

ORBIT BALL VALVE

CIVILIAN INDUSTRY PRODUCT,
MILITARY TECHNOLOGY & MANUFACTURING

CHENGDU HOLY VALVE & COMPLETE EQUIPMENT CO., LTD.

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公司资质

成都航利阀门成套设备有限公司



HOLY VALVE



ORBIT BALL VALVE

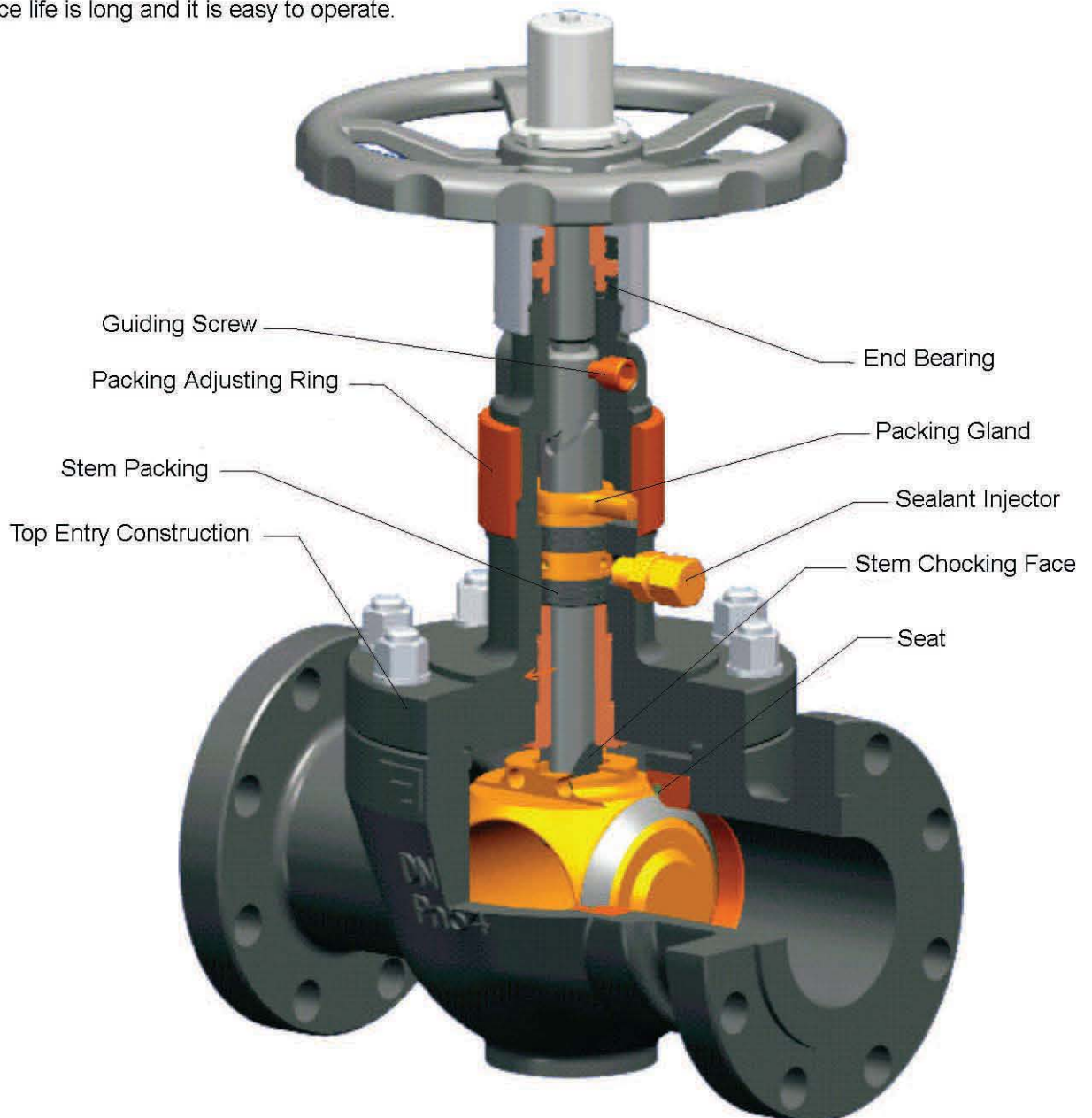


CHENGDU HOLY VALVE & COMPLETE EQUIPMENT CO., LTD.

● GENERAL

Orbit ball valves made by our company integrate the advantage of wedge gate valves, ball valves, globe valves and plug valves. The valves can be disassembled from the top side and can be maintained in situ condition. Unique design construction for stem packing sealing to adjust the tightness of the packing from outside. The valves are designed as mechanical chocking sealing construction, and seat can be soft seated or metal seated upon different requirement of customers. The valves also can be operated by handwheel, motor, pneumatic or pneumatic hydraulic, etc different actuators.

Due to the unique construction, the valves are chocking forced sealing when fully closed and the sealing is reliable. During the process of opening & closing, the seats should not contact seals of the trim, so the valve service life is long and it is easy to operate.

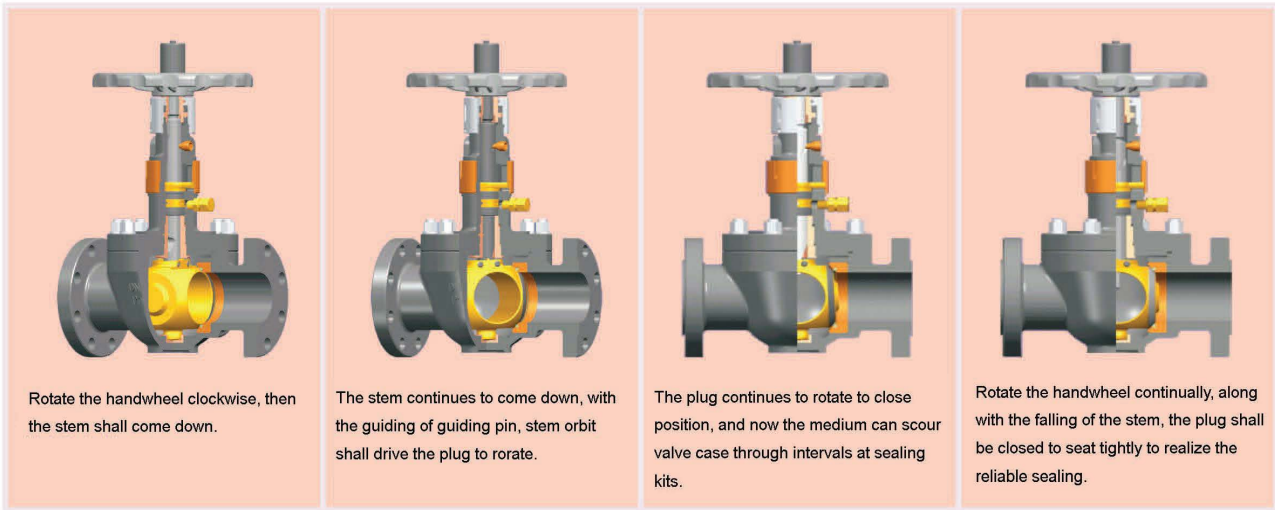


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● WORKING PRINCIPLE

When valve open, the valve plug shall divate the seat firstly, a even interval is formed at the sealing surface. The medium shall flow through the interval along the valve plug surface at 360 °, scour valve case to eliminate sediment in valve case. Then the valve plug rotates around the central axis, valve is openned, the medium shall flow through opening of the valve plug. So the scratch to the sealing surface can be avoided during the process of opening and closing. Meanwhile, very small operation torque and long service life due to no friction to sealing kits.

■ Valve Close Process

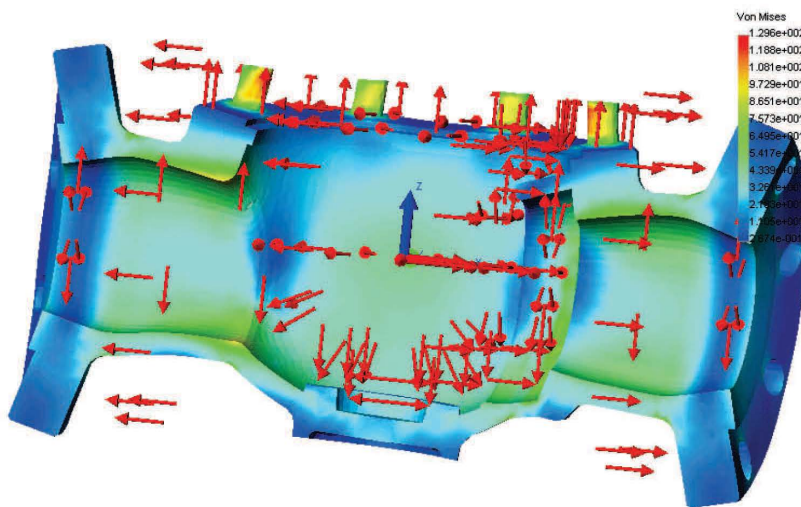


● QUALITY ASSURANCE

The company has ISO9001 certificate issued by DNV, and can provide 18 months of quality guarantee for clients. Each valve must be as per the strictest standard and passed the strictest pressure test.

The newest design or important improvement, the valve shall be passed ten thousands tests against service life under simulative site service condition, to assure the valve quality.

-aa : Static Nodal Stress
Units : MPa



The product design is based on advanced CAD/CAM system and finite element analysis to lay parts, to provide safety, economic and reliable design to clients.

All the main parts are carried out finite element analysis to ensure to supply reliable products.

● MAIN PART MATERIAL

Part Name	Regular	Suplhur Resistant	Middle Temperature	Low Temperature	High Temperature
Body, Bonnet	WCB			LCB, LCC	
Plug, Seat	Alloy Steel / Carbon Steel + Hard Metal Alloy + Special Alloy Coating				
Stem	420	318		410/420/318	
Sealing Ring	NBR	VITON	PPL	NBR/PTFE/VITON	
Packing	PTFE/Graphite				
Bolt	B7	B7M		B7/B7M	
Nut	2H	2HM		2H/2HM	

● AVAILABLE STANDARD

API 6D	Specification For Pipeline Valves
API 6FA	Specification For Fire Testing Of Valves
ASME.	Boiler And Pressure Vessel Code, Section V , Division 1, Rules For Construction Of Pressure Vessel
ASME B16. 5	Steel Pipe Flanges And Flanged Fittings
ASME B16. 34	Steel Valves-Flanged And Butt Welding Ends
GB/T 12221	General Valves End-to-end Dimension
GB/T 12229	General Valves Technical Specification For Carbon Steel Castings
GB/T 13927	Industrial Valves Pressure Test
GB/T 9113	Integral Steel Pipe Flange
JB/T 79. 1~79. 4	Integral Cast Steel Pipe Flange
JB/T 7749	Technical Specification For Low Temperature Valve
JB/T 308	Method Of Valve Model Designation
JB/T 4730. 1~6	NDT For Pressure-Bearing Equipment
JB/T 6903	UT For Valve Forged Parts
JB/T 7928	General Valve Supply Requirement
SY/T 4102	Specification For Valve Inspection And Installation

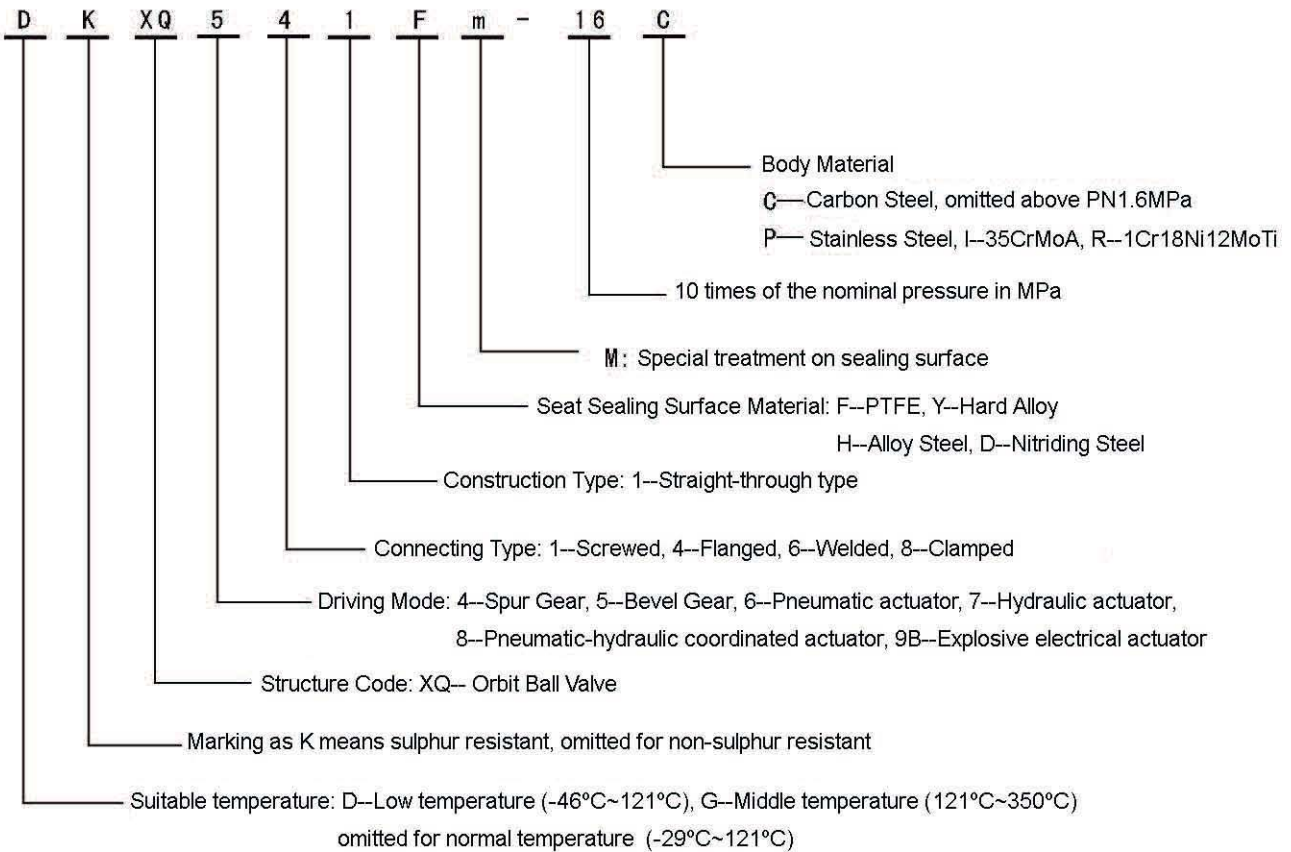
Note: The above standards should be the newest version or specified version upon request.

● APPLICATION

- The valves are suitable for petroleum and petroleum products, natural gas, airport, chemical industry, enviroment, etc transportation pipeline and station to stop medium flow.
- Modulating or venting for long distance natural gas pipeline.
- For pigging pipeline, SY/T0533-1994 and mechanical pig with 3~4 seal cups is recommded, pigging ball is prohibited.

MODEL EXPLANATION

Model Example:



TECHNICAL SPECIFICATION

Suitable Medium: Pure natural gas, coal gas, crude oil, finished oil, light oil, waste water, etc.

Medium Temperature: -29°C~121°C (Normal temperature)

-46°C~121°C (Low temperature)

121°C~350°C (Middle Temperature)

Pressure Rating: PN1.6 ~ 16MPa

Size: DN50~600mm

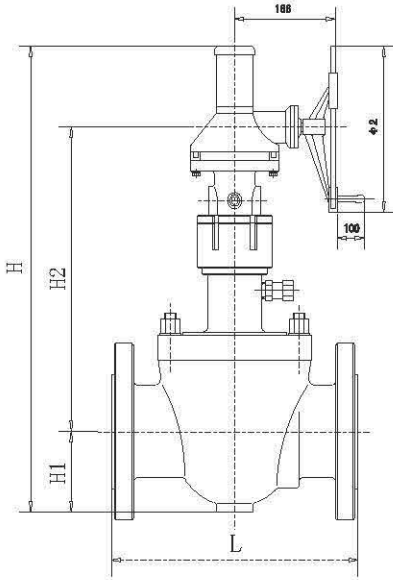


ORBIT BALL VALVE

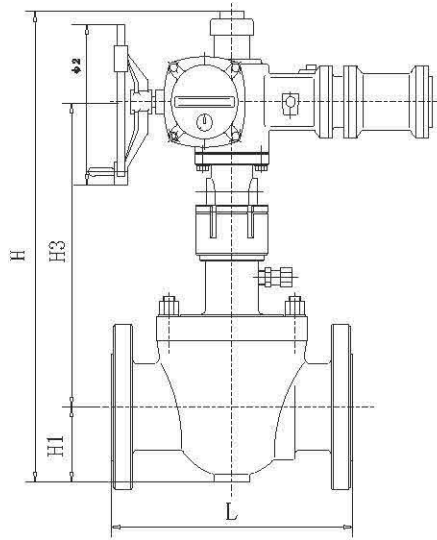
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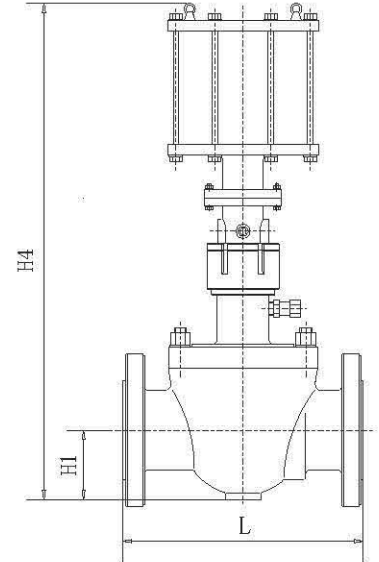
● FLANGED END ORBIT BALL VALVE



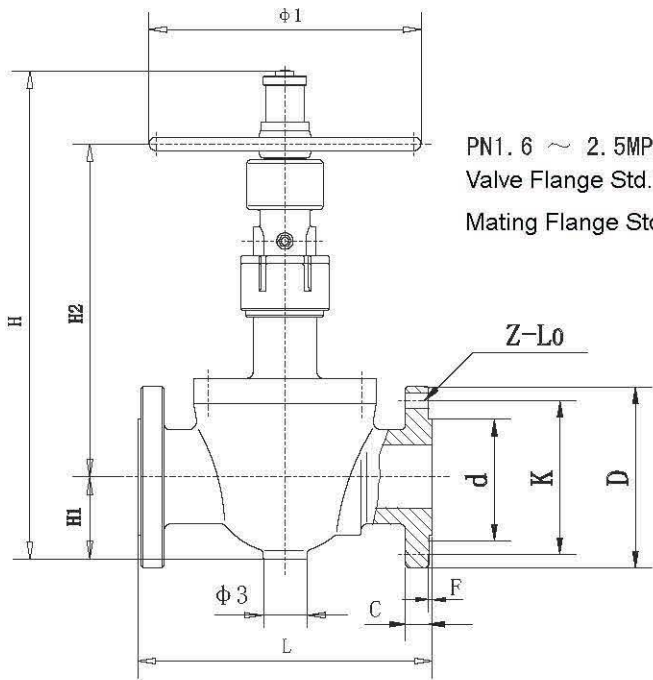
(K) XQ541-□ Series
Bevel Gear Operated Orbit Ball Valve



(K) XQ9B41-□ Series
Motor Operated Orbit Ball Valve

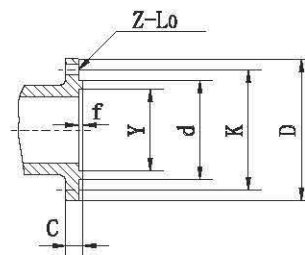


(K) XQ641-□ Series
Pneumatic Orbit Ball Valve



(K) XQ41-□ Series
Handwheel Operated Orbit Ball Valve

PN1.6 ~ 2.5MPa
Valve Flange Std.: JB/T 79.1 / ASME B16.5
Mating Flange Std.: JB/T82.1/ASME B16.5



PN4.0 ~ 20MPa
Valve Flange Std.: JB/T 79.2 (Female)/ASME B16.5
Mating Flange Std.: JB/T82.2 (Male)/ASME B16.5

ORBIT BALL VALVE

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● MAIN DIMENSION

Unit: mm

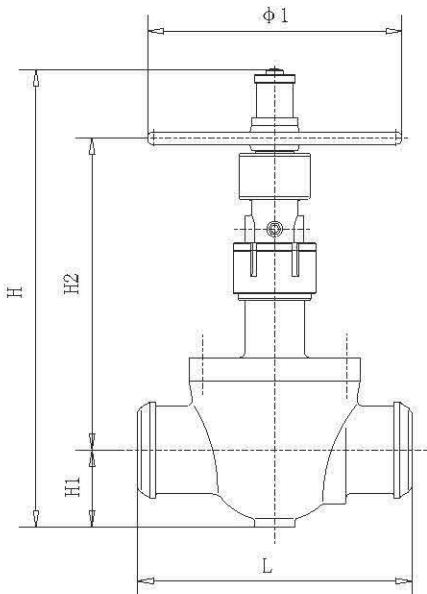
PN (MPa)	DN	Construction Dimension									Dimension for flanges and sealing surface							Wt. (kg)	
		L	H	H1	H2	H3	H4	φ1	φ2	底座φ3	D	K	G	d	Y	f	Z×L ₀		
XQ□41-16C/KXQ□41-16C	50	230	460	80	320	370	580	200	-	80	160	125	16	100	-	-	4-φ18	38	
	65	290	480	90	330	380	600	300	-	80	180	145	18	120	-	-	4-φ18	51	
	80	310	498	98	310	360	618	300	-	100	195	160	20	135	-	-	8-φ18	65	
	100	350	616	108	418	468	736	300	-	100	215	180	20	155	-	-	8-φ18	100	
	125	400	703	123	490	540	823	-	-	150	245	210	22	185	-	-	8-φ18	130	
	150	480	830	140	600	650	950	400	-	150	280	240	24	210	-	-	8-φ23	170	
	200	600	948	168	670	720	1068	500	305	180	335	295	26	265	-	-	12-φ23	290	
	250	730	1193	203	880	930	1313	600	305	180	405	355	30	320	-	-	12-φ25	376	
	300	850	1410	230	1070	1120	1530	600	305	180	460	410	30	375	-	-	12-φ25	491	
	350	980	1510	260	1140	1190	1630	650	305	250	520	470	34	435	-	-	16-φ25	740	
	400	1100	1850	290	1450	1500	1970	650	458	250	580	525	36	485	-	-	16-φ30	1110	
	450	1200	1950	320	1480	1530	2070	700	458	250	640	585	40	545	-	-	20-φ30	1400	
	500	1250	2053	353	1550	1600	2173	700	458	300	705	650	44	608	-	-	20-φ34	1700	
	600	1450	2300	420	1730	1780	2420	800	458	300	840	770	48	718	-	-	20-φ41	2400	
	XQ□41-25/KXQ□41-25	50	230	460	80	320	370	580	200	-	80	160	125	20	100	-	-	4-φ18	42
65		290	480	90	330	380	600	300	-	80	180	145	22	120	-	-	8-φ18	51	
80		310	498	98	310	360	618	300	-	100	195	160	22	135	-	-	8-φ18	69	
100		350	623	115	418	468	743	300	-	100	230	190	24	160	-	-	8-φ23	100	
125		400	715	135	490	540	835	-	-	150	270	220	28	188	-	-	8-φ25	145	
150		480	840	150	600	650	960	400	-	150	300	250	30	218	-	-	8-φ25	159	
200		600	960	180	670	720	1080	500	305	180	360	310	34	278	-	-	12-φ25	310	
250		730	1203	213	880	930	1323	600	305	180	425	370	36	332	-	-	12-φ30	350	
300		850	1423	243	1070	1120	1543	600	485	180	485	430	40	390	-	-	16-φ30	520	
350		980	1525	275	1140	1190	1645	650	305	250	550	490	44	448	-	-	16-φ34	870	
400		1100	1865	305	1450	1500	1985	650	458	250	610	550	48	505	-	-	16-φ34	1200	
450		1200	1960	330	1480	1530	2080	700	458	250	660	600	50	555	-	-	20-φ34	1500	
500		1250	2065	365	1550	1600	2185	700	458	300	730	660	52	610	-	-	20-φ41	1950	
600		1450	2300	420	1730	1780	2420	800	458	300	840	770	56	718	-	-	20-φ41	2800	
XQ□41-40/KXQ□41-40		50	216	460	80	320	370	580	200	-	80	160	125	20	100	88	4	4-φ18	48
	65	290	480	90	330	380	600	300	-	80	180	145	22	120	110	4	8-φ18	56	
	80	310	498	98	350	360	618	300	-	100	195	160	22	135	121	4	8-φ18	80	
	100	350	623	115	418	468	743	300	-	100	230	190	24	160	150	4.5	8-φ23	102	
	125	400	715	135	490	540	835	400	-	150	270	220	28	188	176	4.5	8-φ25	155	
	150	480	840	150	600	650	960	400	-	150	300	250	30	218	204	4.5	8-φ25	165	
	200	600	968	188	670	720	1088	500	-	180	375	320	38	282	260	4.5	12-φ30	340	
	250	730	1213	223	880	930	1333	600	305	-	180	445	385	42	345	313	4.5	12-φ34	419
	300	850	1435	255	1070	1120	1555	600	305	-	180	510	450	46	408	364	4.5	16-φ34	545
	350	980	1535	285	1140	1190	1655	650	458	-	250	570	510	52	465	422	5	16-φ34	870
	400	1100	1888	328	1450	1500	2008	650	458	-	250	655	585	58	535	474	5	16-φ41	1250
	450	1200	1970	340	1480	1530	2090	700	458	-	250	680	610	60	560	524	5	20-φ41	1600
	500	1250	2078	378	1550	1600	2198	700	458	-	300	755	670	62	612	576	5	20-φ48	2100
	600	1450	2325	445	1730	1780	2445	800	458	-	300	890	795	62	730	678	6	20-φ54	3000
	XQ□41-64/KXQ□41-64	50	216	468	88	320	370	588	200	-	80	175	135	26	105	88	4	4-φ23	60
65		290	490	100	330	380	610	300	-	80	200	160	28	130	110	4	8-φ23	85	
80		310	505	105	350	390	625	300	-	100	210	170	30	140	121	4	8-φ23	105	
100		350	633	125	418	468	753	300	-	100	250	200	32	168	150	4.5	8-φ25	140	
125		400	728	148	490	540	848	400	-	150	295	240	36	202	176	4.5	8-φ30	190	
150		480	860	170	600	650	980	450	-	150	340	280	38	240	204	4.5	8-φ34	320	
200		600	983	203	670	720	1103	500	458	-	180	405	345	44	300	260	4.5	12-φ34	450
250		730	1225	235	880	930	1345	600	458	-	180	470	400	48	352	313	4.5	12-φ41	580
300		850	1445	265	1070	1120	1565	600	458	-	180	530	460	54	412	364	4.5	16-φ41	950

● MAIN DIMENSION

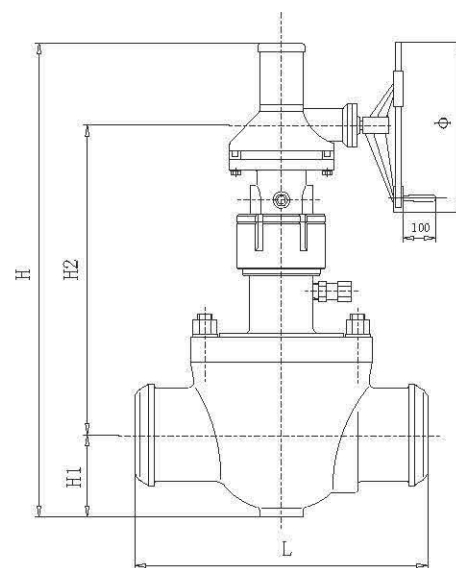
Unit: mm

PN (MPa)	DN	Construction Dimension									Dimension for flanges and sealing surface							Wt. (kg)
		L	H	H1	H2	H3	H4	$\phi 1$	$\phi 2$	A×B($\phi 0$)	D	K	G	d	Y	f	Z×L ₀	
XQ□41-64/KXQ□41-64	350	980	1548	298	1140	1190	1668	650	458	250	595	525	60	475	422	5	16- $\phi 41$	1250
	400	1100	1895	335	1450	1500	2015	650	458	250	670	585	66	525	474	5	16- $\phi 48$	1530
	450	1200	1990	360	1480	1530	2110	700	458	250	800	705	70	640	576	5	20- $\phi 54$	2400
	500	1250	2100	400	1550	1600	2220	700	458	300	930	820	76	750	678	6	20- $\phi 58$	3200
	600	1450	2345	465	1730	1780	2465	800	458	300	1045	935	84	865	768	6	24- $\phi 58$	4000
XQ□41-100/KXQ□41-100	50	292	566	88	418	468	686	250	-	80	195	145	28	112	88	4	4- $\phi 25$	110
	65	330	630	110	430	480	750	300	-	80	220	170	32	138	110	4	8- $\phi 25$	130
	80	356	674	115	469	519	794	300	-	100	230	180	34	148	121	4	8- $\phi 25$	160
	100	432	708	133	485	535	828	400	-	100	265	210	38	172	150	4.5	8- $\phi 30$	210
	125	508	905	155	660	710	1025	400	-	150	310	250	42	210	176	4.5	8- $\phi 34$	295
	150	559	1045	175	760	810	1165	500	305	150	350	290	46	250	204	4.5	12- $\phi 34$	380
	200	660	1417	215	1092	1142	1537	600	458	180	430	360	54	312	260	4.5	12- $\phi 41$	540
	250	787	1576	250	1216	1266	1696	600	458	180	500	430	60	382	313	4.5	12- $\phi 41$	620
	300	838	1804	293	1398	1448	1921	700	458	180	585	500	70	442	364	4.5	16- $\phi 48$	1050
	350	889	2028	328	1590	1640	2148	800	458	250	665	560	76	498	422	5	16- $\phi 54$	1500
XQ□41-160/KXQ□41-160	50	300	586	108	418	468	706	250	-	80	215	165	36	132	88	4	8- $\phi 25$	120
	65	340	643	123	430	480	763	300	-	80	245	190	44	152	110	4	8- $\phi 30$	140
	80	380	689	130	469	519	809	300	-	100	260	205	46	168	121	4	8- $\phi 30$	185
	100	430	725	150	485	535	845	400	-	100	300	240	48	200	150	4.5	8- $\phi 34$	240
	125	500	928	178	660	710	1048	400	-	150	355	285	60	238	176	4.5	8- $\phi 41$	320
	150	550	1065	195	760	810	1185	500	458	150	390	318	66	270	204	4.5	12- $\phi 41$	425
	200	650	1442	240	1092	1142	1562	600	458	180	480	400	78	345	260	4.5	12- $\phi 48$	580
	250	775	1616	290	1216	1266	1736	600	458	180	580	485	88	425	313	4.5	12- $\phi 54$	640
	300	900	1841	333	1398	1448	1961	700	458	180	665	570	100	510	364	4.5	16- $\phi 54$	1100

● WELDED ENDS ORBIT BALL VALVE



(K) XQ61-□ Series
Handwheel Operated Orbit Ball Valve



(K) XQ561-□ Series
Bevel Gear Operated Orbit Ball Valve

ORBIT BALL VALVE



CHENGDU HOLY VALVE & COMPLETE EQUIPMENT CO., LTD.

● MAIN DIMENSION

Model	DN mm	Overall Dimension					
		L	H 1	H 2	H 3	H	φ
XQ□41-16C KXQ□41-16C	50	216	80	320	370	460	200
	65	290	90	330	380	480	300
	80	310	98	350	360	498	300
	100	350	108	418	468	616	300
	125	400	123	490	540	703	400
	150	480	140	600	650	830	400
	200	600	168	670	720	948	500
	250	730	203	880	930	1193	600
	300	850	230	1070	1120	1410	600
	350	980	260	1140	1190	1510	650
	400	1100	290	1450	1500	1850	650
	450	1200	320	1480	1530	1950	700
	500	1250	353	1550	1600	2053	700
	600	1450	420	1730	1780	2300	800
	700	1650	455	1950	2000	2555	800
	800	1850	470	2060	2110	2680	800

Model	DN mm	Overall Dimension					
		L	H 1	H 2	H 3	H	φ
XQ□41-25 KXQ□41-25	50	216	80	320	370	460	200
	65	290	90	330	380	480	300
	80	310	98	350	390	498	300
	100	350	115	418	468	623	300
	125	400	135	490	540	715	400
	150	480	150	600	650	840	400
	200	600	180	670	720	960	500
	250	730	213	880	930	1203	600
	300	850	243	1070	1120	1423	600
	350	980	273	1140	1190	1525	650
	400	1100	305	1450	1500	1865	650
	450	1200	330	1480	1530	1960	700
	500	1250	365	1550	1600	2065	700
	600	1450	420	1730	1780	2300	800
	700	1650	478	1950	2000	2578	800
	800	1850	506	2060	2110	2716	800

Model	DN mm	Overall Dimension					
		L	H 1	H 2	H 3	H	φ
XQ□41-40 KXQ□41-40	50	216	80	320	370	460	200
	65	290	90	330	380	480	300
	80	310	98	350	390	498	300
	100	350	115	418	468	623	300
	125	400	135	490	540	715	400
	150	480	150	600	650	840	400
	200	600	188	670	720	968	500
	250	730	223	880	930	1213	600
	300	850	255	1070	1120	1435	600
	350	980	285	1140	1190	1535	650
	400	1100	328	1450	1500	1888	650
	450	1200	340	1480	1530	1970	700
	500	1250	378	1550	1600	2078	700
	600	1450	445	1730	1780	2325	800
	700	1549	498	1950	2000	2598	800
	800	1850	518	2060	2110	2750	800

Model	DN mm	Overall Dimension					
		L	H 1	H 2	H 3	H	φ
XQ□41-64 KXQ□41-64	50	216	88	320	370	468	200
	65	290	100	330	380	490	300
	80	310	105	350	390	505	300
	100	350	125	418	468	633	300
	125	400	148	490	540	728	400
	150	480	170	600	650	860	400
	200	600	203	670	720	983	500
	250	730	235	880	930	1225	600
	300	850	265	1070	1120	1445	600
	350	980	298	1140	1190	1548	650
	400	1100	335	1450	1500	1895	650
	450	1200	360	1480	1530	1990	700
	500	1250	400	1550	1600	2100	700
	600	1450	465	1730	1780	2345	800
	700	1549	518	1950	2000	2598	800

Model	DN mm	Overall Dimension					
		L	H 1	H 2	H 3	H	φ
XQ□41-100 KXQ□41-100	50	292	88	418	468	566	250
	65	330	110	430	480	630	300
	80	356	115	469	519	674	300
	100	432	133	485	535	708	400
	125	508	155	660	710	905	400
	150	559	175	760	810	1045	500
	200	600	215	1092	1142	1417	600
	250	787	250	1216	1266	1576	600
	300	838	293	1398	1448	1801	600
	350	889	328	1590	1640	2028	600
	400	991	358	1752	1802	2260	600

Model	DN mm	Overall Dimension						
		L	H 1	H 2	H 3	H	φ	
XQ□41-160 KXQ□41-160	50	300	108	418	468	586	250	
	65	340	123	430	480	643	300	
	80	380	130	469	519	689	300	
	100	430	150	485	535	725	400	
	125	500	178	660	710	928	400	
	150	550	195	760	810	1065	500	
	200	650	240	1092	1142	1442	600	
	250	775	290	1216	1266	1616	600	
	300	900	333	1398	1448	1841	600	

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主要产品图片展示

成都航利阀门成套设备有限公司



有导流孔平板闸阀



无导流孔平板闸阀



半导流孔平板闸阀



节流截止放空阀



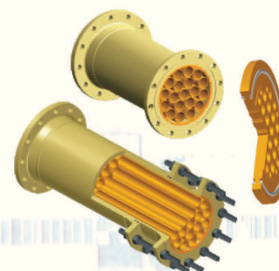
焊接式埋地平板闸阀



法兰式埋地平板闸阀



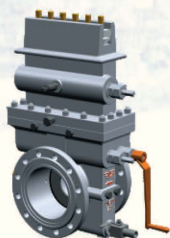
钢制球阀



气体整流器



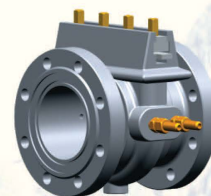
一体化孔板流量计



高级阀式孔板节流装置



普通型阀式孔板节流装置



简易阀式孔板节流装置

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