve under full close and full open, therefore, no blockage will be occurred.
- Middle and small-diameter integrated construction, big-diameter piece construction, the construction has solid structure which can eliminate the pressure effect of pipeline system and the leakage danger of joint. The bearings installed make the operating torque smaller, thus there is no failure occurred during the bad operation of valve.
- Worm, pneumatic, electric or hydraulic executor can be chosen.

外形图





典型结构图 Typical structural diagram



1	阀体 Body
2	螺钉 Screw
3	压板 Gland
4	阀座 Seat
5	密封垫 Gasket
6	球体 Ball
7	固定轴 Fixed axle
8	密封垫 Sealing gasket
9	底盖 Bottom cover
10	螺钉 Screw
11	阀杆 Stem
12	键 key
13	填料函 Packing block
14	填料 Packing
15	密封垫 Sealing gasket
16	填料压盖 Packing gland
17	螺钉 Screw
18	支架 Yoke
19	螺柱 Bolt
20	螺母 Nut
21	连接套 Connecting sleeve
22	螺柱 Bolt
23	螺母 Nut
24	蜗轮 Worm wheel

主要零件材料及适用工况 Main components and applicable situations

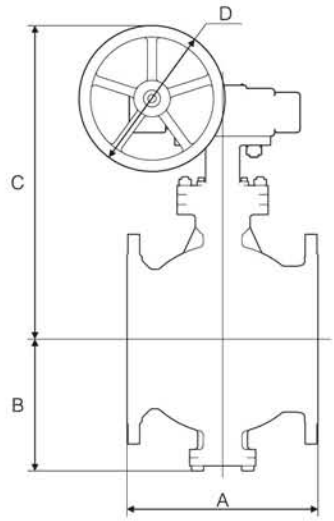
主要零件材料 Main components	阀体 Valve body	WCB	CF8	ZG1Cr18Ni9Ti	CF3	CF8M	ZG1Cr18Ni12Mo2Ti	CF3M
	球体 Sphere	CF8	CF8	ZG1Cr18Ni9Ti	CF3	CF8M	ZG1Cr18Ni12Mo2Ti	CF3M
	阀杆 Valve rod	2Cr13	304/17-4PH	1Cr18Ni9Ti	304L	316	1Cr18Ni12Mo2Ti	316L
	阀座 Valve seat	2Cr13	304	1Cr18Ni9Ti	304L	316	1Cr18Ni12Mo2Ti	316L
	密封面 Sealing surface	聚四氟乙烯、硬质合金、橡胶 PTFE, Hard alloy, Rubber						
适用工况 Applicable situations	适用介质 Applicable mediums	非腐蚀性介质或弱腐蚀性介质 Non-corrosive medium or weakly-corrosive medium	硝酸类腐蚀性介质 Nitric acid medium		强氧化性介质 Strongly-oxidized medium	醋酸类腐蚀性介质 Acetic acid medium		尿素类腐蚀性介质 Ureas
	温度范围 Temperature range	-196 ~ 400 ℃						

注: 根据用户的需求可提供其他材料，如: 双相不锈钢、蒙乃尔合金、哈氏合金等。
Note: Other materials can be chosen according to the requirements of customers like duplex stainless steel, Monel alloy and Hastelloy alloys.

设计参照标准与规范
Reference standards and specifications for design

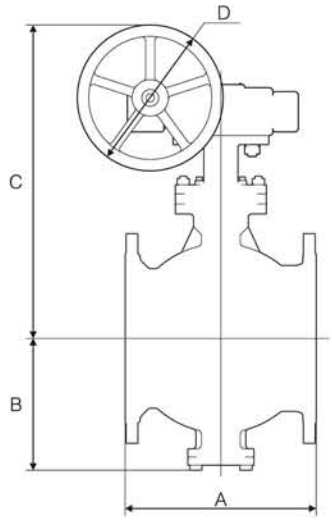
GB/T 9113.1	平面、凸面整体钢制管法兰	Integral steel pipe flanges with flat face orraised face
GB/T 9113.2	凹凸面整体钢制管法兰	Integral steel pipe flanges with male and female face
GB/T 12221	金属阀门 结构长度	Metal valves-Face to face,end to end,center to face and center to end dimensions
GB/T 12224	钢制阀门 一般要求	General requirements for industrial steel valves
GB/T 12237	石油、石化及相关工业用的钢制球阀	Steel ball valves for petroleum, petrochemical and allied industries
GB/T 13927	通用阀门 压力试验	Pressure testing for general purpose valves
ANSI/ASME B16.5	管道法兰和法兰管件	Pipe flanges and flanged fittings
ANSI/ASME B16.34	法兰、螺纹和焊连接的阀门	Valves – Flanged, threaded, and welding end
ANSI/ASME B16.47	大直径钢制法兰	Large diameter steel flanges
API 598	阀门的检查和试验	Valve inspection and testing

外形尺寸 Figure sizes



压力等级 Pressure Class	口径 DN	尺寸 Size（mm）			
		A	B	C	D
PN 6 RF法兰	40	165	77	255	160
	50	178	97	265	160
	65	190	109	275	160
	80	203	114	335	220
	100	229	125	360	220
	125	254	154	395	240
	150	267	180	445	300
	200	292	214	470	300
	250	394	250	530	350
	300	419	285	570	350
	350	550	332	650	400
	400	600	368	740	400
	450	650	420	850	400
	500	700	478	955	450
	600	800	532	1070	450
	700	900	590	1160	500
	800	1000	650	1200	500
PN 10 RF法兰	40	165	77	255	160
	50	178	97	265	160
	65	190	109	275	160
	80	203	114	335	220
	100	229	125	360	220
	125	254	154	395	240
	150	267	180	445	300
	200	292	214	470	300
	250	394	250	530	350
	300	419	285	570	350
	350	550	332	650	400
	400	600	368	740	400
	450	650	420	850	400
	500	700	478	955	450
	600	800	532	1070	450
	700	900	590	1160	500
	800	1000	650	1200	500

外形尺寸 Figure sizes



压力等级 Pressure Class	口径 DN	尺寸 Size（mm）			
		A	B	C	D
PN 16 RF法兰	40	165	77	255	160
	50	178	97	265	160
	65	190	109	275	160
	80	203	114	335	220
	100	229	125	360	220
	125	254	154	395	240
	150	267	180	445	300
	200	292	214	470	300
	250	394	250	530	350
	300	419	285	570	350
	350	550	332	650	400
	400	600	368	740	400
	450	650	420	850	400
	500	700	478	955	450
	600	800	532	1070	450
	700	900	590	1160	500
	800	1000	650	1200	500
PN 25 RF法兰	40	165	77	255	160
	50	178	97	265	160
	65	190	109	275	160
	80	203	114	335	220
	100	229	125	360	220
	125	254	154	395	240
	150	267	180	445	300
	200	292	214	470	300
	250	394	250	530	350
	300	419	285	570	350
	350	550	332	650	400
	400	600	368	740	400
	450	650	420	850	400
	500	700	478	955	450
	600	800	532	1070	450
	700	900	590	1160	500
	800	1000	650	1200	500

压力等级 Pressure Class	口径 DN	尺寸 Size（mm）			
		A	B	C	D
PN 40 MF法兰	40	165	77	255	160
	50	178	97	265	160
	65	190	109	275	160
	80	203	114	335	220
	100	229	125	360	220
	125	254	154	395	240
	150	267	180	445	300
	200	292	214	470	300
	250	394	250	530	350
	300	419	285	570	350
	350	550	332	650	400
	400	600	368	740	400
	450	650	420	850	400
	500	700	478	955	450
	600	800	532	1070	450
Class 150 PN 20 RF法兰	40	165	77	255	160
	50	178	97	265	160
	65	190	109	275	160
	80	203	114	335	220
	100	229	125	360	220
	150	267	180	445	300
	200	292	214	470	300
	250	394	250	530	350
	300	419	285	570	350
	350	550	332	650	400
	400	600	368	740	400
	450	650	420	850	400
	500	700	478	955	450
	600	800	532	1070	450
	700	900	590	1160	500
	800	1000	650	1200	500
Class 300 PN 50 RF法兰	40	165	77	255	160
	50	178	97	265	160
	65	190	109	275	160
	80	203	114	335	220
	100	229	125	360	220
	150	267	180	445	300
	200	292	214	470	300
	250	394	250	530	350
	300	419	285	570	350
	350	550	332	650	400
	400	600	368	740	400
	450	650	420	850	400
	500	700	478	955	450
	600	800	532	1070	450

V 型球阀是我公司开发的一种高性能球阀，此球阀具有两种用途，一种是具有调节功能，用于调节管路中介质的流量等参数，具有等百分比特性，有很宽的控制范围和特别稳定的控制过程。一种是具有切断功能，用于切断或接通管路中的介质， V型切口的球体与金属阀座之间具有剪切作用，特别适用含纤维、固体颗粒、浆料等介质。因此可广泛用于造纸、石油、化工、化纤、电力、冶金、制药及环保等行业。

Segmental ball valves is a high performance ball valve developed by Our Corporation , this ball valve has two purposes: one is to adjust the parameters like flowage of medium in the pipeline, which has equal percentage, wide control range and specially stable control process; the other is to cut off or pull through the medium in the pipeline, The shearing action is done between Segmental ball valves and metal seat, it is specially fit for medium containing fibre, solid article, sludge, and be widely used in the industries like paper-making, petroleum, chemicals, chemical fibre, power supply, metallurgy, pharmacy and environmental protection.

优越的调节性
V型球阀具有等百分比特性及高达300:1的可调比，因此可以在广范的变化范围内提供精确的控制。

超强的切断性
采用可动补偿密封金属阀座，与V 型球体切口在启闭中产生强大的剪切力，能切断高浓度的纤维等介质，并具有自洁功能，防止阀门在工作中卡死现象。

整体式构造
阀体为整体式构造，构件结构坚固，可消除管道系统压力效应及连接处渗漏的危险。

固定球结构
固定球结构配 PTFE轴承使其操作扭矩小，灵敏度高。备有标准材料的替换件，一流的工艺，加工符合 ISO 9001质量体系，保证了阀门工作过程中无故障。

结构紧凑
V型球阀结构紧凑，小巧轻盈，安装方便，维护简便。

执行器选择
可选配气动、电动、蜗轮传动。

Excellent Adjustment
Segmental ball valves has equal percentage and high turndown ration up to 300:1, therefore, it can exactly control within wide vibration range.

Extra strong cutting
Active compensable sealing metal seat is applied to form strong shearing force with Segmental slot during the switching, the shearing force can cut off high solidity fiber etc., and has self-cleaning function to avoid blockage.

Integrated Construction
The body is integrated constructed, the structure is solid can eliminate the pressure effect of pipeline system and the leakage danger of joint.

Fixed ball structure
The operation torque is small and flexibility is high with fixed ball and PTFE bearing. The spare parts can replace standard materials, no failure is occurred during the operation of valve on the basis first class technology and ISO 9001 quality system.

Compact structure
Segmental ball valves has compact, light and tiny structure, easy to install and maintain.

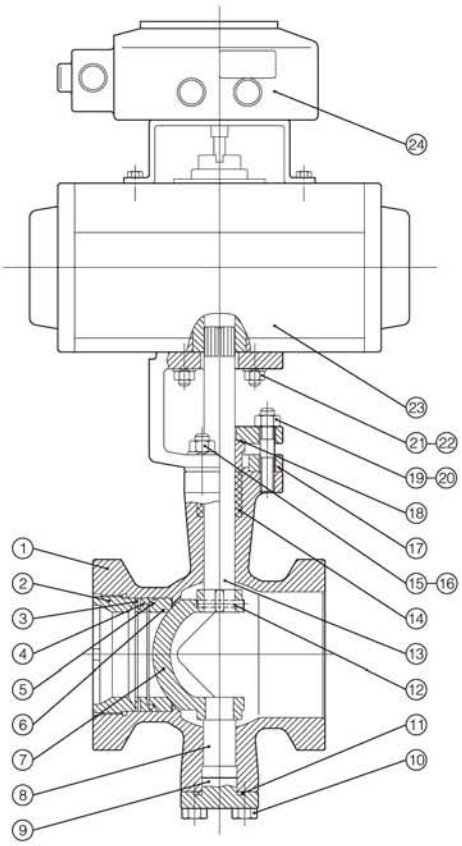
Options of executors
Optional for pneumatic, electric and worm.

外形图





典型结构图 Typical structural diagram



1	阀体 Body
2	螺塞 Threaded plug
3	板簧 Spring band
4	压圈 Clamping ring
5	阀座密封圈 Seat seal ring
6	阀座 Seat
7	球体 Ball
8	固定轴 Fixed axle
9	底盖 Bottom cover
10	螺钉 Screw
11	密封垫 Sealing gasket
12	定位销 Located pin
13	阀杆 stem
14	填料 Packing
15	螺柱 Bolt
16	螺母 Nut
17	支架 Yoke
18	填料压盖 Packing gland
19	螺柱 Bolt
20	螺母 Nut
21	螺柱 Bolt
22	螺母 Nut
23	气动执行器 Pneumatic actuators
24	定位器 Positioner

主要零件材料及适用工况 Main components and applicable situations

主要零件材料 Main components	阀体 Valve body	WCB	CF8	ZG1Cr18Ni9Ti	CF3	CF8M	ZG1Cr18Ni12Mo2Ti	CF3M
	球体 Sphere	CF8	CF8	ZG1Cr18Ni9Ti	CF3	CF8M	ZG1Cr18Ni12Mo2Ti	CF3M
	阀杆 Valve rod	2Cr13	304/17-4PH	1Cr18Ni9Ti	304L	316	1Cr18Ni12Mo2Ti	316L
	阀座 Valve seat	2Cr13	304	1Cr18Ni9Ti	304L	316	1Cr18Ni12Mo2Ti	316L
	密封面 Sealing surface	聚四氟乙烯、硬质合金、橡胶 PTFE, Hard alloy, Rubber						
适用工况 Applicable situations	适用介质 Applicable mediums	非腐蚀性介质或弱腐蚀性介质 Non-corrosive medium or weakly-corrosive medium	硝酸类腐蚀性介质 Nitric acid medium		强氧化性介质 Strongly-oxidized medium	醋酸类腐蚀性介质 Acetic acid medium		尿素类腐蚀性介质 Ureas
	温度范围 Temperature range	-196～400 ℃						

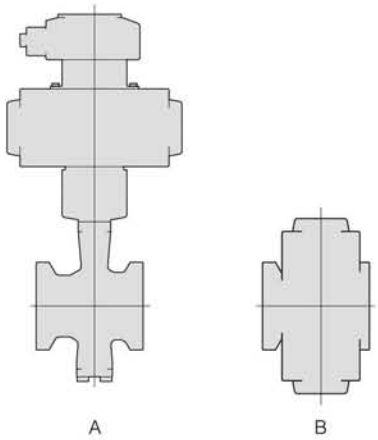
注: 根据用户的需求可提供其他材料，如: 双相不锈钢、蒙乃尔合金、哈氏合金等。
Note: Other materials can be chosen according to the requirements of customers like duplex stainless steel, Monel alloy and Hastelloy alloys.

压力等级
Pressure class
PN 10/16/20/25/40/50
Class 150/300

口径
Caliber
对夹式 Wafer type：DN25~250 / 1~10"
法兰式 Flange type：DN25~400 / 1~16"

密封性能
Sealing performance
密封试验是根据GB/T 4213、ISO 5208的规定而进行的，金属阀座V形球阀的标准密封等级是10×ISO 5208标准D，这个密封等级相应于ASME/FCI 70.2，IV级最大阀座泄漏量为1/100。
The sealing test is done as per GB/T 4213, ISO 5208, the standard sealing grade of metal seated V-shaped ball valve is 10 *ISO5208 Standard D, which corresponds to ASME/FCI 70.2, the max seat leakage of Class IV is 1/100.

执行器安装位置
Installation position of executor

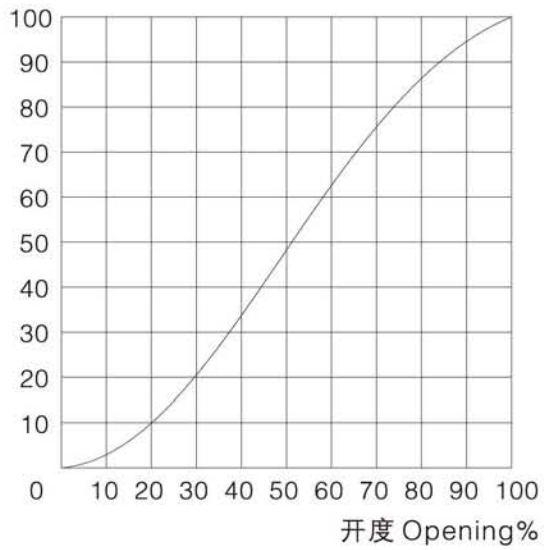


注：1.图中为2种一般的安装位置，如需其它安装位置与我公司联系。
2.如未指定安装位置，我公司选用A安装位置。

Note: 1. Two options for installation position is indicated in the diagram, please contact Our Corporation for other position.
2. The installation position A is selected when no position is specified.

法兰参照标准
Flange refers to
GB/T 9113.1 平面、凸面整体钢制管法兰
Integral steel pipe flanges with flat face orraised face
ANSI/ASME B16.5 管道法兰和法兰管件
Pipe flanges and flanged fittings

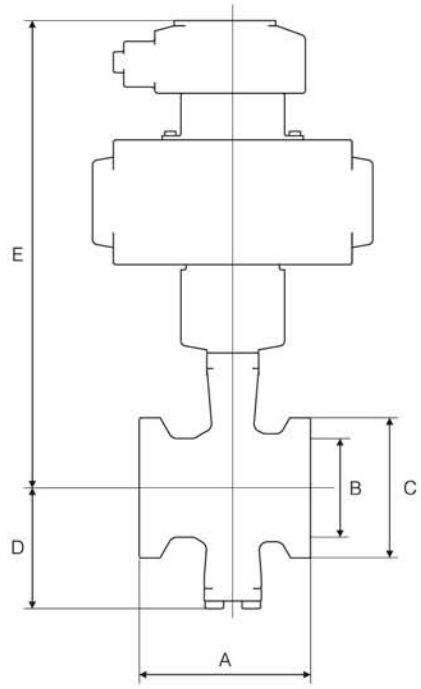
流量特性
Flow features
Cv%



最大允许工作扭矩
Max allowable operation torque

口径 Caliber		Nm
NPS	DN	
1	25	30
1-1/2	40	30
2	50	65
2-1/2	65	65
3	80	160
4	100	160
5	125	300
6	150	490
8	200	675
10	250	1350
12	300	1900
14	350	3000
16	400	4200

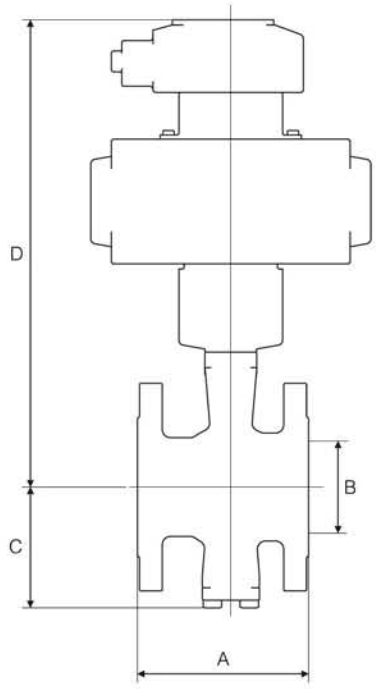
对夹式外形尺寸 Wafer type overall sizes



压力等级 Pressure Class	口径		尺寸 Size（mm）				
	NPS	DN	A	B	C	D	E
Class 150 PN 20	1	25	102	38	65	57	405
	1–1/2	40	114	49	84	63	410
	2	50	124	60	103	92	430
	2–1/2	65	145	75	122	99	435
	3	80	165	89	135	108	445
	4	100	194	113	173	117	455
	6	150	229	164	220	177	530
	8	200	243	205	277	200	575
	10	250	297	259	337	252	630
Class 300 PN 50	1	25	102	38	72	57	405
	1–1/2	40	114	49	94	63	410
	2	50	124	60	110	92	430
	2–1/2	65	145	75	128	99	435
	3	80	165	89	147	108	445
	4	100	194	113	179	117	455
	6	150	229	164	249	177	530
	8	200	243	205	305	200	575
	10	250	297	259	359	252	630

压力等级 Pressure Class	口径 DN	尺寸 Size（mm）				
		A	B	C	D	E
PN 10	25	102	38	72	57	405
	40	114	49	93	63	410
	50	124	60	108	92	430
	65	145	75	128	99	435
	80	165	89	142	108	445
	100	194	113	162	117	455
	125	210	140	192	152	495
	150	229	164	218	177	530
	200	243	205	273	200	575
	250	297	259	328	252	630
PN 16	25	102	38	72	57	405
	40	114	49	93	63	410
	50	124	60	108	92	430
	65	145	75	128	99	435
	80	165	89	142	108	445
	100	194	113	162	117	455
	125	210	140	192	152	495
	150	229	164	218	177	530
	200	243	205	273	200	575
	250	297	259	329	252	630
PN 25	25	102	38	72	57	405
	40	114	49	93	63	410
	50	124	60	108	92	430
	65	145	75	128	99	435
	80	165	89	142	108	445
	100	194	113	168	117	455
	125	210	140	194	152	495
	150	229	164	224	177	530
	200	243	205	284	200	575
	250	297	259	341	252	630
PN 40	25	102	38	72	57	405
	40	114	49	93	63	410
	50	124	60	108	92	430
	65	145	75	128	99	435
	80	165	89	142	108	445
	100	194	113	168	117	455
	125	210	140	194	152	495
	150	229	164	224	177	530
	200	243	205	291	200	575
	250	297	259	353	252	630

法兰式外形尺寸 Flange type overall sizes



压力等级 Pressure Class	口径		尺寸 Size（mm）			
	NPS	DN	A	B	C	D
Class 150 PN 20 RF法兰	1	25	102	38	57	405
	1-1/2	40	114	49	63	410
	2	50	124	60	92	430
	2-1/2	65	145	75	99	435
	3	80	165	89	108	445
	4	100	194	113	117	455
	6	150	229	164	177	530
	8	200	243	205	200	575
	10	250	297	259	252	630
	12	300	338	300	270	695
	14	350	400	370	310	710
	16	400	400	410	355	800
Class 300 PN 50 RF法兰	1	25	102	38	57	405
	1-1/2	40	114	49	63	410
	2	50	124	60	92	430
	2-1/2	65	145	75	99	435
	3	80	165	89	108	445
	4	100	194	113	117	455
	6	150	229	164	177	530
	8	200	243	205	200	575
	10	250	297	259	252	630
	12	300	338	300	270	695
	14	350	400	370	310	710
	16	400	400	410	355	800

压力等级 Pressure Class	口径 DN	尺寸 Size（mm）			
		A	B	C	D
PN 10 RF法兰	25	102	38	57	405
	40	114	49	63	410
	50	124	60	92	430
	65	145	75	99	435
	80	165	89	108	445
	100	194	113	117	455
	125	210	140	152	495
	150	229	164	177	530
	200	243	205	200	575
	250	297	259	252	630
	300	338	300	270	695
	350	400	350	310	710
	400	400	400	355	800
PN 16 RF法兰	25	102	38	57	405
	40	114	49	63	410
	50	124	60	92	430
	65	145	75	99	435
	80	165	89	108	445
	100	194	113	117	455
	125	210	140	152	495
	150	229	164	177	530
	200	243	205	200	575
	250	297	259	252	630
	300	338	300	270	695
	350	400	350	310	710
	400	400	400	355	800
PN 25 RF法兰	25	102	38	57	405
	40	114	49	63	410
	50	124	60	92	430
	65	145	75	99	435
	80	165	89	108	445
	100	194	113	117	455
	125	210	140	152	495
	150	229	164	177	530
	200	243	205	200	575
	250	297	259	252	630
	300	338	300	270	695
	350	400	350	310	710
	400	400	400	355	800
PN 40 RF法兰	25	102	38	57	405
	40	114	49	63	410
	50	124	60	92	430
	65	145	75	99	435
	80	165	89	108	445
	100	194	113	117	455
	125	210	140	152	495
	150	229	164	177	530
	200	243	205	200	575
	250	297	259	252	630
	300	338	300	270	695
	350	400	350	310	710
	400	400	400	355	800

注: 以上为气动调节型外形尺寸，如需电动、蜗轮传动的外形尺寸可与我公司联系

Note: Pneumatic adjusting overall sizes is indicated above, please contact Corporation for overall sizes of electric and worm.

1	2	4	5	6	7	8	9	10
K	Q	3	4	7	F	C3	C	12"

1	功能代号 Functional code❶
D	低温 Low temperature
K	抗硫 Sulfide
V	V型球体 Segmental ball
S	缩径 Crinkled diameter

2	阀门类别 Types of valve
Q	球阀 Ball valve

4	传动方式 Driving modes❷
3	蜗轮传动 Worm-driven
6	气动 Pneumatic
9	电动 Electric
7	液动 Hydraulic
8	气液联动 Pneumatic-hydraulic

5	连接形式 Connection modes
1	内螺纹 Inner thread
4	法兰 Flange
6	对焊 Buttwelding

6	结构形式 Structural form
0	偏心半球 Eccentric segmental ball
1	浮动球直通 Floating ball direct connection
7	固定球直通 Fixed ball direct connection

7	密封材料 Sealing materials
F	聚四氟乙烯 PTFE
R	旦林 DENIER
N	尼龙 NYLON
Y	金属密封 Metal to metal❸

8	压力等级 Pressure Class
6	0.6MPa
10	1.0MPa
16	1.6MPa
25	2.5MPa
40	4.0MPa
63	6.3MPa
100	10.0MPa
160	16.0MPa
C1	150Lb
C3	300Lb
C6	600Lb
C9	900Lb
C15	1500Lb
C25	2500Lb
20	2.0MPa
50	5.0MPa
110	11.0MPa
150	15.0MPa
260	26.0MPa
420	42.0MPa

9	阀体材料 Body Materials❹
C	WCB/A105
P	CF8/304
P3	CF3/304L
P1	ZG1Cr18Ni9Ti/1Cr18Ni9Ti
R	CF8M/316
R3	CF3M/316L
R1	ZG1Cr18Ni12Mo2Ti/1Cr18Ni12Mo2Ti

10	口径 Caliber

❶ 没有专用功能可省略
❷ 手动可省略
❸ 具体的密封材料要注明
❹ 其他材料可省略，另注明
注:以上项目如有改变恕不事先通知。

❶ Can be omitted if no special function
❷ Can be omitted when manually
❸ Please indicate specific sealing materials
❹ Please indicate other materials can be omitted

Note: No notification will be given in advance if there is any modification

SWEK® 史威阀

阀 门 型 号 一 览

8	GY	4	A	3	P	—	25	W
1	2	3	4	5	6	—	7	8

1 通径 Nominal diameter

6	1/4″
10	3/8″
15	1/2″
20	3/4″
25	1″
32	1 1/4″
40	1 1/2″
50	2″
65	2 1/2″
80	3″
100	4″
125	5″
150	6″
200	8″
250	10″
300	12″
350	14″
400	16″
450	18″
500	20″

2 阀门类型 Valve type

NS	仪 分体 Split
NI	仪 连体 Intergral
NF	仪 模锻 Forged
GNY	截 Y型无 Y Globe Valve
GNT	截 T型无 T Globe Valve
GB	截 波纹管 Bellows
GY	截 Y型旋 Y Globe Valve
GT	截 T型旋 T Globe Valve
GA	闸 阀 Gate Valve
BA	球 阀 Ball Valve
BU	蝶 阀 Butterfly Valve
DI	隔膜阀 Diaphragm Valve
CH	止回阀 Check Valve
SA	安全阀 Safety Valve
BT	三偏心蝶阀 Three eccentric butterfly valve
RE	调节阀 Control Valve
RV	蝶型调阀 Butterfly Control Valve
RA	球型调阀 Ball Control Valve
GP	高压差 High-pressure

注：凡阀门为角式连接方式，在该阀门类型后加缀字母A，如角式调节阀为REA。

Note:The connection of the valve is angel type,add A after the valve type. e.g. The type of Angel Control Valve is REA.

3 阀门接口方式 Interface mode

2	内螺纹 Internal thread
3	外螺纹 External thread
4	对 焊 Butt-welded
5	承插焊 Socket-welded
6	法 兰 Flanged
7	卡 套 Sleeved
8	对夹式 Wafer
9	卡箍式 Clamp
10	NPT(内螺纹) NPT (Internal thread)
11	NPT(外螺纹) NPT (External thread)
12	锥管内螺纹 Taper pipe (Internal thread)
13	锥管外螺纹 Taper pipe (External thread)

4 阀座 Seat

W	本 体 Body
H	合 金 Alloy steel
A	硬质合金 Hard alloy
S	不锈钢 Stainless steel
R	橡 胶 Rubber
N	尼龙塑料 Nylon plastic
F	氟塑料 Fluorine plastic
B	巴氏合金 Babbitt alloy
C	搪 瓷 Enamel
P	软硬中性 Neutral

5 阀瓣 Petal

2	合金球 Alloy ball
3	合金锥 Alloy cone
4	尼龙等 Nylon
5	调 节 Regulating
6	304
7	316
8	双相钢 Double phase steel
9	巴氏合金 Babbitt alloy
10	A105
11	套 筒 Sleeve
12	迷 宫 Labyrinth
13	多 级 Multistage
14	多 孔 Multihole
15	单 座 Single seat
16	双 座 Double seat
17	单闸板 Single plate
18	双闸板 Double plate
19	弹性板 Spring plate
20	旋启式 Swing
21	升降式 Lift

6 驱动方式 Drive mode

H	手 轮 Handwheel
R	圆手柄 Round handle
F	扁手柄 Flat handle
P	气 动 Pneumatic
E	电 动 Electric
H	液 动 Hydraulic
W	涡 轮 Turbine
S	自力式 self actuated

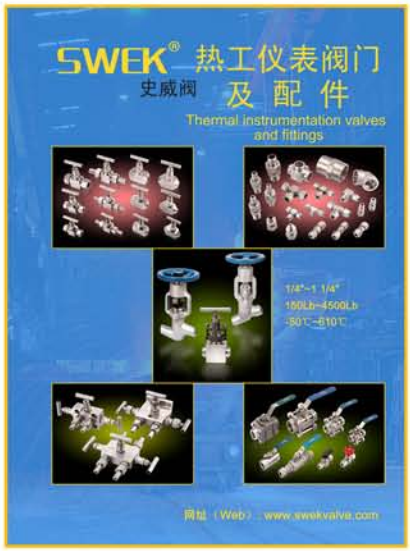
7 压力值 Pressure

2	150lb
3	300lb
6	600lb
9	900lb
15	1500lb
25	2500lb
45	4500lb

8 阀体材质 Body material

F	F22
K	F11
B	F91
W	F92
D	WB36
E	F304
S	F316
G	WCB
H	WC9
N	F316H
P	F347H
Q	F321
A	A105
R	F316L
T	WC6
Y	CF8
Z	CF8M



















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