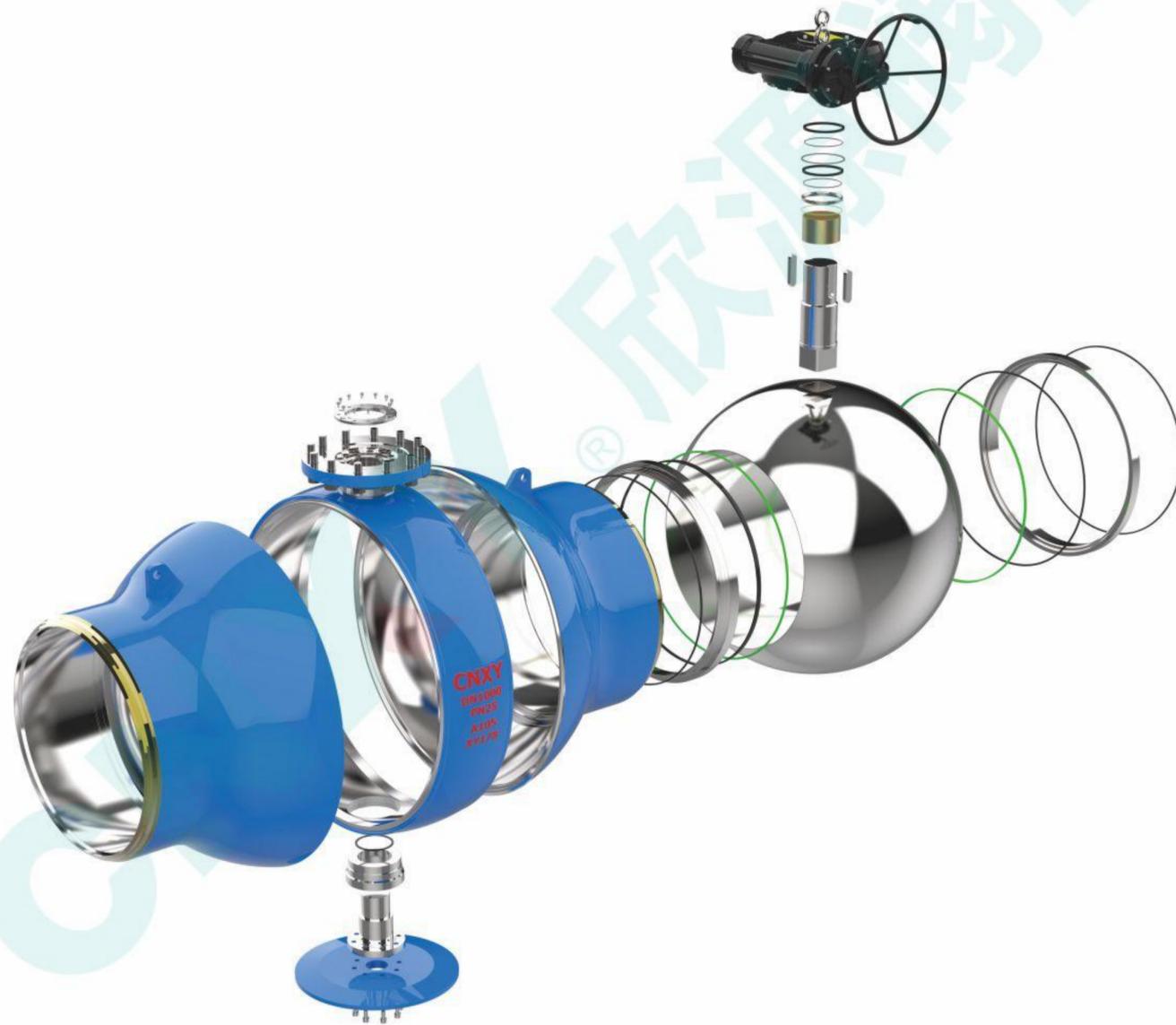


全焊接球阀产品型号编制

Full Welded Ball Valve How To Order

FULL WELDED TRUNNION BALL VALVE

全焊接球阀



举例Sample	DN200	H	Q	V	S	3	4	7	F	-	16	C
编号Code	I	II			III	IV	V	VI	VII		VIII	

I	阀门规格Valve Size	举例Sample
NPS	配管公称尺寸 Nominal Pipe Size	NPS2,NPS3,....
DN	公称尺寸 Nominal Size	DN50.DN80

II	阀门类型Valve Type
HQ	常规型 Normal
QHQ	球阀全焊接 All-welded Ball Valve
KHQ	抗硫型 Resist SSC
EHQ	紧急切断型Emergency Shut-off
HRQ	供热球阀 Heating Ball Valve
V	埋地式设计 Buried-type Design
S	带维护用加长管 Extended Pipe For Maintenance Purpose

III	驱动方式Operated
1	手柄操作不标注 N/A for Lever Operated
2	电液联动 Electrohydraulic linkage
3	蜗轮驱动 Worm gear drive
6	气动 Pneumatic Operated
6s	气动带手动 Pneumatic Operated with Manua
7	液动 Hydraulic Operated
7s	液动带手动 Hydraulic Operated with Manua
8	气液联动 Pneumatic- Hydraulic Operated
9	电动 power-driven
9B	防爆电动 Explosion-Proof Electro Operated

IV	连接形式Type of Connection
1	内螺纹 Female threaded End
2	外螺纹 Male thread End
4	法兰式 Flange End
6	焊接式 Welding End
7	对夹式 Wafer Type
8	卡箍式 Hooped End

V	结构形式Type of Construction
1	浮动球直通通道 Floating Ball Through-way flow path
7	固定球直通通道 Trunnion Ball Through-way flow path

VI	密封面材料Material of Sealing Face
F	氟塑料 Fluorocarbon
G	陶瓷 Ceramic
H	13CR系不锈钢 Martensitic Stainless Steel
M	蒙乃尔合金 Monel Metal
N	尼龙塑料 Nylon
PK	聚酮 PEEK
PL	对位聚苯 PPL
T	铜合金 Copper Alloy
X	橡胶 Rubber
Y	硬质合金 Stellite Alloy

VII	压力代号Pressure Code	举例Sample
NPS	磅级Class	150Lb,300Lb,...
DN	公称压力数值的10倍=PN*10	16,25,...

VIII	阀体材料Material of Shel
G	碳钢(磅级及PN25以上不标注) Carbon Steel(Class and up than PN25 is not marked)
H	13CR系不锈钢 Martensitic SS
I	铬钼系钢 Chrome-Molybdenum steel
P	铬镍系不锈钢 Chromium-Nickel SS
R	铬镍钼系不锈钢 Chromium-Nickel-Molybdenum SS
T	铜及铜合金 Copper&Copper Alloy
Ti	钛及钛合金 Titanium&Titanium Alloy
V	铬钼钒系钢 Chrome-Molybdenum-Vanadium Steel

全焊接球阀

Full Welded Trunnion Ball Valve

全焊接球阀

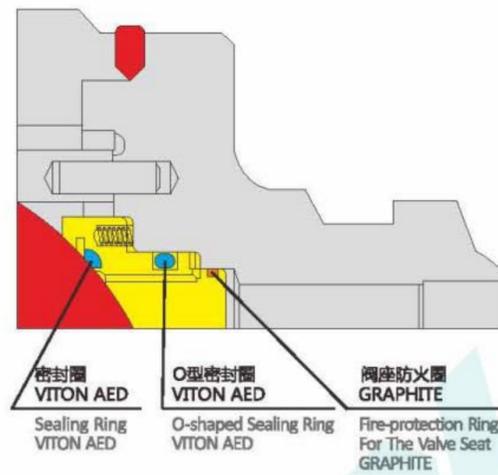
Full Welded Trunnion Ball Valve

1.防火结构设计:

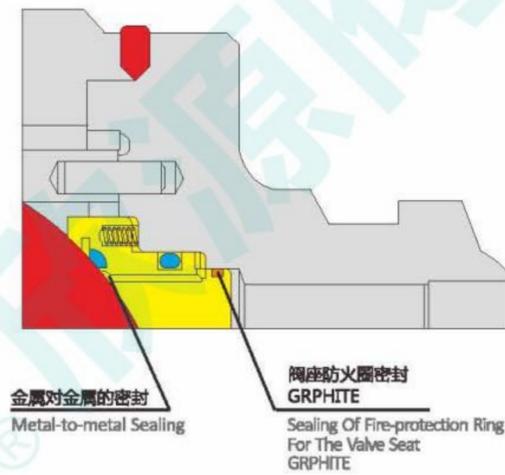
根据 API607/BS6755规范。在阀门使用现场发生火灾时次级密封非金属材料制作的密封圈在高温下分解或破坏,此时初级金属密封能够迅速贴紧球体起到密封作用。独特的双级密封阀座结构设计,确保了阀门阀座防火的可靠性。

1.fire-protection Structure Design

According to API 607/BS6755 standard, if fire takes place at the place where the valve is used, the sealing ring made from non-metallic material for secondary sealing may break down or become damaged the primary metallic sealing would soon come close to the ball for quick sealing. The unique dual sealing valve seat structure design is able to ensure reliable fire protection of the valve seat.



阀座火烧前
Before The Valve Seat Are Burnt By The Fire



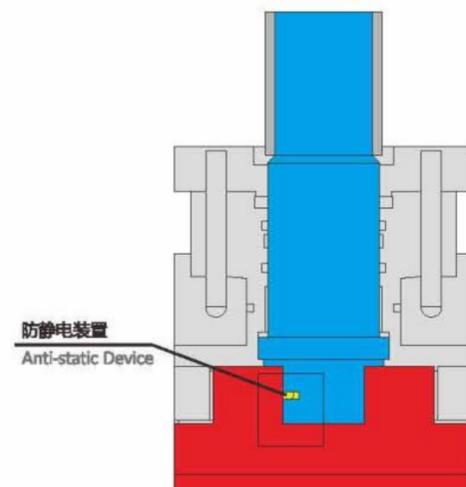
阀座火烧后
After The Valve Seat Are Burnt By The Fire

2.防静电设计:

采用弹簧和小球静电引出装置,通过阀杆使球与阀体之间形成静电通道,从而使球体与密封圈开关过程中摩擦产生的静电通过阀体引到大地,防止静电火花可能引起的火灾或爆炸等危险。

2.anti-static Design:

Use of spring and small-ball static electricity extractor, together with the electrostatic channel formed between the ball and the valve body by the valve stem, the static electricity arising from the friction between the ball and opening/closing of the sealing ring is able to be taken to the ground by the valve body, which effectively eliminates the fire or explosion risk that could possibly be caused by the electrostatic spark.

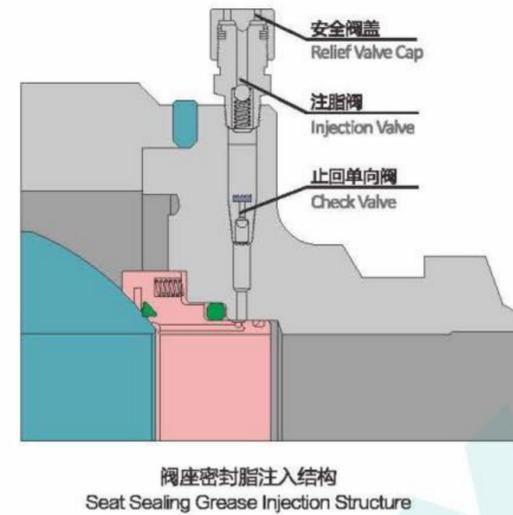


3.密封的紧急救护及阀门的润滑

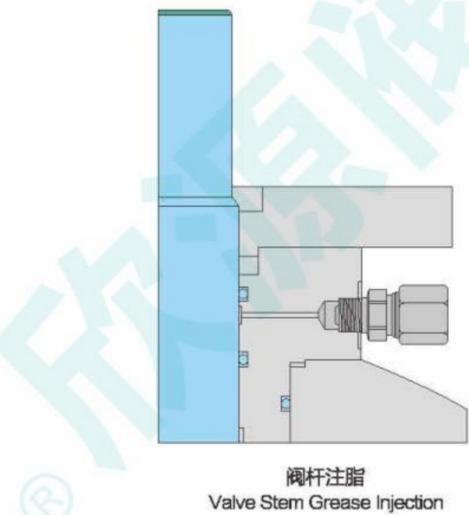
3.emergency Sealing Security And Lubrication Of The Valve

阀座及阀杆密封件出现损伤而出现泄露时,可以通过注脂阀注入的密封脂达到瞬时密封的作用。阀门正常工作状态下,可以通过注脂阀注入润滑脂对阀杆和球面进行润滑使阀门启闭更加灵活轻便。

If the valve seat and the stem seal become damaged and leakage occurs, instantaneous sealing could be available by filling sealing grease through injection valve. When the valve is under normal operation, the stem and the spherical surface may be lubricated by filling lubricant through the injection valve and the valve will be opened and closed more easily.



阀座密封脂注入结构
Seat Sealing Grease Injection Structure



阀杆注脂
Valve Stem Grease Injection

4.阀座结构设计 Valve Seat Structure Design:

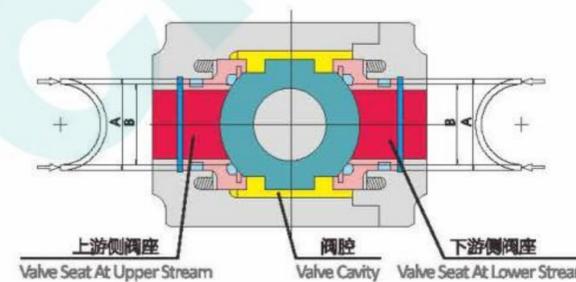
A.上下游均采用单活塞阀座:

A. Both Upper And Lower Stream Adopt Single-piston Valve Seat:

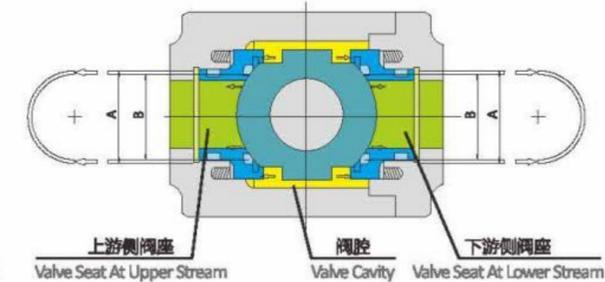
具有双阻塞/双排放功能,能同时截断来自上、下游的介质;具有自动泄压功能:阀门阀腔滞留的介质由于温度的升高,出现异常升压时,阀座可自动泄压(向压力低的一端排放)。

With double blocking/double discharge function, it can cut off the media from the upper and downstream at the same time; With automatic pressure relief function: When the medium trapped in the valve chamber increases in temperature, the valve seat can automatically relieve pressure (discharge to the end of the low pressure).

上下游单活塞阀座 Single-piston Valve Seat At Both Upper And Lower Stream



上游侧阀座 阀腔 下游侧阀座
Valve Seat At Upper Stream Valve Cavity Valve Seat At Lower Stream



上游侧阀座 阀腔 下游侧阀座
Valve Seat At Upper Stream Valve Cavity Valve Seat At Lower Stream

双截断:同时截断来自上、下游的介质
Dual cut-off: simultaneously cut off the medium coming from both upper and lower stream

双排放:阀腔滞留介质可以向上、下游侧排放
Double-drainage: medium held back inside the valve cavity may be discharged to both upper and lower stream

全焊接球阀

Full Welded Trunnion Ball Valve

全焊接球阀

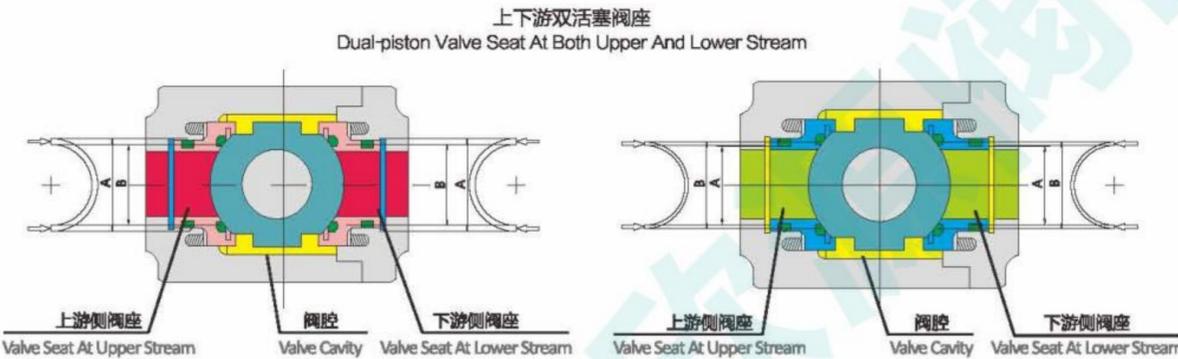
Full Welded Trunnion Ball Valve

B.上下游均采用双活塞阀座：

具有双阻塞功能，能同时截断来自上、下游的介质；阀门阀腔滞留的介质不能实现自动泄放，需要在阀体上设置泄压阀来定压泄放阀腔的异常升压。

B. Both Upper And Lower Stream Adopt Plstion Valve Seat

With the double bouble block function, it may simultaneously cut off the medium coming from both the upper and lower stream; medium held back inside the valve cavity is unable to be drained automatically; pressure release valve shall be provided on the valve body to set up pressure in order to release the exceptional pressure rise inside the valve cavity



双截断:同时截断来自上、下游的介质
Dual cut-off: simultaneously cut off the medium coming from both upper and lower stream

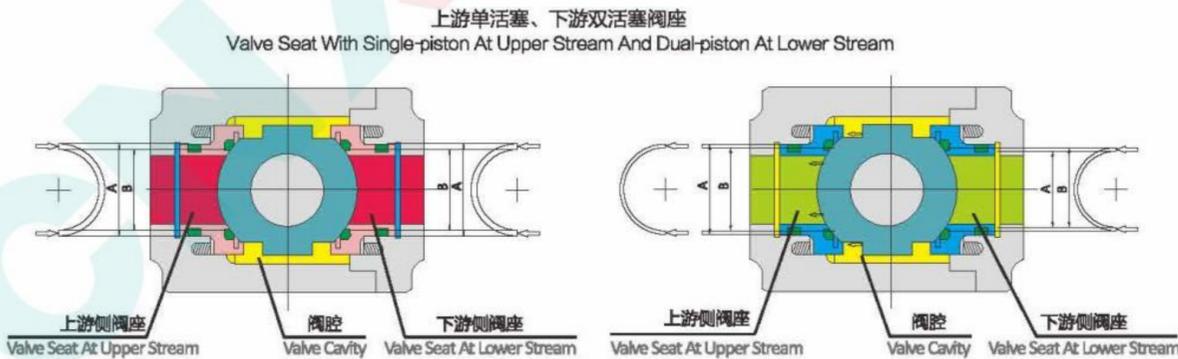
阀腔截留介质不能向上、下游侧泄放
Medium contained inside the valve cavity cannot be discharged to upper or lower stream

C.上游采用单活塞阀座、下游采用双活塞阀座：

具有双阻塞功能，能同时截断来自上、下游的介质；具有自动定向泄压功能：阀门阀腔滞留的介质由于温度的升高，出现异常升压时，阀座可自动泄压(向上游侧排放)

C.single-piston Valve Seat Is Adopted At Upper Stream And Dual-piston Valve Seat Is Adopted At Lower Stream:

With the double block/bleed function, it may simultaneously cut off the medium coming from the upper and lower stream; automatic self-reliving function; in case of abnormal pressure rises caused by the medium retained inside the cavity when the temperature rises, the valve seat is able to automatically relieve pressure (discharging towards the upper stream).



双截断:同时截断来自上、下游的介质
Dual cut-off: simultaneously cut off the medium coming from both upper and lower stream

定向排放:阀腔截留的介质只能向上游侧泄放
Directional discharge: medium contained inside the valve cavity is discharged to upper stream only

5.驱动装置安装平台的设置：

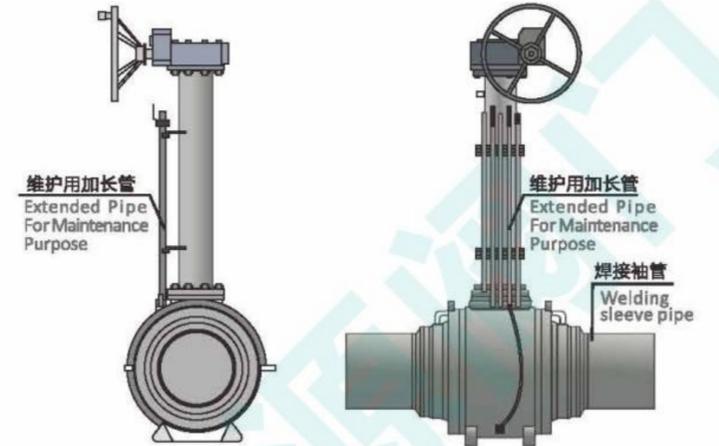
符合ISO5211的阀门上法兰的设计，通过借助支架和联接套，便于安装任何型式的驱动装置。

5.setting The Installation Platform Of The Actuating Device:

In accordance with the flange design on 1S05211 cobalt valve, the bracket and the adapter sleeve make it easy to install any type of actuating device

6.加长阀杆：

对于埋地安装的阀门，根据安装和操作的需要，可对阀门的阀杆进行加长，加长阀杆的尺寸按客户的要求。所有的排污管、排气管和紧急注脂装置都相应加长，其他相关管道紧贴阀门的加长部位，将阀门排污阀、放空阀以及注脂阀接到地面安装，以便于对主阀进行定期维护。阀门表面按规范涂覆耐腐蚀沥青、聚氨酯或者环氧树脂等涂层以适应埋地安装使用工况。



6.extended Valve Stem:

For valves with buried installation, according to the installation and operation demand, the valve stem could be extended in accordance with customer requirements for the size of the exxtended stem. All discharge pipe , exhaust pipe, and emergency injection device shall all be extended accordingly. Other realted pipes shall be close to the extended part of the valve for the purpose of installing the blow-down valve, air release valve and grease injection valve above the ground for regular maintenance of the main valve. The surface of the valve shall be coated with anti-corrosion asphalt, polyurethane or epoxy resin as required to meet the demand of underground service condition.

阀门所带袖管道与常用钢管(Q235B和20#钢)的可焊接说明
Welding instruction for the sleeve pipe and common steel pipe (Q235B and 20# steel)of the valve

袖管材料 Sleeve piping material	焊材 Welding material	管道材料 Piping material		
		Q235B	20#	16Mn
WCB		J507(E5015),H10Mn2,TIG R40		
Q235B		N/A		
20#		J427(E4315),H08A,H08MnA	N/A	
16Mn		J507(E5015),H10Mn2		

7.加长阀盖：

对于要求在低温下工作的阀门，通过加长阀盖，增加了阀体和阀杆密封区的距离，避免了温度对密封的影响。加长的高度根据标准的规定，也可根据客户的要求

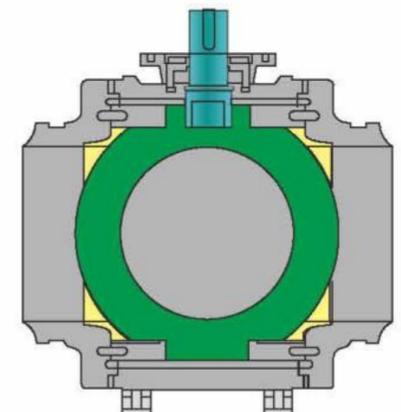
7.extended Valve Cover:

For valves working in low temperature, the extended valve cover increases the distance between the valve body and the sealing area of the stem, which prevents the impact of temperature on sealing performance. Extended height shall be in accordance with relevant standard and customer requirement.

8.阀门结构：

阀门采用三体侧装锻焊结构，球体采用阀体内置支撑板结构固定，消除了由于进口压力推动球体与密封座形成的巨大密封负荷而造成过大的扭矩。球体表面光洁度达到镜面并使用镀衬了具有良好自润滑性的衬套，即使在最高的操作压力下也能达到较小的启闭力矩，

支撑板结构
The Support Plate Structure



8.valve Structure:

The valve adopts three-piece side-mount forge welding structure and the sphere is supported by the supporting plate built inside the valve body,which eliminates the exccsive torque caused by the huge loading seal when the inlet pressure pushes against the sphere. The surface finish of the sphere reaches the mirror surface; the use of metallic bushing lining with good lubrication also ensures small open/close torque even under maximal operating pressure.

全焊接球阀

Full Welded Trunnion Ball Valve

9.焊接结构特性:

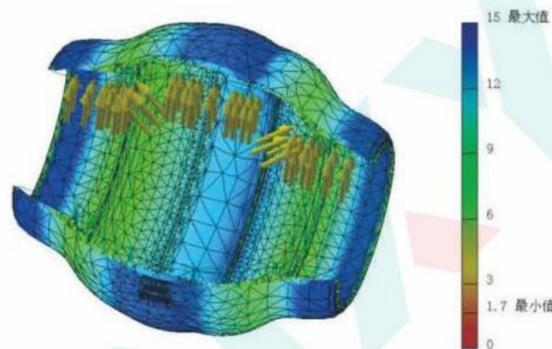
左右体与中体的焊接采用典型的窄间隙埋弧多层焊接,焊接时采用的专用焊剂具有焊接时所需的载流量和脱渣效果焊层颗粒度较细,满足高强度韧性焊缝金属性能。焊缝进行100%的超声波检测和硬度测试,确保焊缝的焊接质量。

10.有限元分析:

阀门壳体及内件经过精心设计,确保在各种工况下能可靠的工作;采用有限元分析法对阀门壳体强度、内件受力以及阀杆操作扭矩等进行模拟工况分析,为易出现问题和薄弱处进行优化,确保阀门性能优越。

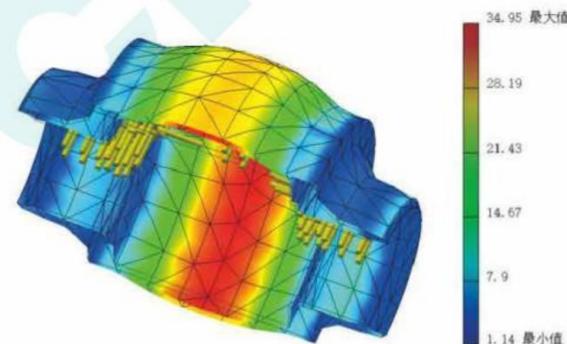
G型焊接阀体壳体强度分析

Strength Analysis Of Globose Welding Valve Shell



T型阀体壳体强度分析

Strength Analysis of Tubular Valve Shell



9.Welding structure characteristics

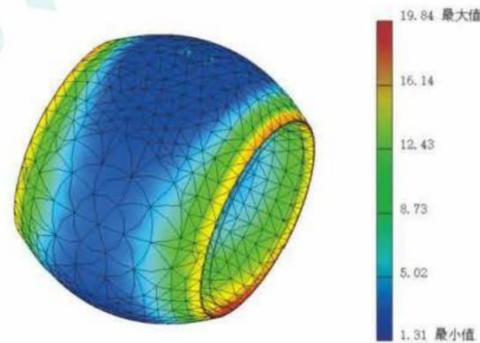
The left, right, and middle body welding adopts the typical narrow-gap submerged arc multi-layer welding. The special welding agent and welding tools has required current-carrying capacity and degreasing effect for the welding. The granularity of the welding layer is fine and able to meet the metallic performance of high-toughness welding line, which has undertaken 100% ultrasonic test and hardness test to guarantee the welding quality of the weld.

10.finite Element Analysis

The valve shell and internal elements are designed carefully to make sure they may work reliably under any working conditions; finite element analysis has been adopted to conduct simulated condition analysis for valve shell strength, stress of internal elements and operating torque of the valve stem improve fragile and weak parts and ensure the superior performance of the valve.

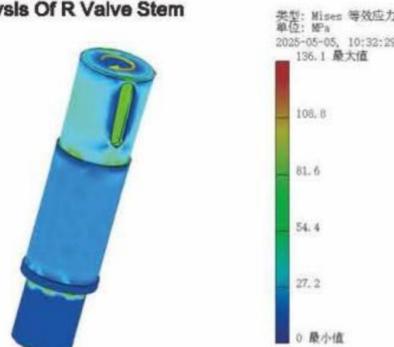
内件应力分析

Stress Analysis Of Internal Elements



阀杆强度分析

Strength Analysis Of R Valve Stem



T型全焊接固定式球阀

T-type fully welded fixed ball valve



技术规范 Technical Specifications

设计依据 Design Basis	GB		API	ASME
设计标准 Desian Standard	GB/T 12237	GB/T 19672	API 6D	ASME B 16.34
结构长度 Face-to-Face	GB/T 12221	GB/T 19672	API 6D	ASME B 16.10
连接端* Connection End	法兰连接 Flanged	GB/T 9113	ASME B16.5/MSS SP-44/ASME B 16.47	
	对焊连接 Butt-Welding	GB/T 12224	ASME B16.25	
材料要求 Material	NACE Mr0175			
试验和检验 Test and Inspection	J B/T 9092	GB/T 19672	API 598	API 6D ASME B 16.34
防火试验 Fire Test	JB/T 6899		API6FA/API 607	

*阀门连接端对焊端尺寸可按用户要求设计制造。

The dimension of welded end connection can be designed and manufactured according to the buyers's request

G型全焊接固定式球阀

Globe Fully Welded Trunnion Ball Valve



特点features

G型全焊接结构阀体自重低,其理想的球形可以应付更高的压力和弯矩,能够承受较高的内部和外部的压力。可选择不同的材料组合确保阀门在腐蚀性场合下运行可靠,如酸性气体等。

Globe all-welded valve has low dead weight An ideal ball shape shall be able to cope with higher pressure and bending moment and withstand higher internal and external pressure Combination of different materials may be chosen to make sure that the valve may operate reliably under corrosive circumstances such as acid gas environment.

G型阀体组焊形式两纵两环组焊式

Valve body group welding form two longitudinal two ring group welding type

特点:采用独特的焊接工艺保证多道焊缝的质量,及焊接过程中产生的变形。特殊的装配工艺及工装设备来保证装配定位精度。

Feature: unique welding technique has been adopted to ensure the quality of multiple welding lines and avoid distortion during welding process. The unique assembly technique and tooling equipment are able to ensure the assembling and positioning accuracy.

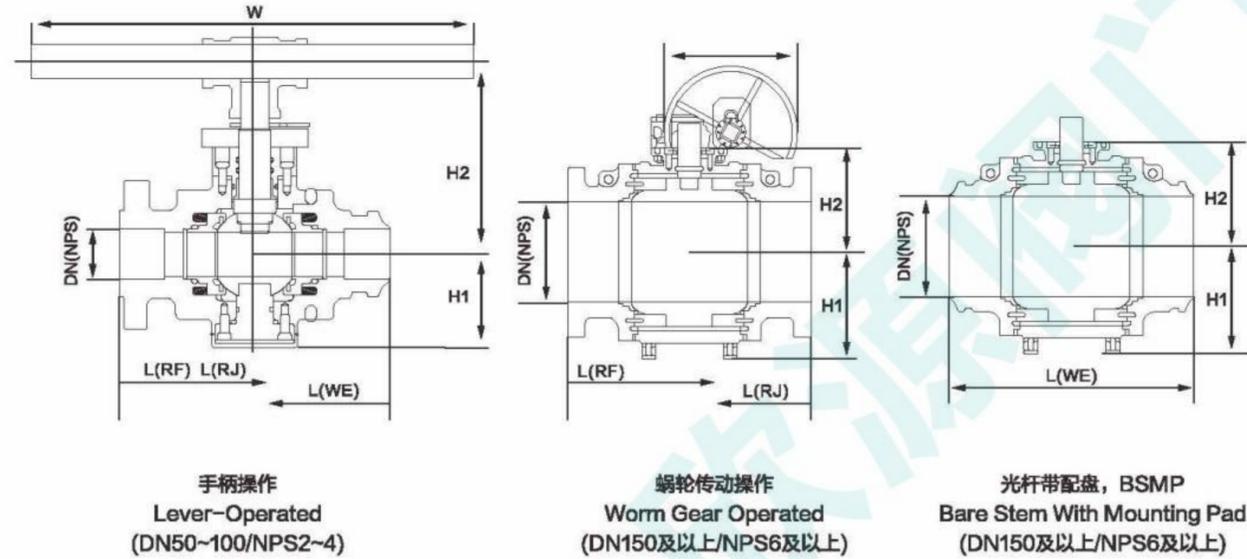
单道焊缝组焊式 Single-pass group welding

特点:阀体由两个封头形状的阀体在中间组焊,焊缝少变形小,且焊缝远离阀座,焊接热不易损伤阀座,

Feature: the valve body is group welded with two head-designed vales with less welding line and little distortion. In addition, the welding line is kept away from the valve seat to stop welding heat from damaging the valve seat.

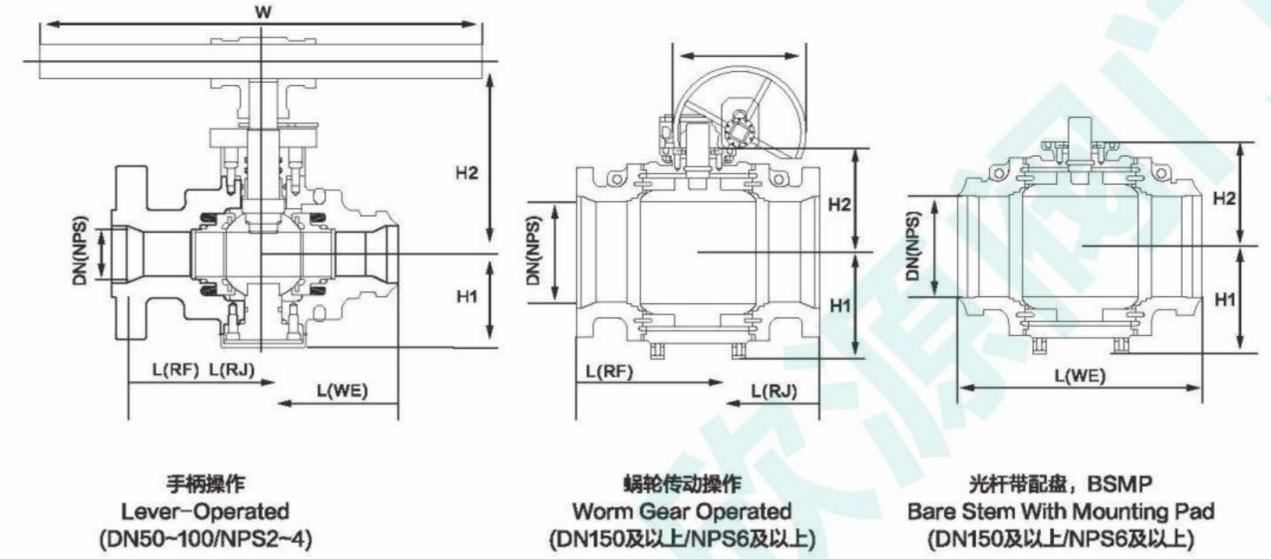
T型全焊接固定式球阀

T-type fully welded fixed ball valve



T型全焊接固定式球阀

T-type fully welded fixed ball valve



主要外形尺寸 Main External Dimension
(全通径 Full Bore)

PN16/PN20/CLASS 150

DN	NPS	L			H1	H2	W	Weight (kg)		Torque (N·M)
		RF	WE	RJ				WE	RF/RJ	
50	2	178	216	191	99	210	300	22	25	42
65	2 1/2	191	241	203	110	215	350	30	35	68
80	3	203	283	216	120	225	400	35	40	92
100	4	229	305	241	148	255	650	48	95	145
150	6	394	457	406	218	237	460	190	230	210
200	8	457	521	470	260	290	600	250	295	625
250	10	533	559	546	292.5	323.5	600	400	430	835
300	12	610	635	622	327.5	359.5	600	550	620	1150
350	14	686	762	699	365	395	750	820	900	1560
400	16	762	838	775	437.5	436.5	750	1100	1220	2375
450	18	864	914	876	485	487.5	750	1400	1500	2850
500	20	914	991	927	522.5	525	750	1750	1950	3580
550	22	991	1092	1004	575.5	560	750	2200	2350	4275
600	24	1067	1143	1080	607.5	617.5	750	2800	3050	5650
650	26	1143	1245	1156	640	632.5	750	2900	3250	6520
700	28	1245	1346	1285	670	682.5	750	3400	3700	7380
750	30	1295	1397	1308	710	760	750	4800	5300	8380
800	32	1372	1524	1385	730	780	750	5500	6000	9370
850	34	1473	1626	1486	780	830	750	7650	8550	12065
900	36	1524	1727	1537	830	880	750	8865	9845	14760
1000	40	1753	1956	1985	875	920	750	12350	13560	18465
1050	42	1829	2083	2115	910	945	750	13250	14280	29210
1200	48	2032	2388	2418	1070	1085	750	20500	21800	44500

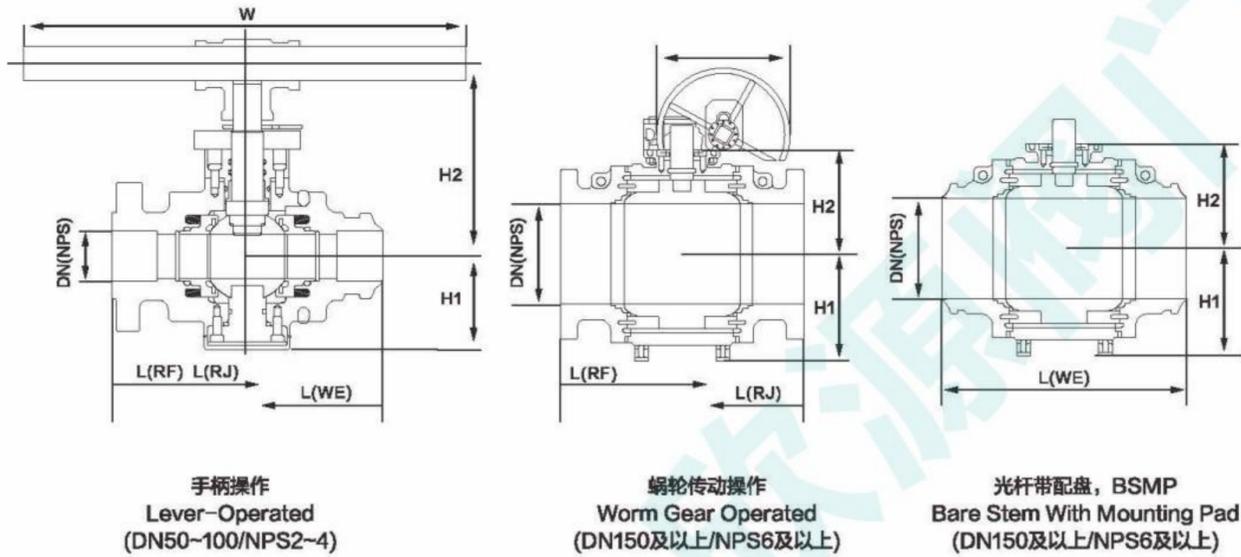
主要外形尺寸 Main External Dimension
缩径 Reduced Bore

PN16/PN20/CLASS 150

DN	NPS	L			H1	H2	W	Weight (kg)		Torque (N·M)
		RF	WE	RJ				WE	RF/RJ	
80X50	3X2	203	283	216	99	210	300	28	32	42
100X80	4X3	229	305	241	120	225	400	42	68	92
150X100	6X4	394	457	406	148	255	650	115	185	145
200X150	8X6	457	521	470	218	237	460	220	262	210
250X200	10X8	533	559	546	260	290	600	320	360	625
300X250	12X10	610	635	622	292.5	323.5	600	475	525	835
350X300	14X12	686	762	699	327.5	359.5	600	685	760	1150
400X350	16X14	762	838	775	365	395	750	960	1060	1560
450X400	18X16	864	914	876	437.5	436.5	750	1250	1385	2375
500X450	20X18	914	991	927	485	487.5	750	1575	1750	2850
600X500	24X20	1067	1143	1080	522.5	525	750	2200	2500	3580
700X600	28X24	1245	1346	1285	607.5	617.5	750	3100	3375	5650
750X600	30X24	1295	1397	1308	607.5	617.5	750	3800	4175	5650
750X700	30X28	1295	1397	1308	670	682.5	750	4100	4500	7380
800X700	32X28	1372	1524	1385	670	682.5	750	4450	4850	7380
800X750	32X30	1372	1524	1385	710	760	750	5150	5650	8380
900X750	36X30	1524	1727	1537	710	760	750	6830	7570	8380
900X800	36X32	1524	1727	1537	730	780	750	7180	7920	9370
1000X900	40X36	1524	1727	1537	830	880	750	10610	11700	14760

T型全焊接固定式球阀

T-type fully welded fixed ball valve



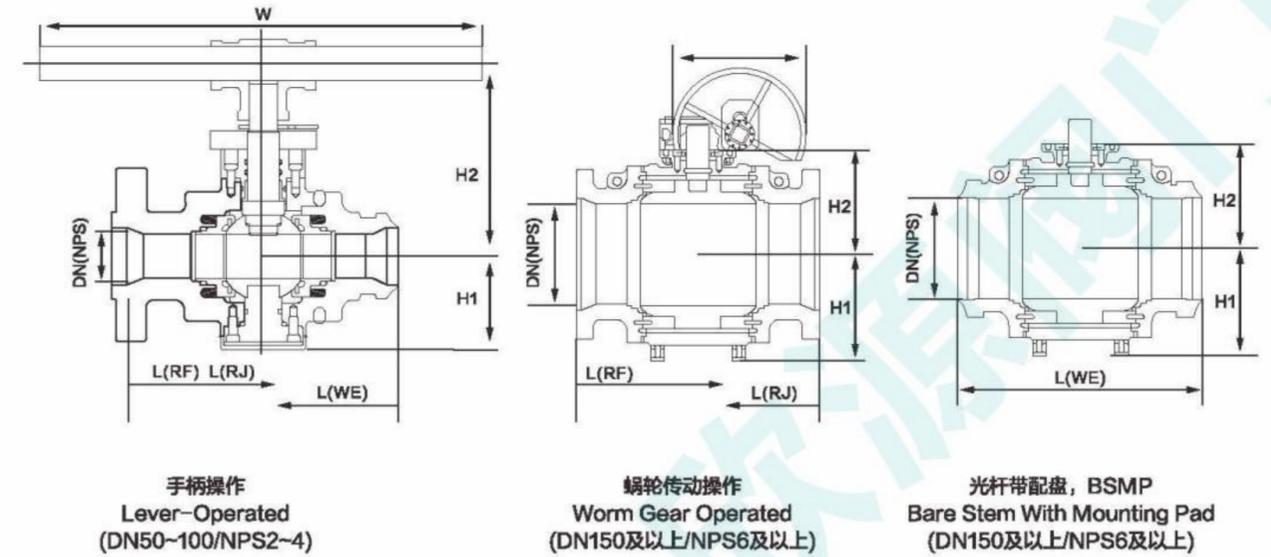
主要外形尺寸 Main External Dimension
(全通径 Full Bore)

PN25/PN40/PN50/CLASS 300

DN	NPS	L			H1	H2	W	Weight (kg)		Torque (N·M)
		RF	WE	RJ				WE	RF/RJ	
50	2	216	216	232	99	210	300	22	28	75
65	2	241	241	257	110	215	350	30	40	117
80	3	283	283	298	120	225	400	35	50	159
100	4	305	305	321	148	255	650	48	105	250
150	6	403	457	419	218	237	460	190	230	410
200	8	502	521	518	260	290	600	250	295	935
250	10	568	559	584	292.5	323.5	600	400	460	1300
300	12	648	635	664	327.5	359.5	600	590	670	1790
350	14	762	762	778	365	395	750	820	1000	2415
400	16	838	838	854	437.5	436.5	750	1100	1320	3850
450	18	914	914	930	485	487.5	750	1400	1650	4645
500	20	991	991	1010	522.5	525	750	1750	2000	5870
550	22	1092	1092	1114	575.5	560	750	2200	2550	7970
600	24	1143	1143	1165	607.5	617.5	750	2800	3100	9718
650	26	1245	1245	1270	640	632.5	750	2900	3300	10795
700	28	1346	1346	1372	670	682.5	750	3400	3750	11715
750	30	1397	1397	1422	710	760	750	4800	5500	14025
800	32	1524	1524	1553	730	780	750	5500	6500	15775
850	34	1626	1626	1654	780	830	750	7650	8590	20075
900	36	1727	1727	1756	830	880	750	8865	9895	24375
1000	40	1956	1956	1985	875	920	750	12350	13620	29625
1050	42	2083	2083	2115	910	945	750	13250	14780	44130
1200	48	2388	2388	2418	1070	1085	750	20500	22300	67140

T型全焊接固定式球阀

T-type fully welded fixed ball valve



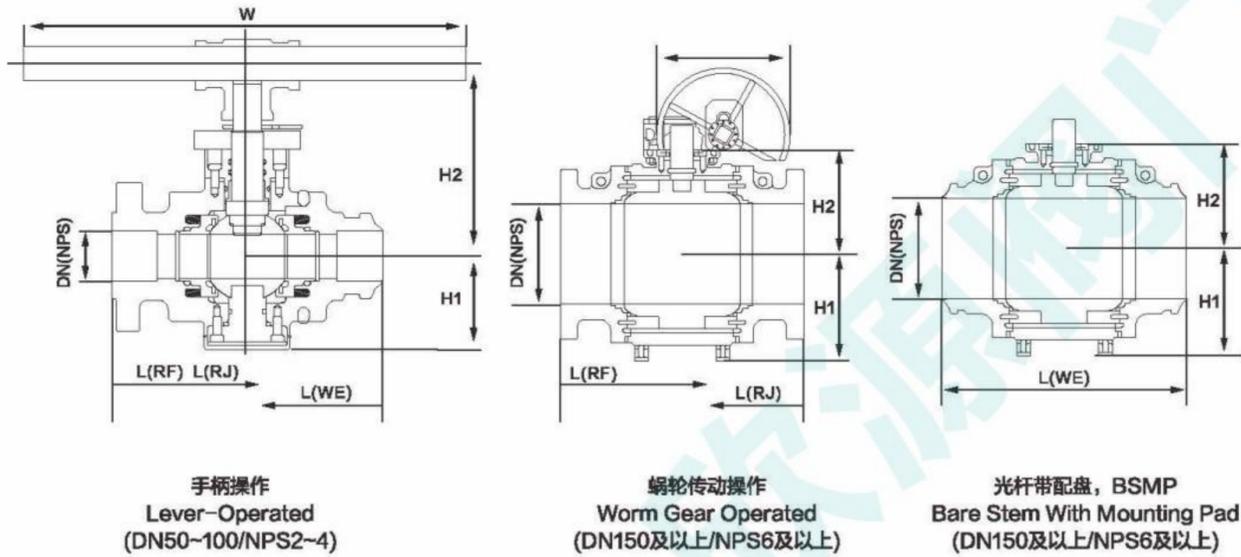
主要外形尺寸 Main External Dimension
缩径 Reduced Bore

PN25/PN40/PN50/CLASS 300

DN	NPS	L			H1	H2	W	Weight (kg)		Torque (N·M)
		RF	WE	RJ				WE	RF/RJ	
80X50	3X2	283	283	298	99	210	300	28	39	75
100X80	4X3	305	305	321	120	225	400	42	78	159
150X100	6X4	403	457	419	148	255	650	115	168	250
200X150	8X6	502	521	518	218	237	460	220	264	410
250X200	10X8	568	559	584	260	290	600	320	375	935
300X250	12X10	648	635	664	292.5	323.5	600	475	565	1300
350X300	14X12	762	762	778	327.5	359.5	600	685	835	1790
400X350	16X14	838	838	854	365	395	750	960	1160	2415
450X400	18X16	914	914	930	437.5	436.5	750	1250	1485	3850
500X450	20X18	991	991	1010	485	487.5	750	1575	1825	4645
600X500	24X20	1143	1143	1165	522.5	525	750	2200	2550	5870
700X600	28X24	1346	1346	1372	607.5	617.5	750	3100	3425	9718
750X600	30X24	1397	1397	1422	607.5	617.5	750	3800	4300	9718
750X700	30X28	1397	1397	1422	670	682.5	750	4100	4625	11715
800X700	32X28	1524	1524	1553	670	682.5	750	4450	5125	11715
800X750	32X30	1524	1524	1553	710	760	750	5150	6000	14025
900X750	36X30	1727	1727	1756	710	760	750	6830	7695	14025
900X800	36X32	1727	1727	1756	730	780	750	7180	8195	15775
1000X900	40X36	1956	1956	1985	830	880	750	10610	11755	24375

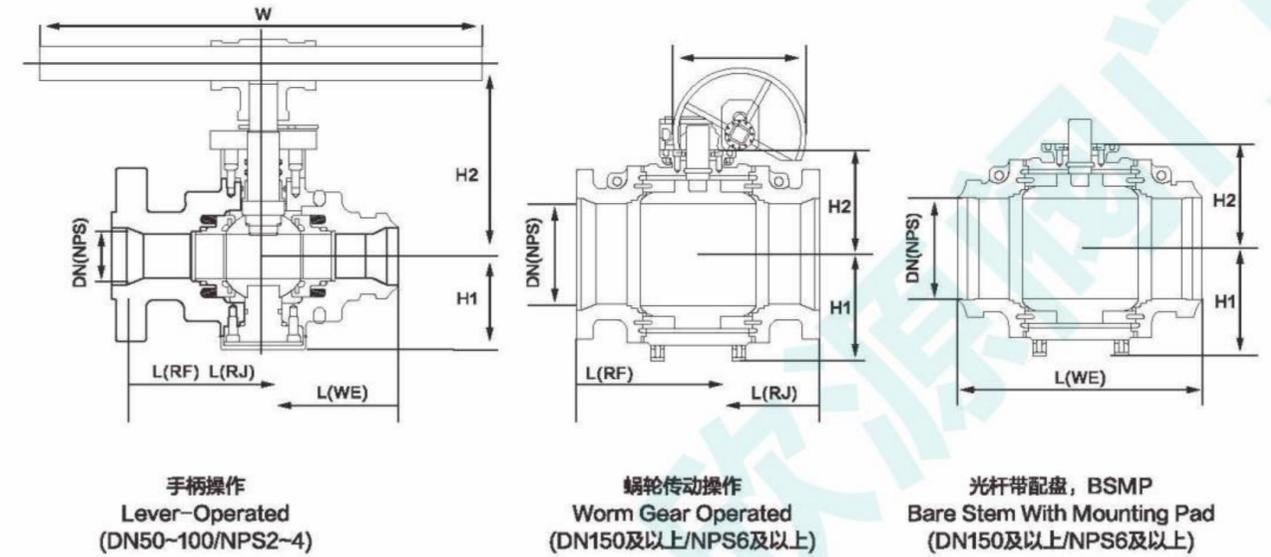
T型全焊接固定式球阀

T-type fully welded fixed ball valve



T型全焊接固定式球阀

T-type fully welded fixed ball valve



主要外形尺寸 Main External Dimension
(全通径 Full Bore)

PN63/PN64/CLASS 400

DN	NPS	L			H1	H2	W	Weight (kg)		Torque (N·M)
		RF	WE	RJ				WE	RF/RJ	
50	2	292	292	295	99	210	300	25	38	110
65	2	330	330	333	110	215	350	35	50	148
80	3	356	356	359	120	225	400	45	60	185
100	4	406	406	410	148	255	650	65	115	350
150	6	495	495	498	218	237	460	240	320	485
200	8	597	597	600	260	290	600	320	405	1235
250	10	673	673	676	292.5	323.5	600	540	630	1980
300	12	762	762	765	327.5	359.5	600	780	920	2195
350	14	826	826	829	365	395	750	1030	1220	2980
400	16	902	902	905	437.5	436.5	750	1280	1500	4735
450	18	978	978	981	485	487.5	750	1930	2300	5710
500	20	1054	1054	1060	522.5	525	750	2380	2720	7215
550	22	1143	1143	1153	575.5	560	750	2900	3350	8735
600	24	1232	1232	1241	607.5	617.5	750	3475	4035	11925
650	26	1308	1308	1321	640	632.5	750	3680	4350	13295
700	28	1397	1397	1410	670	682.5	750	4000	4800	15136
750	30	1524	1524	1537	710	760	750	5700	6600	17315
800	32	1651	1651	1667	730	780	750	6475	7425	19485
850	34	1778	1778	1794	780	830	750	7660	8740	27460
900	36	1880	1880	1895	830	880	750	8910	10100	35435
1000	40	2250	2250	2265	875	920	750	12200	13650	44210
1050	42	2439	2439	2467	910	945	750	16980	18630	53325
1200	48	2540	2540	2540	1070	1085	750	23200	25050	64285

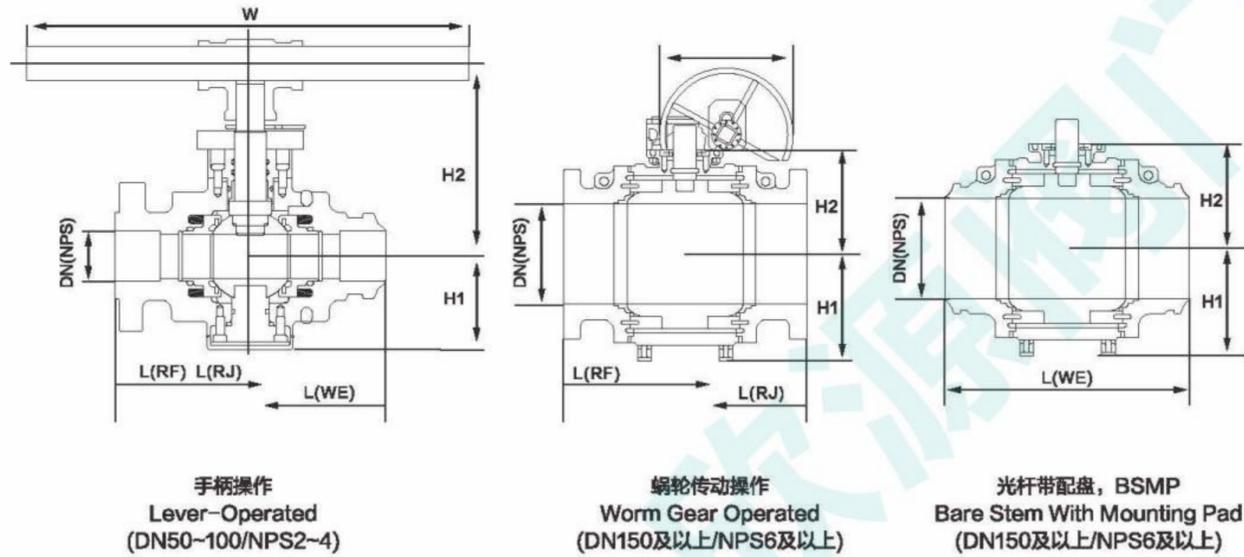
主要外形尺寸 Main External Dimension
缩径 Reduced Bore

PN63/PN64/CLASS 400

DN	NPS	L			H1	H2	W	Weight (kg)		Torque (N·M)
		RF	WE	RJ				WE	RF/RJ	
80X50	3X2	356	356	359	99	210	300	35	49	110
100X80	4X3	406	406	410	120	225	400	55	88	185
150X100	6X4	495	495	498	148	255	650	152	217	350
200X150	8X6	597	597	600	218	237	460	280	362	485
250X200	10X8	673	673	676	260	290	600	430	517	1235
300X250	12X10	762	762	765	292.5	323.5	600	660	775	1980
350X300	14X12	826	826	829	327.5	359.5	600	905	1070	2195
400X350	16X14	902	902	905	365	395	750	1155	1360	2980
450X400	18X16	978	978	981	437.5	436.5	750	1605	1900	4735
500X450	20X18	1054	1054	1060	485	487.5	750	2155	2510	5710
600X500	24X20	1232	1232	1241	522.5	525	750	2925	3375	7215
700X600	28X24	1397	1397	1410	607.5	617.5	750	3735	4418	11925
750X600	30X24	1524	1524	1537	607.5	617.5	750	4585	5318	11925
750X700	30X28	1524	1524	1537	670	682.5	750	4850	5700	15136
800X700	32X28	1651	1651	1667	670	682.5	750	5238	6115	15136
800X750	32X30	1651	1651	1667	710	760	750	6087	7015	17315
900X750	36X30	1880	1880	1895	710	760	750	7305	8350	17315
900X800	36X32	1880	1880	1895	730	780	750	7695	8765	19485
1000X900	40X36	2250	2250	2265	730	780	750	9340	10540	19485

T型全焊接固定式球阀

T-type fully welded fixed ball valve



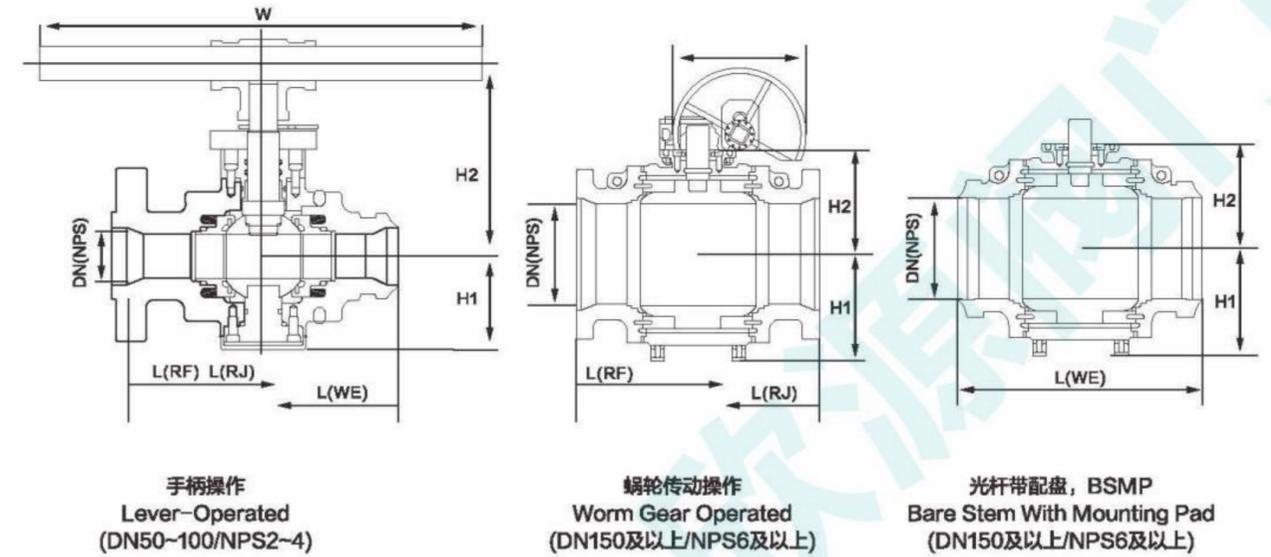
主要外形尺寸 Main External Dimension
(全通径 Full Bore)

PN100/PN110/CLASS 600

DN	NPS	L			H1	H2	W	Weight (kg)		Torque (N·M)
		RF	WE	RJ				WE	RF/RJ	
50	2	292	292	295	99	210	300	25	38	125
65	2 1/2	330	330	333	110	215	350	35	50	198
80	3	356	356	359	120	225	400	45	60	270
100	4	432	432	435	148	255	650	70	120	430
150	6	559	559	562	218	237	460	250	330	685
200	8	660	660	664	260	290	600	340	450	1635
250	10	787	787	791	292.5	323.5	600	570	710	2320
300	12	838	838	841	327.5	359.5	600	850	1000	3210
350	14	889	889	892	365	395	750	1100	1370	5595
400	16	991	991	994	437.5	436.5	750	1350	1650	6985
450	18	1092	1092	1095	485	487.5	750	2100	2400	10980
500	20	1194	1194	1200	522.5	525	750	2600	3000	15010
550	22	1295	1295	1305	575.5	560	750	3150	3550	18585
600	24	1397	1397	1407	607.5	617.5	750	3700	4300	23420
650	26	1448	1448	1461	640	632.5	750	3900	4500	28265
700	28	1549	1549	1562	670	682.5	750	4200	4900	32625
750	30	1651	1651	1664	710	760	750	6000	6900	39375
800	32	1778	1778	1794	730	780	750	6800	8000	46125
850	34	1930	1930	1946	780	830	750	8230	9400	52590
900	36	2083	2083	2099	830	880	750	9570	10850	59065
1000	40	2337	2337	2366	875	920	750	13110	14670	73875
1050	42	2439	2439	2467	910	945	750	18250	21050	88875
1200	48	2540	2540	2540	1070	1085	750	24950	27100	107137

T型全焊接固定式球阀

T-type fully welded fixed ball valve



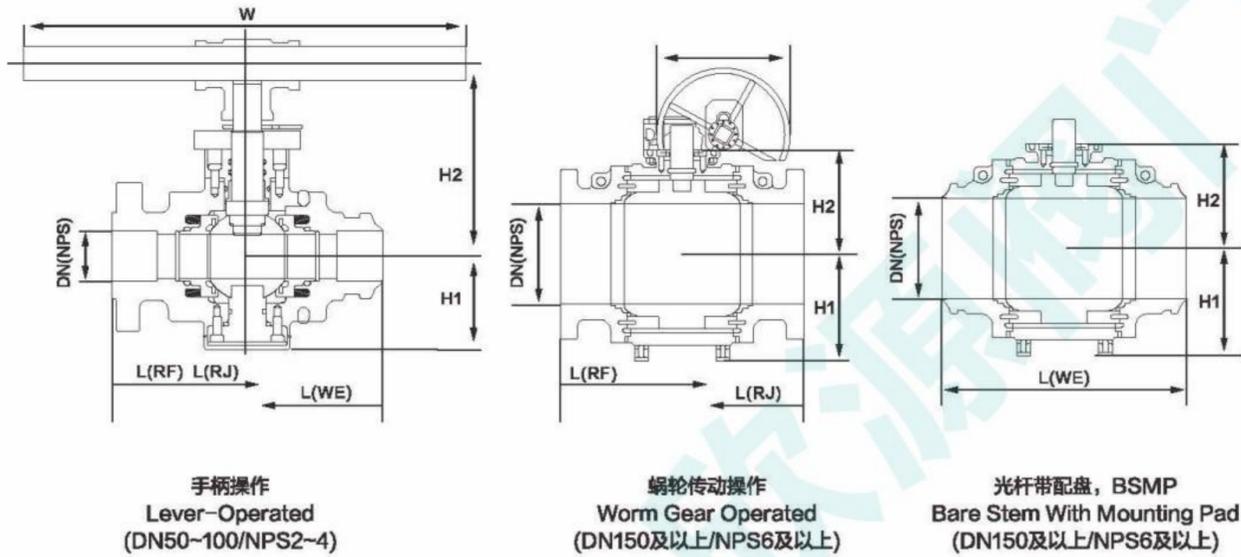
主要外形尺寸 Main External Dimension
缩径 Reduced Bore

PN100/PN110/CLASS 600

DN	NPS	L			H1	H2	W	Weight (kg)		Torque (N·M)
		RF	WE	RJ				WE	RF/RJ	
80X50	3X2	356	356	359	99	210	300	35	49	125
100X80	4X3	432	432	435	120	225	400	58	90	270
150X100	6X4	559	559	562	148	255	650	160	225	430
200X150	8X6	660	660	664	218	237	460	295	390	685
250X200	10X8	787	787	791	260	290	600	455	580	1635
300X250	12X10	838	838	841	292.5	323.5	600	710	855	2320
350X300	14X12	889	889	892	327.5	359.5	600	975	1185	3210
400X350	16X14	991	991	994	365	395	750	1225	1510	5595
450X400	18X16	1092	1092	1095	437.5	436.5	750	1725	2025	6985
500X450	20X18	1194	1194	1200	485	487.5	750	2350	2700	10980
600X500	24X20	1397	1397	1407	522.5	525	750	3150	3650	15010
700X600	28X24	1549	1549	1562	607.5	617.5	750	3950	4600	23420
750X600	30X24	1651	1651	1664	607.5	617.5	750	4850	5600	23420
750X700	30X28	1651	1651	1664	670	682.5	750	5100	5900	32625
800X700	32X28	1778	1778	1794	670	682.5	750	5500	6450	32625
800X750	32X30	1778	1778	1794	710	760	750	6400	7450	39375
900X750	36X30	2083	2083	2099	710	760	750	7785	8875	39375
900X800	36X32	2083	2083	2099	730	780	750	8185	9425	46125
1000X900	40X36	2337	2337	2366	830	880	750	11340	12760	59065

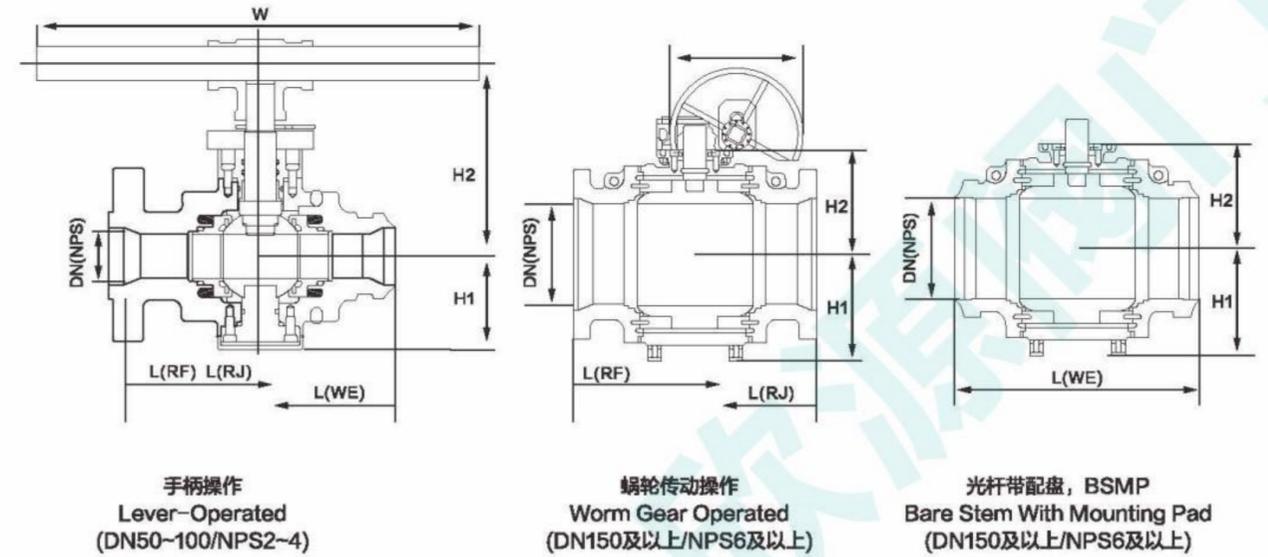
T型全焊接固定式球阀

T-type fully welded fixed ball valve



T型全焊接固定式球阀

T-type fully welded fixed ball valve



主要外形尺寸 Main External Dimension
(全通径 Full Bore)

PN150/PN160/CLASS 900

DN	NPS	L			H1	H2	W	Weight (kg)		Torque (N·M)
		RF	WE	RJ				WE	RF/RJ	
50	2	368	368	371	110	220	650	30	45	215
65	2 1/2	419	419	422	120	225	800	42	60	350
80	3	381	381	384	125	235	800	58	75	485
100	4	457	457	460	175	275	1050	95	135	895
150	6	610	610	613	225	250	460	330	430	1690
200	8	737	737	740	275	305	600	400	520	3910
250	10	838	838	841	325	360	600	640	820	5615
300	12	965	965	968	350	385	600	900	1050	9630
350	14	1029	1029	1038	385	410	750	1150	1530	13435
400	16	1130	1130	1140	460	445	750	1460	2160	17920
450	18	1219	1219	1232	500	505	750	2600	3400	21280
500	20	1321	1321	1334	550	540	750	3700	4200	27100
550	22	1422	1422	1435	620	570	750	4000	4600	40305
600	24	1549	1549	1568	635	625	750	4400	5400	50510
650	26	1651	1651	1673	660	655	750	5800	7000	61750
700	28	1753	1753	1775	695	710	750	7600	8600	72675
750	30	1880	1880	1902	750	770	750	10000	11000	83600
800	32	2032	2032	2054	765	790	750	10600	12500	100320
850	34	2159	2159	2188	795	850	750	-	-	112850
900	36	2286	2286	2315	850	910	750	-	-	125400

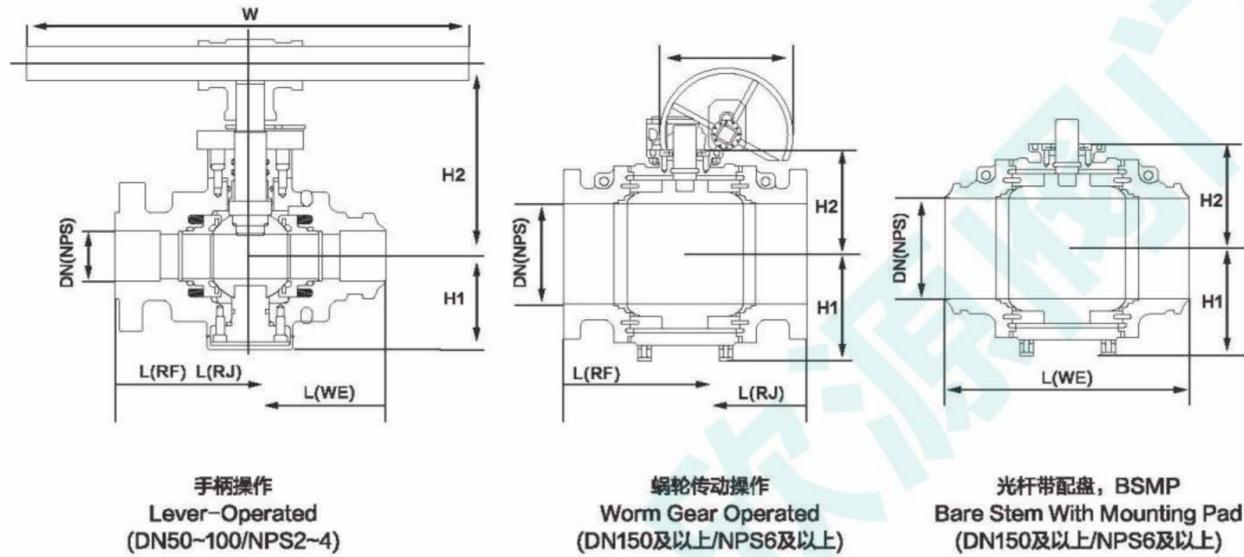
主要外形尺寸 Main External Dimension
(缩径 Reduced Bore)

PN150/PN160/CLASS 900

DN	NPS	L			H1	H2	W	Weight (kg)		Torque (N·M)
		RF	WE	RJ				WE	RF/RJ	
80X50	3X2	381	381	384	110	220	650	45	60	215
100X80	4X3	457	457	460	125	235	800	76	105	485
150X100	6X4	610	610	613	175	275	1050	210	280	895
200X150	8X6	737	737	740	225	250	460	365	475	1690
250X200	10X8	838	838	841	275	305	600	520	670	3910
300X250	12X10	965	965	968	325	360	600	770	935	5615
350X300	14X12	1029	1029	1038	350	385	600	1025	1290	9630
400X350	16X14	1130	1130	1140	385	410	750	1205	1845	13435
450X400	18X16	1219	1219	1232	460	445	750	2030	2780	17920
500X450	20X18	1321	1321	1334	500	505	750	3150	3800	21280
600X500	24X20	1549	1549	1568	550	540	750	4050	4800	27100
700X600	28X24	1753	1753	1775	635	625	750	6000	7000	50510
750X600	30X24	1880	1880	1902	635	625	750	7200	8200	50510
750X700	30X28	1880	1880	1902	695	710	750	8800	9800	72675
800X700	32X28	2032	2032	2054	695	710	750	9100	10550	72675
800X750	32X30	2032	2032	2054	750	770	750	10300	11750	83600
900X750	36X30	2286	2286	2315	750	770	750	-	-	83600

T型全焊接固定式球阀

T-type fully welded fixed ball valve



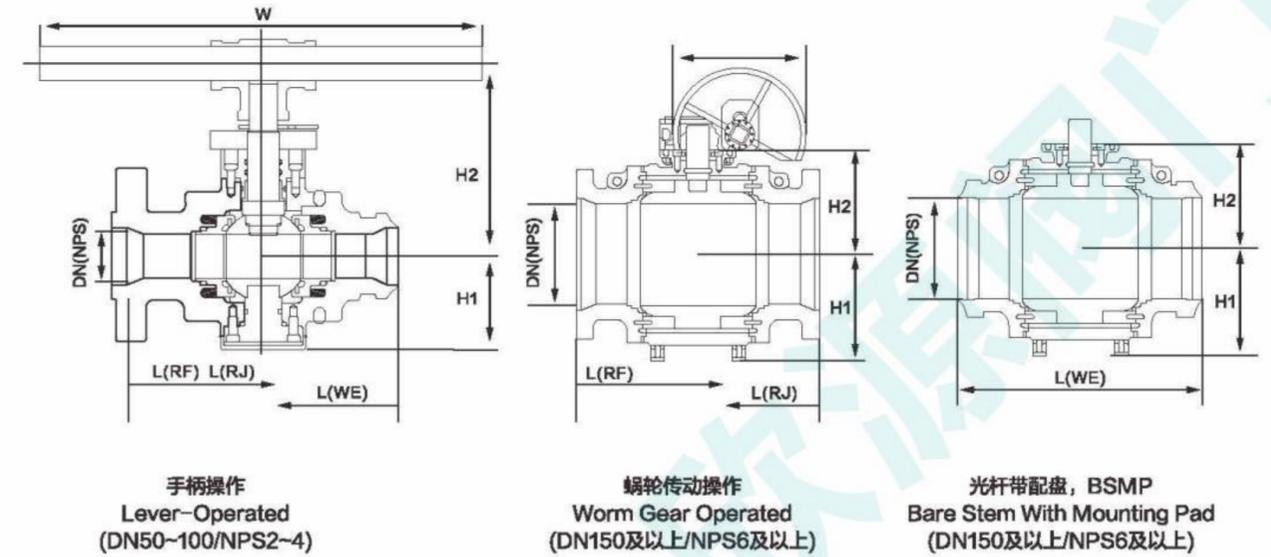
主要外形尺寸 Main External Dimension
(全通径 Full Bore)

PN250/PN260/CLASS 1500

DN	NPS	L			H1	H2	W	Weight (kg)		Torque (N·M)
		RF	WE	RJ				WE	RF/RJ	
50	2	368	368	371	110	220	650	30	45	385
65	2 1/2	419	419	422	120	225	800	42	60	610
80	3	470	470	473	125	235	800	70	85	815
100	4	546	546	549	175	275	1050	110	150	1490
150	6	705	705	711	225	250	460	375	565	2875
200	8	832	832	841	275	305	600	415	735	7070
250	10	991	991	1000	325	360	600	725	840	10900
300	12	1130	1130	1146	350	385	600	1025	1195	15780
350	14	1257	1257	1276	385	410	750	1335	1570	24030
400	16	1384	1384	1407	460	445	750	1745	2440	29050
450	18	1537	1537	1559	500	505	750	2750	3185	40750
500	20	1664	1664	1686	550	540	750	3980	4628	52430
550	22	-	-	-	-	-	-	-	-	-
600	24	-	-	1972	635	625	750	5380	7285	71050

T型全焊接固定式球阀

T-type fully welded fixed ball valve



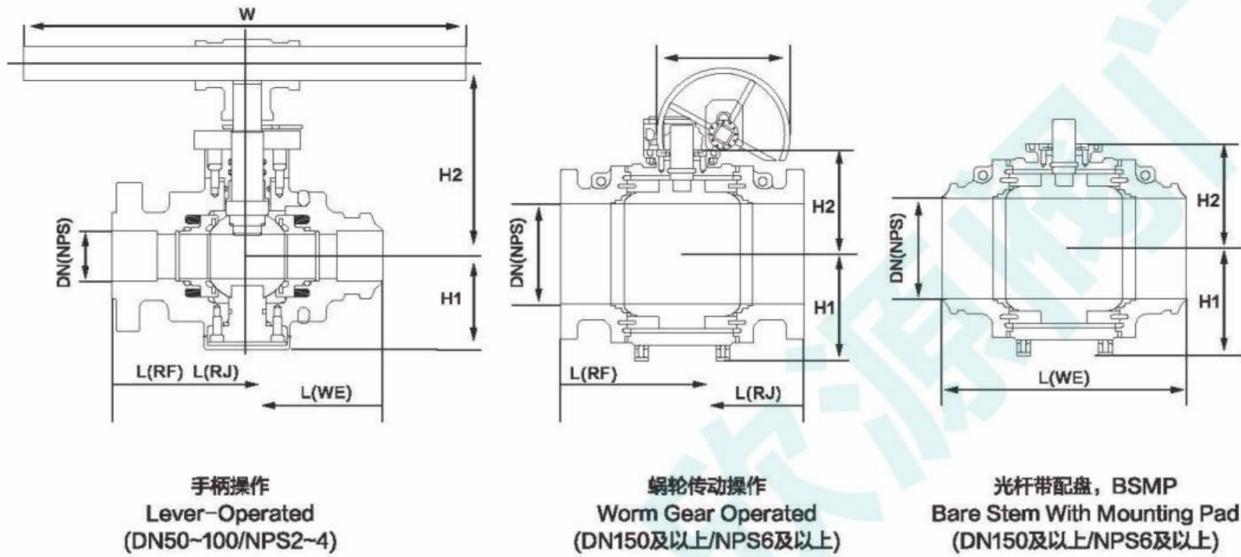
主要外形尺寸 Main External Dimension
缩径 Reduced Bore

PN250/PN260/CLASS 1500

DN	NPS	L			H1	H2	W	Weight (kg)		Torque (N·M)
		RF	WE	RJ				WE	RF/RJ	
80x50	3x2	470	470	473	110	220	650	50	65	385
100x80	4x3	546	546	549	125	235	800	70	85	815
150x100	6x4	705	705	711	175	275	1050	240	358	1490
200x150	8x6	832	832	841	225	250	460	395	650	2875
250x200	10x8	991	991	1000	275	305	600	570	790	7070
300x250	12x10	1130	1130	1146	325	360	600	875	1018	10900
350x300	14x12	1257	1257	1276	350	385	600	1180	1385	15780
400x350	16x14	1384	1384	1407	385	410	750	1540	2005	24030
450x400	18x16	1537	1537	1559	460	445	750	2248	2815	29050
500x450	20x18	1664	1664	1686	500	505	750	3365	3905	40750
600x500	24x20	-	-	1971	550	540	750	4680	5960	52430

T型全焊接固定式球阀

T-type fully welded fixed ball valve



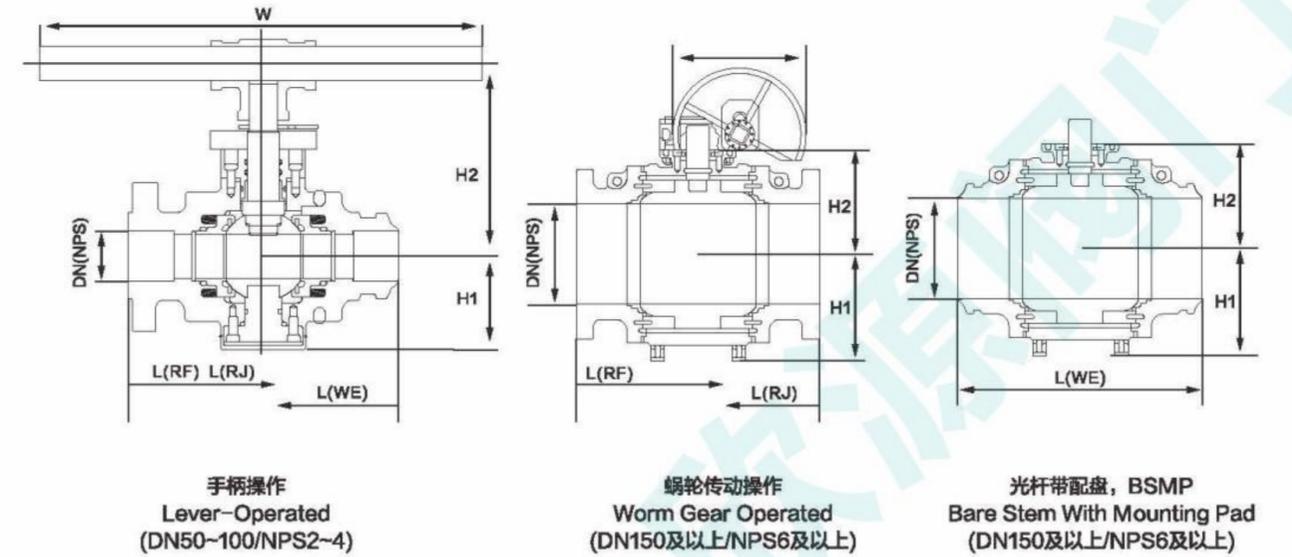
主要外形尺寸 Main External Dimension
(全通径 Full Bore)

PN420/CLASS 2500

DN	NPS	L			H1	H2	W	Weight (kg)		Torque (N·M)
		RF	WE	RJ				WE	RF/RJ	
50	2	451	451	454	115	230	1000	40	65	630
65	2 1/2	508	508	540	135	245	1200	58	100	958
80	3	578	578	584	150	265	460	78	135	1345
100	4	673	673	683	185	315	460	175	258	2465
150	6	914	914	927	250	325	600	405	585	4745
200	8	1022	1022	1038	320	350	600	575	775	11680
250	10	1270	1270	1292	385	415	750	860	1430	17990
300	12	1422	1422	1445	410	455	750	1540	2310	26050

T型全焊接固定式球阀

T-type fully welded fixed ball valve



主要外形尺寸 Main External Dimension
(缩径 Reduced Bore)

PN420/CLASS 2500

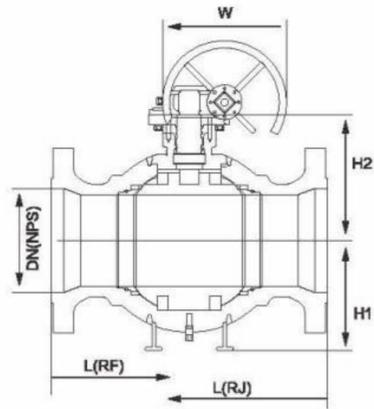
DN	NPS	L			H1	H2	W	Weight (kg)		Torque (N·M)
		RF	WE	RJ				WE	RF/RJ	
80X50	3X2	578	578	584	115	230	1000	59	100	630
100X80	4X3	673	673	683	150	265	460	127	196	1345
150X100	6X4	914	914	927	185	315	460	290	420	2465
200X150	8X6	1022	1022	1038	250	325	600	490	680	4745
250X200	10X8	1270	1270	1292	320	350	600	718	1100	11680
300X250	12X10	1422	1422	1445	385	415	750	1200	1870	17990

G型全焊接固定式球阀

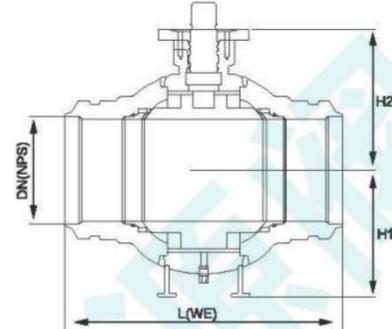
G-type fully welded fixed ball valve

G型全焊接固定式球阀

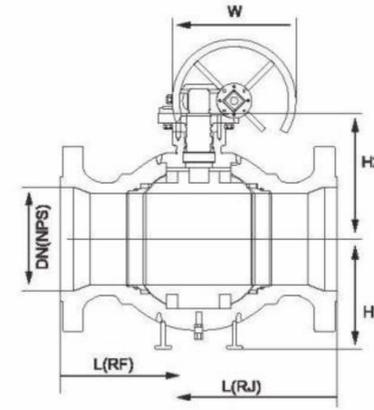
G-type fully welded fixed ball valve



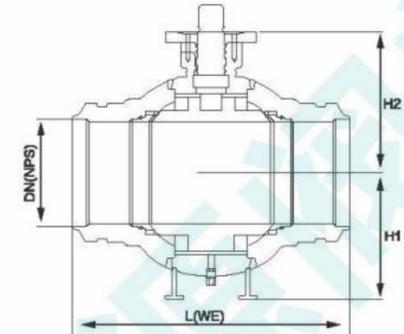
蜗轮传动操作
Worm Gear Operation



光杆带配盘, BSMP
Bare Stem with Mounting Pad



蜗轮传动操作
Worm Gear Operation



光杆带配盘, BSMP
Bare Stem with Mounting Pad

主要外形尺寸 Main External Dimension
(全通径 Full Bore)

PN16/PN20/CLASS 150

DN	NPS	L			H1	H2	W	Weight (kg)		Torque (N · M)
		RF	WE	RJ				WE	RF/ RJ	
150	6	394	457	406	218	265	460	200	250	210
200	8	457	521	470	260	300	600	220	275	625
250	10	533	559	546	292.5	345	600	280	340	835
300	12	610	635	622	327.5	390	600	420	510	1150
350	14	686	762	699	365	420	750	620	740	1560
400	16	762	838	775	437.5	485	750	920	1110	2375
450	18	864	914	876	485	510	750	1260	1520	2850
500	20	914	991	927	522.5	550	750	1600	1880	3580
550	22	991	1092	1004	575.5	595	750	2100	2500	4275
600	24	1067	1143	1080	607.5	625	750	2630	3100	5650
650	26	1143	1245	1156	640	680	750	3230	3780	6520
700	28	1245	1346	1286	670	725	750	3900	4560	7380
750	30	1295	1397	1308	710	765	750	4500	5250	8380
800	32	1372	1524	1385	730	805	750	5360	6150	9370
850	34	1473	1626	1486	780	850	750	6380	7280	12065
900	36	1524	1727	1537	830	905	750	7390	8370	14760
1000	40	1753	1956	1985	875	980	750	10110	11320	18465

主要外形尺寸 Main External Dimension
缩径 Reduced Bore

PN16/PN20/CLASS 150

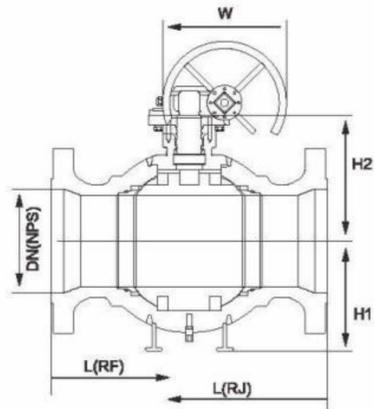
DN	NPS	L			H1	H2	W	Weight (kg)		Torque (N · M)
		RF	WE	RJ				WE	RF/ RJ	
200X150	8X6	457	521	470	218	265	460	210	265	210
250X200	10X8	533	559	546	260	300	600	250	305	625
300X250	12X10	610	635	622	292.5	345	600	280	340	835
350X250	14X12	686	762	699	327.5	390	600	520	625	1150
400X350	16X14	762	838	775	365	420	750	770	925	1560
450X400	18X16	864	914	876	437.5	485	750	1090	1315	2375
500X450	20X18	914	991	927	485	510	750	1430	1700	2850
600X500	24X20	1067	1143	1080	522.5	550	750	2100	2500	3580
700X600	28X24	1245	13346	1285	607.5	625	750	3230	3780	5650
750X600	30X24	1295	1397	1308	607.5	625	750	3565	4175	5650
750X700	30X28	12995	1397	1308	670	725	750	4200	4905	7380
800X700	32X28	1372	1524	1385	670	725	750	4630	5355	7380
800X750	32X30	1372	1524	1385	710	765	750	4930	5700	8380
900X750	36X30	1524	1727	1537	710	765	750	5945	6810	8380
900X800	36X32	1524	1727	1537	730	805	750	6375	7260	9370
1000X900	40X36	1753	1956	1985	830	905	750	8750	9845	14760

G型全焊接固定式球阀

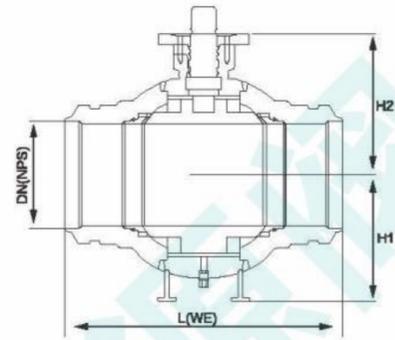
G-type fully welded fixed ball valve

G型全焊接固定式球阀

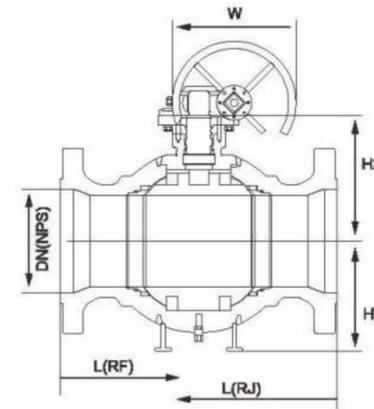
G-type fully welded fixed ball valve



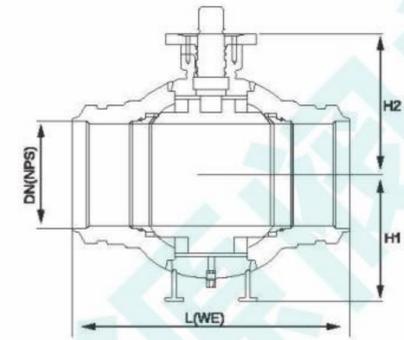
蜗轮传动操作
Worm Gear Operation



光杆带配盘, BSMP
Bare Stem with Mounting Pad



蜗轮传动操作
Worm Gear Operation



光杆带配盘, BSMP
Bare Stem with Mounting Pad

主要外形尺寸 Main External Dimension
(全通径 Full Bore)

PN25/PN40/PN50/CLASS 300

DN	NPS	L			H1	H2	W	Weight (kg)		Torque (N·M)
		RF	WE	RJ				WE	RF/ RJ	
150	6	403	403	419	218	265	460	210	260	410
200	8	502	502	518	260	300	600	230	285	935
250	10	568	568	584	292.5	345	600	300	360	1300
300	12	648	648	664	327.5	390	600	440	530	1790
350	14	762	762	778	365	420	750	645	785	2415
400	16	838	838	854	437.5	485	750	970	1160	3850
450	18	914	914	930	485	510	750	1320	1760	4645
500	20	991	991	1010	522.5	550	750	1680	2180	5870
550	22	1092	1092	1114	575.5	595	750	2210	2600	7970
600	24	1143	1143	1165	607.5	625	750	2770	3260	9718
650	26	1245	1245	1270	640	680	750	3390	3980	10795
700	28	1346	1346	1372	670	725	750	4100	5250	11715
750	30	1397	1397	1422	710	765	750	4730	5420	14025
800	32	1524	1524	1553	730	805	750	5630	6460	15775
850	34	1626	1626	1654	780	850	750	6710	7650	20075
900	36	1727	1727	1756	830	905	750	7770	8800	24375
1000	40	1956	1956	1985	875	980	750	10630	11900	29625

主要外形尺寸 Main External Dimension
缩径 Reduced Bore

PN25/PN40/PN50/CLASS 300

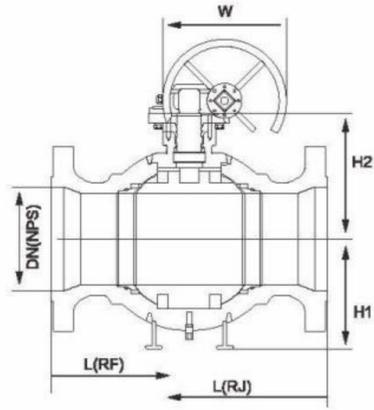
DN	NPS	L			H1	H2	W	Weight (kg)		Torque (N·M)
		RF	WE	RJ				WE	RF/ RJ	
200X150	8X6	502	502	518	218	265	460	220	275	410
250X200	10X8	568	568	584	260	300	600	265	325	935
300X250	12X10	648	648	664	292.5	345	600	370	445	1300
350X250	14X12	762	762	778	327.5	390	600	540	1310	1790
400X350	16X14	838	838	854	365	420	750	810	970	2415
450X400	18X16	914	914	930	437.5	485	750	1145	1460	3850
500X450	20X18	991	991	1010	485	510	750	1500	1970	4645
600X500	24X20	1143	1143	1165	522.5	550	750	2225	2720	5870
700X600	28X24	1346	1346	1372	607.5	625	750	2210	2600	9718
750X600	30X24	1397	1397	1422	607.5	625	750	3750	4340	9718
750X700	30X28	1397	1397	1422	670	725	750	4235	5335	11715
800X700	32X28	1524	1524	1553	670	725	750	4865	5855	11715
800X750	32X30	1524	1524	1553	710	765	750	5180	4940	14025
900X750	36X30	1727	1727	1756	710	765	750	6250	7150	14025
900X800	36X32	1727	1727	1756	730	805	750	6700	7630	15775
1000X900	40X36	1956	1956	1985	830	905	750	9200	10350	24375

G型全焊接固定式球阀

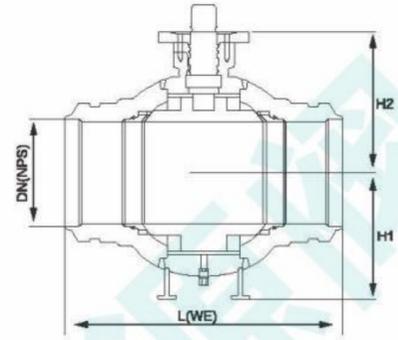
G-type fully welded fixed ball valve

G型全焊接固定式球阀

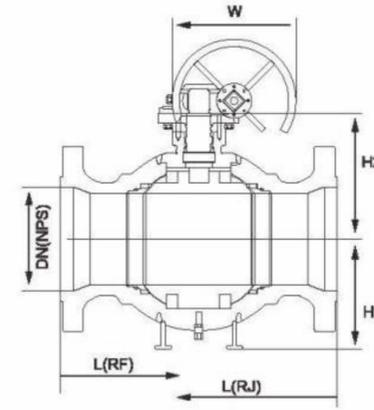
G-type fully welded fixed ball valve



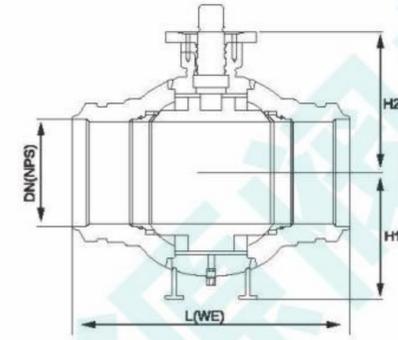
蜗轮传动操作
Worm Gear Operation



光杆带配盘, BSMP
Bare Stem with Mounting Pad



蜗轮传动操作
Worm Gear Operation



光杆带配盘, BSMP
Bare Stem with Mounting Pad

主要外形尺寸 Main External Dimension
(全通径 Full Bore)

PN63/PN64/CLASS 400

DN	NPS	L			H1	H2	W	Weight (kg)		Torque (N·M)
		RF	WE	RJ				WE	RF/RJ	
150	6	495	495	498	218	265	460	240	320	485
200	8	597	597	600	260	300	600	260	345	1235
250	10	673	673	676	292.5	345	600	340	430	1980
300	12	762	762	765	327.5	390	600	500	640	2195
350	14	826	826	829	365	420	750	745	935	2980
400	16	902	902	905	437.5	485	750	1130	1350	4735
450	18	978	978	981	485	510	750	1510	1880	5710
500	20	1054	1054	1060	522.5	550	750	1930	2270	7215
550	22	1143	1143	1153	575.5	595	750	2540	2990	8735
600	24	1232	1232	1241	607.5	625	750	3170	3730	11925
650	26	1308	1308	1321	640	680	750	3890	4560	13295
700	28	1397	1397	1410	670	725	750	4700	5500	15136
750	30	1524	1524	1537	710	765	750	5480	6380	17315
800	32	1651	1651	1667	730	805	750	6460	7410	19485
850	34	1778	1778	1794	780	850	750	7660	8740	27460
900	36	1880	1880	1895	830	905	750	8910	10100	35435
1000	40	2250	2250	2265	875	980	750	12200	13650	44210

主要外形尺寸 Main External Dimension
(缩径 Reduced Bore)

PN63/PN64/CLASS 400

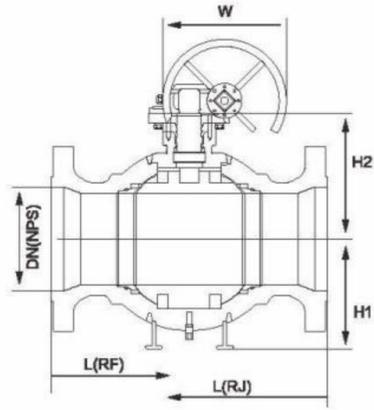
DN	NPS	L			H1	H2	W	Weight (kg)		Torque (N·M)
		RF	WE	RJ				WE	RF/RJ	
200X150	8X6	597	597	600	218	265	460	250	335	485
250X200	10X8	673	673	676	260	300	600	300	385	1235
300X250	12X10	762	762	765	292.5	345	600	420	535	1980
350X250	14X12	826	826	829	327.5	390	600	620	785	2195
400X350	16X14	902	902	905	365	420	750	935	1140	2980
450X400	18X16	978	978	981	437.5	485	750	1320	1615	4735
500X450	20X18	1054	1054	1060	485	510	750	1510	1880	5710
600X500	24X20	1232	1232	1241	522.5	550	750	2540	2990	7215
700X600	28X24	1397	1397	1410	607.5	625	750	3890	4560	11925
750X600	30X24	1524	1524	1537	607.5	625	750	4325	5055	11925
750X700	30X28	1524	1524	1537	670	725	750	5090	5940	15136
800X700	32X28	1651	1651	1667	670	725	750	5580	6495	15136
800X750	32X30	1651	1651	1667	710	765	750	5970	6890	17315
900X750	36X30	1880	1880	1895	710	765	750	7195	8240	17315
900X800	36X32	1880	1880	1895	730	805	750	7685	8755	19485
1000X900	40X36	2250	2250	2265	830	905	750	10555	11875	35435

G型全焊接固定式球阀

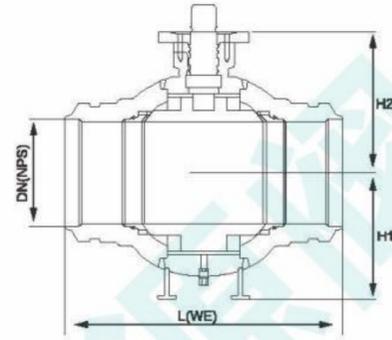
G-type fully welded fixed ball valve

G型全焊接固定式球阀

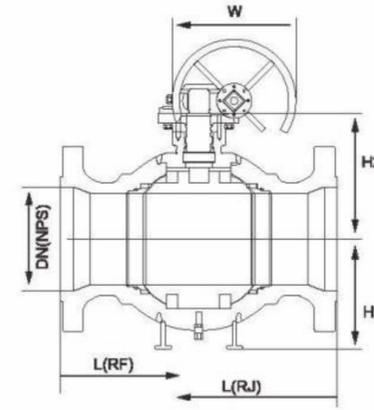
G-type fully welded fixed ball valve



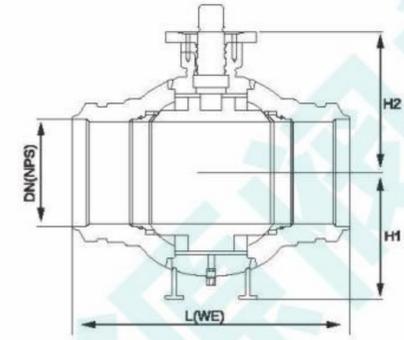
蜗轮传动操作
Worm Gear Operation



光杆带配盘, BSMP
Bare Stem with Mounting Pad



蜗轮传动操作
Worm Gear Operation



光杆带配盘, BSMP
Bare Stem with Mounting Pad

主要外形尺寸 Main External Dimension
(全通径 Full Bore)

PN100/PN110/CLASS 600

DN	NPS	L			H1	H2	W	Weight (kg)		Torque (N·M)
		RF	WE	RJ				WE	RF/RJ	
150	6	559	559	562	218	265	460	260	380	685
200	8	660	660	664	260	300	600	280	405	1635
250	10	787	787	791	292.5	345	600	360	510	2320
300	12	838	838	841	327.5	390	600	540	730	3210
350	14	889	889	892	365	420	750	795	1095	5595
400	16	991	991	994	437.5	485	750	1210	1450	6985
450	18	1092	1092	1095	485	510	750	1620	1930	10980
500	20	1194	1194	1200	522.5	550	750	2070	2440	15010
550	22	1295	1295	1305	575.5	595	750	2730	3210	18585
600	24	1397	1397	1407	607.5	625	750	3410	4330	23420
650	26	1448	1448	1461	640	680	750	4180	4890	28265
700	28	1549	1549	1562	670	725	750	5050	5910	32625
750	30	1651	1651	1664	710	765	750	5880	6850	39375
800	32	1778	1778	1794	730	805	750	6940	7970	46125
850	34	1930	1930	1946	780	850	750	8230	9400	52590
900	36	2083	2083	2099	830	905	750	9570	10850	59065
1000	40	2337	2337	2366	875	980	750	13110	14670	73875

主要外形尺寸 Main External Dimension
缩径 Reduced Bore

PN100/PN110/CLASS 600

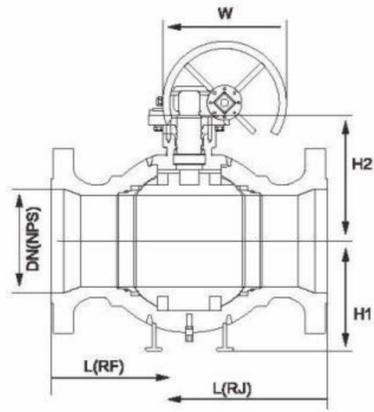
DN	NPS	L			H1	H2	W	Weight (kg)		Torque (N·M)
		RF	WE	RJ				WE	RF/RJ	
200X150	8X6	660	660	664	218	265	460	270	395	685
250X200	10X8	787	787	791	260	300	600	320	455	1635
300X250	12X10	838	838	841	292.5	345	600	450	620	2320
350X250	14X12	889	889	892	327.5	390	600	665	915	3210
400X350	16X14	991	991	994	365	420	750	1005	1270	5595
450X400	18X16	1092	1092	1095	437.5	485	750	1415	1690	6985
500X450	20X18	1194	1194	1200	485	510	750	1845	2185	10980
600X500	24X20	1397	1397	1407	522.5	550	750	2730	3210	15010
700X600	28X24	1549	1549	1562	607.5	625	750	4180	4890	23420
750X600	30X24	1651	1651	1664	607.5	625	750	4645	5590	23420
750X700	30X28	1651	1651	1664	670	725	750	5450	6380	32625
800X700	32X28	1778	1778	1794	670	725	750	5995	6940	32625
800X750	32X30	1778	1778	1794	710	765	750	6410	7410	39375
900X750	36X30	2083	2083	2099	710	765	750	7725	8850	39375
900X800	36X32	2083	2083	2099	730	805	750	8255	9410	46125
1000X900	40X36	2337	2337	2366	830	905	750	11340	12760	59065

G型全焊接固定式球阀

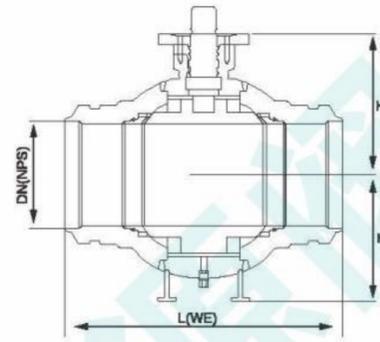
G-type fully welded fixed ball valve

G型全焊接固定式球阀

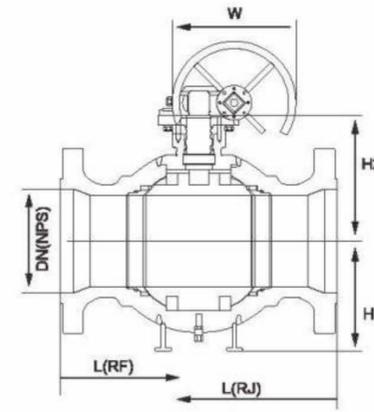
G-type fully welded fixed ball valve



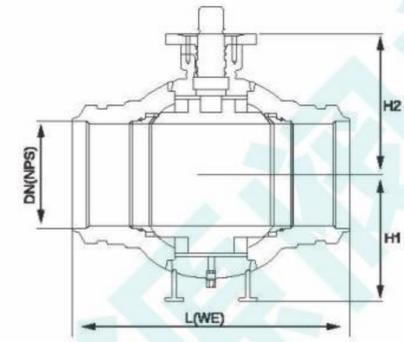
蜗轮传动操作
Worm Gear Operation



光杆带配盘, BSMP
Bare Stem with Mounting Pad



蜗轮传动操作
Worm Gear Operation



光杆带配盘, BSMP
Bare Stem with Mounting Pad

主要外形尺寸 Main External Dimension
(全通径 Full Bore)

PN150/PN160/CLASS 900

DN	NPS	L			H1	H2	W	Weight (kg)		Torque (N·M)
		RF	WE	RJ				WE	RF/ RJ	
150	6	610	610	613	225	265	460	310	385	1690
200	8	737	737	740	275	300	600	340	415	3910
250	10	838	838	841	325	345	600	440	610	5615
300	12	965	965	968	350	390	600	655	790	9630
350	14	1029	1029	1038	385	420	750	960	1155	13435
400	16	1130	1130	1140	460	485	750	1460	1750	17920
450	18	1219	1219	1232	500	510	750	1955	2330	21280
500	20	1321	1321	1334	550	550	750	2500	2950	27100
550	22	1422	1422	1435	620	595	750	3295	3875	40305
600	24	1549	1549	1568	635	625	750	4125	4850	50510
650	26	1651	1651	1673	660	680	750	4950	5900	61750
700	28	1753	1753	1775	695	725	750	6460	7500	72675
750	30	1880	1880	1902	750	765	750	10000	11000	83600

主要外形尺寸 Main External Dimension
缩径 Reduced Bore

PN150/PN160/CLASS 900

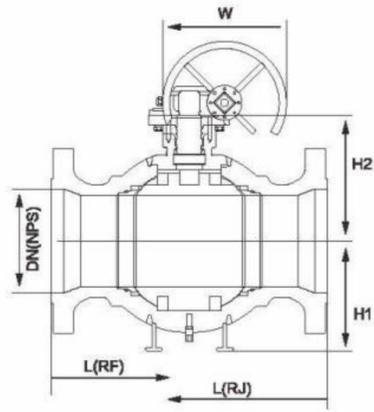
DN	NPS	L			H1	H2	W	Weight (kg)		Torque (N·M)
		RF	WE	RJ				WE	RF/ RJ	
200X150	8X6	737	737	740	225	265	460	325	400	1690
250X200	10X8	838	838	841	275	300	600	390	510	3910
300X250	12X10	965	965	968	325	345	600	550	700	5615
350X250	14X12	1029	1029	1038	350	390	600	810	970	9630
400X350	16X14	1130	1130	1140	385	420	750	1210	1455	13435
450X400	18X16	1219	1219	1232	460	485	750	1705	2040	17920
500X450	20X18	1321	1321	1334	500	510	750	2225	2640	21280
600X500	24X20	1549	1549	1568	550	550	750	3295	3875	27100
700X600	28X24	1753	1753	1775	635	625	750	4950	5900	50510
750X600	30X24	1880	1880	1902	635	625	750	7065	7925	50510
750X700	30X28	1880	1880	1902	695	725	750	8230	9250	72675

G型全焊接固定式球阀

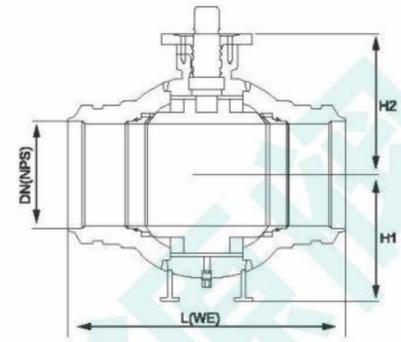
G-type fully welded fixed ball valve

G型全焊接固定式球阀

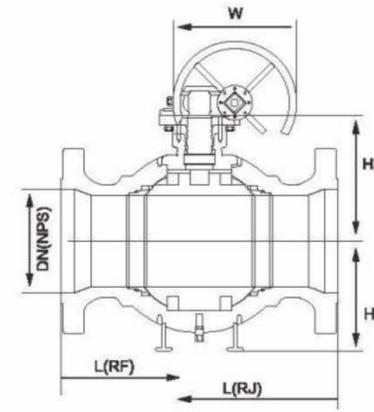
G-type fully welded fixed ball valve



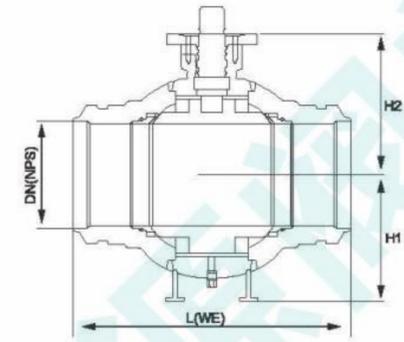
蜗轮传动操作
Worm Gear Operation



光杆带配盘, BSMP
Bare Stem with Mounting Pad



蜗轮传动操作
Worm Gear Operation



光杆带配盘, BSMP
Bare Stem with Mounting Pad

主要外形尺寸 Main External Dimension
(全通径 Full Bore)

PN250/PN260/CLASS 1500

DN	NPS	L			H1	H2	W	Weight (kg)		Torque (N·M)
		RF	WE	RJ				WE	RF/ RJ	
150	6	705	705	711	225	265	460	375	565	2875
200	8	832	832	841	275	300	600	415	505	7070
250	10	991	991	1000	325	345	600	525	640	10900
300	12	1130	1130	1146	350	390	600	780	950	15780
350	14	1257	1257	1276	385	420	750	1145	1380	24030
400	16	1384	1384	1407	460	485	750	1745	2095	29050
450	18	1537	1537	1559	500	515	750	2750	3185	40750
500	20	1664	1664	1686	550	560	750	3980	4628	52430

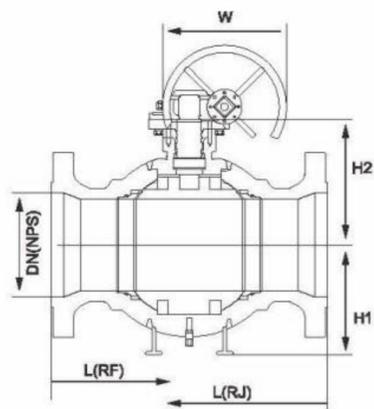
主要外形尺寸 Main External Dimension
缩径 Reduced Bore

PN250/PN260/CLASS 1500

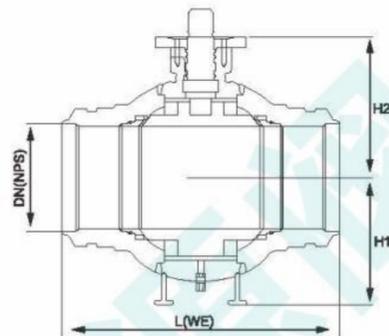
DN	NPS	L			H1	H2	W	Weight (kg)		Torque (N·M)
		RF	WE	RJ				WE	RF/ RJ	
200X150	8X6	832	832	841	225	265	460	395	535	2875
250X200	10X8	991	991	1000	275	300	600	470	575	7070
300X250	12X10	1130	1130	1146	325	345	600	655	795	10900
350X250	14X12	1257	1257	1276	350	390	600	965	1165	15780
400X350	16X14	1384	1384	1407	385	420	750	1445	1735	24030
450X400	18X16	1537	1537	1559	460	485	750	2250	2640	29050
500X450	20X18	1664	1664	1686	500	515	750	3365	3905	40750

G型全焊接固定式球阀

Globe Fully Welded Trunnion Ball Valve



蜗轮传动操作
Worm Gear Operation



光杆带配盘, BSMP
Bare Stem with Mounting Pad

主要外形尺寸 Main External Dimension
(全通径 Full Bore)

PN420/CLASS 2500

DN	NPS	L			H1	H2	W	Weight (kg)		Torque (N · M)
		RF	WE	RJ				WE	RF/ RJ	
150	6	914	914	927	250	295	600	405	585	4745
200	8	1022	1022	1038	320	340	600	575	775	11680
250	10	1270	1270	1292	385	415	750	860	1430	17990
300	12	1422	1422	1445	410	455	750	1540	2310	26050

主要外形尺寸 Main External Dimension
缩径 Reduced Bore

PN420/CLASS 2500

DN	NPS	L			H1	H2	W	Weight (kg)		Torque (N · M)
		RF	WE	RJ				WE	RF/ RJ	
200X150	8X6	1022	1022	1038	250	295	600	490	680	4745
250X200	10X8	1270	1270	1392	320	340	600	718	1100	11680
300X250	12X10	1422	1422	1445	385	415	750	1200	1870	17990

HEATING FULL WELDED BALL VALVE

供热焊接球阀



用途

适用于城市煤气管道, 大型供热设备管线, 以及钢厂各种流体, 煤气热力供应, 燃料供应管道。

Purpose

Applicable to urban gas pipeline, large heating pipeline, various liquid, gas, and heat supply in steel works, and fuel supply lines.

结构特性

阀门阀体由钢板成型, 整体组焊而成, 避免了任何可能的介质外漏现象, 采用弹簧加载的阀座组合结构, 对压力和温度变化的适应力强, 确保密封圈与球体的紧密接触, 在确保密封的前提下使阀门启闭灵活, 操作轻便, 球体与阀杆经过精密机床加工而成, 减小了接触面间的摩擦系数, 进一步提高了阀门的密封性能及操作扭矩。

Structural Feature

Formed by steel plates and group welded, the valve and valve body is able to avoid leakage of any medium. The spring-loaded valve seat is more adaptable to pressure and temperature changes, ensures the close contact between sealing ring and the ball, and achieves flexible open/close operation under the premise of tight sealing. Both the ball and the valve stem are processed with precision machining tools to minimize the friction coefficient between contact surfaces and improve the sealing performance and the operating torque of the valve.

技术规范 Technical specifications

设计和制造 Design and Manufacture	GB/T12237、GB/T37827-2019	
结构长度 Face-to-Face	按厂标 Manufacture's specification	
连接端* Connection End	法兰连接 Flanged	GB/T79、GB/T9113
	对焊连接 Butt-Welding	GB/T12224
试验和检验 Test and Inspection	GB/T13927	
防火试验 Fire Test	AP1607.AP16FA	

*阀门连接端对焊端尺寸可按用户要求设计制造。

The dimension of welded end connection can be designed and manufactured according to the buyers's request.

供热焊接球阀

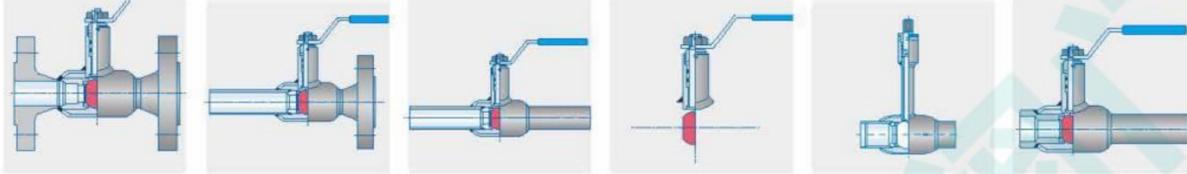
Heating Full Welded Ball Valve

供热焊接球阀

Heating Full Welded Ball Valve

连接段:对焊、对焊/法兰、法兰、螺纹/焊接

Connecting piece: butt welding, butt welding/ flange, thread/ welding

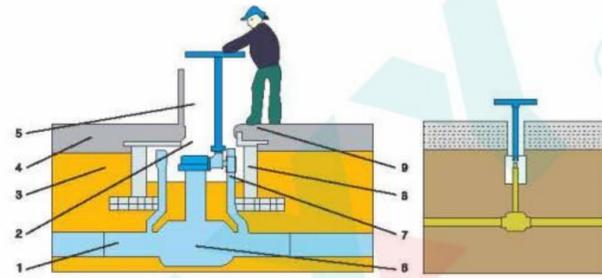
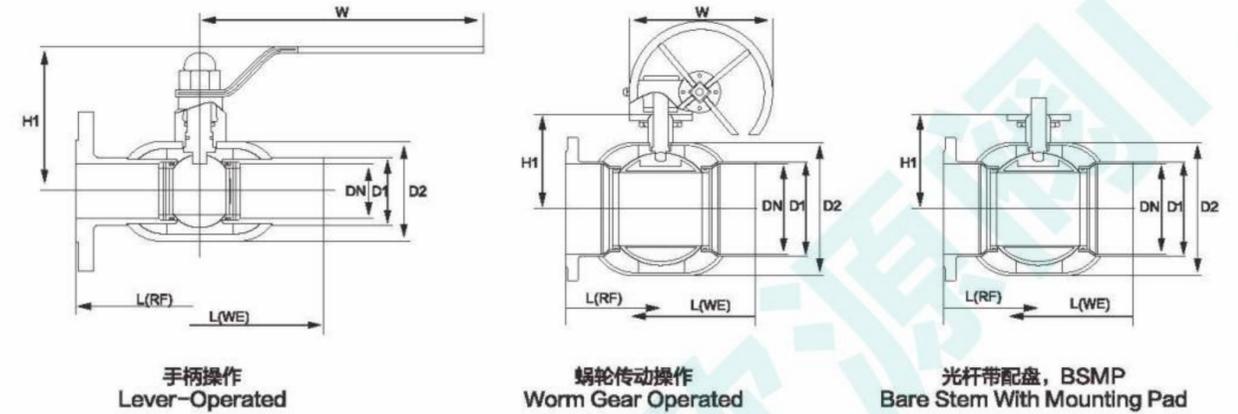


各种操作方式

可提供各种类型的阀门执行机构:手动、气动、电动、液动、气液联动。
具体型号根据阀门力矩选型。

Various Operating Methods

provides all kinds of valve actuators, including manual, pneumatic, electric, hydraulic, and pneumatic and hydraulic actuators. The types will be chosen in accordance with valve torques.



- | | | |
|--------|---------|-------|
| 1.埋地管线 | 4.水泥浇注面 | 7.放空阀 |
| 2.阀室 | 5.井盖井圈 | 8.砌墙 |
| 3.埋地介质 | 6.阀门 | 9.路面 |

埋地工况设计

用于埋地工况的阀门, 设置阀门加长杆、维护用加长管(两侧通道排气管+两侧阀座注脂管+阀体底部排污管)和控制阀, 使阀门操作位置至于地面上方便操作的位置。阀门表面耐腐蚀沥青涂覆保护或环氧树脂保护、现场管道跨越及阴极保护措施, 适用埋地使用环境。

DESIGN OF UNDERGROUND WORKING CONDITIONS

For valves buried underground, they have been provided with extended rod, and extended pipe for maintenance purpose (exhaust pipe on both sides of the passageway + valve seat injection pipe on both sides + discharge pipe at the bottom of the valve body) and control valve so that the valve operating position above the ground facilitates operation. The surface of the valve has been coated with anti-corrosion asphalt coating protection or epoxy resin protection, on-site pipeline bridging and cathodic protection to adapt to underground environment.

主要外形尺寸 Main External Dimension (全通径 Full Bore)

Q61F/Q361F-Q41F/Q341F PN16/PN25/PN40

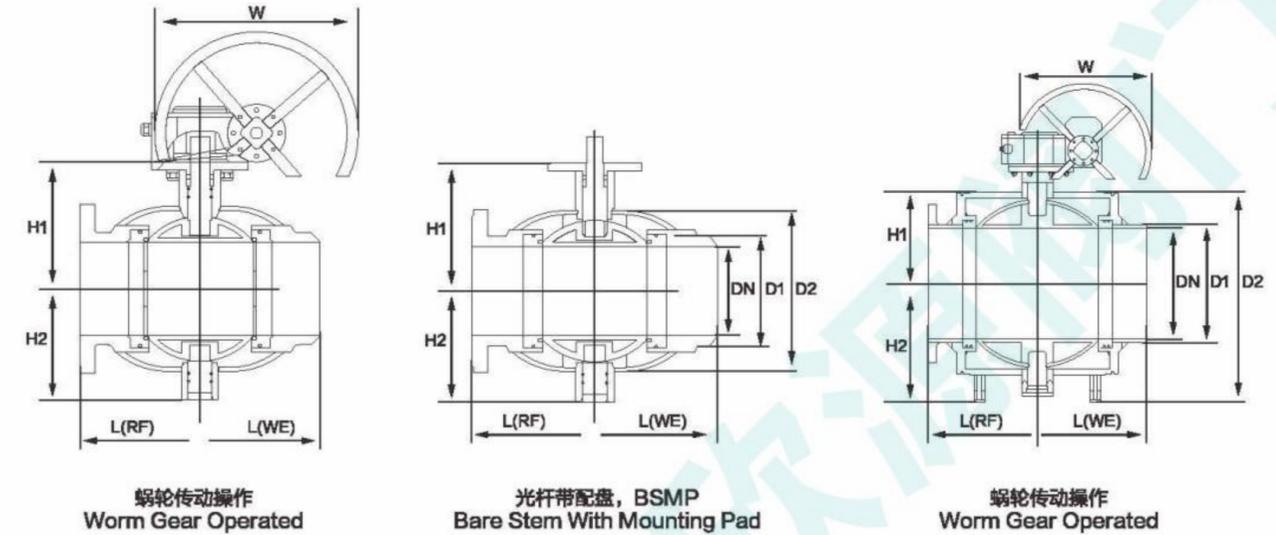
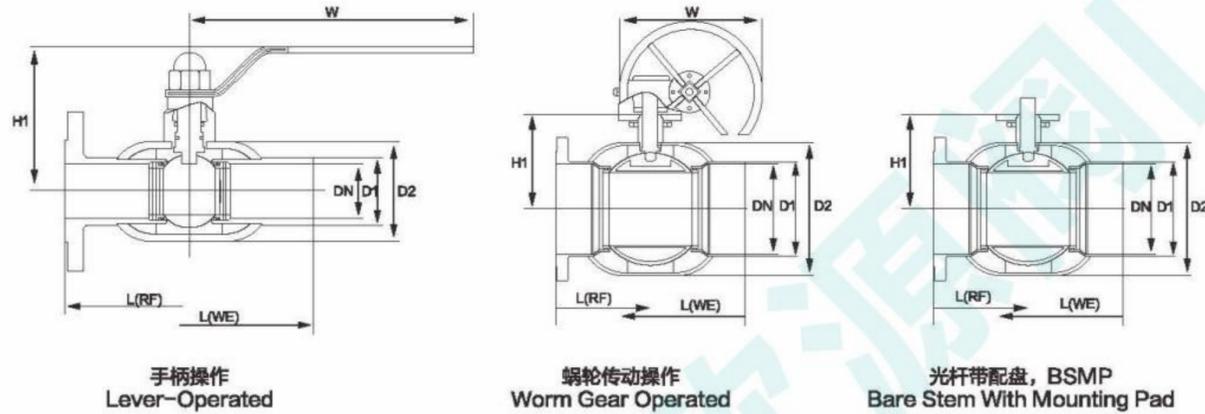
DN	L(RF)	L(WE)		D1	D2	H1(手柄) (Handle)	H1(蜗轮) (Worm Gear)	W(手柄) (Handle)	W(蜗轮) (Worm Gear)
		国标	参考						
15	150	230	210	22	42	64		129	
20	160	260	230	27	48	76		159	
25	180	260	260	34	60	85		159	
32	200	300	260	42	76	95		245	
40	230	300	300	48	83	124		265	
50	270	300	300	60	102	162		265	
65	280	300	300	76	133	175		265	
80	300	325	325	89	152	192	169	350	
100	350	350	325	114	180	205	183	420	140
125	350	390	350	140	219	225	203	420	140
150	457	520	400	168	273	245	224	900	200
200	521	635	533	219	351	285	262	900	400
250	568	689	635	273	426	348	322		400
300	648	762	680	325	508		355		500

供热焊接球阀

Heating Full Welded Ball Valve

供热焊接固定式球阀

Heating welded fixed ball valve



主要外形尺寸 Main External Dimension

缩径 Reduced Bore

Q61F/Q361F-Q41F/Q341F PN16/PN25/PN40

DN	L(RF)	L(WE)		D1	D2	H1(手柄) (Handle)	H1(蜗轮) (Worm Gear)	W(手柄) (Handle)	W(蜗轮) (Worm Gear)
		国标	参考						
15	130	210	210	22	34	64		129	
20	150	230	230	27	42	64		129	
25	160	260	260	34	48	76		159	
32	180	260	260	42	60	85		159	
40	200	300	260	48	76	95		245	
50	230	300	300	60	83	124		265	
65	270	300	300	76	102	162		265	
80	280	300	300	89	133	175		265	
100	300	325	325	108	152	192	169	350	140
125	350	350	325	133	180	205	183	420	140
150	360	390	350	159	219	225	203	420	140
200	420	520	400	219	273	245	224	900	200
250	568	635	533	273	351	285	262	900	400
300	648	689	635	325	426	348	322		400
350	762	762	680	377	508		355		500

主要外形尺寸 Main External Dimension

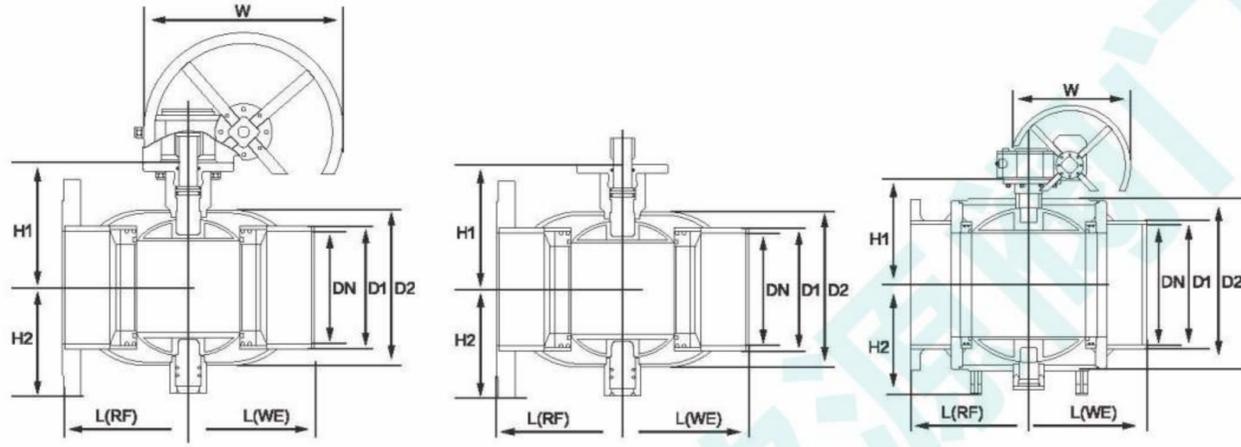
(全通径 Full Bore)

Q367F/Q347F PN16/PN25/PN40

DN	L(RF)	L(WE)		D1	D2	H1	H2	W
		国标	参考					
150	403	520	400	168	273	246	193	200
200	502	635	533	219	351	285	238	400
250	568	689	635	273	426	323	278	400
300	648	762	680	325	508	365	315	500
350	762	838	762	377	580	410	370	500
400	838	915	838	426	675	457	425	600
450	914	991	914	480	740	495	465	600
500	991	1143	991	530	805	545	520	400
600	1143	1380	1143	630	965	625	615	400
700	1346	1524	1346	720	1120	702	663	500
800	1524	1727	1524	820	1280	790	755	500
900	1727	1900	1727	920	1410	865	825	500
1000	1900	2000	1780	1020	1570	965	920	500
1200	2180	2430	2100	1220	1890	1105	1112	600
1400	2300	2680	2250	1420	2220	1280	1235	600

供热焊接固定式球阀

Heating welded fixed ball valve



蜗轮传动操作
Worm Gear Operated

光杆带配盘, BSMP
Bare Stem With Mounting Pad

蜗轮传动操作
Worm Gear Operated

主要外形尺寸 Main External Dimension
缩径 Reduced Bore

Q367F/Q347F PN16/PN25/PN40

DN	L(RF)	L(WE)		D1	D2	H1	H2	W
		国标	参考					
150	403	390	350	168	219	200	151	140
200	502	520	400	219	273	246	193	200
250	568	635	533	273	351	285	238	400
300	648	689	635	325	426	323	278	400
350	762	762	680	377	508	365	315	500
400	838	838	762	426	580	410	370	500
450	914	915	850	480	675	457	425	600
500	991	991	914	530	740	495	465	600
600	1143	1143	1067	630	805	545	520	400
700	1346	1380	1245	730	965	625	615	400
800	1524	1524	1372	830	1120	702	663	600
900	1727	1727	1524	940	1280	790	755	500
1000	1900	1900	1727	1045	1410	865	825	500
1200	2180	2100	1900	1250	1570	965	920	600
1400	2300	2430	2100	1450	1890	1105	1112	600
1600	2600	2680	2430	1630	2220	1280	1235	600

BUTT-WELDING ENDS 对接焊端

DN65-250

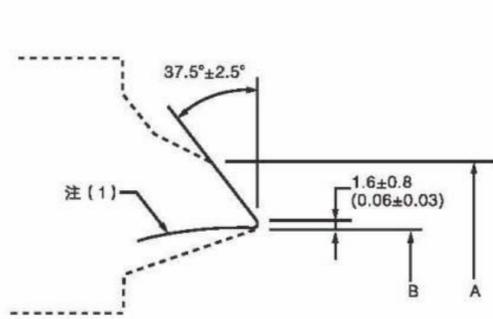
管子公称规格 DN Pipe nominal specification DN	管壁厚度 系列号 [注(1)] Series of pipe schedule thickness [note(1)]	焊接端部外径 Welded-end out diameters		B	C[注(3)] C[Note(3)]	t
		锻造或加工零件 [注(1)]A Forged or manufactured components [Note(1)]A	铸钢阀门 [注(2)]A Casting steel valve [Note(2)] A			
65	40	73.0	75	62.5	662.93	5.16
	80	73.0	75	59	59.69	7.01
	160	73.0	75	54	55.28	9.35
	XXS	73.0	75	45	47.43	14.02
80	40	88.9	91	78	78.25	5.49
	80	88.9	91	73.5	74.53	7.62
	160	88.9	91	66.5	68.38	11.13
	XXS	88.9	91	58.5	61.19	15.24
90	40	101.6	105	90	90.52	5.74
	80	101.6	105	85.5	86.42	8.08
	120	114.3	117	102	102.73	6.02
	160	114.3	117	97	98.28	8.56
100	120	114.3	117	92	93.78	11.13
	160	114.3	117	87.5	89.65	13.49
	XXS	114.3	117	80	83.30	17.12
	125	40	141.3	144	128	128.80
80		141.3	144	122	123.58	9.3
120		141.3	144	116	118.04	12.70
160		141.3	144	109.5	112.47	15.88
150	XXS	141.3	144	103	106.92	19.05
	40	168.3	172	154	154.82	7.11
	80	168.3	172	146.5	148.06	10.97
	120	168.3	172	140	142.29	14.27
200	160	168.3	172	132	135.31	18.26
	XXS	168.3	172	124.5	128.85	21.95
	40	219.1	223	203	203.75	8.18
	60	219.1	223	198.5	200.02	10.31
250	80	219.1	223	193.5	195.84	12.70
	100	219.1	223	189	191.65	15.09
	120	219.1	223	182.5	186.11	18.26
	140	219.1	223	178	181.98	20.62
300	XXS	219.1	223	174.5	179.16	22.23
	160	219.1	223	173	177.79	23.01
	40	273.0	278	254.5	255.74	9.27
	60	273.0	278	247.5	249.55	12.70
350	80	273.0	278	243	245.55	15.09
	100	273.0	278	236.5	240.01	18.26
	120	273.0	278	230	234.44	21.44
	140	273.0	278	222	227.51	25.40
400	160	273.0	278	216	221.95	28.58

DN300-450

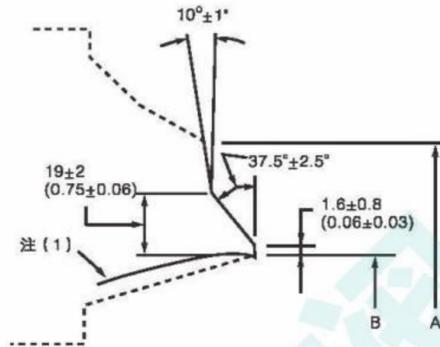
管子公称规格 DN Pipe nominal specification DN	管壁厚度 系列号 [注(1)] Series of pipe schedule thickness [note(1)]	焊接端部外径 Welded-end out diameters		B	C[注(3)] C[Note(3)]	t
		锻造或加工零件 [注(1)]A Forged or manufactured components [Note(1)]A	铸钢阀门 [注(2)]A Casting steel valve [Note(2)] A			
300	STD	323.8	329	305	306.08	9.53
	40	323.8	329	303	304.72	10.3
	XS	323.8	329	298.5	300.54	12.71
	60	323.8	329	295	297.79	14.2
350	80	323.8	329	289	292.17	17.48
	100	323.8	329	281	285.24	21.44
	120	323.8	329	273	278.31	25.40
	140	323.8	329	266.5	272.75	28.58
400	160	323.8	329	257	264.25	33.35
	STD	355.6	362	336.5	337.88	9.53
	40	355.6	362	333.5	335.08	11.13
	XS	355.6	362	300	332.34	12.70
450	60	355.6	362	325.5	328.15	15.09
	80	355.6	362	317.5	321.22	19.05
	100	355.6	362	308	312.86	23.83
	120	355.6	362	300	305.93	27.79
500	140	355.6	362	292	299.00	31.75
	160	355.6	362	284	292.07	35.71
	STD	406.4	413	387.5	388.68	9.83
	40	406.4	413	381	383.14	12.70
600	60	406.4	413	373	376.21	16.66
	80	406.4	413	363.5	367.84	21.44
	100	406.4	413	354	359.53	26.19
	120	406.4	413	344.5	351.18	30.96
700	140	406.4	413	333.5	341.43	36.53
	160	406.4	413	325.5	334.50	40.49
	STD	457.2	464	438	439.48	9.53
	40	457.2	464	432	433.94	12.70
800	XS	457.2	464	428.5	431.19	14.27
	60	457.2	464	419	422.82	19.05
	80	457.2	464	409.5	414.46	23.83
	100	457.2	464	398.5	404.78	29.36
900	120	457.2	464	387.5	395.03	34.93
	140	457.2	464	378	386.77	39.67
	160	457.2	464	366.5	376.99	45.24

对接焊端

Butt-welding Ends



DN500-800



DN850-900

管子公称规格 DN Pipe, nominal specification Cation DN	壁厚 系列号 [注(1)] Series of pipe schedule thickness [Note(1)]	焊接端部外径 Welded-end out diameters		B	C[注(3)] C[Note(3)]	t	
		锻造或 加工组件 [注(1)]A Forged or manufactured components [Note(1)]A	铸钢阀门 [注(2)]A Casting steel v d lve [Note(2)] A				
500	STD	508.0	516	489	490.28	9.53	
	XS	508.0	516	482.5	484.74	12.70	
	40	508.0	516	478	480.55	15.09	
	60	508.0	516	467	470.88	20.62	
	80	508.0	516	455.5	461.13	26.19	
	100	508.0	516	443	450.02	23.54	
	120	508.0	516	432	440.29	38.10	
	140	508.0	516	419	429.19	44.45	
550	160	508.0	516	408	419.44	50.01	
	STD	558.8	567	539	541.08	9.53	
	XS	558.8	567	533	535.54	12.70	
	40	558.8	567	514	518.86	22.23	
	60	558.8	567	501	507.75	28.58	
	80	558.8	567	488.5	496.63	34.93	
	100	558.8	567	476	485.52	41.28	
	120	558.8	567	463	474.41	47.63	
600	140	558.8	567	450.5	463.30	53.98	
	160	558.8	567	590.5	591.88	9.53	
	STD	609.6	619	584	586.34	12.70	
	XS	609.6	619	581	583.59	14.27	
	40	609.6	619	574.5	577.97	17.48	
	60	609.6	619	560.5	565.49	24.61	
	80	609.6	619	547.5	554.38	30.96	
	100	609.6	619	532	540.49	38.89	
650	120	609.6	619	517.5	528.03	46.2	
	140	609.6	619	505	516.91	52.37	
	160	609.6	619	490.5	504.37	59.54	
	10	660.4	670	645.5	645.50	7.92	
	20	660.4	670	635	637.14	12.70	
	30	660.4	670	625	628.78	15.88	
	40	660.4	670	615	620.42	19.05	
	700	10	711.2	721	695.5	696.30	7.92
20		711.2	721	686	687.94	12.70	
30		711.2	721	679.5	682.37	18.88	
40		711.2	721	672	676.80	25.06	
750		10	762.0	772	746	747.10	7.92
		20	762.0	772	736.5	738.74	12.70
		30	762.0	772	730	733.17	15.88
		40	762.0	772	723	727.60	19.05
	800	10	812.8	825	797	797.90	7.92
		20	812.8	825	787.5	789.54	12.70
		30	812.8	825	781	783.97	15.88
		40	812.8	825	778	781.17	17.48

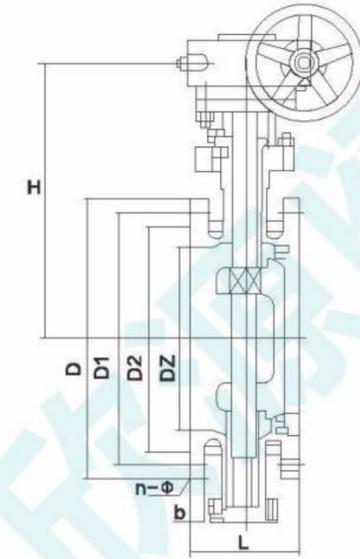
管子公称规格 DN Pipe, nominal specification Cation DN	壁厚 系列号 [注(1)] Series of pipe schedule thickness [Note(1)]	焊接端部外径 Welded-end out diameters		B	C[注(3)] C[Note(3)]	t
		锻造或 加工组件 [注(1)]A Forged or manufactured components [Note(1)]A	铸钢阀门 [注(2)]A Casting steel v d lve [Note(2)] A			
850	10	863.6	876	848	848.70	7.92
	20	863.6	876	848	840.34	12.70
	30	863.6	876	832	834.77	18.88
	40	863.6	876	828.5	831.97	17.48
	50	863.6	876	824.5	829.17	16.08
900	10	914.4	927	898.5	889.50	7.92
	20	914.4	927	889	891.14	12.70
	30	914.4	927	882.5	885.57	15.88
	40	914.4	927	876.5	880.02	19.05

注:(1)字母代号为: (a)STD二标准壁厚
(b)XS=加厚
(c)XXS=特加厚
(2)所列直径为非要求尺寸, 此处列出为使用者提供方便
(3)DN5. 及更小规格连续垫环不考虑内部机加工。

Note:(1)Characters stand for:(a)STD=Standard schedule thickness
(b)XS=Thickened
(c)XXS=Super thickened
(2)A11 the diameters are not required size, just be convenient for users
(3)Gasket rings for DN50 and below Size are not considered to manufacture.

双向流硬碰硬旋球阀

Two-way flow hard-on-hard spin ball valve



产品特点 Product characteristics

金属对金属硬密封旋球阀是我公司综合运用国内外的先进技术, 积累多年专业生产蝶阀的经验,精心研制的一种新型阀门。

Metal-to-metal hard sealed rotary ball valve is a new type of valve carefully developed by our company with the comprehensive use of advanced technology at home and abroad, accumulated many years of professional experience in the production of butterfly valves.

采用了蝶阀的结构长度短、整体式的设计、结构紧凑、重量轻、便于安装及运输方便等优点;并运用了偏心半球阀出口密封和阀板、阀杆及阀体的双偏心结构形式,使阀门的正向密封性能得到保障及密封面的自洁功能大大加强,开启时阀瓣跟阀座迅速脱离,有效防止密封面的摩擦损伤;更采用了固定式球阀进口密封的阀座结构形式,使它反向承压能力达到100%。

butterfly valve has the advantages of short structure length, integral design, compact structure, light weight, easy installation and convenient transportation, etc. And the use of eccentric half ball valve outlet seal and valve plate, stem and valve body double eccentric structure form, so that the forward sealing performance of the valve is guaranteed and the sealing surface self-cleaning function is greatly strengthened, the valve disc and the seat quickly separated when opened, effectively prevent the friction damage of the sealing surface; The fixed ball valve inlet sealed seat structure form, so that its reverse pressure capacity reaches 100%.

用途 use

本阀门广泛用于冶金、矿山、石化、化工、电力、环保、市政等行业和部门的管路启闭、调节。

The valve is widely used in metallurgy, mining, petrochemical, chemical, electric power, environmental protection, municipal and other industries and departments of pipeline opening and closing, regulation.

双向流硬碰硬旋球阀

Two-way flow hard-on-hard spin ball valve

双向流硬碰硬旋球阀

Two-way flow hard-on-hard spin ball valve

标准规范Standard specification

设计标准Design criteria	GB/T12237
结构长度标准Structural length standard	GB/T12221
法兰连接标准Flange connection standard	JB/T79.1
检测与试验标准Testing and testing standards	GB/T26480

主要零部件材料Main parts material

阀体Valve body	WCB、CF8、CF8M
球体sphere	WCB+STL、WCB、CF8+CF8M+D507
阀座Valve seat	WCB+STL、WCB、CF8、CF8M+D507
阀杆Valve stem	2Cr13、304、316
填料filler	柔性石墨Flexible graphite

1.0MPA

公称直径DN	L	H1	H2	D	D1	D2	b	n-Φ
50	108	85	196	165	125	100	18	4-18
65	112	90	211	185	145	120	18	8-18
80	114	100	230	200	160	135	20	8-18
100	127	107	256	220	180	155	20	8-18
125	140	123	288	250	210	185	22	8-18
150	140	140	315	285	240	210	22	8-22
200	152	180	350	340	295	265	24	8-22
250	165	200	398	395	350	320	26	12-22
300	178	250	431	445	400	370	26	12-22
350	190	270	478	505	460	430	26	16-22
400	216	350	513	565	515	480	26	16-26
450	222	365	550	615	565	530	28	20-26
500	229	410	615	670	620	585	28	20-26
600	267	470	670	780	725	685	34	20-30
700	292	495	750	895	840	795	34	24-30
800	318	575	820	1015	950	900	36	24-33
900	330	620	895	1115	1050	1000	38	28-33
1000	410	680	990	1230	1160	1115	38	28-36
1200	470	790	1150	1455	1380	1330	44	32-39

1.6MPA

公称直径DN	L	H1	H2	D	D1	D2	b	n-Φ
50	108	85	196	165	125	100	18	4-18
65	112	90	211	185	145	120	18	8-18
80	114	100	230	200	160	135	20	8-18
100	127	107	256	220	180	155	20	8-18
125	140	123	288	250	210	185	22	8-18
150	140	140	315	285	240	210	22	8-22
200	152	180	350	340	295	265	24	12-22
250	165	200	398	405	355	320	26	12-26
300	178	250	431	460	410	375	28	12-26
350	190	270	478	520	470	435	30	16-26
400	216	350	513	580	525	485	32	16-30
450	222	365	550	640	585	545	40	20-30
500	229	410	615	715	650	610	44	20-33
600	267	470	670	840	770	725	54	20-36
700	292	495	750	910	840	795	42	24-36
800	318	575	820	1025	950	900	42	24-39
900	330	620	895	1125	1050	1000	44	28-39
1000	410	680	990	1255	1170	1115	46	28-42
1200	470	790	1150	1485	1390	1330	52	32-48

2.5MPA

公称直径DN	L	H1	H2	D	D1	D2	b	n-Φ
50	108	85	196	165	125	100	20	4-18
65	112	90	211	185	145	120	22	8-18
80	114	100	230	200	160	135	24	8-18
100	127	107	256	235	190	160	24	8-22
125	140	123	288	270	220	185	26	8-26
150	140	140	315	300	250	215	28	8-26
200	152	180	350	360	310	275	30	12-26
250	165	200	398	425	370	300	32	12-30
300	178	250	431	485	430	390	34	16-30
350	190	270	478	555	490	448	38	16-33
400	216	350	513	620	550	505	40	16-36
450	222	365	550	670	600	550	46	20-36
500	229	410	615	730	660	610	48	20-36
600	267	470	670	845	770	720	58	20-39
700	292	495	750	960	875	820	50	24-42
800	318	575	820	1085	990	930	54	24-48
900	330	620	895	1185	1090	1025	58	28-48
1000	410	680	990	1320	1210	1140	62	28-55

C型球阀

C-type ball valve

C型球阀特点 C-type ball valve features

阀体:
 .上装式全通径设计
 .两偏心结构
 .出口端60°漏斗型设计
 .体腔大, 流阻小
 .无死角
 .无介质堆积



阀盖: 加上支架可安装涡轮、气动、电动、电液联动

阀杆:
 .防吹出
 .防静电
 .不受介质横向冲击力
 .可在线更换



球体:
 .两偏心结构: 球和阀座无摩擦, 使用寿命长
 .球体采用上下支撑轴固定
 .整体喷涂WC, 增加球体耐磨耐冲刷的性能
 .带刮扫+吹扫功能, 清理粘附在球体上的物料
 .双向密封, 能满足各种不同工况
 .防火功能, 紧急时可作紧急切断阀使用
 .特殊要求时可加YG15增加耐磨耐冲刷性能
 .可作-196°低温切断阀使用
 .可在线更换

阀座:
 .采用螺纹固定, 废除常规阀座用弹簧和柔性石墨预压结构, 解决阀座卡死问题
 .密封面+内孔喷涂WC
 .特殊要求时可加YG15 增加阀座耐磨耐冲刷性能
 .防火功能
 .可用于-196°低温阀

适用于严苛工况的调节/开关C型球阀 Adjust/switch C ball valve for harsh operating conditions



C型球阀应用范围

功能: 开/关、调节、控制系统、清管

适用介质

腐蚀性气体和液体
 硅粉
 混合粘稠性
 固体颗粒
 低温介质
 真空系统
 混合性煤浆

应用要求:

零摩擦, 使用寿命长
 双向零泄漏
 扭矩小
 流阻小
 减少维护
 维护方便
 公称尺寸: 2"~48"
 公称压力: 150LB~2500LB
 高温: -29°C~815°C
 低温: -196°C~150°C

安全可靠Safe and reliable

C型球阀采用双偏心结构, 零摩擦, 在开启或者关闭时无接触, 使用寿命长, 确保流体设备安全运行, 有效防止火灾、内泄漏以及外泄漏的安全事故, 有效消除对设备、人员、环境的安全事故发生。从而达到安全生产。

C-type ball valve adopts double eccentric structure, zero friction, no contact when opening or closing, long service life, to ensure the safe operation of fluid equipment, effectively prevent fire, internal leakage and external leakage safety accidents, and effectively eliminate safety accidents to equipment, personnel and the environment. So as to achieve safe production.

节能环保Environmental protection

C型球阀完全符合双向零泄漏标准, 不会出现内泄露现象。阀杆不受介质横向冲击力, 所以填料不会因为阀杆受力而发生变形, 阀座采用螺纹结构废除常规阀座用弹簧和柔性石墨预压结构, 解决阀座卡死问题, 杜绝C型球阀两处泄漏点, 完全达到无内、外泄漏, 从而达到无污染、绿色运行环境。

C-type ball valve fully complies with the bi-directional zero leakage standard, and there will be no internal leakage phenomenon. The valve stem is not subject to the lateral impact force of the medium, so the packing will not be deformed because of the force of the valve stem. The valve seat adopts a threaded structure to abolish the conventional valve seat with spring and flexible graphite precompression structure, to solve the problem of the valve seat stuck, to eliminate the two leakage points of the C-type ball valve, and completely achieve no internal and external leakage, so as to achieve no pollution and green operating environment.

维修方便快捷Easy and fast maintenance

C型球阀主要四大件: 阀体、阀盖、半球体、阀杆做到互换, 如阀门长久使用出现易损部件修复以及更换, 无需专业人员以及专用工具, 按照阀门使用说明书便可完成阀门的维护, 以及每个零部件的更换, 从而缩短维修工期、降低材料成本。

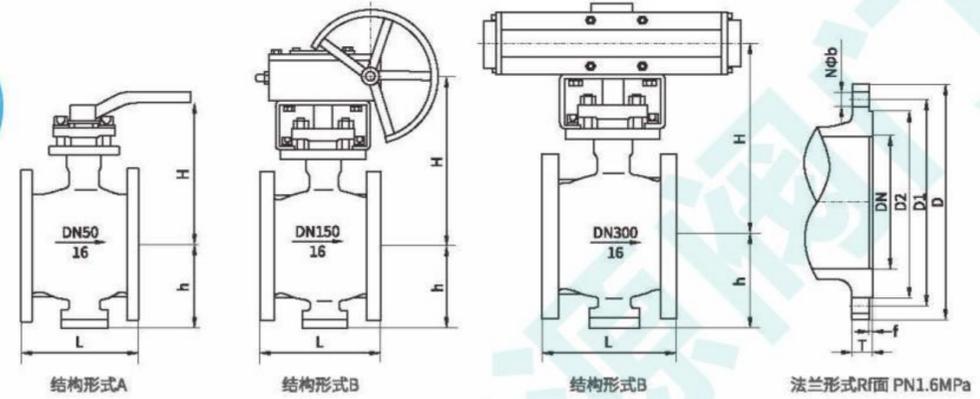
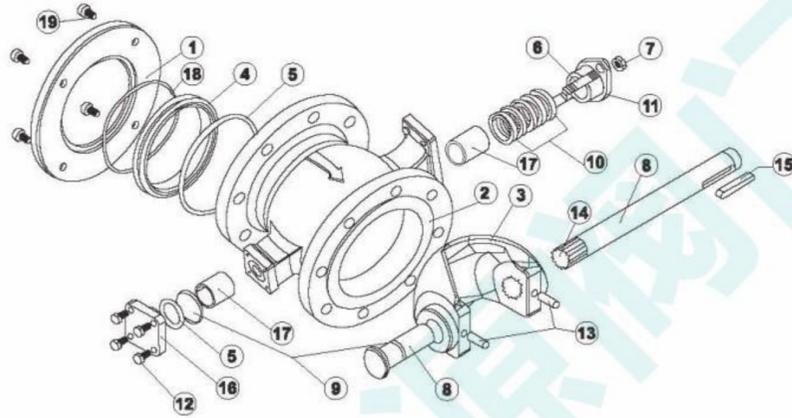
The four main parts of the C-type ball valve: valve body, valve cover, half ball, valve stem can be exchanged, such as the long-term use of the valve vulnerable parts repair and replacement, without professional personnel and special tools, according to the valve instruction manual can complete the maintenance of the valve, as well as the replacement of each part, thereby shortening the maintenance period and reducing material costs.

V型球阀

V-type ball valve

V型球阀

V-type ball valve



V型球阀功能

V型球阀，结构紧凑，体积小，等百分比调节V型球阀是我公司专业开发的硬密封、四氟密封新型调节球阀。它采用板簧加载的可动阀座结构，阀座与球体不会产生卡阻或脱离等问题，密封可靠，使用寿命长。V型球阀阀芯设计成带有特殊开关的V型缺口，流通能力大，压力损失小，并具有精确的截流特性和控制功能，流量特性为近似等百分比。启闭件采用V型球缺结构，完全解决了阀腔易沉积介质的问题。

序号no.	名称及规格name	材料
1	密封座盖	PPL RPTFE PTFE A105+硬质合金 F304+硬质合金 F316+硬质合金等特种金属材料
2	阀体	WCB CF8 CF8M CF3 CF3M 2205 2507
3	阀芯	软密封: 304 316 316L 304L 2205 2507 4A 5A 6A等特种金属材料 硬密封: 喷焊硬质合金: A105 F304 F316 316L 304L F51 F53
4	密封座	PPL PTFE RPTFE 20Cr13 A105 F304 F316 F316L F304L F51 F53
5	O形圈	NBR VITONB FKM
6	双头螺钉	A2-70 A4-80
7	六角螺母	Ss304
8	阀杆	20Cr13 17-4PH F304 F316 F304L F316L F51 F53等特种金属材料
9	调整垫	PTFE
10	填料	PTFE RPTFE 柔性石墨 低泄漏填料
11	填料压盖	WCB CF8 CF8M CF3 CF3M 2205 2507
12	六角螺钉	A2-70 A4-80
13	圆柱销	Ss304 Ss316
14	花键	17-4PH Ss316
15	平键	Ss304 45#
16	后压盖	Cf8 CF8M
17	自润滑轴承	复合材料 Composite material
18	密封座弹簧	Ss316
19	内六角螺钉	Ss304

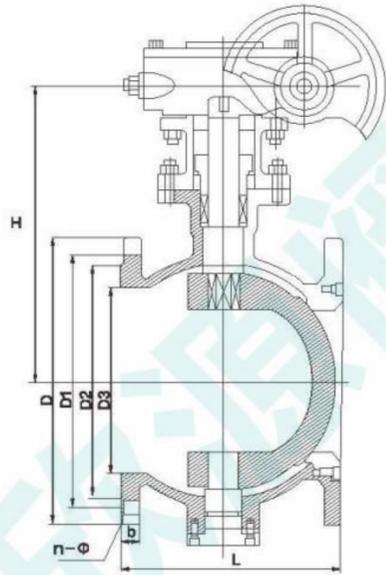
公称压力 PN(MPa)	公称口径 DN(mm)	L	H	h	D	D1	D2	b	f	N-Φ
1.6MPa	25	102	170	120	115	85	68	18	2	4-Φ14
	32	102	170	120	140	100	78	18	2	4-Φ18
	40	114	200	150	150	110	88	18	2	4-Φ18
	50	124	200	155	165	125	102	18	2	4-Φ18
	65	145	200	165	185	145	122	18	2	8-Φ18
	80	165	230	190	200	160	138	20	2	8-Φ18
	100	194	250	200	220	180	158	20	2	8-Φ18
	125	213	240	265	250	210	188	22	2	8-Φ18
	150	229	240	280	285	240	212	22	2	8-Φ22
	200	243	240	325	340	295	268	24	2	12-Φ22
	250	297	280	385	405	355	320	26	2	12-Φ26
	300	338	350	430	460	410	378	28	2	12-Φ26
2.5MPa	350	410	350	480	520	470	438	30	2	16-Φ26
	400	445	400	520	580	525	490	32	2	16-Φ30
	25	102	170	120	115	85	68	18	2	4-Φ14
	32	102	170	120	140	100	78	18	2	4-Φ18
	40	114	200	150	150	110	88	18	2	4-Φ18
	50	124	200	155	165	125	102	20	2	4-Φ18
	65	145	200	165	185	145	122	22	2	8-Φ18
	80	165	230	190	200	160	138	24	2	8-Φ18
	100	194	250	200	235	190	158	24	2	8-Φ22
	125	213	240	265	270	220	188	26	2	8-Φ26
	150	229	240	280	300	250	212	28	2	8-Φ26
	200	243	240	325	360	310	274	30	2	12-Φ26
250	297	280	385	425	370	330	32	2	12-Φ30	
300	338	350	430	485	430	389	34	2	16-Φ30	
350	410	350	480	555	490	448	38	2	16-Φ33	
400	445	400	520	620	550	503	40	2	16-Φ36	

侧装式偏心半球阀

Side mounted eccentric half ball valve

侧装式偏心半球阀

Side mounted eccentric half ball valve



结构特点及用途 Structural characteristics and uses

适用于石油、化工、冶金、电力、轻纺、造纸、水利等各部门中低压管路系统，污水处理、蒸汽、空气、煤气、沙浆、矿浆等弱污流体介质的输送和截流、节流等。

Suitable for petroleum, chemical industry, metallurgy, electric power, textile, paper making, water conservancy and other departments in the low pressure pipeline system, sewage treatment, steam, air, gas, sand pulp and other weak dirty fluid media transmission and closure, throttling.

其结构采用双偏心原理，使阀门越关越紧，从而达到零泄漏。双偏心结构在开启时阀芯位于球腔内，流通截面大，且球面不被冲刷，开启时阀芯球面沿阀座瞬间脱开，阀座与球面无摩擦，延长使用寿命。

Its structure adopts the double eccentric principle to make the valve tighter and tighter, so as to achieve zero leakage. Double eccentric structure in the opening of the spool is located in the ball room, the flow section is large, and the spherical surface is not washed, opening the spool spherical surface along the seat instantaneously off, the seat and the spherical surface without friction, prolong the service life.

标准规范 Standard specification

设计标准 Design criteria	GB/T26146
结构长度标准 Structural length standard	GB/T12221
法兰连接标准 Flange connection standard	HG20592 / JB/T79.1
检验与试验标准 Inspection and testing standards	GB/T13927

主要零部件材料 Main parts material

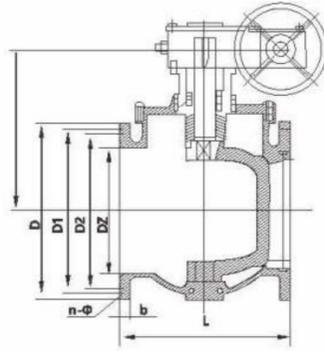
阀体、阀盖 Valve body, valve cover	WCB, CF8, CF8M
球 ball	WCB堆焊D507、304喷涂、316喷涂
阀座 Valve seat	A105+D507Mo、304+STL、316+STL
阀杆 Valve stem	2Cr13、304、316
填料 filler	柔性石墨

公称压力 PN	公称通径 DN	L	D	D1	D2	B	N-φ	H
1.6 MPA	50	125/178	165	125	100	18	4-18	200
	65	145/190	185	145	120	18	8-18	215
	80	165/203	200	160	135	20	8-18	235
	100	194/229	220	180	155	20	8-18	250
	125	213/254	250	210	185	22	8-18	280
	150	229/267	285	240	210	22	8-22	300
	200	243/292	340	295	265	24	12-22	370
	250	330	405	355	320	26	12-26	420
	300	356	460	410	375	28	12-26	450
	350	381	520	470	429	30	16-26	500
	400	430/530	580	525	485	32	16-30	570
	500	550/630	715	650	608	44	20-33	640
	600	680	840	770	718	54	20-36	720
	700	750	910	840	788	42	24-36	800
800	910	1025	950	898	42	24-39	925	
1000	1220	1255	1170	1110	46	28-42	1155	

公称压力 PN	公称通径 DN	L	D	D1	D2	B	N-φ	H
2.5 MPA	50	125/178	165	125	100	20	4-18	200
	65	145/190	185	145	120	22	8-18	215
	80	165/203	200	160	135	24	8-18	235
	100	194/229	235	190	155	24	8-22	250
	125	213/254	270	220	185	26	8-26	280
	150	229/267	300	250	210	28	8-26	300
	200	243/292	360	310	278	30	12-26	370
	250	330	425	370	332	32	12-30	420
	300	356	485	430	390	34	16-30	450
	400	430/530	620	550	505	40	16-36	570
	500	550/630	730	660	610	48	20-36	640
	600	680	845	770	718	58	20-39	720
	700	750	960	875	815	50	24-42	800
	800	910	1085	990	930	54	24-48	925
1000	1220	1320	1210	1140	62	28-55	1155	

上装偏心半球阀

Upload eccentric semi-ball valves



用途

适用于石油、化工、冶金、电力、轻纺、造纸、水利等各部门中低压管路系统,污水处理、蒸汽、空气、煤气、砂浆、矿浆等弱污浊流体介质的输送和截流,节流等。

产品特点

其结构采用双偏心原理,使阀门越关越紧,从而达到零泄露。双偏心结构在开启时阀芯位于球体内,流通截面大,且球面不被冲刷,开启时阀芯球面沿阀座瞬间脱离,阀座与球面无摩擦,延长使用寿命。检修时只需打开阀盖即可维修密封环及其它配件,不必将整个阀门从管线上拆下来,这给地下和高空等特殊管线,维修阀门时带来很大的方便。

主要零部件材料Main parts material

阀体、阀盖Valve body, valve cover	WCB, CF8, CF8M
球ball	WCB堆焊D507、304喷涂、316喷涂
阀座Valve seat	A105+STL、304+STL、316+STL
阀杆Valve stem	2Cr13、304、316
填料filler	柔性石墨

标准规范Standard specification

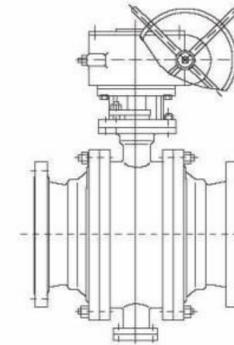
设计标准Design criteria	GB/26146
结构长度标准Structural length standard	GB/T12221
法兰连接标准Flange connection standard	JB/T79.1
检验与试验标准Inspection and testing standards	GB/T13927

公称压力 PN	公称通径 DN	L	D	D1	D2	B	N-φ	H
1.6 MPa	150	267	285	240	210	22	8-22	440
	200	292	340	295	265	24	12-22	470
	250	330	405	355	320	26	12-26	540
	300	400	460	410	375	28	12-26	580
	400	530	580	525	485	32	16-30	710
	450	580	715	650	608	44	20-33	820
	600	680	840	770	718	54	20-36	940
	700	900	910	840	788	42	24-36	1040
	800	1000	1025	950	898	42	24-39	1180
	900	1100	1255	1170	1110	46	28-42	1420
1200	1300	1485	1390	1325	52	32-48	1530	

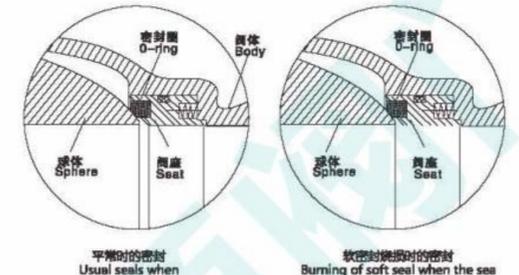
公称压力 PN	公称通径 DN	L	D	D1	D2	B	N-φ	H
2.5 MPa	150	267	300	250	218	28	8-26	440
	200	292	360	310	278	30	12-26	470
	250	330	425	370	332	32	12-30	540
	300	400	485	430	390	34	16-30	580
	400	530	620	550	505	40	16-36	710
	500	630	730	660	610	48	20-36	820
	600	800	845	770	718	58	20-39	940
	700	900	960	875	815	50	24-42	1040
	800	1000	1085	990	930	54	24-48	1180
	1000	1200	1320	1210	1140	62	28-55	1420
1200	1350	1530	1420	1350	70	32-55	1530	

固定式球阀

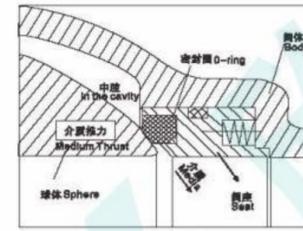
Fixed ball valves



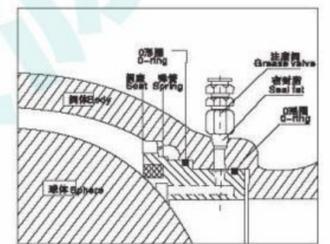
图一 Figure 1



图二 Figure 2



图三 Figure 3



图四 Figure 4

结构特点及用途

Structural characteristics and uses

1、操作省力:球体由上下轴承支撑,减少摩擦,消除了由于进口压力推动球体与密封座形成的巨大密封负荷而造成过大的扭矩。

2、密封性能可靠(见图1):PTFE 弹性材料密封圈嵌于不锈钢阀座内,金属阀座尾端设有弹簧,保证密封圈足够的预紧力,阀门在使用过程中密封面摩擦损坏时,在弹簧作用下阀门继续保证良好密封性能。

3、防火结构(见图2):为防止由于骤热或火灾的出现,使聚四氟乙烯密封圈烧毁,发生较大泄漏,而助长火势,在球体与阀座间设置防火密封环,在密封圈烧毁时,在弹簧力作用下,将阀座密封环迅速推向球体上,形成金属与金属密封,起到一定程度的密封效果。耐火试验符合 API 6FA和 API 607标准要求。

4、自动泄压功能(见图3):当阀门中腔停滞的介质压力异常升高超过弹簧的预紧力时,阀座后脱离球体,达到自动泄压的效果,卸压后阀座自动复位。

1、Operation: ball bearings supported by the up and down, to reduce friction, eliminate the pressure as imports to promote the formation of the sphere and the great seal sealed seat load caused by excessive torque.

2、Sealing performance and reliable (see Figure 1): PTFE elastic material embedded in stainless steel valve seat ring, the metal spring seat no end, to ensure adequate preload ring, valve sealing surface in the course of friction loss When the valve under the action of the spring to ensure good sealing performance.

3、Fire structure (see Figure 2): in order to prevent the sudden appearance of heat or fire to burn PTFE seals, large leak occurred, and contribute to the fire, the fire ball and set the seal ring between the valve seat, in the ring when burned, under the action of the spring force will quickly push the ball valve seat seal ring, the formation of metal to metal seal, play a certain degree of sealing effect. The fireproof experiment conforms to API 6FA and the API 607 standard requests.

4、Automatic pressure relief function (see Figure 3): When the valve is in a stagnant medium pressure in the cavity increased over the spring preload, the seat back from the ball, to the effect of automatic pressure relief, pressure relief valve seat after automatically reset.

标准与规范Standards and norms

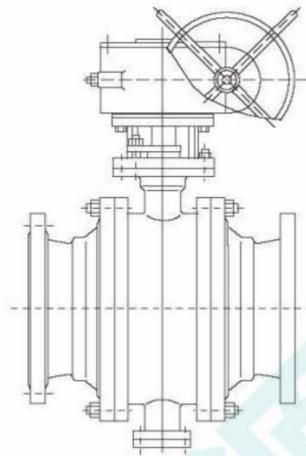
设计与制造 Design and Manufacture	结构长度 Structure Length	压力-温度等级 Pressure - temperature rating	连接法兰 Connection flange	试验与检验 Test and Inspection
GB/T12237	GB/T 12221	GB/T 12224	HG/T 20592	GB/T26480

固定式球阀

Fixed ball valves

固定式球阀

Fixed ball valves

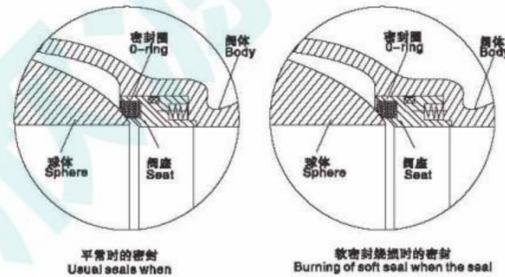


图一Figure 1

5、排泄管路：阀体上下均设置排泄孔，可检查阀座是否发生泄漏，在工作中，阀门处于全开或全关时，卸掉中腔压力，可直接更换填料；可以排放中腔滞留物，减少介质对阀门的污染。

5、Discharge tube: the upper and lower body were set to vent, to check whether the leak valve seat, at work, the valve is fully open or fully closed, the removal of the pressure in the cavity can directly replace the packing; to emissions cavity left in reducing pollution of medium on the valve.

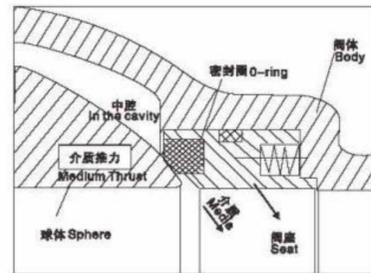
Auxiliary sealing set the system (customer needs when ordering please specify)



图二Figure 2

6、见图4:本阀门设计有辅助的阀座紧急密封系统，一旦密封受损或出现紧急情况而不能密封时，通过辅助密封系统向密封面注射相应的密封剂即可修复密封面，达到紧急密封。当输送的介质不洁或含有少量颗粒时，为保护密封面，确保达到可靠的密封，还可给这一装置注射相应的清洗剂或润滑剂对密封面进行清洗。

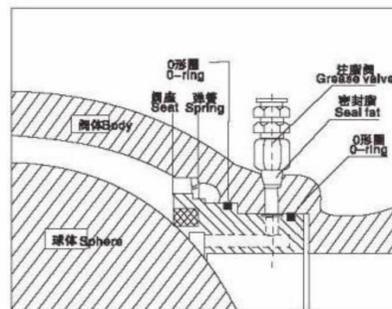
6、Figure 4: The auxiliary valve seat designed for emergency sealing system, once the seal damage or emergency situations cannot be sealed, through the auxiliary sealing system corresponding to the sealing surface sealant injection sealing surface can be repaired, to an emergency seal. When the transport medium or containing a small amount of contaminated particles, in order to protect the sealing surface and ensure that a reliable seal, the device can also be injected to the appropriate cleaning agents or lubricants on the sealing surface cleaning.



图三Figure 3

7、广泛适用于食品、医药、石油、化工、天然气、钢铁、环保、造纸等输送管路介质的切断或流通。还可给这一装置注射相应的清洗剂或润滑剂对密封面进行清洗。

7、Widely used in food, medicine, petroleum, chemical, natural gas, steel, environmental protection, paper and other media to cut off pipeline transportation or circulation. The device can also be injected to the appropriate cleaning agents or lubricants on the sealing surface cleaning.



图四Figure 4

主要零件材料Main components material

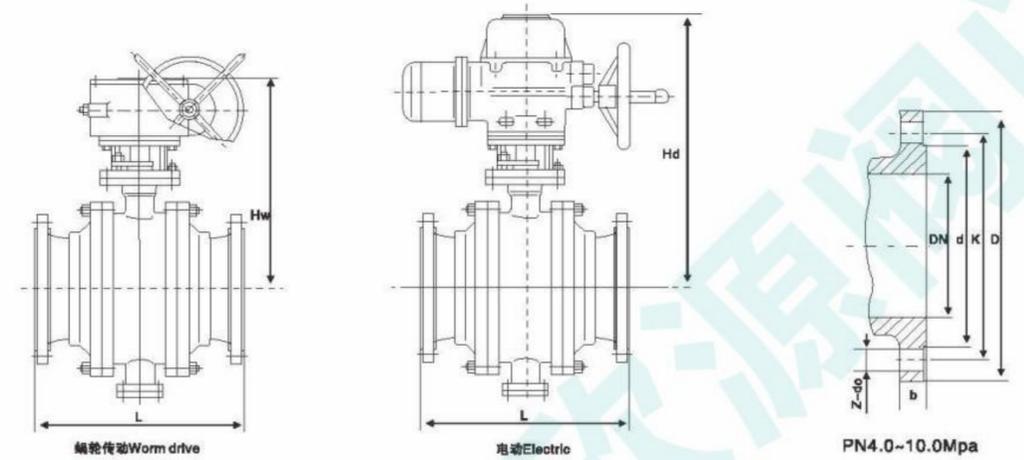
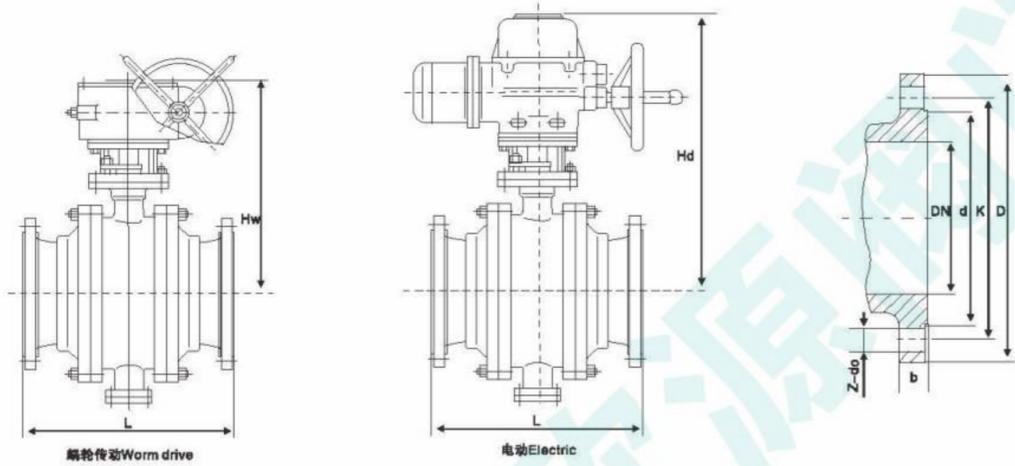
阀体 阀盖 Body bonnet	GB	2205	2507	GB/T12230 CF8	GB/T12230 CF8M
	ASTM	A995 4A	A995 5A	A351 Cf8	A351 CF8M
球体 Ball	GB	S31803/表面特殊处理 Special surface treatment	S32750/表面特殊处理 Special surface treatment	S30408/表面特殊处理 Special surface treatment	S31608/表面特殊处理 Special surface treatment
	ASTM	F51+HF	F53+HF	F304+HF	F316+HF
阀杆、固定轴 Stem, fixed axis	GB	S31803	S32750	06Cr19Ni10	06Cr17Ni12Mo2
	ASTM	F51	F53	F304	F316
阀座 Seat	GB	F51	F53	F304	F316
	ASTM	F51	F53	F304	F316
填料 Packing	GB	柔性石墨 Flexible Graphite	柔性石墨 Flexible Graphite	柔性石墨 Flexible Graphite	柔性石墨 Flexible Graphite
	ASTM	柔性石墨 Flexible Graphite	柔性石墨 Flexible Graphite	柔性石墨 Flexible Graphite	柔性石墨 Flexible Graphite
螺栓 Bolt	GB	B8	B8	B8	B8
	ASTM	B8	B8	B8	B8
螺母 Nut	GB	8	8	8	8
	ASTM	8	8	8	8

固定式球阀

Fixed ball valves

固定式球阀

Fixed ball valves



主要连接尺寸 Main connection dimensions

公称压力 PN(MPa)	公称口径 DN(mm)	L	D	K	d	z-dO	b	Ws	Hs	Hw	Hd
1.6 MPa	50	203	165	125	102	4-18	18	-	-	-	-
	65	222	185	145	122	8-18	18	-	-	-	-
	80	241	200	160	138	8-18	20	-	-	-	-
	100	305	220	180	158	8-18	20	-	-	-	-
	125	356	250	210	188	8-18	22	-	-	-	-
	150	394	285	240	212	8-22	22	1000	305	470	540
	200	457	340	295	268	12-22	24	-	-	520	580
	250	533	405	355	320	12-26	26	-	-	610	640
	300	610	460	410	378	12-26	28	-	-	650	690
	350	686	520	470	428	16-26	30	-	-	740	785
	400	762	580	525	490	16-30	32	-	-	795	830
	450	864	640	585	550	20-30	40	-	-	860	910
2.5 MPa	500	914	715	650	610	20-33	44	-	-	945	990
	600	1067	840	770	725	20-36	54	-	-	1040	1090
	50	203	165	125	102	4-18	20	-	-	-	-
	65	241	185	145	122	8-18	22	-	-	-	-
	80	283	200	160	138	8-18	24	-	-	-	-
	100	305	235	190	162	8-22	24	-	-	-	-
	125	381	270	220	188	8-26	26	-	-	-	-
	150	403	300	250	218	8-26	28	1000	305	470	540
	200	502	360	310	278	12-26	30	-	-	520	580
	250	568	425	370	335	12-30	32	-	-	610	640
	300	648	485	430	395	16-30	34	-	-	650	690
	350	762	555	490	450	16-33	38	-	-	740	785
400	838	620	550	505	16-36	40	-	-	795	830	
450	914	670	600	555	20-36	46	-	-	860	910	
500	991	730	660	615	20-36	48	-	-	945	990	
600	1143	845	770	720	20-39	58	-	-	1040	1090	

主要连接尺寸 Main connection dimensions

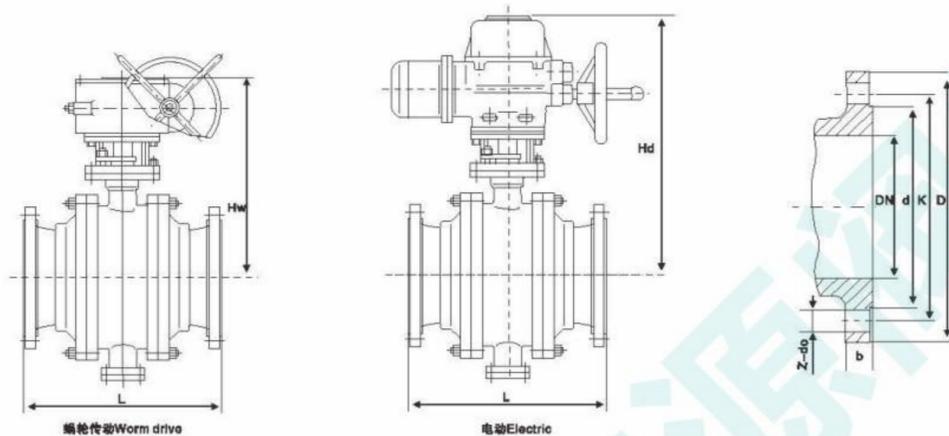
公称压力 PN(MPa)	公称口径 DN(mm)	L	D	K	d	Y	z-dO	b	Ws	Hs	Hw	Hd
4.0 MPa	50	216	165	125	102	88	4-18	20	-	-	-	-
	65	241	185	145	122	110	8-18	22	-	-	-	-
	80	283	200	160	138	121	8-18	24	-	-	-	-
	100	305	235	190	162	150	8-22	24	-	-	-	-
	125	381	270	220	188	176	8-26	26	-	-	-	-
	150	403	300	250	218	204	8-26	28	1200	360	485	590
	200	502	375	320	285	260	12-30	34	-	-	580	640
	250	568	450	385	345	313	12-33	38	-	-	665	680
	300	648	515	450	410	364	16-33	42	-	-	760	810
	350	762	580	510	465	422	16-36	46	-	-	820	890
	400	838	660	585	535	474	16-39	50	-	-	860	940
	450	914	685	610	560	524	20-39	57	-	-	930	1010
6.3 MPa	500	991	755	670	612	576	20-42	57	-	-	980	1130
	600	1143	890	795	735	676	20-48	72	-	-	1040	1090
	50	292	180	135	102	88	4-22	26	-	-	-	-
	65	330	205	160	122	110	8-22	26	-	-	-	-
	80	356	215	170	138	121	8-22	28	-	-	-	-
	100	432	250	200	162	150	8-26	30	-	-	-	-
	125	508	295	240	188	176	8-30	34	-	-	-	-
	150	559	345	280	218	204	8-33	36	1200	360	485	590
	200	660	415	345	285	260	12-36	42	-	-	580	650
	250	787	470	400	345	313	12-36	46	-	-	665	720
	300	838	530	460	410	364	16-36	52	-	-	760	840
	10.0 MPa	350	889	600	525	465	422	16-39	56	-	-	820
400		991	670	585	535	474	16-42	60	-	-	870	990
50		292	195	145	102	88	4-26	30	500	180	-	-
65		330	220	170	122	110	8-26	34	800	200	-	-
80		356	230	180	138	121	8-26	36	1000	240	310	410
100		432	265	210	162	150	8-30	40	1200	270	340	450
125		508	315	250	188	176	8-33	40	-	-	360	505
150		559	355	290	218	204	12-33	44	-	-	425	560
200		660	430	360	285	260	12-36	52	-	-	530	630
250		787	505	430	345	313	12-39	60	-	-	570	720
300		838	585	500	410	364	16-42	68	-	-	680	780

固定式球阀

Fixed ball valves

锻钢球阀

Forged steel ball valves



主要连接尺寸 Main connection dimensions

公称压力 PN(MPa)	公称通径 DN(mm)	L	D	K	d	b	z-dO	Ws	Hs	Hw	Hd
Class 150	2"	178	152	120.6	91.9	16	4-19	260	155	-	-
	2 1/2"	190	178	139.7	104.6	18	4-19	350	185	-	-
	3"	203	190	152.4	127.0	19.5	4-19	500	205	-	-
	4"	229	229	190.5	157.2	24.3	8-19	650	255	390	500
	5"	356	254	215.9	185.7	24.3	8-22	800	285	410	520
	6"	394	279	241.3	215.9	25.9	8-22	1000	305	470	540
	8"	457	343	298.4	269.7	29	8-22	-	-	520	580
	10"	533	406	362.0	323.8	30.6	12-25	-	-	610	640
	12"	610	484	431.8	381.0	32.2	12-25	-	-	650	690
	14"	686	533	476.2	412.8	35.4	12-29	-	-	740	785
	16"	762	597	539.8	469.9	37	16-29	-	-	795	830
	18"	864	635	577.8	533.4	40.1	16-32	-	-	860	910
20"	914	693	635.0	584.2	43.3	20-32	-	-	945	990	
24"	1067	813	749.3	692.2	48.1	20-35	-	-	1040	1090	
Class 300	2"	216	165	127.0	91.9	23	8-19	260	155	-	-
	2 1/2"	241	190	149.4	104.6	26	8-22	350	185	-	-
	3"	283	210	168.1	127.0	29	8-22	500	205	-	-
	4"	305	254	200.2	157.2	32.2	8-22	800	270	410	530
	5"	381	279	235.0	185.7	35.4	8-22	1000	305	470	560
	6"	403	318	269.7	215.9	37	12-22	1200	340	485	590
	8"	502	381	330.2	269.7	41.7	12-25	-	-	5809	640
	10"	568	444	387.4	323.8	48.1	16-29	-	-	665	680
	12"	648	521	450.8	381.0	51.3	16-32	-	-	760	810
	14"	762	584	514.4	412.8	54.5	20-32	-	-	820	890
	16"	838	648	571.5	469.9	57.6	20-35	-	-	860	940
	18"	914	711	628.6	533.4	60.8	24-35	-	-	930	1010
20"	991	775	685.8	584.2	64	24-35	-	-	980	1130	
Class 600	2"	292	165	127.0	91.9	27.4	8-19	350	175	-	-
	2 1/2"	330	190	149.4	104.6	30.6	8-22	500	200	-	-
	3"	356	210	168.1	127.0	33.8	8-22	650	235	-	-
	4"	432	273	215.9	157.2	40.1	8-25	1000	275	395	550
	5"	508	330	266.7	185.7	46.5	8-29	1200	325	430	580
	6"	559	356	292.1	215.9	49.7	12-29	-	-	495	620
	8"	660	419	349.2	269.7	57.6	12-32	-	-	595	680
	10"	787	508	431.8	323.8	65.5	16-35	-	-	680	740
	12"	838	559	489.0	381.0	68.7	20-35	-	-	790	850

执行标准 Implementation of standards

- 1、设计和制造 Design and manufacture: GB/T 12237 ; API 608
- 2、检验和试验 Inspection and test: GB/T 26480; API 598
- 3、法兰连接 Flange connection: HG/T20592; ASME/ANSI B 16.5
- 4、结构长度 Structure length: GB/T 12221; GB/T 15188.1; ASME/ANSI B 16.10

结构特点及用途 Unique feature and use

- 1、抗硫化应力裂化：阀门接触介质的材料都是按美国腐蚀工程师协会 NACE0 1-75 的标准进行选择，且按标准进行表面镀镍，能满足硫化环境工况的要求。
- 2、用聚合物或金属作密封材料，在高温、高压工况具有优良的密封性能。
- 3、设置填料箱，防止阀门内腔压力异常升高而使阀杆飞出，增强倒密封结构，能确保填料可靠密封。
- 4、广泛适用于化工、炼油、油气、天然气、钢铁等介质管路。

- 1、Anti-curing stress cracking: The valve contact medium's material is corrodes Engineer according to the US the association NACE0 1-75 standards to carry on the choice, and carries on the superficial nickel plating according to the standard, can satisfy the curing environment operating mode the request.
- 2、Make the packing material with the polymer or the metal, in the high temperature, the high-pressured operating mode has the fine sealing property.
- 3、The establishment stuffing box, prevents the valve cavity pressure anomaly to elevate causes the valve lever to depart, increases ets seals the structure but actually, can guarantee that the padding seals reliably.
- 4、Widely is suitable for medium pipelines and so on chemical industry, refinery, oil gas, natural gas, steel and iron.

性能规范 Performance Specifications

试验压力 Test pressure

单位 Unit: Mpa

公称压力 PN	常温最大工作压力 Max temperature Working pressure	壳体试验压力 Case Test pressure	气密封试验压力 Gas Sealstest pressure	高压密封试验压力 High-pressure sealing test pressure
1.6	1.6	2.4	0.6	1.76
2.5	2.5	3.8	0.6	2.75
4.0	4.0	6.0	0.6	4.4
6.4	6.4	9.6	0.6	7.1
10.0	10.0	15.0	0.6	11.0
16.0	16.0	24.0	0.6	17.6
20.0	20.0	30.0	0.6	22.0
25.0	25.0	37.5	0.6	27.5
Class 150	2.0	3.0	0.6	2.2
Class 300	5.0	7.5	0.6	5.5
Class 600	10.0	15.0	0.6	11.0
Class 900	15.0	22.5	0.6	16.5
Class 1500	25.0	37.5	0.6	27.5

锻钢球阀

Forged steel ball valves

锻钢球阀

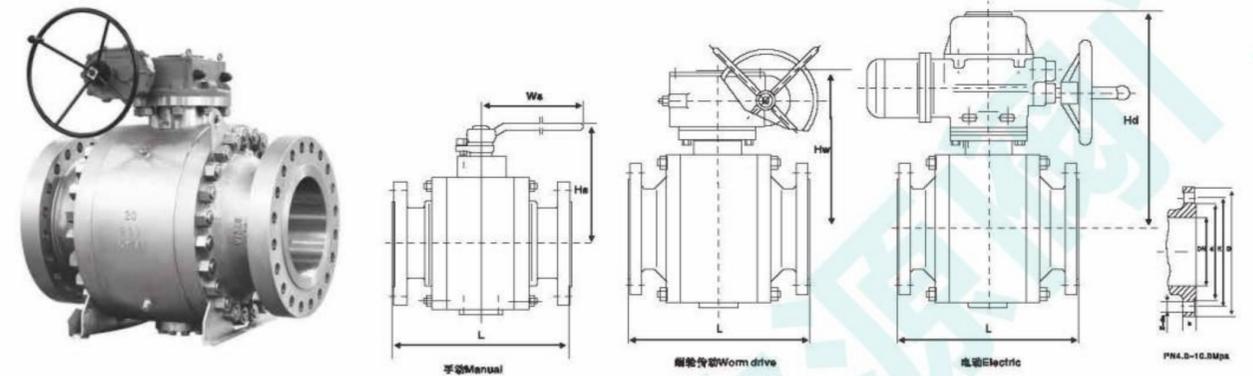
Forged steel ball valves

使用范围 Terms of Use

壳体材料 Shell material	阀座材料 Seat Material	适用温度 Applicable temperature	适用介质 Applicable medium
奥氏体不锈钢 Austenitic stainless steel	PTFE PTFE	≤125°C	Acid, alkali, salt, etc
	Ni60/STL	≤300°C	
双相钢 Duplex steel	PTFE PTFE	≤125°C	Acid, alkali, salt, etc
	Ni60/STL	≤300°C	
镍基合金 Nickel-based alloy	PTFE PTFE	≤125°C	Acid, alkali, salt, etc
	Ni60/STL	≤400°C	
钛合金 Titanium alloy	Ni60/STL	≤300°C	Acid, alkali, salt, etc

主要零件材料 Main components material

零件名称 Part Name	标准 Standard	材料 Material	材料 Material	材料 Material	材料 Material
阀体、阀盖、填料箱 Body, bonnet, Packing Box	GB	2205	2507	06Cr17Ni12Mo2	310S
	ASTM	F51	F53	316	F310H
球体 Ball	GB	S31803/表面特殊处理 Special surface treatment	S32750/表面特殊处理 Special surface treatment	0Cr18Ni12Mo2T/表面特殊处理 Special surface treatment	F310H/表面特殊处理 Special surface treatment
	ASTM	F51	F53	F316HF	F310H
阀杆、固定轴 Stem, fixed axis	GB	F51	F53	0Cr18Ni12Mo2Ti	F310H
	ASTM	F51	F53	316	F310H
阀座 Seat	GB	PTFE F51	PTFE F53	PTFE 06Cr17Ni12Mo2	F310H
	ASTM	PTFE F51	PTFE F53	PTFE 316	F310H
填料 Packing	GB	PTFE 柔性石墨 Flexible Graphite	PTFE 柔性石墨 Flexible Graphite	PTFE 柔性石墨 Flexible Graphite	柔性石墨 Flexible Graphite
	ASTM	PTFE 柔性石墨 Flexible Graphite	PTFE 柔性石墨 Flexible Graphite	PTFE 柔性石墨 Flexible Graphite	柔性石墨 Flexible Graphite
螺栓 Bolt	GB	8	8	8	8
	ASTM	A193 B8	A193-B8	A193-B8	A193 B8
螺母 Nut	GB	8	8	8	8
	ASTM	A194 8	A194-8	A194-8	A194-8



主要连接尺寸 Main connection dimensions

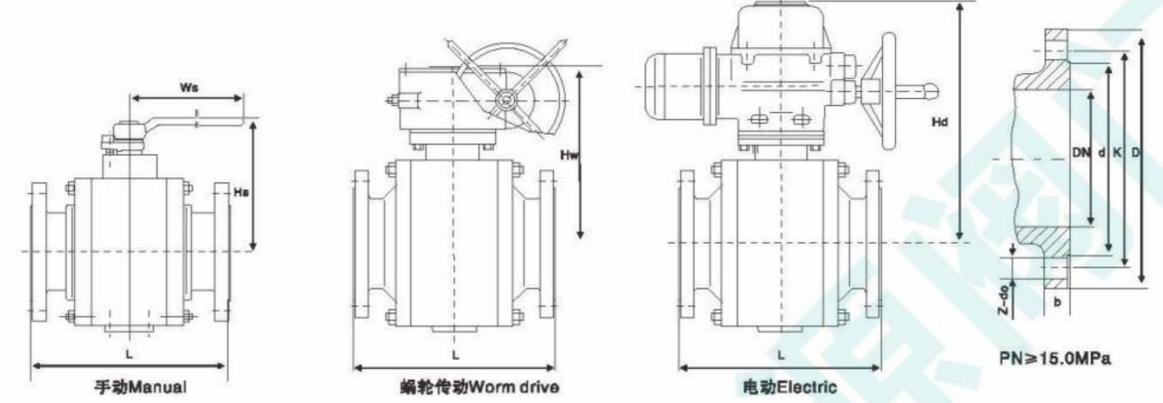
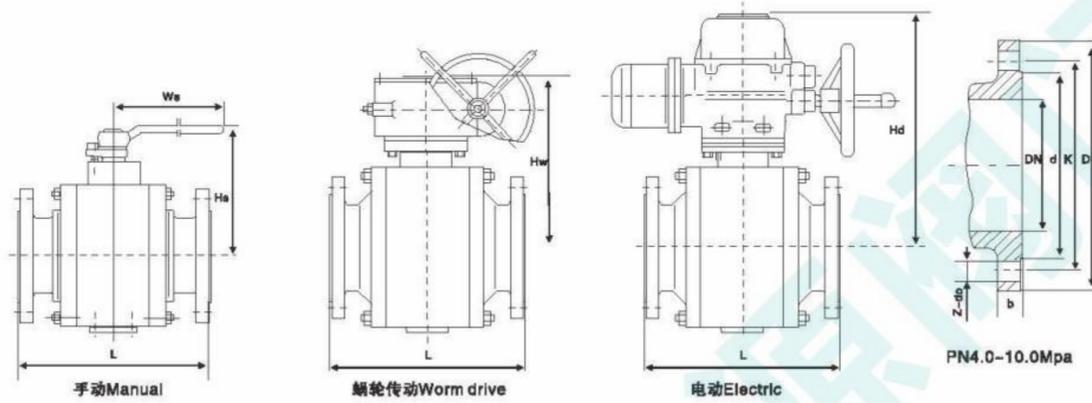
公称压力 PN(MPa)	公称直径 DN(mm)	L	D	K	d	b	z-dO	Ws	Hs	Hw	Hd
1.6 MPa	40	165	150	110	88	18	4-18	230	135	-	-
	50	203	165	125	102	18	4-18	260	150	-	-
	65	222	185	145	122	18	8-18	350	180	-	-
	80	241	200	160	138	20	8-18	500	195	-	-
	100	305	220	180	158	20	8-18	650	245	310	420
	125	356	250	210	188	22	8-18	800	270	330	440
	150	394	285	240	212	22	8-22	1000	295	390	470
	200	457	340	295	268	24	12-22	-	-	440	510
	250	533	405	355	320	26	12-26	-	-	490	560
	300	610	460	410	378	28	12-26	-	-	530	600
	350	686	520	470	428	30	16-26	-	-	620	670
	400	762	580	525	490	32	16-30	-	-	675	720
2.5 MPa	450	864	640	585	550	40	20-30	-	-	740	790
	500	914	715	650	610	44	20-33	-	-	825	870
	600	1067	840	770	725	54	20-36	-	-	920	960
	40	165	150	110	88	18	4-18	230	135	-	-
	50	203	165	125	102	20	4-18	260	150	-	-
	65	241	185	145	122	22	8-18	350	180	-	-
	80	283	200	160	138	24	8-18	500	195	-	-
	100	305	235	190	162	24	8-22	650	245	310	420
	125	381	270	220	188	26	8-26	800	270	330	440
	150	403	300	250	216	28	8-26	1000	295	390	470
	200	502	360	310	278	30	12-26	-	-	440	510
	250	568	425	370	335	32	12-30	-	-	490	560
300	648	485	430	395	34	16-30	-	-	530	600	
350	762	555	490	450	38	16-33	-	-	620	670	
400	838	620	550	505	40	16-36	-	-	675	720	
450	914	670	600	555	46	20-36	-	-	740	790	
500	991	730	660	615	48	20-36	-	-	825	870	
600	1143	845	770	720	58	20-39	-	-	920	960	

锻钢球阀

Forged steel ball valves

锻钢球阀

Forged steel ball valves



主要连接尺寸Main connection dimensions

公称压力 PN(MPa)	公称直径 DN(mm)	L	D	K	d	Y	b	z-dO	Ws	Hs	Hw	Hd
4.0 MPa	40	190	150	110	88	76	18	4-18	230	135	-	-
	50	216	165	125	102	88	20	4-18	260	150	-	-
	65	241	185	145	122	110	22	8-18	350	180	-	-
	80	283	200	160	138	121	24	8-18	500	195	-	-
	100	305	235	190	162	150	24	8-22	800	250	320	430
	125	381	270	220	188	176	26	8-26	1000	280	340	450
	150	403	300	250	218	204	28	8-26	1200	300	405	480
	200	502	375	320	285	260	34	12-30	-	-	450	530
	250	568	450	385	345	313	38	12-33	-	-	505	590
	300	648	515	450	410	364	42	16-33	-	-	545	620
	350	762	580	510	465	422	46	16-36	-	-	640	690
6.3 MPa	40	241	170	125	88	76	28	4-22	260	140	-	-
	50	292	180	135	102	88	26	4-22	260	160	-	-
	65	330	205	160	122	110	26	8-22	350	180	-	-
	80	356	215	170	138	121	28	8-22	500	220	-	-
	100	406	250	200	162	150	30	8-26	800	250	320	430
	125	508	295	240	188	176	34	8-30	1000	295	340	450
	150	495	345	280	218	204	36	8-33	1200	340	405	480
	200	597	415	345	285	260	42	12-36	-	-	450	530
	250	673	470	400	345	313	46	12-36	-	-	505	590
	300	762	530	460	410	364	52	16-36	-	-	545	620
	350	826	600	525	465	422	56	16-39	-	-	640	690
400	902	670	585	535	474	60	16-42	-	-	690	740	
500	1054	800	705	615	576	66	20-54	-	-	760	810	

主要连接尺寸Main connection dimensions

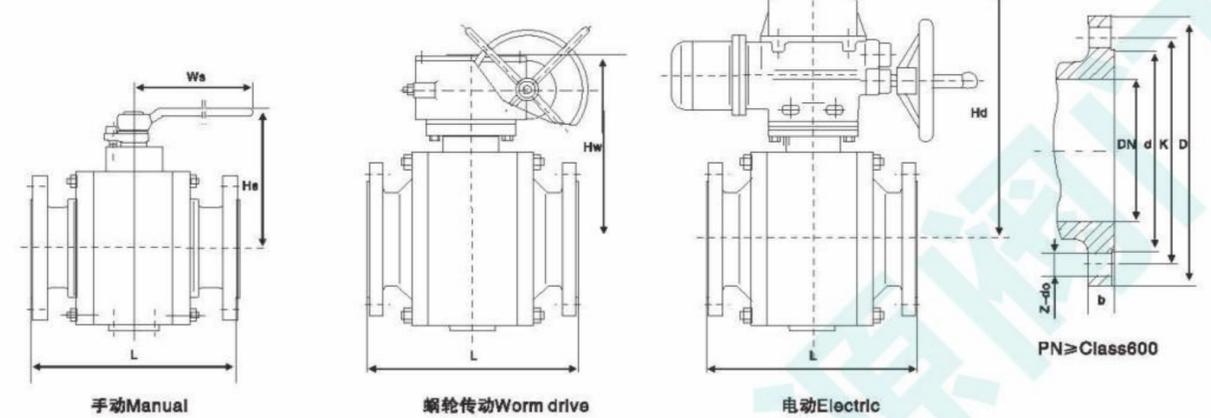
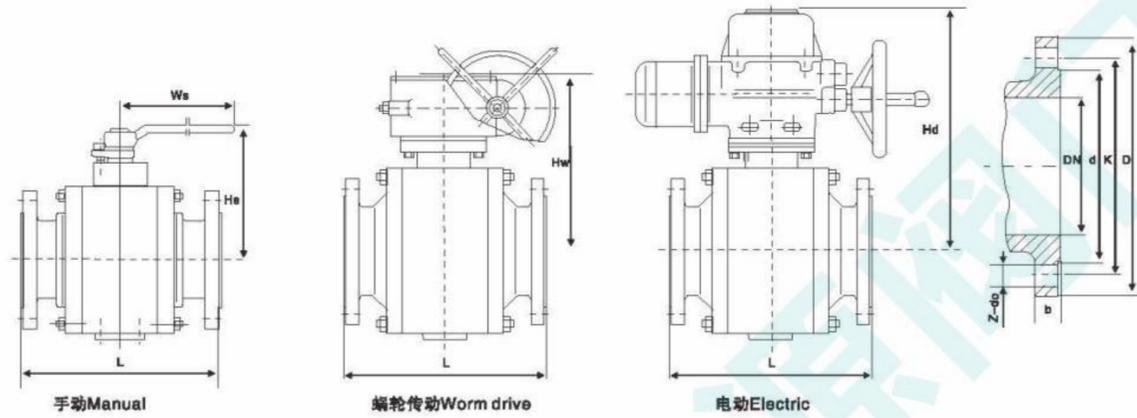
公称压力 PN(MPa)	公称直径 DN(mm)	L	D	K	d	Y	b	z-dO	Ws	Hs	Hw	Hd
10.0 MPa	40	241	170	125	88	76	28	4-22	260	160	-	-
	50	292	195	145	102	88	30	4-26	350	180	-	-
	65	330	220	170	122	110	34	8-26	500	200	-	-
	80	356	230	180	138	121	36	8-26	800	240	310	410
	100	432	265	210	162	150	40	8-30	1000	270	340	450
	125	508	315	250	188	176	40	8-33	1200	320	360	505
	150	559	355	290	218	204	44	12-33	-	-	425	555
	200	660	430	360	285	260	52	12-36	-	-	470	625
	250	787	505	430	345	313	60	12-39	-	-	525	645
	300	838	585	500	410	364	68	16-42	-	-	565	715
	350	889	655	560	465	422	74	16-48	-	-	670	770
400	991	715	620	535	474	78	16-48	-	-	720	840	
16.0 MPa	40	305	170	125	88	76	28	4-22	350	160	-	-
	50	368	195	145	102	88	30	4-26	500	180	-	-
	65	419	220	170	122	110	34	8-26	800	200	-	-
	80	381	230	180	138	121	36	8-26	1000	240	310	410
	100	457	265	210	162	150	40	8-30	1200	270	340	450
	125	559	315	250	188	175	44	8-33	-	-	360	505
	150	610	355	290	218	204	50	12-33	-	-	425	560
	200	737	430	360	285	260	60	12-36	-	-	530	630
	250	838	515	430	345	313	68	12-42	-	-	570	720
	300	965	585	500	410	364	78	16-42	-	-	680	780

锻钢球阀

Forged steel ball valves

锻钢球阀

Forged steel ball valves



主要连接尺寸 Main connection dimensions

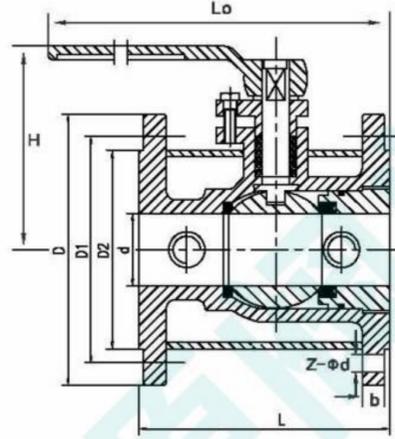
公称压力 PN(MPa)	公称直径 DN(mm)	L	D	K	d	b	z-dO	Ws	Hs	Hw	Hd
Class 150	1 1/2"	165	125	98.5	73	15	4-15	230	135	-	-
	2"	178	150	120.5	92	16	4-19	260	150	-	-
	2 1/2"	190	180	139.5	105	18	4-19	350	180	-	-
	3"	203	190	152.5	127	19.5	4-19	500	195	-	-
	4"	229	230	190.5	157	24.3	8-19	650	245	310	420
	5"	356	255	216	186	24.3	8-22	800	270	330	440
	6"	394	280	241.5	216	25.9	8-22	1000	295	390	470
	8"	457	345	298.5	270	29	8-22	-	-	440	510
	10"	533	405	362	324	30.6	12-25	-	-	490	560
	12"	610	485	432	381	32.2	12-25	-	-	530	600
	14"	686	535	476	413	35.4	12-29	-	-	620	670
	16"	762	595	540	470	37	16-29	-	-	675	720
	18"	864	635	578	533	40.1	16-32	-	-	740	790
	20"	914	700	635	584	43.3	20-32	-	-	825	870
Class 300	24"	1067	815	749.5	692	48.1	20-35	-	-	920	960
	1 1/2"	190	155	114.5	73	21	4-22	230	135	-	-
	2"	216	165	127	92	23	8-19	260	150	-	-
	2 1/2"	241	190	149	105	26	8-22	350	180	-	-
	3"	283	210	168.5	127	29	8-22	500	195	-	-
	4"	305	255	200	157	32.2	8-22	800	250	320	430
	5"	356	280	235	186	35.4	8-22	1000	280	340	450
	6"	403	320	270	216	37	12-22	1200	300	405	480
	8"	502	380	330	270	41.7	12-25	-	-	450	530
	10"	568	445	387.5	324	48.1	16-29	-	-	505	590
	12"	648	520	451	381	51.3	16-32	-	-	545	620
	14"	762	585	514.5	413	54.4	20-32	-	-	640	690
	16"	838	650	571.5	470	57.6	20-35	-	-	690	740
	18"	914	710	628.5	533	60.8	24-35	-	-	760	810
20"	991	775	686	584	64	24-35	-	-	850	900	

主要连接尺寸 Main connection dimensions

公称压力 PN(MPa)	公称直径 DN(mm)	L	D	K	d	b	z-dO	Ws	Hs	Hw	Hd	
Class 600	1 1/2"	241	155	114.5	90	23	4-22	260	160	-	-	
	2"	292	165	127	108	26	8-19	350	180	-	-	
	2 1/2"	330	190	149	127	29	8-22	500	200	-	-	
	3"	356	210	168	146	38.8	8-22	800	240	310	410	
	4"	432	275	216	175	45.1	8-25	1000	270	340	450	
	5"	508	330	266.5	210	48	8-29	1200	320	360	505	
	6"	559	355	292	241	54.7	12-29	-	-	425	555	
	8"	660	420	349	302	62.6	12-32	-	-	470	625	
	10"	787	510	432	356	70.5	16-35	-	-	525	645	
	12"	838	560	489	413	73.7	20-35	-	-	565	715	
	14"	889	605	527	457	76.9	20-38	-	-	670	770	
	16"	991	685	603	508	83.2	20-41	-	-	720	840	
	18"	1092	745	654	575	89.6	20-44	-	-	780	920	
	20"	1194	815	724	635	95.9	24-44	-	-	850	995	
Class 900	1 1/2"	305	180	123.8	73	32	4-29	350	160	-	-	
	2"	368	215	165.1	92	38.5	8-26	500	180	-	-	
	2 1/2"	419	245	190.5	105	41.5	8-29	800	200	-	-	
	3"	381	240	190.5	156	45.1	8-26	1000	240	310	410	
	4"	457	290	234.9	181	51.5	8-32	1200	270	340	450	
	5"	559	350	279.4	216	56	8-35	-	-	360	505	
	6"	610	380	317.5	241	62.5	12-32	-	-	425	560	
	8"	737	470	393.7	308	70.5	12-39	-	-	530	630	
	10"	838	545	469.9	362	76.9	16-39	-	-	570	720	
	12"	965	610	533.4	419	86.4	20-39	-	-	680	780	
	14"	1029	640	558.8	467	92.8	20-42	-	-	800	905	
	16"	1130	705	615.9	524	95.9	20-45	-	-	910	1010	
	Class 1500	1 1/2"	305	180	123.8	92	32	4-29	500	180	-	-
		2"	368	215	165.1	124	38.5	8-26	650	200	-	-
2 1/2"		419	245	190.5	137	41.5	8-29	800	220	-	-	
3"		470	265	203.2	168	48	8-32	1000	260	320	420	
4"		546	310	241.3	194	54	8-35	1200	290	360	470	
5"		673	375	292.1	229	73	8-42	-	-	380	530	
6"		705	395	317.5	248	83	12-39	-	-	440	580	
8"		832	485	393.7	318	92	12-45	-	-	550	650	

国标一体式球阀保温球阀

GB One-piece ball valve Insulated ball valve



整体式高温球阀结构和工作原理

Integral high temperature ball valve structure and working principle

本球阀具有二只密封圈，因此球体旋转任何一个方向都具有可靠的密封性，并可调节密封圈的位置达到所需目的。而本球阀以聚四氟乙烯—石墨为密封材料，所以密封性能好而稳定，维修方便，开启和关闭只需旋转手柄90度。

The ball valve has two sealing rings, because the ball rotates in any direction has a reliable sealing, and can adjust the position of the sealing ring to achieve the desired purpose. The ball valve with polytetrafluoroethylene - graphite as the sealing material, so the sealing performance is good and stable, easy maintenance, open and close only need to rotate the handle 90 degrees.

主要部件材料Main component material

零件名称 Part name	灰铸铁	铸钢	不锈钢	含钼不锈钢
阀体阀塞 Valve body plug	304	316	2205	2507
球体 sphere	304	316	2205	2507
阀杆 Valve stem	304	316	2205	2507
阀座 Valve seat	聚四氟乙烯—石墨+高弹性胶 (8202) 型			
填料 filler	Polytetrafluoroethylene graphite + high elastic adhesive (8202) type			

主要技术参数 Main technical parameters

型号 Model number	公称压力 (MPa) nominal stress	试验压力(MPa) Test pressure		工作温度℃ Operating temperature	适用介质 Applicable medium
		强度 intensity	密封 seal		
QJ41M-16	1.6	2.4	1.76	-10~250	水蒸气、油品、氨、酸、介质等
QJ41M-25	2.5	3.75	2.75		

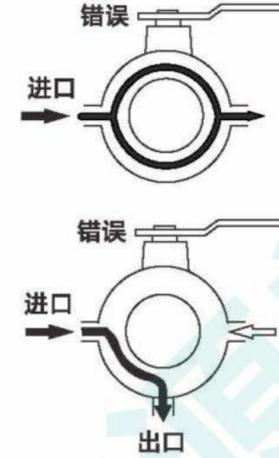
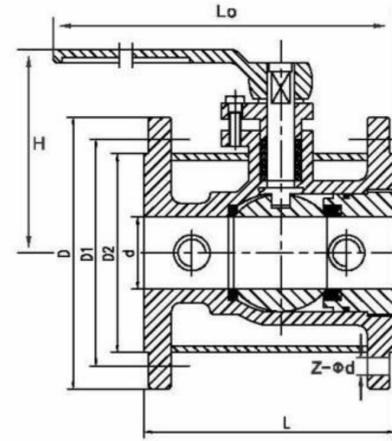
替代截止阀的整体式高温球阀主要连接尺寸

Replace the globe valve integral high temperature ball valve main connection size

型号 Model number	公称口径 DN(mm)	L	D	D1	D2	Z-φd	b	Lo	H
BQ41F-16 VUR	DN15	130	95	65	45	4-14	16	150	105
	DN20	150	105	75	58	4-14	18	150	110
	DN25	160	115	85	68	4-14	18	160	120
	DN32	180	140	100	78	4-18	18	180	140
	DN40	200	150	110	88	4-18	18	250	155
	DN50	230	165	125	102	4-18	18	300	175
	DN65	290	185	145	122	8-18	18	300	195
	DN80	310	200	160	138	8-18	20	320	225
	DN100	350	220	180	158	8-18	20	320	250
	DN125	400	250	210	188	8-18	22	360	270
BQ41F-25 VUR	DN150	480	285	240	212	8-22	22	360	290
	DN200	600	340	295	268	12-22	24	450	350
	DN15	130	95	65	45	4-14	16	150	105
	DN20	150	105	75	58	4-14	18	150	110
	DN25	160	115	85	68	4-14	18	160	120
	DN32	180	140	100	78	4-18	18	180	140
	DN40	200	150	110	88	4-18	18	250	155
	DN50	230	165	125	102	4-18	20	300	175
	DN65	290	185	145	122	8-18	22	300	195
	DN80	310	200	160	138	8-18	24	300	225
BQ41F-25 PRVU	DN100	350	235	190	158	8-22	24	320	250
	DN125	400	270	220	188	8-26	26	320	270
	DN150	480	300	250	218	8-26	28	360	290
	DN200	600	360	310	278	12-26	30	450	350

美标一体式球阀保温球阀

ASME One-piece ball valve Insulated ball valve



主要部件材料Main component material

零件名称 Part name	灰铸铁	铸钢	不锈钢	含钼不锈钢
阀体阀塞 Valve body plug	304	316	2205	2507
球体 sphere	304	316	2205	2507
阀杆 Valve stem	304	316	2205	2507
阀座 Valve seat	聚四氟乙烯—石墨+高弹性胶 (8202) 型			
填料 filler	Polytetrafluoroethylene graphite + high elastic adhesive (8202) type			

主要技术参数 Main technical parameters

型号 Model number	公称压力 (MPa) nominal stress	试验压力(MPa) Test pressure		工作温度℃ Operating temperature	适用介质 Applicable medium
		强度 intensity	密封 seal		
BQ41F-10	1.0	1.5	1.1	-10~250	水蒸气、油品、氨、酸、介质等
BQ41F-16	1.6	2.4	1.76		
BQ41F-25	2.5	3.75	2.75		

替代闸阀的整体式高温球阀主要连接尺寸

The integral high temperature ball valve replacing the gate valve is the main connection size

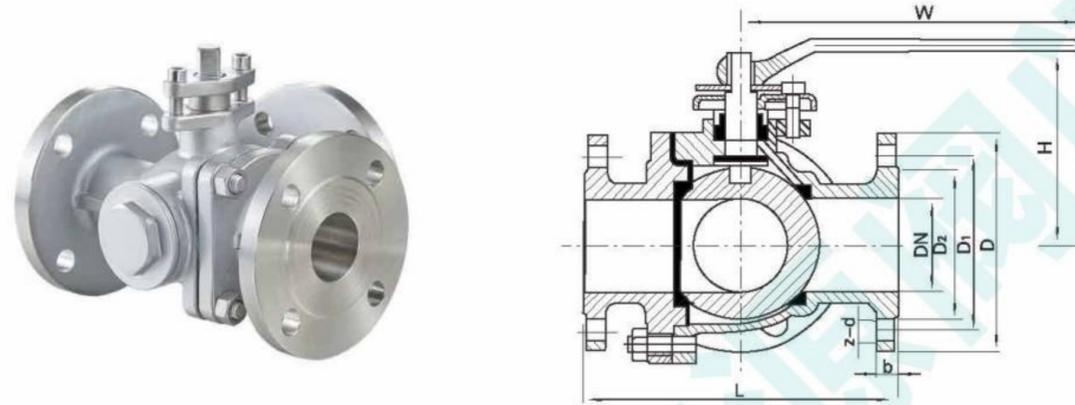
型号 Model number	公称口径 DN(mm)	L	D	D1	D2	Z-φd	b	Lo	H
BQ41F-10 PRVU	DN40	165	150	110	88	4-18	18	250	155
	DN50	180	165	125	102	4-18	18	300	175
	DN65	195	185	145	122	8-18	18	300	195
	DN80	210	200	160	138	8-18	20	320	225
	DN100	229	220	180	158	8-18	20	320	250
	DN125	255	250	210	188	8-18	22	360	270
BQ41F-16 PRVU	DN150	280	285	240	212	8-22	22	360	290
	DN200	330	340	295	268	8-22	24	450	320
	DN40	230	150	110	88	4-18	18	250	155
	DN50	250	165	125	102	4-18	18	300	175
	DN65	265	185	145	122	8-18	18	300	195
	DN80	280	200	160	138	8-18	20	320	225
BQ41F-25 PRVU	DN100	300	220	180	158	8-18	20	320	250
	DN125	325	250	210	188	8-18	22	360	270
	DN150	350	285	240	212	8-22	22	360	290
	DN200	400	340	295	268	12-22	24	450	320
	DN50	250	165	125	102	4-18	20	300	175
	DN65	265	185	145	122	8-18	22	300	195
BQ41F-25 PRVU	DN80	280	200	160	138	8-18	24	320	225
	DN100	300	235	190	162	8-22	24	320	250
	DN125	325	270	220	188	8-26	26	360	270
	DN150	350	300	250	218	8-26	28	360	290
	DN200	400	360	310	278	12-26	30	450	320

L型三通球阀

L-shaped three-way ball valve

T型三通球阀

T-shaped three-way ball valve

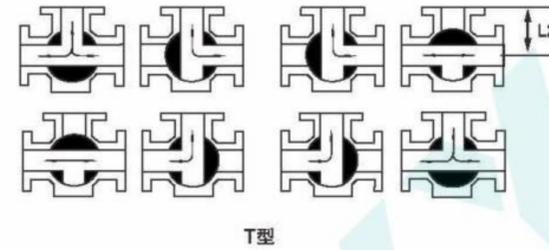
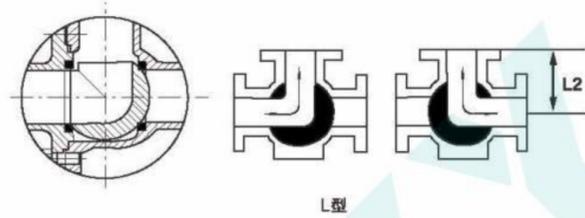


主要性能规范 Main Performance Specifications

型号 Model	适用介质 Applicable medium	工作温度 (°C) Working temperature	工作压力 P(MPa) Pressure of work (气体)	试验压力(Mpa) P5 Test pressure		公称压力 Mpa Nominal Pressure
				密封 Seal	强度 Strength	
Q44F-16C	油, 汽水 Oil and soda	≤150°C	1.6	1.76	2.4	1.6
Q44F-16P	醋类 Vinegar	≤150°C	1.6	1.76	2.4	1.6
Q44F-16R	硝酸类 Nitric acid class	≤150°C	1.6	1.76	2.4	1.6

主要性能规范 Main Performance Specifications

型号 Model	适用介质 Applicable medium	工作温度 (°C) Working temperature	工作压力 P(MPa) Pressure of work (气体)	试验压力(Mpa) P5 Test pressure		公称压力 Mpa Nominal Pressure
				密封 Seal	强度 Strength	
Q45F-16C	油, 汽水 Oil and soda	≤150°C	1.6	1.76	2.4	1.6
Q45F-16P	醋类 Vinegar	≤150°C	1.6	1.76	2.4	1.6
Q45F-16R	硝酸类 Nitric acid class	≤150°C	1.6	1.76	2.4	1.6



主要尺寸 Dimensions of Flanged end

型号 Model	Size DN	L	L2	D	D1	D2	Z-φd	b	H	W
Q44F-16C	15	150	75	95	65	45	4-φ14	16	95	130
Q44F-16C	20	160	80	105	75	58	4-φ14	18	110	130
Q44F-16C	25	180	90	115	85	68	4-φ14	18	120	140
Q44F-16C	32	200	100	140	100	78	4-φ18	18	144	180
Q44F-16C	40	220	110	150	110	88	4-φ18	18	152	220
Q44F-16C	50	240	120	165	125	102	4-φ18	18	182	220
Q44F-16C	65	260	130	185	145	122	8-φ18	18	193	240
Q44F-16C	80	280	140	200	160	138	8-φ18	20	217	270
Q44F-16C	100	320	160	220	180	158	8-φ18	20	245	350
Q44F-16C	125	380	190	250	210	188	8-φ18	22	282	500
Q44F-16C	150	440	220	285	240	212	8-φ22	22	319	600
Q44F-16C	200	550	275	340	295	268	12-φ22	24	380	1000
Q44F-16C	250	670	355	405	355	320	12-φ26	26	460	1400
Q44F-16C	300	720	360	460	410	378	12-φ26	28	520	1800
Q44F-16C	350	820	410	520	470	428	16-φ26	30	560	2800
Q44F-16C	400	1000	500	580	525	490	16-φ30	32	600	3500

主要尺寸 Dimensions of Flanged end

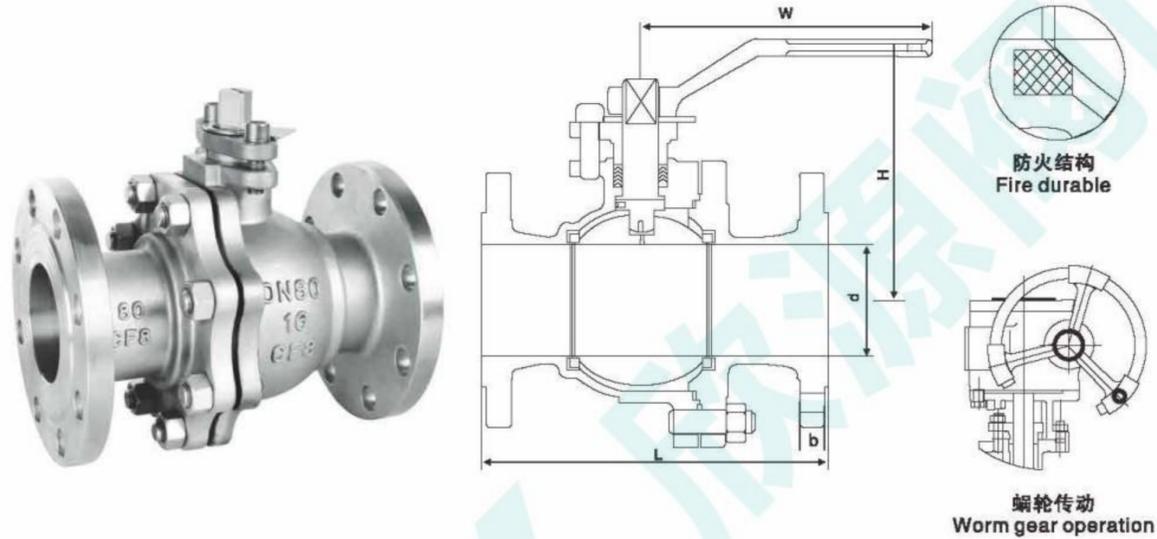
型号 Model	Size DN	L	L2	D	D1	D2	Z-φd	b	H	W
Q45F-16C	15	150	75	95	65	45	4-φ14	16	95	130
Q45F-16C	20	160	80	105	75	58	4-φ14	18	110	130
Q45F-16C	25	180	90	115	85	68	4-φ14	18	120	140
Q45F-16C	32	200	100	140	100	78	4-φ18	18	144	180
Q45F-16C	40	220	110	150	110	88	4-φ18	18	152	220
Q45F-16C	50	240	120	165	125	102	4-φ18	18	182	240
Q45F-16C	65	260	130	185	145	122	8-φ18	18	193	270
Q45F-16C	80	280	140	200	160	138	8-φ18	20	217	350
Q45F-16C	100	320	160	220	180	158	8-φ18	20	245	500
Q45F-16C	125	380	190	250	210	188	8-φ18	22	282	600
Q45F-16C	150	440	220	285	240	212	8-φ22	22	319	1000
Q45F-16C	200	550	275	340	295	268	12-φ22	24	380	1300
Q45F-16C	250	670	335	405	355	320	12-φ26	26	460	1700
Q45F-16C	300	720	360	460	410	378	12-φ26	28	520	2100
Q45F-16C	350	880	440	520	470	428	16-φ26	30	560	2800
Q45F-16C	400	1000	500	580	525	490	16-φ30	32	600	3500

法兰浮动球阀

Flange floating ball valves

法兰浮动球阀

Flange floating ball valves



主要外形及连接尺寸 Main external and connection dimension

公称直径 DN	L1/L2	D	D1	D2	b	Z-φd	H	W
Q41F-16P Q341F-16R Q641F-16V Q941F-16U Q41F-16Ti Q41F-16R9								
15	130/130	95	65	45	16	4-φ14	78	140
20	130/140	105	75	58	18	4-φ14	84	160
25	140/150	115	85	68	18	4-φ14	95	180
32	165/165	140	100	78	18	4-φ18	150	250
40	165/180	150	110	88	18	4-φ18	150	300
50	203/200	165	125	102	18	4-φ18	170	350
65	222/220	185	145	122	18	8-φ18	195	350
80	241/250	200	160	138	20	8-φ18	215	4400
100	305/280	220	180	158	20	8-φ18	250	500
125	356/320	250	210	188	22	8-φ18	265	600
150	394/360	285	240	212	22	8-φ22	270	800
200	457/400	340	295	268	24	12-φ22	330	800
250	533/450	405	355	320	26	12-φ26	450	1300

主要外形及连接尺寸 Main external and connection dimension

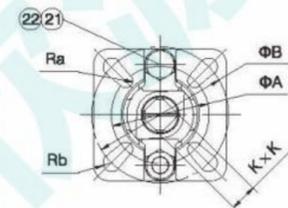
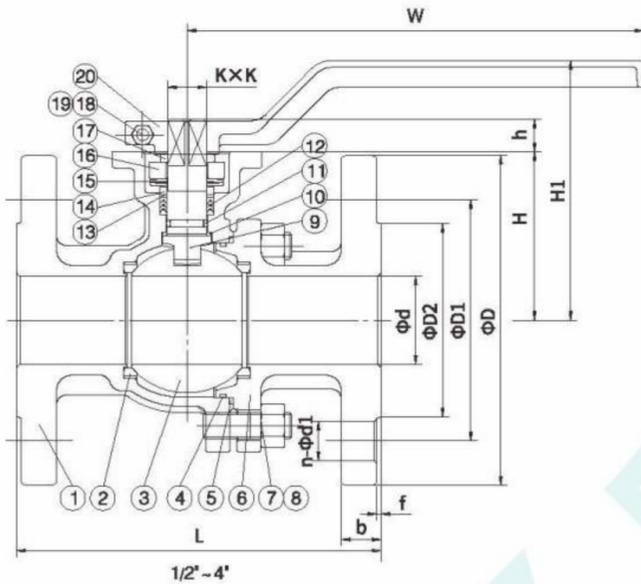
公称直径 DN	L1/L2	D	D1	D2	b	Y	Z-φd	H	W
Q41F-25P Q341F-25R Q641F-25V Q941F-25U Q41F-25Ti Q41F-25R9									
15	130/130	95	65	45	16	-	4-φ14	103	100
20	130/140	105	75	58	18	-	4-φ14	112	160
25	140/150	115	85	68	18	-	4-φ14	123	160
32	165/165	140	100	78	18	-	4-φ18	150	250
40	165/180	150	110	88	18	-	4-φ18	156	250
50	203/200	165	125	102	20	-	4-φ18	172	350
65	222/220	185	145	122	22	-	8-φ18	197	350
80	241/250	200	160	138	24	-	8-φ18	222	450
100	305/280	235	190	162	24	-	8-φ22	253	450
125	356/320	270	220	188	26	-	8-φ26	275	600
150	394/360	300	250	218	28	-	8-φ26	286	800
200	457/400	360	310	278	30	-	12-φ26	340	1200
250	533/450	425	370	335	32	-	12-φ30	470	1400
Q41F-40P Q341F-40R Q641F-40V Q941F-40U Q41F-40Ti Q41F-40R9									
15	130/130	95	65	45	16	40	4-φ14	103	100
20	152/140	105	75	58	18	51	4-φ14	112	160
25	165/150	115	85	68	18	58	4-φ14	123	160
32	180/165	140	100	78	18	66	4-φ18	150	250
40	200/200	150	110	88	18	76	4-φ18	156	250
50	230/220	165	125	102	20	88	4-φ18	172	35
65	290/250	185	145	122	22	110	8-φ18	197	350
80	310/280	200	160	138	24	121	8-φ18	222	50
100	350/320	235	190	162	24	150	8-φ22	253	450
125	381/360	270	220	188	26	176	8-φ26	275	600
150	403/400	300	250	218	28	204	8-φ26	286	800
200	419/502	375	320	285	34	260	12-φ30	340	1200
250	457/457	450	385	345	38	313	12-φ33	470	1400
Q41F-63P Q341F-63R Q641F-63V Q941F-63U Q41F-63Ti Q41F-63R9									
15	165/140	105	75	45	20	40	4-φ14	105	130
20	190/165	130	90	58	22	51	4-φ18	125	130
25	216/185	140	100	68	24	58	4-φ18	135	160
32	229/200	155	110	78	26	66	4-φ22	150	160
40	241/230	170	125	88	28	76	4-φ22	165	230
50	292/250	180	135	102	26	88	4-φ22	175	230
65	330/280	205	160	122	26	110	8-φ22	200	400
80	356/320	215	170	138	28	121	8-φ22	210	400
100	406/360	250	200	162	30	150	8-φ26	250	700
125	508/450	295	240	188	34	176	8-φ30	295	1100
150	495/500	345	280	218	36	204	8-φ33	340	1500
Q41F-100P Q341F-100R Q641F-100V Q941F-100U Q41F-100Ti Q41F-100R9									
15	165/140	105	75	45	20	40	4-φ14	105	170
20	190/165	130	90	58	22	51	4-φ18	125	200
25	216/185	140	100	68	24	58	4-φ18	135	200
32	229/200	155	110	78	26	66	4-φ22	150	250
40	241/230	170	125	88	28	76	4-φ22	165	350
50	292/250	195	145	102	30	88	4-φ26	195	350
65	330/280	220	170	122	34	110	8-φ26	220	420
80	356/320	230	180	138	36	121	8-φ26	230	420
100	432/360	265	210	162	40	150	8-φ30	265	700
125	508/450	315	250	188	40	176	8-φ33	310	-
150	559/500	355	290	218	44	204	12-φ33	350	-
200	660/600	430	360	285	52	260	12-φ36	430	-

高平台球阀

High platform ball valve

高平台球阀

High platform ball valve



特点 Features

- 全通径 Full port, 1/2"~12" (DN15~DN300)
- 工作压力 W.P.: PN16/40
- 工作温度 W.T.: -20°C~180°C
- 精密铸造 Investment casting
- 阀杆防爆出装置设计 Blow-out proof stem
- 防静电装置 (可选) Anti-static device (option)
- 带锁手柄 Locking device handle
- ISO5211直装高平台设计 ISO 5211 Direct mounting pad
- API 607 防火结构 (可选) API 607 Fire safe (option)
- 自动化装置 (可选) Automation accessories (option)

JB PN16

- 设计标准 Design: GB / T 12237
- 法兰标准 Flange dimension: JB / T 79.1
- 结构长度 Face to face: JB / T 1686
- 检验 & 测试 Inspection & testing: GB / T 13927, JB / T 9092

HG PN16/40

- 设计标准 Design: GB / T 12237
- 法兰标准 Flange dimension: HG / T 20592
- 结构长度 Face to face: GB / T 12221
- 检验 & 测试 Inspection & testing: GB / T 13927, JB / T 9092

材料列表 Material List

序号 No.	零件名称 Parts	材质 Material		
1	阀体 Body	4A	5A	CF8M
2	阀座 Seat	PTFE		
3	球体 Ball	2205	2507	CF8M
4	O 形圈 O- Ring	NBR		
5	垫片 Gasket	PTFE RPTFE PPL PI PEEK DEVLON		
6	阀盖 Bonnet	4A	5A	CF8M
7	螺栓 Bolt	A193-B8		
8	螺母 Nut	A194-8		
9	阀杆 Stem	2205	2507	316
10	阀杆垫圈 Stem Washer	PTFE+25% GF		
11	O 形圈 O-ring	NBR		
12	填料 Packing	PTFE RPTFE PPL PI PEEK DEVLON		
13	耐磨垫 Wear Washer	PTFE+25% GF		
14	压圈 Gland	SS304		
15	蝶形弹簧 Disc Spring	SS304		
16	压板 GLAND FLANGE	SSCF8		
17	定位片 Stopper	SS304		
18	内六角螺钉 HEX SOCKET BOLT	A193-B8		
19	螺母 Nut	A194-8		
20	手柄 Handle	WCB/CF8		
21	螺栓 Bolt	A193-B8		
22	螺母 Nut	A194-8		

G22 机械部 JB PN16

公称通径 DN	L	d	D2	D1	D	n-φd1	H	h	H1	W	Ra	Rb	A	B	KxK	
15	1/2"	130	15	45	65	95	4-14	51	9	83	140	3.0	3.5	36	50	9X9
20	3/4"	140	20	58	75	105	4-14	56	9	88	140	3.0	3.5	36	50	9X9
25	1"	150	25	68	85	115	4-14	62	11	97	170	3.0	3.5	42	50	11X11
32	1-1/4"	165	32	78	100	140	4-18	72	11	107	170	3.0	3.5	42	50	11X11
40	1-1/2"	180	40	88	110	150	4-18	78	14	116	200	3.5	4.5	50	70	14X14
50	2"	200	50	102	125	165	4-18	86	14	124	200	3.5	4.5	50	70	14X14
65	2-1/2"	220	65	122	145	185	8-18	102	17	146	300	4.5	5.5	70	102	17X17
80	3"	250	80	138	160	200	8-18	115	17	159	300	4.5	5.5	70	102	17X17
100	4"	280	100	158	180	220	8-18	137	17	181	300	4.5	5.5	70	102	19X19
125	5"	320	125	188	210	255	8-18	170	25	255	650	5.5	6.5	102	125	22X22
150	6"	360	150	212	240	285	8-22	192	30	277	800	5.5	6.5	102	125	27X27
200	8"	400	200	268	295	340	12-22	234	35	280	300	5.5	6.5	102	125	27X27

美标系列 ASME CL150-300

公称通径 DN	L	d	D2	D1	D	n-φd1	H	h	H1	W	Ra	Rb	A	B	KxK	
15	1/2"	108	15	45	60.5	89	4-15	55	9	87	140	3.0	3.5	36	50	9X9
20	3/4"	117	20	58	69.8	99	4-15	60	9	92	140	3.0	3.5	36	50	9X9
25	1"	127	25	68	79.2	108	4-15	67	11	102	170	3.0	3.5	42	50	11X11
32	1-1/4"	140	32	78	88.9	117	4-15	76	11	111	170	3.0	3.5	42	50	11X11
40	1-1/2"	165	40	88	98.6	127	4-15	85	14	123	200	3.5	4.5	50	70	14X14
50	2"	178	50	102	120.6	152	4-19	93	14	131	200	3.5	4.5	50	70	14X14
65	2-1/2"	190	65	122	139.7	178	4-19	113	17	157	300	4.5	5.5	70	102	17X17
80	3"	203	80	138	152.4	190	4-19	126	17	170	300	4.5	5.5	70	102	17X17
100	4"	229	100	158	190.5	229	8-19	141	17	185	300	4.5	5.5	70	102	19X19
125	5"	356	125	188	215.9	254	8-22	170	25	255	650	5.5	6.5	102	125	22X22
150	6"	394	150	212	241.3	279	8-22	192	30	277	800	5.5	6.5	102	125	27X27
200	8"	457	200	268	298.4	343	8-22	234	35	280	300	5.5	6.5	102	125	27X27

G21 化工部长系列 HG Long series PN16

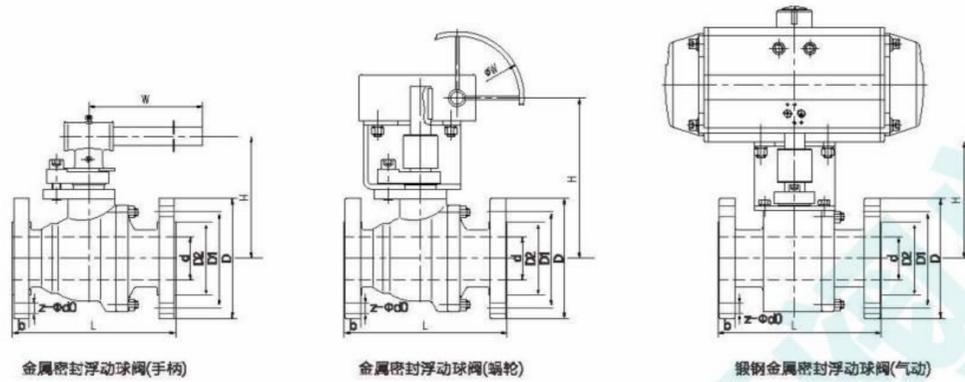
公称通径 DN	L	d	D2	D1	D	n-φd1	H	b	h	H1	W	Ra	Rb	A	B	KxK	
15	1/2"	130	15	45	65	95	4-14	55	16	9	87	140	3.0	3.5	36	50	9X9
20	3/4"	140	20	58	75	105	4-14	60	18	9	92	140	3.0	3.5	36	50	9X9
25	1"	140	25	68	85	115	4-14	67	18	11	102	170	3.0	3.5	42	50	11X11
32	1-1/4"	165	32	78	100	140	4-18	76	18	11	111	170	3.0	3.5	42	50	11X11
40	1-1/2"	165	40	88	110	150	4-18	85	18	14	123	200	3.5	4.5	50	70	14X14
50	2"	203	50	102	125	165	4-18	93	18	14	131	200	3.5	4.5	50	70	14X14
65	2-1/2"	222	65	122	145	185	8-18	113	18	17	157	300	4.5	5.5	70	102	17X17
80	3"	241	80	138	160	200	8-18	126	20	17	170	300	4.5	5.5	70	102	17X17
100	4"	305	100	158	180	220	8-18	141	20	17	185	300	4.5	5.5	70	102	19X19
125	5"	356	125	188	210	250	8-18	170	22	25	255	650	5.5	6.5	102	125	22X22
150	6"	394	150	212	240	285	8-22	192	22	30	277	800	5.5	6.5	102	125	27X27
200	8"	457	200	268	295	340	12-22	234	24	35	280	300	5.5	6.5	102	125	27X27

硬密封球阀

Hard Sealed Ball Valve

硬密封球阀

Hard Sealed Ball Valve



球体表面涂层使用说明 Spheroid top coat operating instructions

基本材料 Matrix material	金属材料 Matrix material					
涂层材料 Coating material	碳化钨 Tungsten carbide	镍铬碳化铬 Nichrome ghromic carbide	N:60	Incone 625	Stellite6	Stellite20
硬度 hardness	HV800-1300° HRC68-72°	HV600- 950° HRC55- 68°	HV600- 700° HRC68- 60°	HV380- 430° HRC68- 43°	HV800- 1300° HRC68- 72°	HV580- 620° HRC50- 56°
适用温度 Applicable temperature	≤450°C	≤880°C	≤450°C	≤660°C	≤680°C	≤680°C
涂层厚度 Coating thickness	0.15-1mm					
涂层结合强度 Coating bonding strength	70MPa					
适用零部件 Applicable parts	球体, 阀座, 通道 Body ,Seat,Channel	球体, 阀座, 通道 Body ,Seat, Channel	球体, 阀座, 通道 Body ,Seat, Channel	球体, 阀座, 通道, 阀杆 Body ,Seat,Channel,Stem	阀座, 通道, 阀杆 Seat,Channel, Stem	阀座, 通道, 阀杆 Seat,Channel, Stem
适用介质 Applicable Medium	一般用于矿石, 煤渣, 水泥, 硅粉, 污水处理, 燃气, 蒸汽, 化纤, 天然气海水等一些带晶体颗粒的工况。水性溶液和湿气腐蚀环境, 具有良好的微观结构和高结合强度及光滑性, 有更高的耐腐蚀性, 并代替硬铬。 Generally used for ore, coal, cement, silica fume, sewage, gas, steam, chemical, gas, water and some with crystals of mining. Aqueous solution and moisture corrosion, has a good microstructure and high strength and smoothness, a higher corrosion resistance, and to replace hard chrome.					
用途优点 use merit	镍铬碳化铬使用温度880°C, 硬度55- 68HRC。该材料有致密的耐腐蚀和良好的耐气穴性能, 热气体腐蚀性, 滑动性能, 耐热气体腐蚀性和高温氧化性。 Chromium carbide nickel chromium temperature 880°C, hardness 55- 68HRC. The materia is dense and corrosion resistance and corrosion resistance, good resistance to cavitation performance, hot gas corrosion resistance slidg properties, corrosion resistant and high temperature oxidation of gas.					

设计与制造 Design and manufacture	结构长度 Structure length	法兰尺寸 Flange dimension	压力-温度 Pressure-Temperature	试验-检验 Inspection and test
GB/T21385	GB/T-12221	HQ/T20592	GD/T12224	GB/T26480

规格主要尺寸 Size Main Dimensions

DN mm	L	d	D	D1	D2	b	z-φd0	W		H	
								手动Manual	蜗轮Worm	手动Manual	蜗轮Worm
PN16											
15	130	15	95	65	45	16	4-14	160	-	59	-
20	140	20	105	75	58	18	4-14	180	-	63	-
25	150	25	115	85	68	18	4-14	180	-	75	-
32	165	32	140	100	78	18	4-18	200	-	95	-
40	180	40	150	110	88	18	4-18	220	-	107	-
50	200	50	165	125	102	18	4-18	240	-	155	-
65	220	65	185	145	122	18	8-18	300	-	164	-
80	250	80	200	160	138	20	8-18	350	-	182	-
100	280	100	220	180	158	20	8-18	420	320	226	405
125	320	125	250	210	188	22	8-18	560	320	230	420
150	360	150	285	240	212	22	8-22	800	350	250	470
200	400	200	340	295	268	24	12-22	1200	350	280	550

规格主要尺寸 Size Main Dimensions

公称压力 PN(MPa)	公称通径 DN	L	d	D	D1	D2	D3	b	z-φd0	W		H	
										手动Manual	蜗轮Worm	手动Manual	蜗轮Worm
2.5	15	130	15	95	65	45	-	16	4-14	160	-	85	-
	20	140	20	105	75	58	-	18	4-14	180	-	90	-
	25	150	25	115	85	68	-	18	4-14	180	-	99	-
	32	165	32	140	100	78	-	18	4-18	200	-	105	-
	40	180	40	150	110	88	-	18	4-18	220	-	126	-
	50	200	50	165	125	102	-	20	4-18	240	-	142	-
	65	220	65	185	145	122	-	22	8-18	300	-	165	-
	80	250	80	200	160	138	-	24	8-18	350	-	178	390
	100	280	100	235	190	162	-	24	8-22	420	320	230	420
	125	320	125	270	220	188	-	26	8-26	560	320	280	450
4.0	15	130	15	95	65	45	40	16	4-14	160	-	85	-
	20	140	20	105	75	58	51	18	4-14	180	-	90	-
	25	150	25	115	85	68	58	18	4-14	180	-	99	-
	32	165	32	140	100	78	66	18	4-18	200	-	105	-
	40	180	40	150	110	88	76	18	4-18	220	-	126	-
	50	200	50	165	125	102	88	20	4-18	240	-	142	-
	65	220	65	185	145	122	110	22	8-18	300	-	165	-
	80	250	80	200	160	138	121	24	8-18	350	-	178	390
	100	280	100	235	190	162	150	24	8-22	420	320	230	420
	125	320	125	270	220	188	176	26	8-26	560	320	280	450
6.3	15	140	15	105	75	45	40	20	4-14	180	-	79	-
	20	152	20	130	90	50	51	22	4-18	200	-	83	-
	25	165	25	140	100	60	58	24	4-18	220	-	114	-
	32	178	32	155	110	78	66	26	4-22	280	-	120	-
	40	190	40	170	125	88	76	28	4-22	320	-	125	-
	50	216	50	180	135	102	88	26	4-22	400	-	156	-
	65	241	65	205	160	122	110	26	8-22	450	-	172	-
	80	281	80	215	170	138	121	28	8-22	500	-	220	370
	100	305	100	250	200	162	150	30	8-26	650	-	250	440
	10.0	15	165	15	105	75	45	40	20	4-14	180	-	79
20		190	20	130	90	58	51	22	4-18	200	-	83	-
25		216	25	140	100	68	58	24	4-18	220	-	114	-
32		229	32	155	110	78	66	26	4-22	280	-	120	-
40		241	40	170	125	88	76	28	4-22	320	-	125	-
50		292	50	195	145	102	88	30	4-26	400	-	156	-
65		330	65	220	170	122	110	34	8-26	450	-	172	-
80		356	80	230	180	138	121	36	8-26	500	-	220	370
100		432	100	265	210	162	150	40	8-30	650	-	250	440