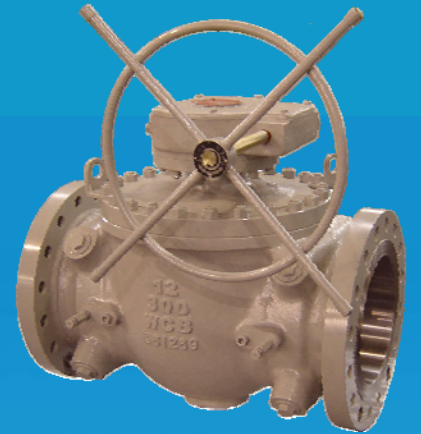




**CHENGDU HOLY VALVE & COMPLETE
EQUIPMENT CO., LTD.**

API 6D BALL VALVE



HOLY VALVE





★ ABOUT GROUP COMPANY



Chengdu Holy Valve & Complete Equipment Co., Ltd. is affiliated to Chengdu Holy Group which is a large-scale national enterprise.

Chengdu Holy Group located in Chengdu city, Sichuan Province, has three industrial parks in Chengdu High-tech Industrial Development Zone, Pengzhou City and Jiujiang town of Shuangliu county. The total area is about 980,000 m² and the total assets is over RMB1.5 billion. The group company is national large-scale enterprise. The business range of the group is diversified, including maintenance of aviation power, manufacturing of steel structure, die type color steel plate, equipments for power transmission & distribution and special valves for oil and natural gas, real estate development, industrial and civil structural design & construction, architectural decoration, etc. The

group company has been awarded 'National Quality & Benefit Type Advanced Enterprise' twice, and has been awarded the many titles of honor, such as 'Top 100 Enterprise of Performance Evaluation in National Mechanism Industries', 'Prominent Contribution Units for National Day Parade', 'Home of National Model Employees', 'National First Class Measuring Units', 'Superexcellent Enterprise of Sichuan Province', and 'National May Day Award', etc.

★ HISTORY OF DEVELOPMENT

At the middle of 1980s, the group company cooperated with scientific research institutions, Sichuan Petroleum Survey & Design Institute, to develop and manufacture the products, including through conduit slab gate valves, ball valves, orifice type pressure measuring equipments for nature gas treatment, transportation and distribution. After devoting the marketing, because of the reasonable design, excellent performance, and good quality, the products made by our company has been used to main natural gas collection, transportation pipeline, and treatment station in Sichuan district, the market of our products has been enlarged rapidly and the products has been used to national mayor oil & gas company, and its usage range has been enlarged to petroleum, finished oil, crude oil, waste water, etc. The suitable temperature range of the valves has been enlarged from low temperature to high temperature.

In 1993, the valve manufacturing scale was augmented increasingly, with nice market foreground, valve branch plant became to valve plant to be professionally in charge of design and manufacturer of valve products, special processing treatment and sealing parts for aviation rubber, etc. through group manufacturing lines. In order to meet marketing demand and improve our quality management level, the valve branch plant joined the China Valve Industries Association in 1996, and been awarded the ISO9001 certificate issued by Det Norske Veritas (DNV) and passed the replacement of version of DNV ISO9001:2000 Quality System in 2005. Except for this point, based on the quality intention of our factory –'Zero Defect, Excellent Quality', our factory acquired the 'Manufacturer License of Special Equipment' issued by General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China in January 2003 and acquired 'Certificate of Conformity of Occupational Health and Safety Management System Certification' issued by CNAS in 2007. In 2009, the company had been awarded API 6D certificate (License No.: 6D-0703).

In December 2004, the valve branch plant renamed Chengdu Holy Valve & Complete Equipment Co., Ltd.



★ ABOUT COMPANY

The covering area of the valve company is about 15,000 square meters and there are more than 200 employees in our company, including 10 mechanical engineering technicians with senior title and 26 mechanical engineering technicians with middle and primary title. The company owns over 200 sets kinds of large and common equipments, including processing centers, CNC lathes, large vertical lathe, general lathe, milling machine, boring machine, surface grinder, cylindrical grinder, rubber vulcanization machines, large type nitriding furnace, etc.

★ PRODUCTS RANGE

The company has adopted computer-aided to design products, the key pieces for stress analysis, and fully guarantee its structure and the stress distribution is reasonable and reliable. Good quality tracking system to enhance the technical level and product quality to provide a fundamental guarantee. The valves designed by our company were acquired many national patents. The major products provided by our company are below:

Name of Products	Nominal Diameter (mm/inch)	Nominal Pressure (MPa/Lbs)	Suitable Temperature (°C)	Remark
Slab Gate Valve With or Without Guiding hole	DN25~1500 (1"~60")	PN1.6~42 (class150~2500)	-101~350	HOV,BGO,MOV
Steel Ball Valve	DN50~1200 (1/2"~48")	PN1.6~25 (class150~1500)	-46~250	HOV,AOV,MOV
Advanced Valve Type Orifice Plate Pressure Device	DN50~700 (2"~28")	PN1.6~16 (class150~900)	-46~121	Patent Products
Simple Valve Type Orifice Plate Pressure Device	DN50~700 (2"~28")	PN1.6~16 (class150~900)	-46~121	/
Under Ground Slab Gate Valve	DN50~700 (2"~28")	PN1.6~16 (class150~900)	-29~121	(Patent Products) HOV, BGO
Non-rising Stem Slab Gate Valve With or Without Guiding Hole	DN50~700 (2"~28")	PN1.6~10 (class150~600)	-46~250	HOV,AOV,MOV
Double Acting Throttle & Globe Valve	DN20~250 (3/4"~10")	PN1.6~16 (class150~900)	-29~121	HOV
Valve Case Type Drain Valve	DN20~250 (3/4"~10")	PN1.6~16 (class150~900)	-29~121	HOV
Under Ground PE Ball Valve	DN50~200 (2"~8")	≤0.4	-60~60	(Patent Products) HOV

Note 1: Except underground PE ball valve, all the other valves mentioned above are of non-sulphur resistant type, sulphur resistant type, and high sulphur resistant type.

Note 2: Abbre. Explanation

MOV: Motor Operated Valve

HOV: Handwheel Operated Valve,

BGO: Bevel Gear Operated Valve,

AOV: Actuators Operated Valve (Electric, pneumatic, hydraulic, etc various actuators upon request)



★ MAJOR BUSINESS

Our company is the first class member of valve suppliers net of CNPC, SINOPEC and CNOOC, our products are widely used in China mayor oil & gas field, like Sichuan Oil & Gas Field, Xinjiang Oil & Gas Field, Qinghai Oil & Gas Field, Changqing Oil & Gas Field, Daqing Oil & Gas Field, North China Oil & Gas Field, Jianguo Oil & Gas Field, Shengli Oil & Gas Field and West China Petroleum Corporation, etc.

The main products that we supplied to: National Pivot Project – West to East Gas Transportation Pipeline Project, China to Russian Crude Oil Pipeline Project , Lanzhou-Zhengzhou-Changqing Oil Transportation Pipeline Project, Daqing – Tieling Pipeline Capacity Expansion Rebuilding Project and Oil Tank, Shilan-Huiyin Oil Transportation Pipeline Project, Shangxi-Beijing Gas Transportation Pipeline Project, Zhongxian-Wuchang Gas Transportation Pipeline Project, Shebei-Ningxia-Lanzhou Gas Transportation Pipeline Project, Cangzhou-Zibo Gas Transportation Pipeline Project, Shanshan-Urumqi Gas Transportation Pipeline Project, Qinghai Shebi-Geermu Gas Transportation Pipeline Project, and gas transportation & distribution project of the coal gas company in mayor cities in China, such as Beijing, Kunming, Xi'an, Chongqing, Guangzhou, Chengdu, etc. We also supplied valves to **Viramgam Kandla Pipeline Project of Indian Oil Corporation Limited, Kazakhstan Hope Oil Field Oil Transfer Station of Xinjiang Petroleum Engineering Construction Co., Ltd. Niger Agadem Field Crude Oil Pipeline Project and Chad Permit H Crude Oil Transportation Pipeline Project of China Petroleum Pipeline Material And Equipment Corporation.**

★ COMPANY CULTURE

Our Business Intention ——Quality Creates Brand, Innovation Accelerates Development, Management Rewards Yield, Performance Pursues Excellence

Our Goal —— Contributing The Inexhaustible Power To The Customers

Our Quality Intention —— No Defect, Excellent Quality

Our Consciousness Idea —— Crisis, High-quality Products, and Beyond

We sincerely thank our customers and friends for your persistent supply and trust. Face to the future, we purpose to improve the product quality and strengthen the cooperation with the customers with more zealous service and agiler system to make the bigger contribution to the construction of oil and gas industries at home and abroad.



Chengdu Holy Valve is one of the biggest and best professional valve manufacturers and measurement systems in China. We are the leading provider of valves and measurement systems to oil and gas industry and general industrial applications. We commit to supply products with excellent quality and suitable price to our customers to enhance our customers' working site safety, system stability and convenient operation. The valves provided by our company have enough safety design, service life and reliable operation.



● ALLPICABLE STANDARDS AND CODES

Chengdu Holy ball valve is designed mainly in accordance with API 6D standards, also in ANSI, DIN, BS, and GB standards. The following list contains the most important applicable standards. Chengdu Holy valves may be produced in accordance with other standards upon customers' request.

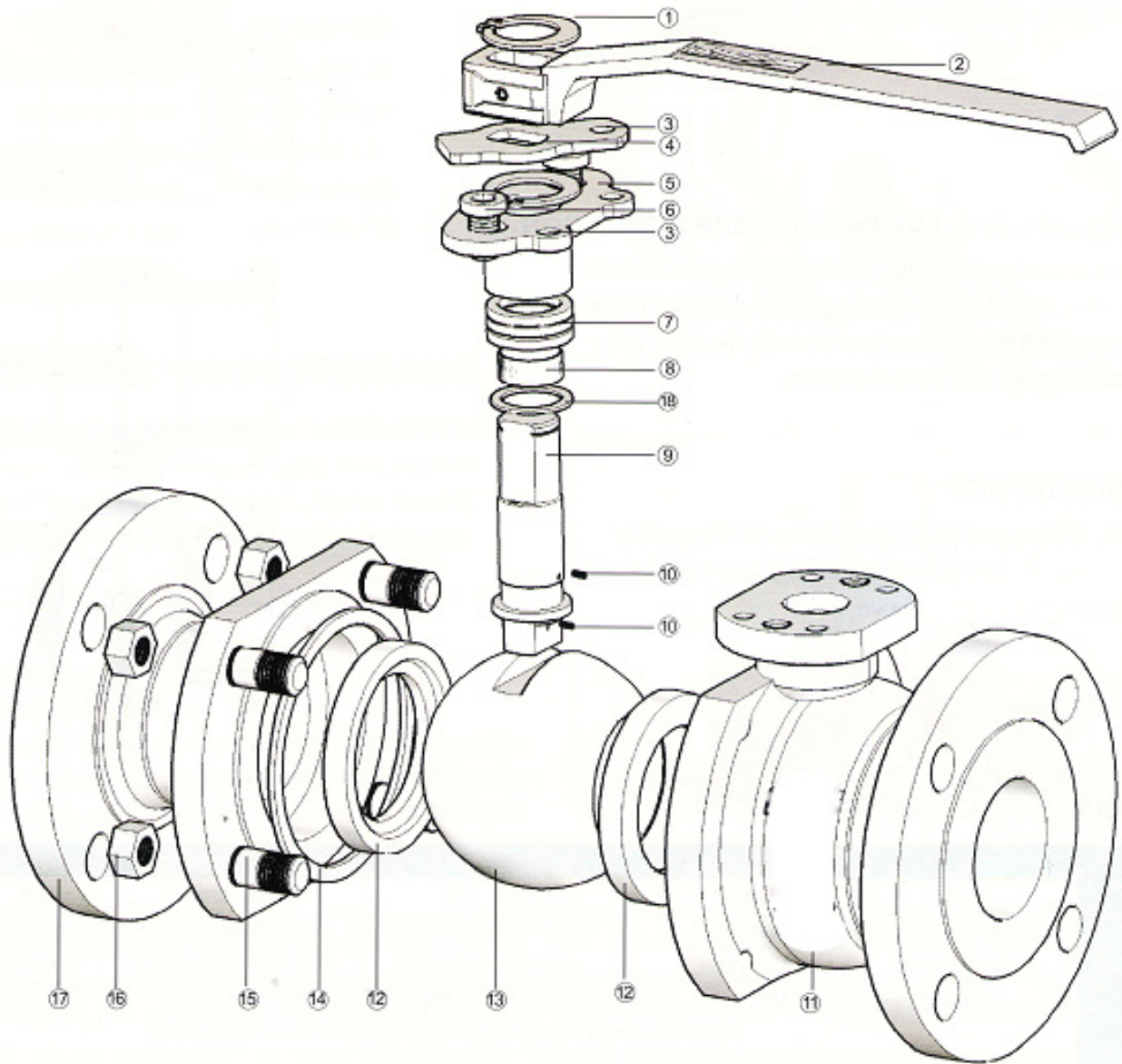
ANSI-American National Standard Institute	API-American Petroleum Institute
ASME B 1.20.1 Pipe Threads, General Purpose	API 6D Specification For Pipeline Valves
ASME B 16.5 Steel Pipe Flanges And Flanged Fittings	API 6A Specification For Wellhead Valves
ASME B 16.10 Face-To-Face And End-To-End Dimensions Of Ferrous Valves	API 6FA Specification For Fire Testing Of Valves
ASME B 16.25 Butt Welding Ends	API 607 Fire Test For Soft Seated Quarter-Turn Valves
ASME B 16.34 Steel Valves-Flanged And Butt Welding Ends	API Q1 Quality Program
ASME B 16.47 Larger Diameter Steel Flange (26"~60")	API 5B EUE External Upset Tubing Threads
ASME B31.3 Technics Pipeline	API 598 Valve Inspection And Test
ASME Boiler And Pressure Vessel Code, Section VIII, Division 1, Rules For Construction Of Pressure Vessel	NACE National Association Of Corrosion Engineers
	MR0175 Sulfide Stress Cracking Resistant Metallic Materials For Oil Field Equipment (Superceded By ISO15156)
MESC SPE 76/001 Surface Roughness Degree Of Flange Gasket Interface	MSS-Manufacturers Standardization Society
MESC SPE 77/130 Ball Valve To API SPEC.6D	
MESC SPE 77/302 Material Acceptance Requirements For Valves In General Service	MSS SP-6 Standard Finishes For Contact Faces Of Pipe Flanges And Connecting-End Flanges Of Valves And Fittings
MESC SPE 77/315 Electroless Nickel Plating	MSS SP-25 Standard Marking System For Valves, Fittings, Flanges And Unions
British Standard	MSS SP-55 Quality Standard For Steel Castings
BS 1503 Pressure-containing Forged Parts (including semi finished) specification	MSS SP-45 Bypass, And Drain Connections Standard
BS 6755-2 Valve Test, Section 2: Fire test requirement Specification	MSS SP-53 Cast Steel Quality Standard Of Valve, Flange, Fitting And Pipeline Accessories --- Magnetic Particle Testing
BS 5146 Pressure Test	MSS SP-54 Cast Steel Quality Standard Of Valve, Flange, Fitting And Pipeline Accessories—Radiographic Testing
BS 1560 End flange dimensions and flange gasket facing	MSS SP-93 Cast Steel And Forged Steel Quality Standard Of Valve, Flange, Fitting, And Pipeline Accessories ---- Liquid Penetrant Testing
ISO9001-International Organization for Standardization	PREN 12116 Penetrant Testing Industry Valve, Executive Institution Accessories Of Quarter – Turn Valves
ISO 9001 Quality Systems - Model For Quality Assurance In Design, Development, Production, Installation And Servicing	
ISO 15156 Materials For Use In H ₂ S Containing Environment In Oil & Gas Production	DEP 31.38.01.11-GEN Standard Of Pipeline Quarter-Turn Open / Close Executive Institution
ISO 5221-1 Executive Institution Accessories Of Quarter-Turn Valves, Section 1: Flange Dimension	DEP 31.40.70.30-GEN
ISO 5221-2 Executive Institution Accessories Of Quarter-Turn Valve, Section2: Capability Character Of Flange And Connector	DEP 32.36.01.17-GEN Control Valve' Choice, Specification And Standard
ISO 5221-3 Executive Institution Accessories Of Quarter-Turn Valves, Section3: The Dimension Of Drive Parts	
ISO 10479 Valve Test: Fire-Proof Test Requirement	

Floating Ball Valve

Chengdu Holy Valve & Complete Equipment Co., Ltd.



● API 6D FLOATING BALL VALVE CONSTRUCTION



Item	Part Name	Item	Part Name	Item	Part Name
1	Snap ring	7	Packing	13	Ball
2	Lever	8	Bearing	14	Gasket
3	Locking hole	9	Stem	15	Bolt
4	Limited plate	10	Antistatic spring	16	Nut
5	Packing gland	11	Body	17	Bonnet
6	Gland bolt	12	Seat	18	Thrust washer

Chengdu Holy floating ball valve is manufactured in according to API 6D, BS 5351 or API 608 standards, the construction is side entry, full or reduced bore port, or one piece design as demand, the normal operator is lever or gear box, the valves can be made in flanged, butt welding or thread.



● TECHNICAL SPECIFICATION

Design standard	API 6D, API 608, BS 5351
Face to face	ASME B16.10
Flanged end	ASME B16.5
Anti-fire standard	API 607
Inspection standard	API 6D, API 598, BS5146



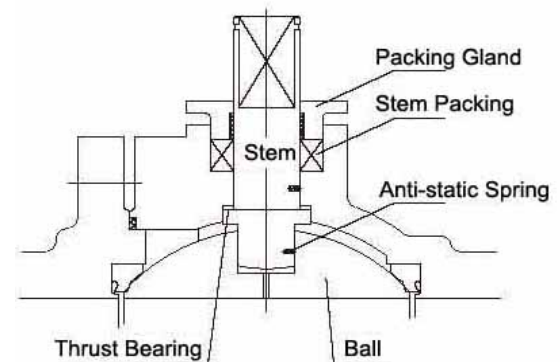
● FLOATING BALL VALVE FEATURES

● Blow out-proof stem construction

The lower end of stem is terraced and is installed from the inside of the valve body. This construction insures a blow out proof stem and metal to metal in case of fire.

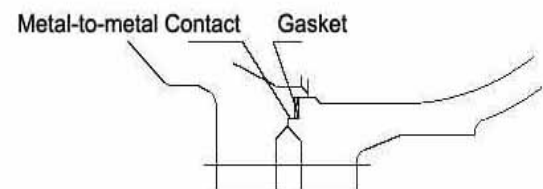
● Antistatic design

During operation of valve, static electricity may accumulate on the ball. The special antistatic device can discharge the static electricity during opening and closing of the valve.



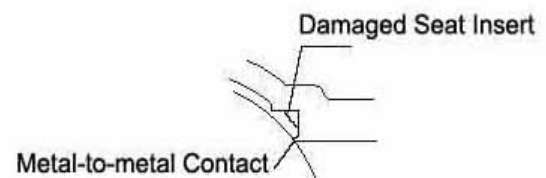
● Fire-safe design: API607/API6FA

Each possible leaking part between Ball and Body, Middle flange, Stem and body are designed for metal to metal contact which conforms to the fire-proof requirements of API 6FA and API 607. In case of extreme fire-proof conditions, the packing and gasket material shall be flexible graphite to insure zero leakage.



● Advanced and exclusive seat design

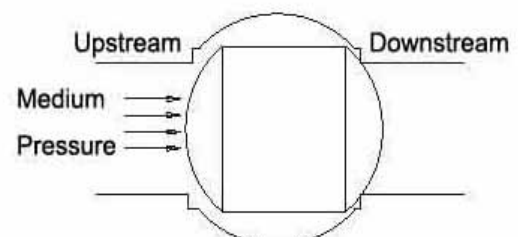
With many years of Ball Valve manufacturing experience and advanced technology from abroad, the cone sealing surface developed, makes the sealing more reliable. Our designs are available with various types of seat materials that offer low friction and low operational torque.



● Middle flange with no leakage design

(Body and Cap connection)

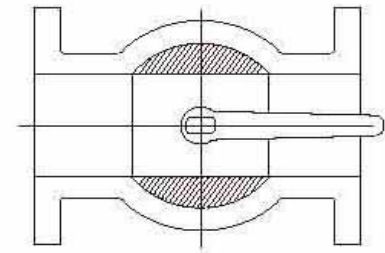
Body and Cap connection are sealed by gaskets. To prevent leakage from fire, high temperature or vibrations, metal to metal sealing between the body and cap is maintained.





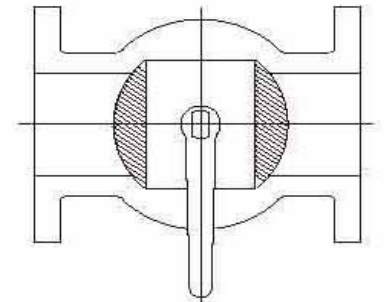
- **Wrench with Open/Close indication**

When the handle (lever) is on the same horizontal line with the pipe, this indicates the valve is at open position. When the handle (lever) is on the vertical line with the pipe, this indicates the valve is at closed position.



- **Locking Device**

The valve is equipped with locking holes for the lever in the full open and full closed position, to prevent accidental opening and closing of the valve.



- **Main material of parts (Casting Steel Ball Valve)**

Part No.	Part Name	Carbon steel	Low Temp. Steel	Stainless Steel
1	Body & Bonnet	WCB	LCB	CF8M/CF3M
2	Ball	A105+ENP	LF2+ENP	F304/F316
3	Stem	A182 F6a/ANSI 4140	LF2+ENP	F304/F316
4	Seat	PTFE/PPL/PEEK/EPDM/VITON/DEVLON		
5	Packing	PTFE/Graphite		
6	Gasket	PTFE/Graphite		
7	Bearing	PTFE/PPL		
8	Bolt	A193-B7/B7M	A320-L7	A193-B8/B7M
9	Nut	A194-2H/2HM	A194-4	A194-8/2HM
10	Handle	Carbon steel	Carbon steel	Carbon steel

Note: The above material conforms to ASME standards, and the material will be subject to the working condition or customers requirements.





● LOW TEMPERATURE LIMITS

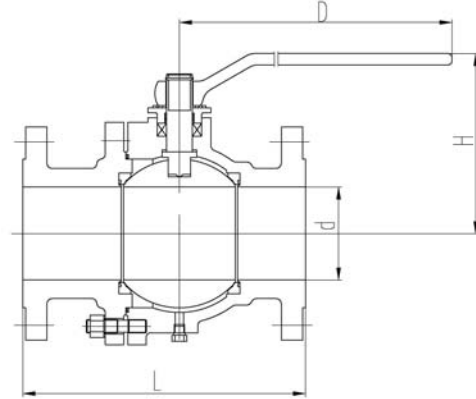
Body Material	°F	°C
WCB	-20	-29
LCB	-50	-46
CF8M	-50	-46

Seal Material	°F	°C
Teflon (PTFE)	-20	-46
VITON	-50	-29
PEEK	-50	-46

Seal Material	°F	°C
Devlon V	-50	-46
HNBR	-50	-46
Nylon	-29	-34

● FLOATING BALL VALVE DIMENSIONS

FULL BORE TYPE



Class 150 (unit: mm)

DN	1/2"	3/4"	1"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"	8"
d	13	19	25	38	49	62	74	100	125	150	201
L	108	117	127	165	178	190	203	229	356	394	457
H	63	75	95	115	120	155	165	200	220	295	355
D	130	130	160	230	230	400	400	650	1050	1050	1410
Wt (kg)	2.5	3	5	7	10.5	16	23	33	58	68	108

Class 300 (unit: mm)

DN	1/2"	3/4"	1"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"	8"
d	13	19	25	38	49	62	74	100	125	150	201
L	140	152	165	191	216	241	283	305	381	403	502
H	63	75	95	115	120	155	165	200	220	295	355
D	130	130	160	230	230	400	400	650	1050	1050	1410
Wt (kg)	3	4	6	11	14.8	23.5	36	41.4	70	105	145

Class 600 (unit: mm)

DN	1/2"	3/4"	1"	1 1/2"
d	13	19	25	38
L(RF)	165	190	216	241
H	105	108	130	135
D	160	160	230	230
Wt (kg)	3.5	6	8	13

Class 900/1500 (unit: mm)

DN	1/2"	3/4"	1"	1 1/2"
d	13	19	25	38
L(RF)	216	229	254	305
H	115	115	122	157
D	160	230	230	400
Wt (kg)	10	11	14	16

Chengdu Holy valve supplies various floating ball valves, such as one piece, 2 pieces and 3 pieces in construction, and with flanges or screwed thread.



● ONE-PIECE FLOATING BALL VALVE

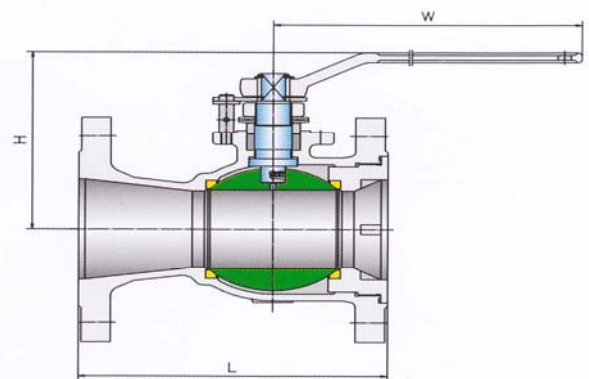


● Main Materials Of Parts For One Piece Ball Valve

Part No.	Part Name	Carbon steel	Low Temp. Steel	Stainless Steel
1	Body & Bonnet	A105	LF2	F304
2	Ball	A105+ENP	LF2+ENP	F304/F316
3	Stem	A182 F6a/ANSI 4140	LF2+ENP	F304/F316
4	Seat	PTFE/PPL/PEEK/EPDM/VITON/DEVLON		
5	Packing	PTFE/Graphite		
6	Gasket	PTFE/Graphite		
7	Bearing	PTFE/PPL		
8	Bolt	A193-B7/B7M	A320-L7	A193-B8/B7M
9	Nut	A194-2H/2HM	A194-4	A194-8/2HM
10	Handle	Carbon steel	Carbon steel	Carbon steel

● Main Standards:

Design standard	API 6D, API 608, BS 5351
Face to face	ASME B16.10
Flanged end	ASME B16.5
Anti-fire standard	API 607
Inspection standard	API 6D, API 598, BS5146



● One-Piece Floating Ball Valve Dimensions

Class 150 (unit: mm)

DN	1/2"	3/4"	1"	1 1/2"	2"	3"	4"	6"	8"	10"
Ball bore	10	12.5	17	30	38	58	76	114	144	187
L	108	117	127	165	178	203	229	267	292	330
H	103	106	115	135	120	155	170	260	300	355
W	130	130	130	140	250	250	400	750	1050	1500

Class 300 (unit: mm)

DN	1/2"	3/4"	1"	1 1/2"	2"	3"	4"	6"	8"	10"
Ball bore	10	12.5	17	30	38	58	76	114	144	187
L	140	152	165	190	216	283	305	403	419	457
H	103	106	115	135	120	155	170	260	300	355
W	130	130	130	140	250	250	400	750	1050	1500

Trunnion Mounted Ball Valve(Side Entry)

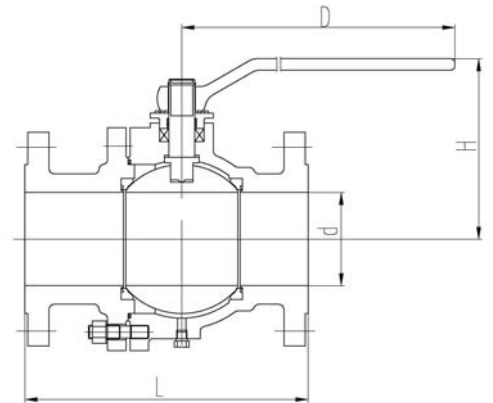
Chengdu Holy Valve & Complete Equipment Co., Ltd.



● FORGED STEEL BALL VALVE

● Main Standards:

Design standard	API 6D, API 608, BS 5351
Face to face	ASME B16.10
Flanged end	ASME B16.5
Anti-fire standard	API 607
Inspection standard	API 6D, API 598, BS5146



The forged floating ball valve is designed in 2-pieces or 3-piece construction, we supply the valves with flanged, butt welding or thread ends.

● Main material of parts (Forging Steel Ball Valve)

Part No.	Part Name	Carbon steel	Low Temp. Steel	Stainless Steel
1	Body & Bonnet	A105	LF2	F304
2	Ball	A105+ENP	LF2+ENP	F304/F316
3	Stem	A182 F6a/ANSI 4140	LF2+ENP	F304/F316
4	Seat	PTFE/PPL/PEEK/EPDM/VITON/DEVLON		
5	Packing	PTFE/Graphite		
6	Gasket	PTFE/Graphite		
7	Bearing	PTFE/PPL		
8	Bolt	A193-B7/B7M	A320-L7	A193-B8/B7M
9	Nut	A194-2H/2HM	A194-4	A194-8/2HM
10	Handle	Carbon steel	Carbon steel	Carbon steel



Our company reserves the right to change the contents of this catalogue without notice.



● DESIGN FEATURE

● Upstream Sealing Bi-directional Valve

Advanced preloading spring floating seat rings and upstream sealing design principle to satisfy reliable sealing whatsoever the valve is under low pressure, high pressure or vacuum. Each valve has two seat rings and two sides can be sealed, no direction limitation required. The valve is a kind of bi-direction valve that whichever side can be used as upstream side.

● Double Block & Bleed

The flow can be complete blocked when valve is at full close position. At the full close and full open position, the deposition contamination or media in valve body cavity can be bled also. And if contamination is bled regularly, the damage from contamination to valve sealing surface can be reduced and valve service life can be extended.

Double Block: Trunnion Ball Valves are made with pre-loading spring floating seat rings, the service flow can be fully blocked by upstream and downstream seat rings no matter valve is in fully open or fully close position.

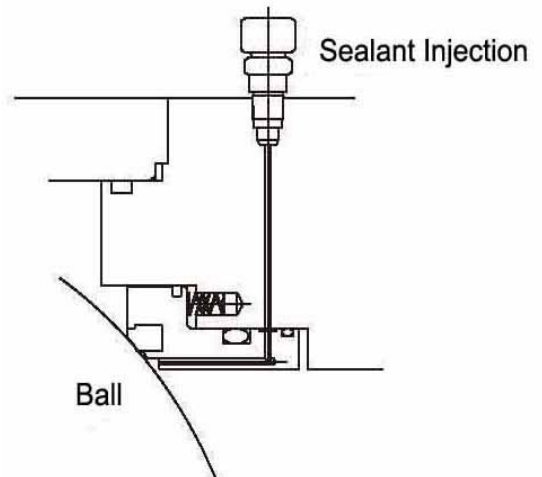
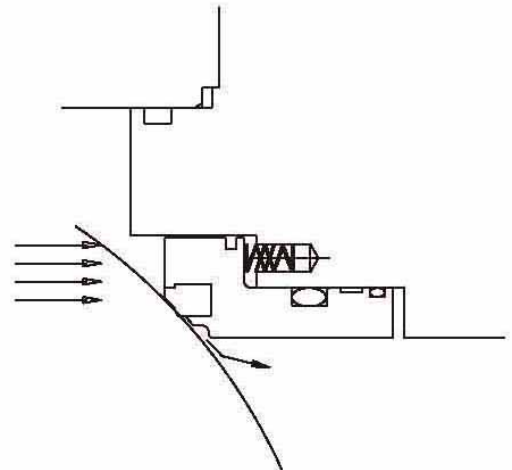
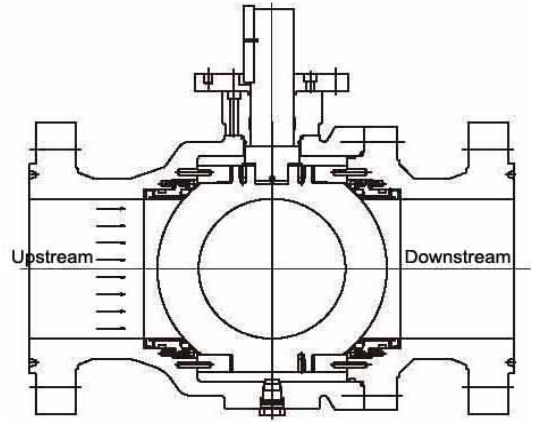
Double Bleed: If the pressure of the body cavity unusually rises up, the trunnion valve can automatically relieve the pressure by compressing springs in the spring pre-tightening seat package. It is very important for the valve safety during transporting the liquid medium.

● Full Bore or Reduced Bore

Full bore or reduced bore is chose upon request. Port dimension of full bore size can satisfy the requirement of API 6D standard, low flow resistance, suitable for piggable.

● Fire Proof Design API607/API6FA

When the non-metal seat are softened and burnt in case of the fire or unusual temperature increase, the seat retainer, under the duty of the spring, will touch with the ball and form a metal -to-metal contact, which can prevent internal leak: meanwhile, the middle flange and the upper part and lower part of the stem will form a metal-to-metal contact which can prevent external leak and conform to API6FA or API607.





- **Emergency Sealant Injection Sealing**

Sealant can be injected through emergency sealant injection to realize emergency sealing after damage of seat and stem sealing systems.

- **Stem Extension**

Valve stem can be extended against the requirement of assembling or operation and the size of the extended stem shall be upon the request of customers. The ball valves with extended stem are especially suitable for occasions of pipelines under ground for city coal gas.

- **Easy Operation**

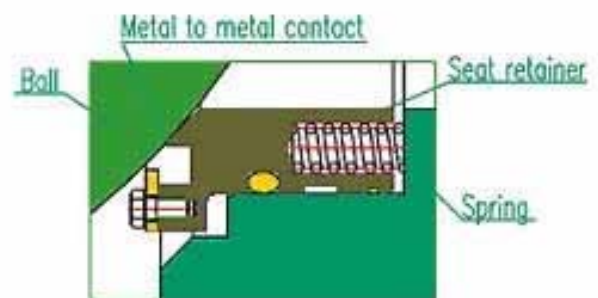
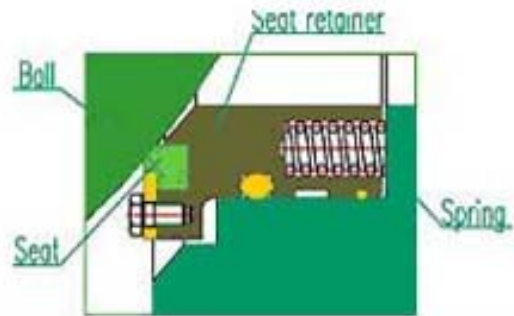
TEFLON seats and stem bearings with low friction and good self-lubrication performance to reduce the valve operation torque, so even if no sealing lubrication, the valve can also be limberly operated for long period.

- **Optional Operation Mode**

Handle operated, worm gear operated, pneumatic-hydraulic operated, motor operated, pneumatic operated mode can be chose upon request.

- **Inner Support Structure**

Valve ball is hided in valve body to reduce the possibility of external leakage, so sealing and support is more reliable.

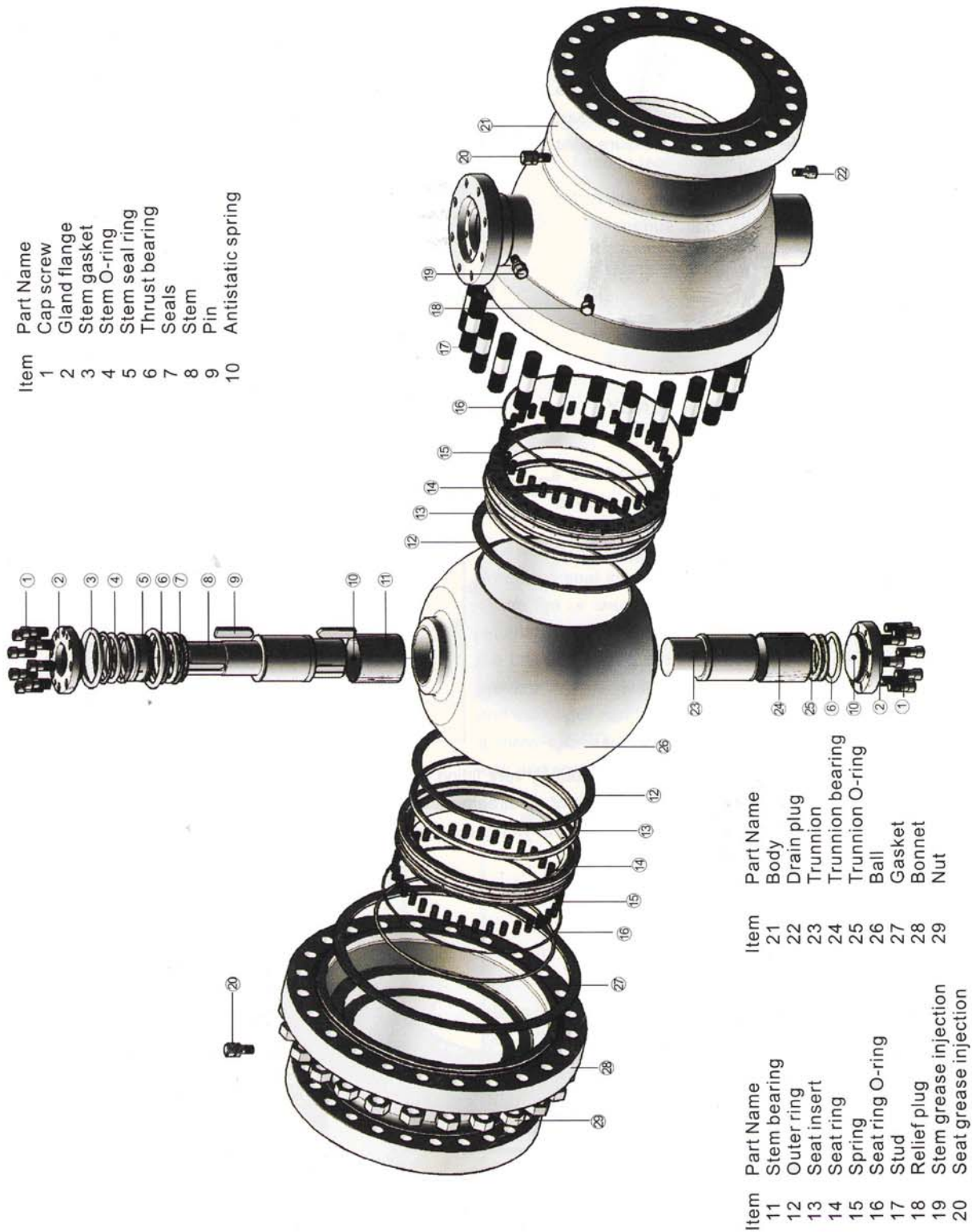


Trunnion Mounted Ball Valve (Side Entry)

Chengdu Holy Valve & Complete Equipment Co., Ltd.



API 6D Construction in 2-Pieces Design



Item	Part Name
1	Cap screw
2	Gland flange
3	Stem gasket
4	Stem O-ring
5	Stem seal ring
6	Thrust bearing
7	Seals
8	Stem
9	Pin
10	Antistatic spring

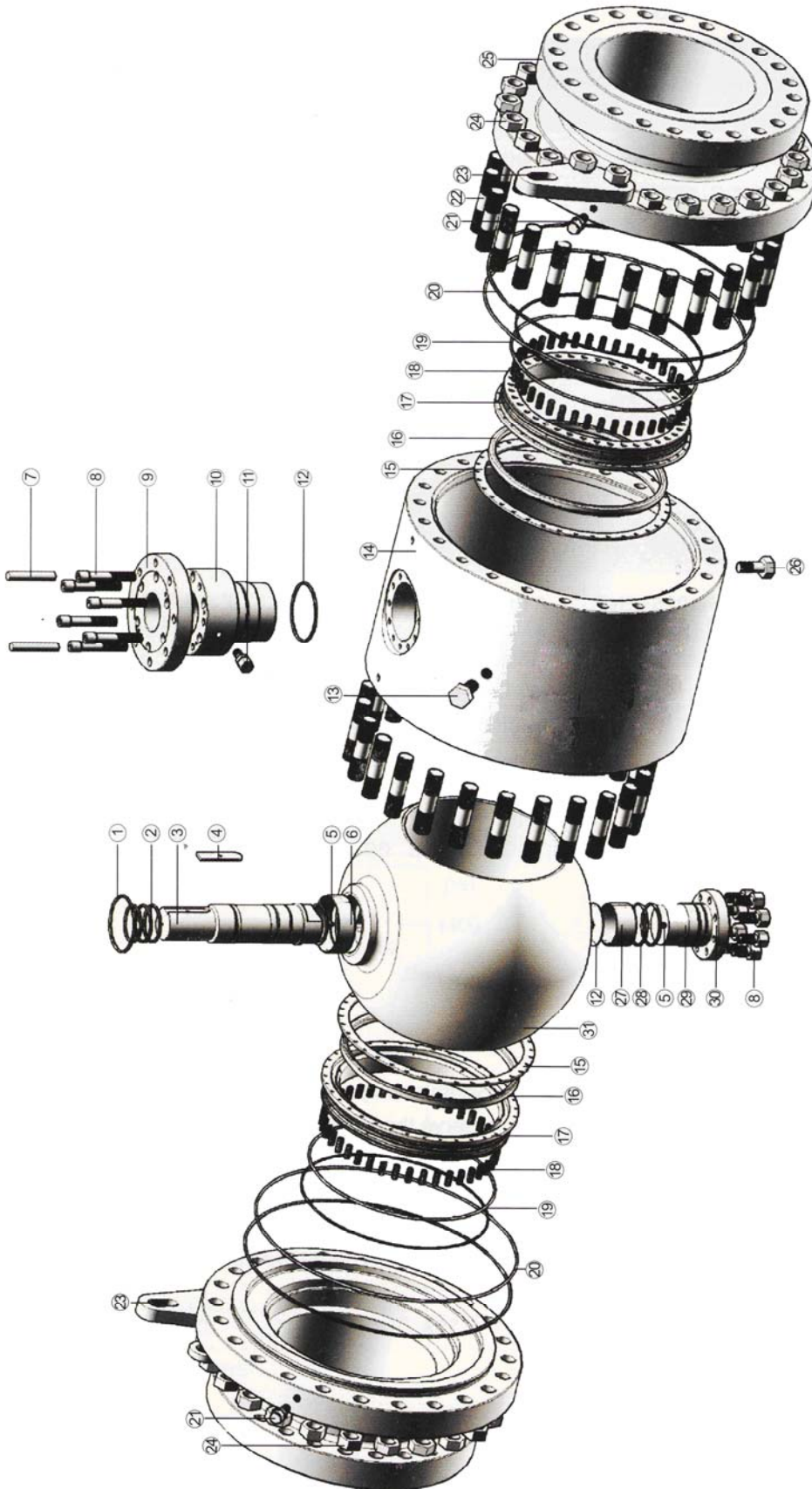
Item	Part Name
11	Stem bearing
12	Outer ring
13	Seat insert
14	Seat ring
15	Spring
16	Seat ring O-ring
17	Stud
18	Relief plug
19	Stem grease injection
20	Seat grease injection
21	Body
22	Drain plug
23	Trunnion
24	Trunnion bearing
25	Trunnion O-ring
26	Ball
27	Gasket
28	Bonnet
29	Nut

Trunnion Mounted Ball Valve (Side Entry)

Chengdu Holy Valve & Complete Equipment Co., Ltd.



API 6D Construction in 3-Pieces Design



Item	Part Name	Item	Part Name	Item	Part Name
1	Stem gasket	11	Stem grease	21	Seat grease injection
2	Stem O-ring	12	Thrust bearing	22	Stud
3	Stem	13	Relief plug	23	Lift lug
4	Pin	14	Body	24	Nut
5	Antistatic spring	15	Outer ring	25	Bonnet
6	Stem bearing	16	Seat insert	26	Body drain plug
7	Alignment pin	17	Seat ring	27	Trunnion bearing
8	Cap screw	18	Spring	28	Trunnion O-ring
9	Adapter plate	19	Seat ring O-ring	29	Trunnion
10	Gland	20	Gasket	30	Mounting plate
				31	Ball

Trunnion Mounted Ball Valve(Side Entry)

Chengdu Holy Valve & Complete Equipment Co., Ltd.

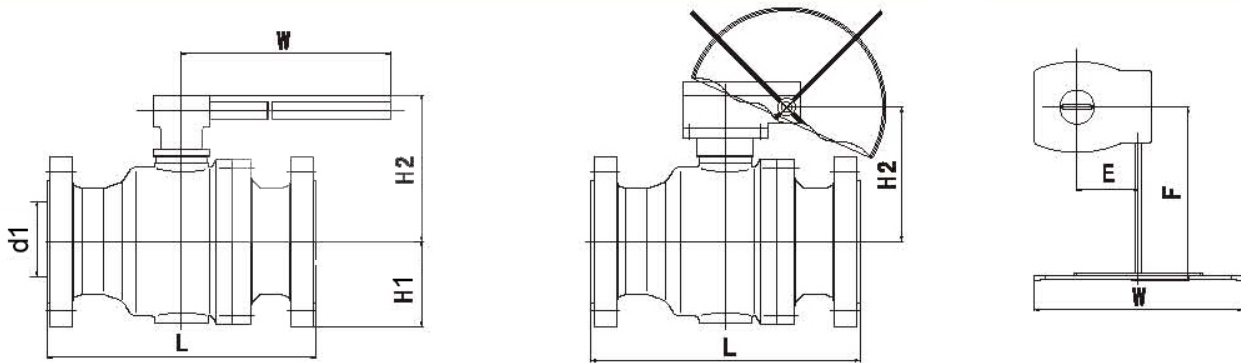


● CASTING STEEL TRUNNION MOUNTED BALL VALVE

● Main Standards:

Design standard	API 6D
Face to face	ASME B16.10
Flanged end	ASME B16.5, ANSI B 16.47
Butt-welded end	ASME B16.25
Anti-fire standard	API 607
Inspection standard	API 6D, API 598

Normal body materials: WCB, LCB, LCC, CF8(M), CF3(M)



● Full Bore Type Construction Dimensions

Class 150 (Unit: mm)

DN	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"	28"	
d1	49	62	74	100	125	150	201	252	303	334	385	436	487	589	684	
L	RF	178	191	203	229	356	394	457	533	610	686	762	864	914	1067	1245
	BW	216	241	283	305	381	457	521	559	635	762	838	914	991	1143	1346
H1	102	114	127	152	184	219	273	360	395	430	470	550	580	700	800	
H2	107	125	152	178	300	330	398	495	580	625	670	698	840	1050	1100	
E	/	/	/	/	/	/	116	116	171	171	257	257	257	150	83	
F	/	/	/	/	/	/	350	350	420	420	400	400	400	410	650	
W	230	400	400	650	1050	1050	600	600	800	800	800	800	800	800	800	
Wt(kg)	12	16	22	35	58	74	205	322	460	576	864	1280	1600	3540	4500	

Class 300 (Unit: mm)

DN	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"	28"	
d1	49	62	74	100	125	150	201	252	303	334	385	436	487	589	684	
L	RF	216	241	283	305	381	403	502	568	648	762	838	914	991	1143	1346
	BW	216	241	283	305	381	457	521	559	635	762	838	914	991	1143	1346
H1	102	114	127	152	184	219	273	360	395	430	470	550	580	700	800	
H2	107	125	152	178	300	330	398	495	580	625	670	698	840	1050	1100	
E	/	/	/	/	/	/	116	116	171	171	257	257	257	150	83	
F	/	/	/	/	/	/	350	350	420	420	400	400	400	410	650	
W	230	400	400	650	1050	1050	600	600	800	800	800	800	800	800	800	
Wt(kg)	15	14	30	56	87	118	256	370	533	640	1030	1542	2100	4200	5300	

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Trunnion Mounted Ball Valve (Side Entry)

Chengdu Holy Valve & Complete Equipment Co., Ltd.



Class600 (Unit: mm)

DN	2"	2 1/2"	3"	4"	6"	8"	10"	12"	14"	16"	20"	24"	28"	
d1	49	62	74	100	125	150	201	252	303	334	487	589	684	
L	RF&BW	292	330	356	432	559	660	787	838	889	991	1194	1397	1549
	RJ	295	333	359	435	562	664	791	841	892	994	1200	1407	1562
H1	114	124	133	159	250	294	395	445	500	530	660	800	900	
H2	108	155	197	235	300	374	445	512	550	615	810	1010	1180	
E	/	/	/	/	116	171	171	257	257	257	150	83	123	
F	/	/	/	/	350	420	420	400	400	400	410	650	735	
W	400	650	650	1050	600	800	800	800	800	800	800	800	800	
Wt(kg)	35	38	55	102	232	390	710	960	1700	1970	3250	5800	6700	

Class 900 (Unit: mm)

DN	2"	2 1/2"	3"	4"	6"	8"	10"	12"	14"	16"	18"	20"	24"	
d1	49	62	74	100	150	201	252	303	322	373	423	471	570	
L	RF&BW	368	419	381	457	610	737	838	965	1029	1130	1219	1321	1549
	RJ	371	422	384	460	613	740	841	968	1038	1140	1232	1334	1569
H1	126	158	191	216	270	322	420	470	510	600	700	720	810	
H2	217	241	259	297	360	394	502	572	675	762	866	894	956	
E	/	/	/	/	/	116	116	171	171	257	257	257	150	
F	/	/	/	/	/	350	350	420	420	400	400	400	400	
W	650	600	600	600	800	800	800	700	700	700	700	700	700	
Wt(kg)	50	60	80	125	270	540	930							

Class 1500 (Unit: mm)

DN	2"	2 1/2"	3"	4"	6"	8"	10"	12"	14"	16"	18"	20"	24"
d1	49	62	74	100	144	192	239	287	315	360	406	454	546
L	RF&BW	368	419	470	546	705	832	991	1130	1257	1384	1537	2043
	RJ	371	422	473	549	711	841	1000	1146	1276	1407	1559	1972
H1	126	158	191	216	296	378	495	542	590	670	710	750	850
H2	217	241	259	297	365	475	578	696	761	831	900	950	1080
E	/	/	/	/	/	116	116	171	171	257	257	257	150
F	/	/	/	/	/	350	350	420	420	400	400	400	410
W	230	400	650	650	600	600	800	800	800	800	800	800	800
Wt(kg)	50	75	117	216	380	680							

Note:

The above parameter is only for full bore port, side entry, trunnion mounted ball valve, please inquiry if need the parameter of reduced bore port.

Trunnion Mounted Ball Valve (Side Entry)

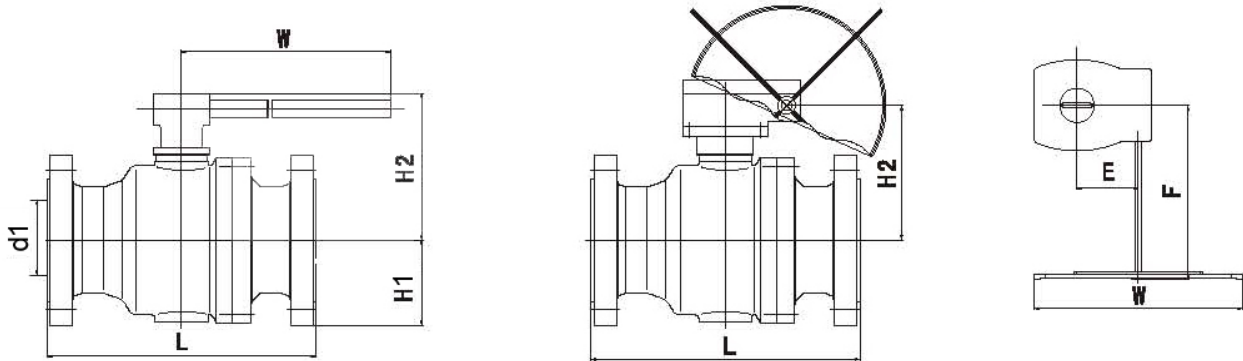
Chengdu Holy Valve & Complete Equipment Co., Ltd.



● FORGED STEEL TRUNNION MOUNTED BALL VALVE

● Main Standards:

Design standard	API 6D
Face to face	ASME B16.10
Flanged end	ASME B16.5, ANSI B 16.47
Butt-welded end	ASME B16.25
Anti-fire standard	API 607
Inspection standard	API 6D, API 598



Normal body materials: A105, LF2, F304, F316

● Full Bore Type Construction Dimensions

Class 150 (Unit: mm)

DN	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"	28"	
d1	49	62	74	100	125	150	201	252	303	334	385	436	487	589	684	
L	RF	178	191	203	229	356	394	457	533	610	686	762	864	914	1067	1245
	BW	216	241	283	305	381	457	521	559	635	762	838	914	991	1143	1346
H1	102	114	127	152	184	219	273	360	395	430	470	550	580	700	800	
H2	107	125	152	178	300	330	398	495	580	625	670	698	840	1050	1100	
E	/	/	/	/	/	/	116	116	171	171	257	257	257	150	83	
F	/	/	/	/	/	/	350	350	420	420	400	400	400	410	650	
W	230	400	400	650	1050	1050	600	600	800	800	800	800	800	800	800	
Wt(kg)	28	40	55	80	138	190	290	445	570	780	1520	2300	2500	3950	4700	

Class 300 (Unit: mm)

DN	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"	28"	
d1	49	62	74	100	125	150	201	252	303	334	385	436	487	589	684	
L	RF	216	241	283	305	381	403	502	568	648	762	838	914	991	1143	1346
	BW	216	241	283	305	381	457	521	559	635	762	838	914	991	1143	1346
H1	102	114	127	152	184	219	273	360	395	430	470	550	580	700	800	
H2	107	125	152	178	300	330	398	495	580	625	670	698	840	1050	1100	
E	/	/	/	/	/	/	116	116	171	171	257	257	257	150	83	
F	/	/	/	/	/	/	350	350	420	420	400	400	400	410	650	
W	230	400	400	650	1050	1050	600	600	800	800	800	800	800	800	800	
Wt(kg)	30	45	60	90	158	200	325	490	690	990	1810	2620	2860	4430	5500	

Trunnion Mounted Ball Valve (Side Entry)

Chengdu Holy Valve & Complete Equipment Co., Ltd.



Class600 (Unit: mm)

DN	2"	2 1/2"	3"	4"	6"	8"	10"	12"	14"	16"	18"	20"	24"
d1	49	62	74	100	150	201	252	303	322	373	423	471	570
L	RF&BW	292	330	356	432	559	660	787	838	889	991	1092	1397
	RJ	295	333	359	435	562	664	791	841	892	994	1095	1407
H1	93	120	128	145	265	315	355	400	420	475	530	575	657
H2	110	150	138	175	212	266	307	346	370	416	476	519	609
E	/	/	/	/	116	116	116	171	171	257	257	257	150
F	/	/	/	/	350	350	350	420	420	400	400	400	410
W	230	400	400	650	1050	600	800	800	800	800	800	800	800
Wt(kg)	34	48	65	125	245	505	640	910	1380	2250	3400	3850	4900

Class 900 (Unit: mm)

DN	2"	2 1/2"	3"	4"	6"	8"	10"	12"	14"	16"	18"	20"	24"
d1	49	62	74	100	150	201	252	303	322	373	423	471	570
L	RF&BW	368	419	381	457	610	737	838	965	1029	1130	1219	1549
	RJ	371	422	384	460	613	740	841	968	1038	1140	1232	1569
H1	126	158	191	216	270	322	420	470	510	600	700	720	810
H2	217	241	259	297	360	394	502	572	675	762	866	894	956
E	/	/	/	/	/	116	116	171	171	257	257	257	150
F	/	/	/	/	/	350	350	420	420	400	400	400	400
W	230	400	400	650	1050	600	800	800	800	800	800	800	800
Wt(kg)	45	60	73	135	360	650	930	1350	1890	3100	4300	4950	7100

Class 1500 (Unit: mm)

DN	2"	2 1/2"	3"	4"	6"	8"	10"	12"	14"	16"	18"	20"	24"
d1	49	62	74	100	144	192	239	287	315	360	406	454	546
L	RF&BW	368	419	470	546	705	832	991	1130	1257	1384	1537	2043
	RJ	371	422	473	549	711	841	1000	1146	1276	1407	1559	1972
H1	126	158	191	216	296	378	495	542	590	670	710	750	850
H2	217	241	259	297	365	475	578	696	761	831	900	950	1080
E	/	/	/	/	/	116	116	171	171	257	257	257	150
F	/	/	/	/	/	350	350	420	420	400	400	400	410
W	230	400	650	650	600	600	800	800	800	800	800	800	800
Wt(kg)	50	75	95	150	540	880	1360	1980	3100	4650			

Note:

The above parameter is only for full bore port, side entry, trunnion mounted ball valve, please inquiry if need the parameter of reduced bore port.

Trunnion Mounted Ball Valve(Top Entry)

Chengdu Holy Valve & Complete Equipment Co., Ltd.



● TOP ENTRY BALL VALVE

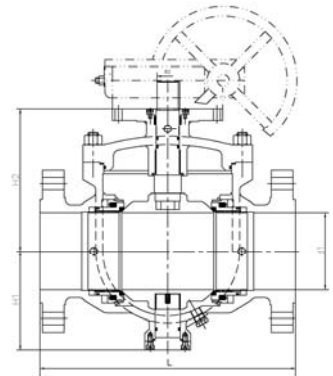
Integral type valve body design, top entry pivot support. The ball is fitted into the valve body from the top, so repair, like replace of stem, ball, should be easy to finished in situ condition.

● Materials of parts

Parts No.	Parts Name	Materials		
		Carbon Steel	Low Temp. Steel	Stainless Steel
1	Body	ASTM A216-WCB	ASTM A352-LCB/LCC	ASTM A351-CF8/CF8M
2	Bonnet	ASTM A216-WCB	ASTM A352-LCB/LCC	ASTM A351-CF8/CF8M
3	Nut	ASTM A194-2H/2HM	ASTM A194 4	ASTM A194-2HM/8
4	Bolt	ASTM A193-B7/B7M	ASTM A320 L7	ASTM A193-B7M/B8
5	Gasket	304+PTFE	304+PTFE	304+PTFE
6	O-ring	VITON	VITON	VITON
7	Spring	INCONELX-750	INCONELX-750	INCONELX-750
8	Seat ring	ASTM A105	ASTM A182 F304/F316	ASTM A182 F304/F316
9	Seat insert	PTFE/PPL/PEEK/EPDM/VITON/DEVLON		
10	Ball	ASTM A182-F6a	ASTM A182-F304	ASTM A182 F304/F316
11	Stem bearing	304+PTFE	304+PTFE	304+PTFE

● Main Standards:

Design standard	API 6D, BS 5351
Face to face	ASME B16.10
Flanged end	ASME B16.5, ANSI B 16.47
Butt-welded end	ASME B16.25
Anti-fire standard	API 607
Inspection standard	API 6D, API 598



Class 150 Full Bore

DN (inch)	d1	H2	H1	L		Wt (kg)
				BW	RF	
3	74	240	115	356	356	43
4	100	255	125	432	432	65
6	150	305	185	559	559	115
8	201	320	215	660	660	220
10	252	380	275	787	787	890
12	303	420	330	838	838	1230
14	334	450	360	889	889	1530
16	385	485	420	991	991	2040
18	436	625	450	1092	1092	3060
20	487	700	490	1194	1194	4050
24	589	755	580	1397	1397	6750
28	684	850	680	1549	1549	7100
30	735	900	730	1651	1651	8500
32	779	1000	790	1778	1778	10070
36	874	1150	890	2083	2083	12070
40	976	1250	970	2330	2330	14025
48	1166	1530	1160	2778	2778	30390
52	1261	1670	1255	3000	3000	33675

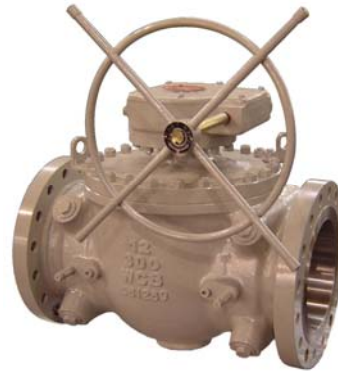
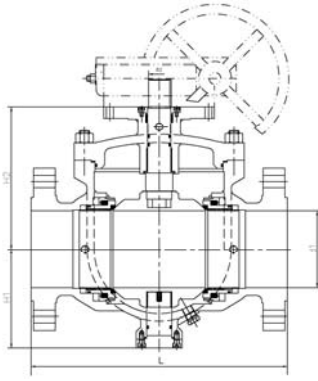
Class 300 Full Bore

DN (inch)	d1	H2	H1	L		Wt(kg)
				BW	RF	
3	74	240	115	356	356	48
4	100	255	125	432	432	74
6	150	305	185	559	559	122
8	201	320	215	660	660	260
10	252	380	275	787	787	945
12	303	420	330	838	838	1305
14	334	450	360	889	889	1620
16	385	485	420	991	991	2160
18	436	625	450	1092	1092	3240
20	487	700	490	1194	1194	4050
24	589	755	580	1397	1397	6750
28	684	850	680	1549	1549	7500
30	735	900	730	1651	1651	9000
32	779	1000	790	1778	1778	10660
36	874	1150	890	2083	2083	12780
40	976	1250	970	2330	2330	14850
48	1166	1530	1160	2778	2778	32175
52	1261	1670	1255	3000	3000	35650

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Trunnion Mounted Ball Valve(Top Entry)

Chengdu Holy Valve & Complete Equipment Co., Ltd.



Class 150 Reduced Bore

DN (inch)	d1	H2	H1	L		Wt(kg)
				BW	RF	
4x3	74	240	115	432	432	50
6x4	100	255	125	559	559	75
8x6	150	305	185	660	660	130
10x6	150	305	185	787	787	145
10x8	201	320	215	787	787	235
12x8	201	320	215	838	838	260
12x10	252	380	275	838	838	1135
14x10	252	380	280	889	889	1230
14x12	303	420	330	889	889	1565
16x12	303	420	330	991	991	1630
16x14	334	450	360	991	991	1945
18x14	334	450	360	1092	1092	2025
20x16	385	485	420	1194	1194	2590
24x20	487	700	490	1397	1397	4860
28x24	589	765	580	1549	1549	8100
30x24	589	765	580	1651	1651	8775
32x28	684	850	680	1778	1778	9020
36x30	735	900	730	2083	2083	10800
40x36	874	1150	890	2330	2330	15335
48x40	976	1250	970	2778	2778	17820
52x48	1166	1530	1160	3000	3000	30610
56x52	1261	1470	1255	3230	3230	42780

Class 300 Reduced Bore

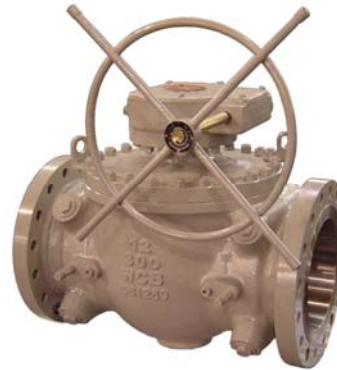
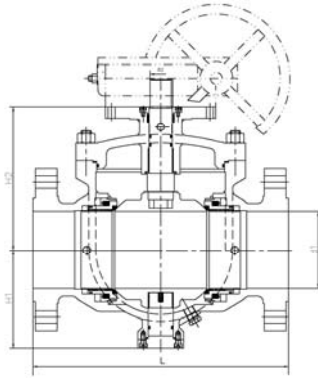
DN (inch)	d1	H2	H1	L		Wt(kg)
				BW	RF	
4x3	74	240	115	432	432	50
6x4	100	255	125	559	559	75
8x6	150	305	185	660	660	130
10x6	150	305	185	787	787	145
10x8	201	320	215	787	787	235
12x8	201	320	215	838	838	260
12x10	252	380	275	838	838	1070
14x10	252	380	280	889	889	1160
14x12	303	420	330	889	889	1565
16x12	303	420	330	991	991	1695
16x14	334	450	360	991	991	1835
18x14	334	450	360	1092	1092	1990
20x16	385	485	420	1194	1194	2450
24x20	487	700	490	1397	1397	4590
28x24	589	765	580	1549	1549	7650
30x24	589	765	580	1651	1651	8290
32x28	684	850	680	1778	1778	8520
36x30	735	900	730	2083	2083	10200
40x36	874	1150	890	2330	2330	14485
48x40	976	1250	970	2778	2778	16830
52x48	1166	1530	1160	3000	3000	36465
56x52	1261	1470	1255	3230	3230	40410

Class 600 Full Bore

Size (inch)	d1	H2	H1	L			Wt(kg)
				BW	RF	RJ	
3	74	240	115	356	356	359	60
4	100	255	125	432	432	435	92
6	150	305	185	559	559	562	187
8	201	320	215	660	660	664	400
10	252	380	275	787	787	791	1050
12	303	420	330	838	838	841	1450
14	334	450	360	889	889	892	1800
16	385	485	420	991	991	994	2400
18	436	625	450	1092	1092	1095	3600
20	487	700	490	1194	1194	1200	4500
24	589	755	580	1397	1397	1407	7500
28	684	850	680	1549	1549	—	8350
30	735	900	730	1651	1651	—	10000
32	779	1000	790	1778	1778	—	11850
36	874	1150	890	2083	2083	—	14200
40	976	1250	970	2330	2330	—	16500
48	1166	1530	1160	2778	2778	—	35750
52	1261	1670	1255	3000	3000	—	39617

Class 900 Full Bore

Size (inch)	A	E	D	L			Wt(kg)
				BW	RF	RJ	
2	49	220	110	368	368	372	95
3	74	250	120	381	381	384	120
4	100	255	125	457	457	460	170
6	150	320	200	610	610	613	380
8	201	380	250	737	737	740	650
10	252	400	285	838	838	842	1250
12	303	475	345	965	965	968	1830
14	322	500	390	1029	1029	1038	2000
16	373	530	430	1130	1130	1140	3300
18	423	650	465	1219	1219	1232	4800
20	471	700	510	1321	1321	1334	5700
24	570	870	600	1549	1549	1569	10000
28	665	1040	690	1807	1807	1826	12700
30	712	1125	735	1963	1963	1975	15520
32	760	1210	780	2066	2066	2085	18430
36	855	1380	870	2324	2324	2343	26250
40	956	1550	960	2582	2582	2601	36000



Class 600 Reduced Bore

Size (inch)	d1	H2	H1	L			Wt(kg)
				BW	RF	RJ	
4x3	74	240	115	432	432	435	60
6x4	100	255	125	559	559	562	92
8x6	150	305	185	660	660	664	187
10x6	150	305	185	787	787	791	198
10x8	201	320	215	787	787	791	400
12x8	201	320	215	838	838	841	420
12x10	252	380	275	838	838	841	1260
14x10	252	380	280	889	889	892	1365
14x12	303	420	330	889	889	892	1740
16x12	303	420	330	991	991	994	1885
16x14	334	450	360	991	991	994	2160
18x14	334	450	360	1092	1092	1095	2340
20x16	385	485	420	1194	1194	1200	2880
24x20	487	700	490	1397	1397	1407	5400
28x24	589	765	580	1549	1549	1562	9000
30x24	589	765	580	1651	1651	1664	9750
32x28	684	850	680	1778	1778	1794	10020
36x30	735	900	730	2083	2083	2099	12000
40x36	874	1150	890	2330	2330	--	17040
48x40	976	1250	970	2778	2778	--	19800
52x48	1166	1530	1160	3000	3000	--	42900
56x52	1261	1470	1255	3230	3230	--	47540

Class 900 Reduced Bore

Size (inch)	d1	H2	H1	L			Wt(kg)
				BW	RF	RJ	
3x2	49	220	110	381	381	384	95
4x3	74	250	120	457	457	460	140
6x4	100	255	125	610	610	613	200
8x6	150	320	200	737	737	740	420
10x6	150	320	200	838	838	842	460
10x8	201	380	250	838	838	842	720
12x8	201	380	250	965	965	968	780
12x10	252	400	285	965	965	968	1500
14x10	252	400	285	1029	1029	1038	1570
14x12	303	475	345	1029	1029	1038	2200
16x12	303	475	345	1130	1130	1140	2290
16x14	322	500	390	1130	1130	1140	2400
18x14	322	500	390	1219	1219	1232	2500
20x16	373	530	430	1321	1321	1334	3960
24x20	471	700	510	1549	1549	1569	6864
30x24	570	870	600	1880	1880	1902	12000
32x28	665	1040	690	2066	2066	2085	15240
36x30	712	1125	735	2324	2324	2343	18624
40x36	855	1380	870	2582	2582	2601	31500
48x40	956	1550	960	3099	3099	3118	43200

Class 1500 Full Bore

Size (inch)	d1	H2	H1	L			Wt(kg)
				BW	RF	RJ	
2	49	230	120	368	368	372	98
3	74	250	130	470	470	473	145
4	100	255	135	546	546	550	243
6	144	500	320	705	705	711	925
8	192	550	350	832	832	842	1625
10	239	690	400	991	991	1000	1940
12	287	720	420	1130	1130	1146	2820
14	315	800	460	1257	1257	1276	5460
16	360	900	500	1384	1384	1407	6120
18	406	950	550	1537	1537	1559	7650
20	454	990	590	1664	1664	1686	9180
24	546	1300	900	1943	1943	1972	15870
28	594	1610	1210	2420	2420	2442	23845
30	686	1765	1365	2593	2593	2615	30710
32	730	1920	1520	2769	2769	2791	37270
36	819	2230	1830	3111	3111	3133	53070

Class 1500 Reduced Bore

Size (inch)	d1	H2	H1	L			Wt(kg)
				BW	RF	RJ	
3x2	49	230	120	381	381	384	110
4x3	74	250	120	470	470	473	170
6x4	100	255	135	705	705	711	255
8x6	144	500	320	832	832	842	1110
10x6	144	500	320	991	991	1000	1160
10x8	192	550	350	991	991	1000	1950
12x8	192	550	350	1130	1130	1146	2030
12x10	239	690	400	1130	1130	1146	2330
14x10	239	690	400	1257	1257	1276	2430
14x12	287	720	420	1257	1257	1276	3390
16x12	287	720	420	1384	1384	1407	3525
16x14	315	800	460	1384	1384	1407	6550
18x14	315	800	460	1537	1537	1559	6825
20x16	360	900	500	1664	1664	1686	7345
24x20	454	990	560	1943	1943	1972	11020
30x24	546	1300	900	2593	2593	2615	19045
32x28	641	1610	1210	2769	2769	2791	28615



● DESIGN FEATURE

● Double Block and Bleed

The flow can be complete blocked when valve is at full close position. At the full close and full open position, the deposition contamination or media in valve body cavity can be bled also. And if contamination is bled regularly, the damage from contamination to valve sealing surface can be reduced and valve service life can be extended.

Double Block: Trunnion Ball Valves are made with pre-loading spring floating seat rings, the service flow can be fully blocked by upstream and downstream seat rings no matter valve is in fully open or fully close position.

Double Bleed: If the pressure of the body cavity unusually rises up, the trunnion valve can automatically relieve the pressure by compressing springs in the spring pre-tightening seat package. It is very important for the valve safety during transporting the liquid medium.

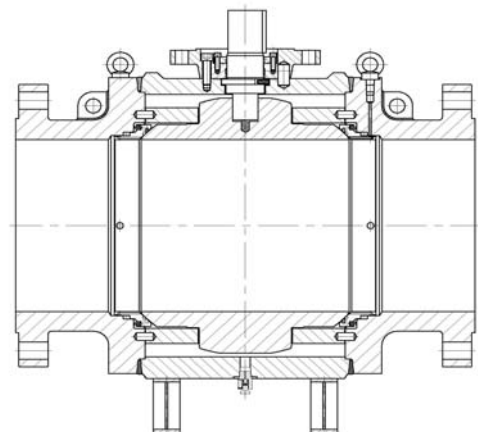


● Full Bore or Reduced Bore

Full bore or reduced bore is chose upon request. Port dimension of full bore size can satisfy the requirement of API 6D standard, low flow resistance, suitable for piggable.

● Anti-static Design

Electrical conductivity between metal parts, such as body, ball, seat retainer, stem, etc. isolated by rubber or plastic sealing parts, can be guaranteed by stainless steel springs per BS5351.



● Ball without Pressure Balance Hole

No balance hole in ball to balance body cavity pressure when opening valves, so medium in body cavity can be drained when valve is in full close or full open position. Customer can make effective check or maintenance without change operation conditions.

● Stem Anti-flying Away Design

Stem is separated from valve ball and designed per ASME B16.34 and BS 5351 for Anti-flying away. There is an integral shaft shoulder pressed under self-lubricating thrust bearing.

● Dual Sealing Seats

Each seat retainer is independent and floating, and is designed to cut off medium by inner pressure automatic sealing (Double Piston Effect). So the valve is bi-directional dual sealing type valve and can assure downstream's seal when upstream seal failed.



● Stem Dual Sealing

Stem dual sealing can be realized by two pcs of O-ring made of PTFE, and outer O-ring can be replaced under pressure.

● Emergency Sealing

If seals for stem and seat retainer is damaged, sealant can be used for temporary repair. We design sealant injection holes in bonnet or cap and bonnet to prevent leakage due to damage of seals for stem and / or seat retainer. Sealant injection holes and grooves can distribute sealant. We also design one non-return valve with an instantaneous connection to injection kit in each sealant injection hole.

● Fire Proof Design

All standard design for valves is complied with API607/API 6FA/BS 6755 : PART

● Drain Connection

Each valve has drain connection and vent connection for plug or valve.

● Stem Extension

For valves under ground or buried, stem can be extended. And vent valve, drain valve and sealant injection can also be extended to suitable position.

● Main Standards:

Design standard	API 6D
Face to face	ASME B16.10
Flanged end	ASME B16.5, ANSI B 16.47
Butt-welded end	ASME B16.25
Anti-fire standard	API 607
Inspection standard	API 6D, API 598



Holy welded ball valve is available in butt welding ends and flanged ends.

● Material of parts

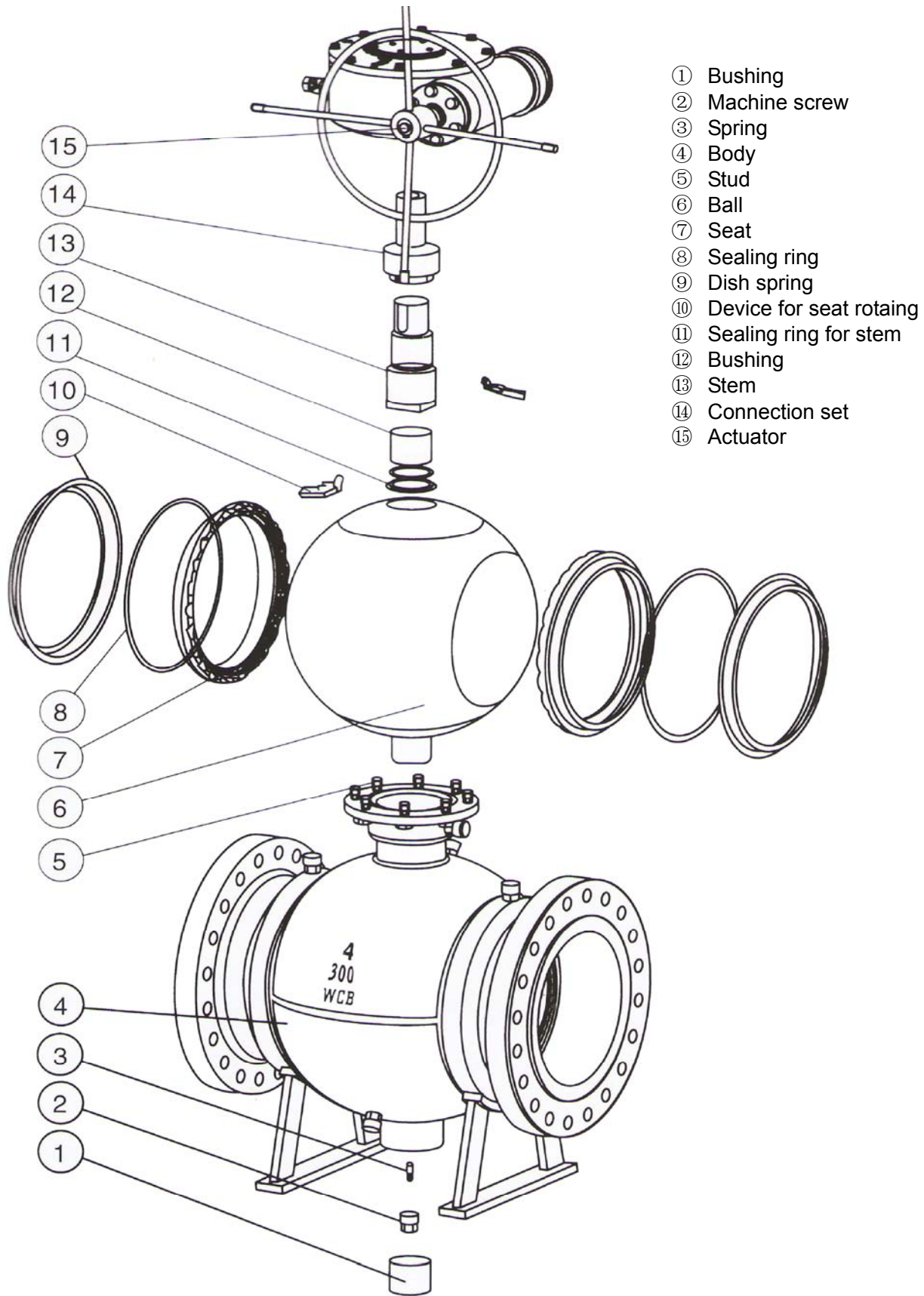
Parts Name	Materials	Parts Name	Materials
Body	ASTM A105	Injection valve	Carbon steel
Bonnet	ASTM A105	Stationary plant	Carbon steel
Spring	INCONELX-750	Support	Carbon steel
Seat ring	ASTM A105	Drain/Vent valve	Carbon steel
Seat insert	RPTFE/VITON	Trunnion	ASTM A105
O-ring	VITON	Parallel pin	ANSI 1025
Ball	ASTM A105	Pin	ANSI 1025
Radial bearing	304+PTFE	O-ring	VITON
Thrust washer	304+PTFE	Stem washer	304+PTFE
Spring	ASTM A276-316	O-ring	VITON
Upper stem	ASTM A182-F6a	Gland	ASTM A105
Gear box	Cast iron	O-ring	VITON
Key	ANSI 1045	Backup ring	ASTM A105
Screw	ASTM A193-B7/B7M	Screw	ASTM A193-B7/B7M
Bolt	ASTM A193-B7/B7M	Screw	ASTM A193-B7/B7M
Hexagon nut	ASTM A194-2H/2HM		

Full Welded Ball Valve

Chengdu Holy Valve & Complete Equipment Co., Ltd.

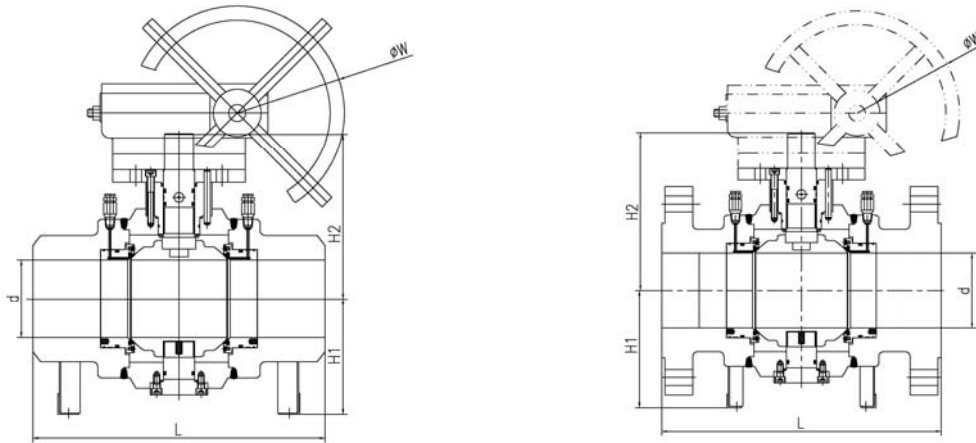


● FULL WELDED BALL VALVE STRUCTURE





Dimension Data



Class 150 (Unit: mm)

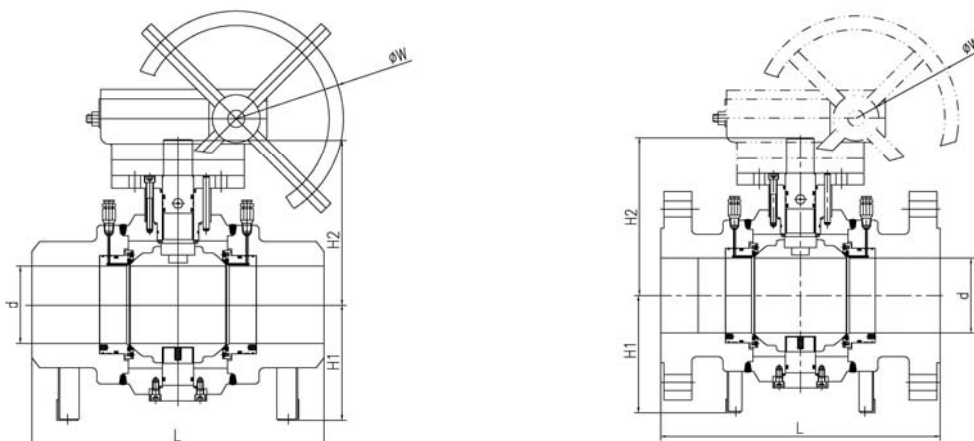
DN	6"	8"	10"	12"	14"	16"	18"	20"	22"	24"	26"	28"	30"	32"	
d1	150	201	252	303	334	385	436	487	538	589	633	684	735	779	
L	RF	394	457	533	610	686	762	864	914	991	1067	1143	1245	1295	1372
	BW	457	521	559	635	762	838	914	991	1092	1143	1245	1346	1397	1524
H1	270	325	362	405	440	430	490	535	585	635	685	730	780	820	
H2	275	335	365	395	456	495	547	590	630	725	767	807	856	890	
w	450	450	500	500	550	550	550	550	550	550	550	650	650	650	
Wt(kg)(BW)	185	250	400	550	820	1100	1400	1750	2200	2800	2900	3400	4800	5300	
Wt(kg)(RF)	220	290	430	620	900	1220	1550	1950	2350	3050	3250	3700	5300	6000	

Class 300 (Unit: mm)

DN	6"	8"	10"	12"	14"	16"	18"	20"	22"	24"	26"	28"	30"	32"
d1	150	201	252	303	334	385	436	487	538	589	633	684	735	779
L	RF	457	502	568	648	762	838	914	991	1092	1143	1245	1346	1524
	BW	457	521	559	635	762	838	914	991	1092	1143	1245	1346	1397
H1	270	325	362	405	440	430	490	535	585	635	685	730	780	820
H2	275	335	365	395	456	495	547	590	630	725	767	807	856	890
w	450	450	500	500	550	550	550	550	550	550	550	650	650	650
Wt(kg)(BW)	185	250	400	550	820	1100	1400	1750	2200	2800	2900	3400	4800	5500
Wt(kg)(RF)	230	300	460	670	1000	1320	1650	2000	2550	3100	3300	3750	5500	6500

Full Welded Ball Valve

Chengdu Holy Valve & Complete Equipment Co., Ltd.



Class600 (Unit: mm)

DN	6"	8"	10"	12"	14"	16"	18"	20"	22"	24"	26"	28"	30"	32"	
d1	150	201	252	303	334	385	436	487	538	589	633	684	735	779	
L	RF	559	660	787	838	889	991	1092	1194	1295	1397	1448	1549	1651	1778
	RTJ	562	664	791	841	892	994	1095	1200	1305	1407	1461	1562	1664	1794
	BW	559	660	787	838	889	991	1092	1194	1295	1397	1448	1549	1651	1778
H1	270	325	362	405	440	430	490	535	585	635	685	730	780	820	
H2	275	335	365	395	456	495	547	590	630	725	767	807	856	890	
w	450	450	500	500	550	600	800	800	600	600	600	650	650	650	
Wt(kg)(BW)	250	340	570	850	1100	1350	2100	2600	3150	3700	3900	4200	6000	6800	
Wt(kg)(RF)	330	450	710	1000	1370	1650	2400	3000	3550	4300	4500	4900	6900	8000	

Class 900 (Unit: mm)

DN	6"	8"	10"	12"	14"	16"	18"	20"	22"	24"	26"	28"	30"	32"	
d1	150	201	252	303	322	373	423	471	522	570	617	665	712	760	
L	RF	610	737	838	965	1029	1130	1219	1321	-	1549	1729	1780	1890	2014
	RTJ	613	740	841	968	1038	1140	1232	1334	-	1568	1751	1802	1912	2036
	BW	610	737	838	965	1029	1130	1219	1321	1422	1549	1729	1700	1700	1884
H1	270	325	380	425	450	455	500	560	615	635	715	770	815	855	
H2	275	335	405	440	463	541	620	660	702	725	842	881	924	968	
w	450	450	500	500	550	600	800	800	600	600	600	650	650	650	
Wt(kg)(BW)	330	400	640	900	1020	1350	2600	3700	4000	4400	5800	7600	10000	10600	
Wt(kg)(RF)	430	520	620	1050	1400	2050	3400	4200	4600	5400	7000	8600	11000	12500	

CHENGDU HOLY VALVE & COMPLETE EQUIPMENT CO., LTD.

MAIN MANUFACTURING FACILITIES

SN	Name	Model and Specification	Qty
1	Single Arm Vertical Type Lathe	C5116A Ø1600	1
2	Single Arm Vertical Type Lathe	C5112A Ø1250	1
3	Vertical Type Lathe (4m)	CQX5240	1
4	Numerical Display Double Arm Vertical Type Lathe	CX5225/1 Ø2500	1
5	Large Type General Lathe	CW611001	1
6	Horizontal Type Processing Center	FBM-11025	1
7	Numerical Control Lathe	CAK63135D	2
8	Numerical Control Lathe	CAK4085DJ	1
9	Ball Surface Lathe	C6595/1500	1
10	Ball Surface Lathe	CR6532 Ø50~320	1
11	Numerical Display Lathe	CX616A-1 320×750	1
12	Numerical Display Lathe	CA6140 800×5000	2
13	General Lathe	C6140 400×1000	5
14	General Lathe	CW6180A 800×5000	1
15	Saddle Bed Lathe	CW6263B 630×750	1
16	Horizontal Type Boring Machine	TX68 Ø85	3
17	Floor Type Boring & Milling Machine	TX6213	1
18	Plano Milling Machine	X2012C 1250×4000	1
19	Vertical Type Knee Type Milling Machine	X53K 400×1600	2
20	Vertical Type Knee Type Milling Machine	X52K 320×1250	2
21	Vertical Type Knee Type Milling Machine	X5032 320×1320	2
22	Universal Knee Type Milling Machine	B1-400W 400×1600	3
23	Numerical Display Horizontal Type Knee Type Milling Machine	FX6045/1	1
24	Numerical Display Universal Knee Type Milling Machine	X6132/1	1
25	Slotting Machine	B5032	1
26	Numeral Control Lathe	180-CNC	5
27	Turning & Milling Processing Center	INTE200SY	1
28	Numeral Control Line Cutter	DK720	2
29	Numeral Control Water Knife Cutting Machine	CX5225	1
30	Universal Cylindrical Grinding Machine	M1432A Ø320×1500	1
31	Universal Cylindrical Grinding Machine	M1432B Ø320×1000	1
32	Universal Tool Grinding Machine	M6025C Ø250	1
33	Universal Tool Grinding Machine	M612K Ø200	1
34	Surface Grinding Machine With Horizontal Spindle And Rectangular Table	M7132H	1
35	Surface Grinding Machine With Horizontal Spindle And Rectangular Table	M7150A 500×2000	1
36	Plano Surface Grinding Machine	CC1-033	1
37	Cylinder Column Vertical Type Drilling Machine	Z525B Ø25	2
38	Radial Drilling Machine	Z3063 Ø63×2000	5

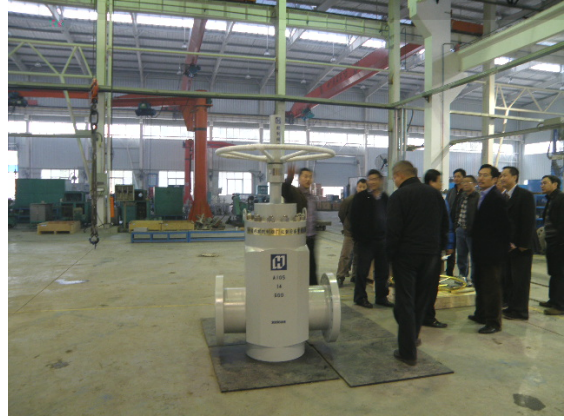


MAIN REFERENCE

- ★ **Indian Oil Corporation Limited**
Viramgam Kandla Pipeline Project
- ★ **Goodwell Engineering Ltd Part.**
Oil Pipeline of Thai Petroleum Pipeline Co., Ltd.
- ★ **China Petroleum Pipeline Material And Equipment Corporation:**
Chas Permit H Crude Oil Transportation Pipeline Project
Niger Agadem Field Crude Oil Pipeline Project
- ★ **Xinjiang Petroleum Engineering Construction Co., Ltd.**
Kazakhstan Hope Oil Field Oil Transfer Station
- ★ **China Petroleum Engineering Construction (Group) Company**
China to Kazakstan Oil Transportation Pipeline Project
- ★ **Zigong Rocky Union Valve Co., Ltd.**
Export to American, Mexico, etc.
- ★ **PetroChina Pipeline Co., Ltd.**
Shilan-Huiyin Oil Transportation Pipeline Project
Lanzhou-Zhengzhou-Changqing Oil Transportation Pipeline Project
China to Russian Crude Oil Pipeline Project
Qinhuangdao-Beijing Oil Transportation Pipeline Project
Renqiu--Beijing Oil Transportation Pipeline Project
Northeast China Pipeline Net
Daqing – Tieling Pipeline Capacity Expansion Rebuilding Project and Oil Tank
Dagang-Zaozhuang Oil Transportation Pipeline Project
Changling - Songlan Nature Gas Transportation Pipeline Project
Dalian- Xiaosonglan Oil Transportation Pipeline Project
- ★ **PetroChina Talimu Oil Field Co., Ltd.**
West To East Gas Transportation Pipeline Project
- ★ **PetroChina Talimu Oil Field Co., Ltd.**
Yingmaili Gas Field Project
- ★ **Xinjiang Oil Managing Bureau Material Provide Head Company**
West China Crude Oil and Finished Oil Pipeline Project
- ★ **Xuzhou Chengda Petroleum & Chemical Equipment Installation Co., Ltd.**
China Petroleum Ningbo Daxie Fuel Oil House Project
- ★ **China Petroleum Pipeline Materials & Equipment Corporation Pipeline Bureau**
West China Crude Oil and Finished Oil Pipeline Project
Lanzhou Commercial Oil Tank Project



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