ZZJG VALVE MORE VALUE

ZZJG VALVE

TOTAL SOLUTIONS FOR FLOW SYSTEM

ZHENGZHOU JINGGONG TECHNOLOGY CO., LTD.

Tel: +86-371-55659925
Fax: +86-371-55659926
Email: info@zzjgvalve.com
Web: www.plugvalveworld.com
Address: Chuangye Road, Gaoshan Town, Zhengzhou City, China 450000

ABOUT US

ZZJG VALVE

ZHENGZHOU JINGGONG TECHNOLOGY CO., LTD., located in the "Valve Capital of China" — Gaoshan Town, Henan Province, is a high-tech enterprise dedicated to the integrated design, manufacturing, sales, and service of industrial valves.

Established in 1981, we have over four decades of experience as a professional valve manufacturer. With a registered capital of RMB 103.18 million and a 26,000 ㎡ facility housing specialized workshops, we have built a solid foundation for excellence.

Aim: We are committed to customer loyalty, optimal management, and a rigorous approach, driving innovation to establish the ZZJG brand as a leader in China's valve industry.

Certifications: ISO 9001, ISO 14001, and ISO 45001 for management systems, alongside critical industry approvals including API, TS, CE, EAC, and SGS. We also comply with SIL and WRAS standards and possess numerous Utility Model Patents.

Main products: Sleeve/non-lubricated plug valve, non-lubricated plug valve, twin seal obrit DBB plug valve, PFA lined plug valves, jacketed plug valve, 3 / 4 way plug valve, eccentric plug valve, lift plug valve, single/double flush plug valve, covering pressure ratings from PN 0.25–32 MPa and sizes from DN15–3000.

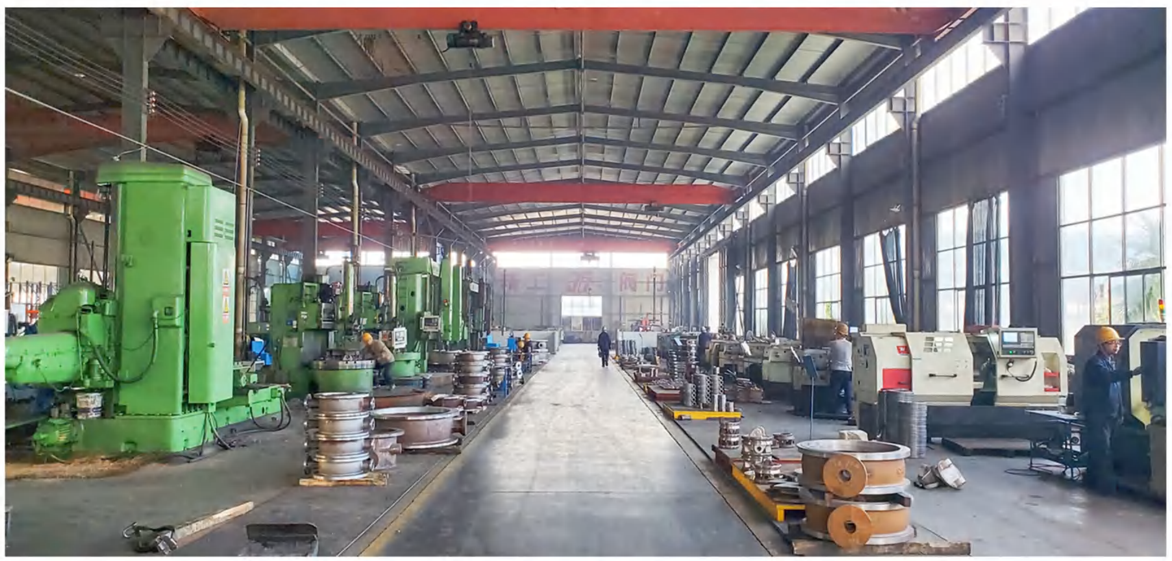
Application: Water engineering, electric power, petroleum, chemical and petrochemical industries, heating, pharmaceuticals, metallurgy, and other key sectors.

www.plugvalveworld.com

ZZJG VALVE

PRODUCTION WORKSHOP

The company strictly controls and checks the quality of every link and process. Product design has been incorporated into a set of extremely rigorous and precise procedures; from design, material selection, manufacturing, assembly to operation, every link must undergo rigorous testing procedures, strict control, and high quality, so that customers can use it. At the same time, we deeply feel our rigorous and pragmatic quality purpose.



www.plugvalveworld.com

CERTIFICATES & QUALIFICATIONS

ZZJG VALVE

ZZJG VALVE

Certificate of Authority to use the Official API Monogram

License Number: 6D-2151 ORIGINAL

The American Petroleum Institute hereby grants to

ZHENGZHOU JINGGONG VALVE CO., LTD
Middle section of Chuangye Road, Gaoshan Town
Xingyang, Henan
People's Republic of China

the right to use the Official API Monogram® on manufactured products under the conditions in the official publications of the American Petroleum Institute entitled API Spec Q1® and **API-6D** and in accordance with the provisions of the License Agreement.

In all cases where the Official API Monogram is applied, the API Monogram shall be used in conjunction with this certificate number: **6D-2151**

The American Petroleum Institute reserves the right to revoke this authorization to use the Official API Monogram for any reason satisfactory to the Board of Directors of the American Petroleum Institute.

The scope of this license includes the following: Ball Valves, Plug Valves

QMS Exclusions: No Exclusions Identified as Applicable

Effective Date: JANUARY 28, 2025
Expiration Date: JANUARY 28, 2028

To verify the authenticity of this license, go to www.api.org/compositelist.

Senior Vice President of Global Industry Services

American Petroleum Institute

2018-151 | Digital

BEIJING HANGXIE CERTIFICATION CENTER CO.,LTD.

QUALITY MANAGEMENT SYSTEM CERTIFICATION

Zhengzhou Jinggong Valve Co., Ltd

Registration No : 03-24-Q-50259R1M
Organization Code: 91410182096930930W
Registration Address: Middle road of entrepreneurship Gaoshan Town Xingyang City, Zhengzhou City, Henan Province, China
Audition Address: Middle road of entrepreneurship Gaoshan Town Xingyang City, Zhengzhou City, Henan Province, China
In conformity with : GB/T 19001-2016/ISO 9001:2015
Certification scope: Production of the butterfly valve, ball valve, Gate valve,check valve, Glasses Valve , Pressure regulating valve , Pipe compensation joint of the basins (Products within the scope of the administrative license)
Issue Date: Mar. 07, 2024 Expiry Date: Mar. 01, 2027
First Issue Date: Mar. 03, 2021

IAF CNAS 中国认可 国际互认 管理体系 MANAGEMENT SYSTEM CNAS C034–M

General Manager:

BEIJING HANGXIE CERTIFICATION CENTER CO.,LTD.

After this certificate is issued, there should be at least 2 surveillance audits within the 3 year period of validity, the current validity of the certificate can be checked on (www.bhxcc.com.cn). The certificate Information is available on the official website of the National Certification and Accreditation Administration (www.cnca.gov.cn)
It is also available by scanning the two-dimensional code at the bottom right corner.

Address : NO.7 Jingshun Road, Chaoyang District, Beijing,China.

BEIJING HANGXIE CERTIFICATION CENTER CO.,LTD.

OCCUPATIONAL HEALTH & SAFETY MANAGEMENT SYSTEM CERTIFICATION

Zhengzhou Jinggong Valve Co., Ltd

Registration No : 03-24-E-50114R1M
Organization Code: 91410182096930930W
Registration Address: Middle road of entrepreneurship Gaoshan Town Xingyang City, Zhengzhou City, Henan Province, China
Audition Address: Middle road of entrepreneurship Gaoshan Town Xingyang City, Zhengzhou City, Henan Province, China
In conformity with : GB/T 45001-2020/ISO 45001:2018
Certification scope: Production of the butterfly valve, ball valve, Gate valve,check valve, Glasses Valve , Pressure regulating valve. Pipe compensation joint of the basins and Environmental Management (Products within the scope of the administrative license)
Issue Date: Mar. 07, 2024 Expiry Date: Mar. 01, 2027
First Issue Date: Mar. 03, 2021

IAF CNAS 中国认可 国际互认 管理体系 MANAGEMENT SYSTEM CNAS C034–M

General Manager:

BEIJING HANGXIE CERTIFICATION CENTER CO.,LTD.

After this certificate is issued, there should be at least 2 surveillance audits within the 3 year period of validity, the current validity of the certificate can be checked on (www.bhxcc.com.cn). The certificate Information is available on the official website of the National Certification and Accreditation Administration (www.cnca.gov.cn)
It is also available by scanning the two-dimensional code at the bottom right corner.

Address : NO.7 Jingshun Road, Chaoyang District, Beijing,China.

BEIJING HANGXIE CERTIFICATION CENTER CO.,LTD.

ENVIRONMENTAL MANAGEMENT SYSTEM CERTIFICATION

Zhengzhou Jinggong Valve Co., Ltd

Registration No : 03-24-E-30124R1M
Organization Code: 91410182096930930W
Registration Address: Middle road of entrepreneurship Gaoshan Town Xingyang City, Zhengzhou City, Henan Province, China
Audition Address: Middle road of entrepreneurship Gaoshan Town Xingyang City, Zhengzhou City, Henan Province, China
In conformity with : GB/T 24001-2016/ISO 14001:2015
Certification scope: Production of the butterfly valve, ball valve, Gate valve,check valve, Glasses Valve , Pressure regulating valve , Pipe compensation joint of the basins and related occupation health safety management activities (Products within the scope of the administrative license)
Issue Date: Mar. 07, 2024 Expiry Date: Mar. 01, 2027
First Issue Date: Mar. 03, 2021

IAF CNAS 中国认可 国际互认 管理体系 MANAGEMENT SYSTEM CNAS C034–M

General Manager:

BEIJING HANGXIE CERTIFICATION CENTER CO.,LTD.

After this certificate is issued, there should be at least 2 surveillance audits within the 3 year period of validity, the current validity of the certificate can be checked on (www.bhxcc.com.cn). The certificate Information is available on the official website of the National Certification and Accreditation Administration (www.cnca.gov.cn)
It is also available by scanning the two-dimensional code at the bottom right corner.

Address : NO.7 Jingshun Road, Chaoyang District, Beijing,China.

CERTIFICATE OF CONFORMITY

Application for
Pressure Equipment Directive (PED) 2014/68/EU.
This is to certify that the product(s):

Manufacturer & Supplier of Process Control Instrumentation & Automation products, Measuring ,Testing & Calibration Instruments, Industrial Valves, Cables, Sensors, Electromechanical Equipment and various Oilfield & Natural Gas Equipments

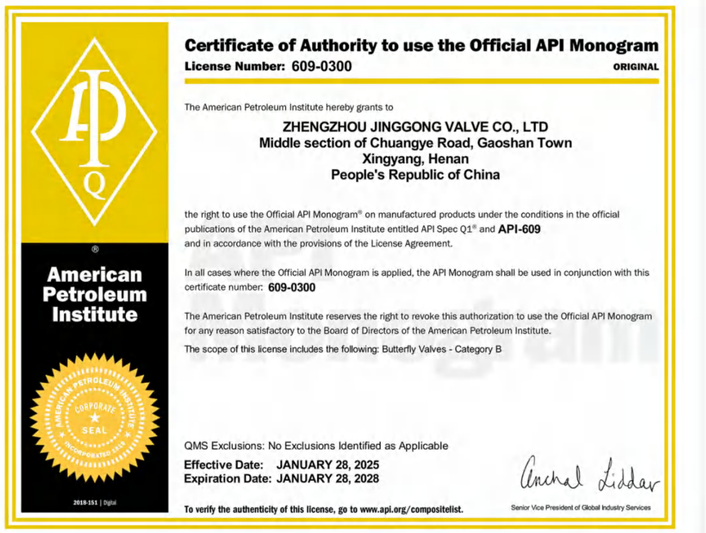
Manufactured by

ZHENGZHOU JINGGONG TECHNOLOGY CO. LTD
Chuangye Road, Gaoshan Town
Zhengzhou City, China

has been assessed & found in accordance with the requirements of **Pressure Equipment Directive (PED) 2014/68/EU**.
QCC is non-notified certification body, issue this 'compliance certificate' after audit of manufacturer product(s) & technical file(s). This certificate applies to the tested sample only not for whole production. It's manufacturer sole responsibility to meet all the necessary conformity assessment activities according to **PED 2014/68/EU** and related standards before placing them on the market & CE mark on the product(s).

Certificate No. : CE/030522/1022
Original Certificate Date : 19-October-2024
Issue Date : 19-October-202
Expiry Date : 18-October-2025 7
To check this certificate status visit: "http://uasl.uk.com/certifiedorganization.html"

Authorised Signature
For **Quality Control Certification**
UK Office: 1929, Chynoweth House, Trevissome Park, Truro-TR4&UN, Cornwall, UK



Certificate of Authority to use the Official API Monogram

License Number: 609-0300 ORIGINAL

The American Petroleum Institute hereby grants to

ZHENGZHOU JINGGONG VALVE CO., LTD
Middle section of Chuangye Road, Gaoshan Town
Xingyang, Henan
People's Republic of China

the right to use the Official API Monogram® on manufactured products under the conditions in the official publications of the American Petroleum Institute entitled API Spec Q1® and **API-609** and in accordance with the provisions of the License Agreement.

In all cases where the Official API Monogram is applied, the API Monogram shall be used in conjunction with this certificate number: **609-0300**

The American Petroleum Institute reserves the right to revoke this authorization to use the Official API Monogram for any reason satisfactory to the Board of Directors of the American Petroleum Institute.

The scope of this license includes the following: Butterfly Valves - Category B

QMS Exclusions: No Exclusions Identified as Applicable

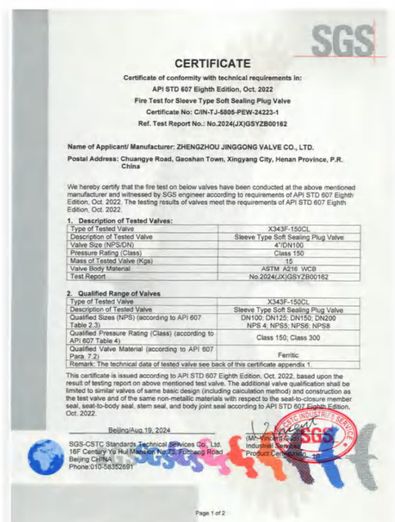
Effective Date: JANUARY 28, 2025
Expiration Date: JANUARY 28, 2028

To verify the authenticity of this license, go to www.api.org/compositelist.

Senior Vice President of Global Industry Services

American Petroleum Institute

2018-151 | Digital



SGS

CERTIFICATE

Certificate of conformity with technical requirements in:
API STD 607 Eighth Edition, Oct. 2022
Fire Test for Sleeve Type Soft Sealing Plug Valve
Certificate No: CIN-TJ-5805-PEW-24223-1
Ref. Test Report No.: No.2024(JX)GSYZB00162

Name of Applicant/ Manufacturer: ZHENGZHOU JINGGONG VALVE CO., LTD.
Postal Address: Chuangye Road, Gaoshan Town, Xingyang City, Henan Province, P.R. China

We hereby certify that the fire test on below valves have been conducted at the above mentioned manufacturer and witnessed by SGS engineer according to requirements of API STD 607 Eighth Edition ,Oct. 2022. The testing results of valves meet the requirements of API STD 607 Eighth Edition ,Oct. 2022.

1. Description of Tested Valves:

Type of Tested Valve	X343F-150CL
Description of Tested Valve	Sleeve Type Soft Sealing Plug Valve
Valve Size (NPS/DN)	4"/DN100
Pressure Rating (Class)	Class 150
Mass of Tested Valve (Kgs)	15
Valve Body Material	ASTM A216 WCB
Test Report	No.2024(JX)GSYZB00162

2. Qualified Range of Valves

Type of Tested Valve	X343F-150CL
Description of Tested Valve	Sleeve Type Soft Sealing Plug Valve
Qualified Sizes (NPS) (according to API 607 Table 2.3)	DN100; DN125; DN150; DN200 NPS 4; NPS5; NPS6; NPS8
Qualified Pressure Rating (Class) (according to API 607 Table 4)	Class 150, Class 300
Qualified Valve Material (according to API 607 Para 7.2)	Ferritic
Remark: The technical data of tested valve see back of this certificate appendix 1.	

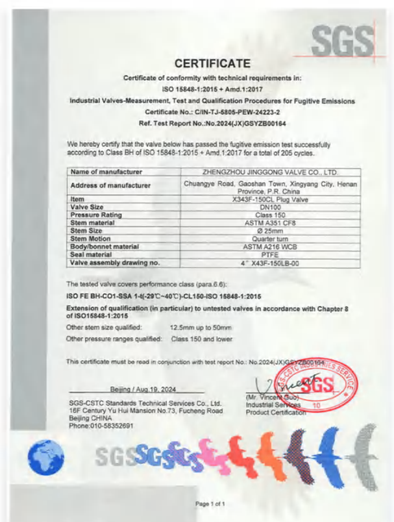
This certificate is issued according to API STD 607 Eighth Edition, Oct. 2022, based upon the result of testing report on above mentioned test valve. The additional valve qualification shall be limited to similar valves of same basic design (including calculation method) and construction as the test valve and of the same non-metallic materials with respect to the seal-to-closure member seal, seat-to-body seal, stem seal, and body joint seal according to API STD 607 Eighth Edition, Oct. 2022.

Beijing/Aug.19, 2024

SGS-CSTC Standards Technical Services Co., Ltd.
16F Century Yu Hui Mansion No.73, Fucheng Road
Beijing CHINA.
Phone:010-58352691

(Mr. Vincent Guo)
Industrial Services
Product Certification

Page 1 of 2



SGS

CERTIFICATE

Certificate of conformity with technical requirements in:
ISO 16848-1:2015 + Amd.1:2017
Industrial Valves-Measurement, Test and Qualification Procedures for Fugitive Emissions
Certificate No.: CIN-TJ-5805-PEW-24223-2
Ref. Test Report No.:No.2024(JX)GSYZB00164

We hereby certify that the valve below has passed the fugitive emission test successfully according to Class BH of ISO 15848-1:2015 + Amd.1:2017 for a total of 205 cycles.

Name of manufacturer	ZHENGZHOU JINGGONG VALVE CO., LTD.
Address of manufacturer	Chuangye Road, Gaoshan Town, Xingyang City, Henan Province, P.R. China
Item	X343F-150CL Plug Valve
Valve Size	DN100
Pressure Rating	Class 150
Stem material	ASTM A351 CF8
Stem Size	Ø 25mm
Stem Motion	Quarter turn
Body/bonnet material	ASTM A216 WCB
Seat material	PTFE
Valve assembly drawing no.	4" X43F-150LB-00

The tested valve covers performance class (para.8.6):

ISO FE BH-CO1-SSA 1-6-23°C–40°C)-CL150-ISO 16848-1:2015

Extension of qualification (in particular) to untested valves in accordance with Chapter 8 of ISO16848-1:2015

Other stem size qualified: 12.5mm up to 50mm
Other pressure ranges qualified: Class 150 and lower

This certificate must be read in conjunction with test report No.: No.2024(JX)GSYZB00164.

Beijing / Aug.19, 2024

SGS-CSTC Standards Technical Services Co., Ltd.
16F Century Yu Hui Mansion No.73, Fucheng Road
Beijing CHINA.
Phone:010-58352691

(Mr. Vincent Guo)
Industrial Services
Product Certification

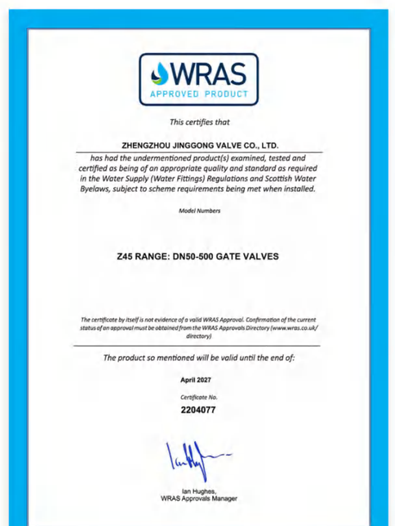
Page 1 of 1

ЕВРАЗИЙСКИЙ ЭКОНОМИЧЕСКИЙ СОЮЗ
ДЕКЛАРАЦИЯ О СООТВЕТСТВИИ

Заявитель Индивидуальный предприниматель Меркулова Елена Ивановна
Место жительства: 690011, Россия, Приморский край, город Владивосток, улица Строительная 3-я, дом 12, квартира 59, адрес места осуществления деятельности: 690981, Россия, Приморский край, город Владивосток, улица Строительная 3-я, дом 12, квартира 59. Основной государственный регистрационный номер индивидуального предпринимателя: 322253600066289, телефон: +78132594603, адрес электронной почты: info@vodokanalexpert.com
заявляет, что Арматура промышленная трубопроводная, торговой марки «Е3»: запорный клапан (PN16-PN40, DN50-DN400, BS1873, GB/T12235), задвижка (PN16-PN420, DN50-DN1200, API6D, GB/T12234»), дисковая клапан (PN6-PN420, DN50-DN6000, A/5689, GB/T12238, JB/T8527), шаровый клапан (PN16-PN420, DN8-DN2000, API6D, GB/T12237), обратный клапан (PN1.6-PN420, DN50-DN2600, API6D, GB/T12236), промывочный пробковый клапан (PN16-PN420, DN50-DN600, API6D, GB/T22130)
изготовитель ZHENGZHOU JINGGONG VALVE CO., LTD., место нахождения (адрес юридического лица): Китай, Chuangye Road, Gaoshan Town, Zhengzhou City, Henan Province, China, адрес (адреса) места осуществления деятельности по изготовлению продукции: Китай, Chuangye Road, Gaoshan Town, Zhengzhou City, Henan Province, China
Код ТН ВЭД ЕАЭС 8481890, Серийный выпуск
соответствует требованиям
ТР ТС 032/2013 "О безопасности оборудования, работающего под избыточным давлением"
Декларация о соответствии принята на основании
Протокола испытаний № 001/Р-21/11/23 от 21.11.2023 года, выданного Испытательным центром диагностики электротехнических изделий и машин ООО "Вега" (аттестат РОСС RU.31578.04ОЛВ0.ИЛ30)
Схема декларирования: 1д
Дополнительная информация
Условия и срок хранения (годности) указаны в прилагаемой к продукции товаросопроводительной документации и на упаковке
Декларация о соответствии действительна с даты регистрации по 20.11.2028 года включительно

(подпись) М.П. Меркулова Елена Ивановна (Ф.И.О. заявителя)

Регистрационный номер декларации о соответствии: ЕАЭС N RU Д-CN.PA09.B.90296/23
Дата регистрации декларации о соответствии: 21.11.2023 года



WRAS APPROVED PRODUCT

This certifies that

ZHENGZHOU JINGGONG VALVE CO., LTD.

has had the undermentioned product(s) examined, tested and certified as being of an appropriate quality and standard as required in the Water Supply (Water Fittings) Regulations and Scottish Water Byelaws, subject to scheme requirements being met when installed.

Model Numbers

Z45 RANGE: DN50-500 GATE VALVES

The certificate by itself is not evidence of a valid WRAS Approval. Confirmation of the current status of an approval must be obtained from the WRAS Approvals Directory (www.wras.co.uk/directory)

The product so mentioned will be valid until the end of:

April 2027

Certificate No.

2204077

Ian Hughes,
WRAS Approvals Manager

www.plugvalveworld.com

ZZJG VALVE

ZZJG VALVE

PROCESSING SITE

The company has a technology research and development center and a product processing center. Under the framework of a strict and complete quality management system, the stability and reliability of each product is ensured through sophisticated CNC equipment, mature process flow and superb processing skills.

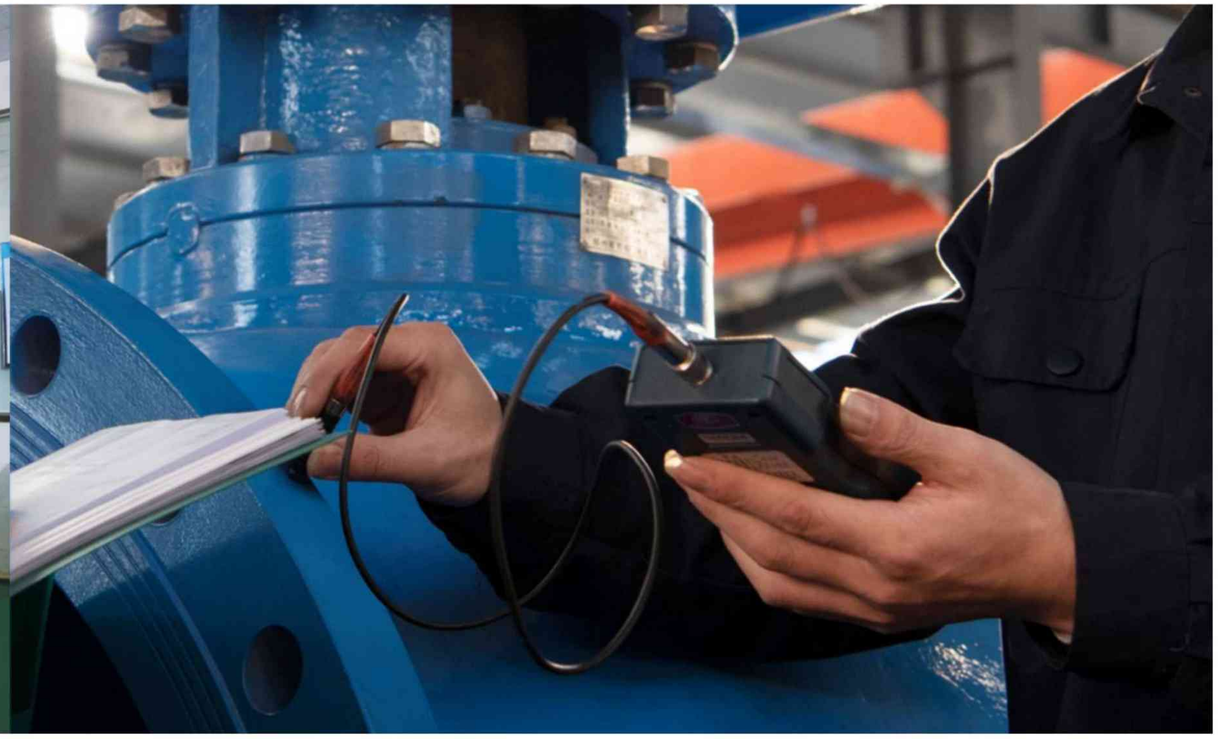
www.plugvalveworld.com

ZZJG VALVE

ZZJG VALVE

QUALITY ASSURANCE

With the rapid development of science and technology and the continuous improvement of industrial level, higher requirements have been put forward for product mechanical performance and safety standards. The company continues to increase investment in product research and development and quality standards, achieving full-process quality control from raw material testing, production processes, products and applications, providing a better guarantee for corporate innovation and quality.

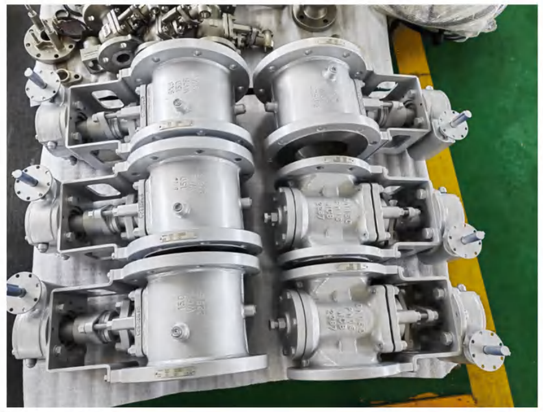


www.plugvalveworld.com

ZZJG VALVE

ZZJG VALVE

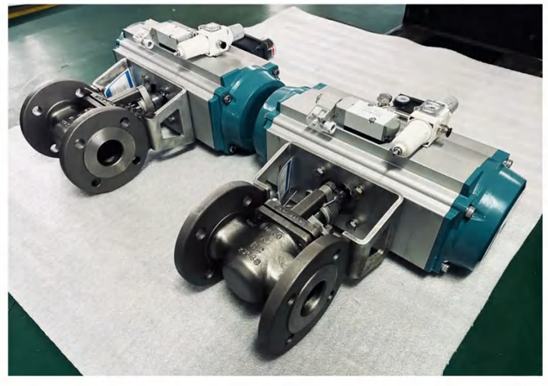
PRODUCT SCENE



www.plugvalveworld.com

ZZJG VALVE

PRODUCT SCENE



www.plugvalveworld.com

ZZJG VALVE

ENGINEERING SITE

Always adhere to flexible and diverse marketing strategies, actively carry out customer-centered marketing work, and implement regional sales strategies. The mature and strict quality management system ensures efficient and standardized operation from product manufacturing to sales. The professional technical team and after-sales service have been praised by domestic and foreign merchants.

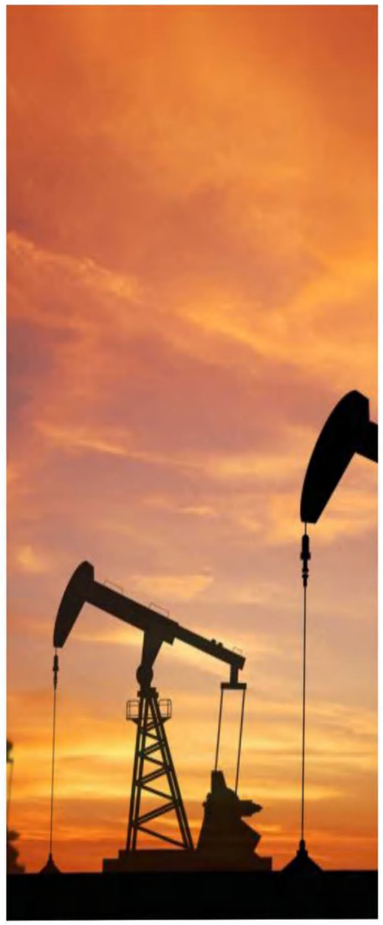
www.plugvalveworld.com

ZZJG VALVE

ZZJG VALVE

INDUSTRY APPLICATION

Product application range: water conservancy engineering, urban water supply and drainage, sewage treatment, electric power, petroleum, natural gas, chemical industry, heating, pharmaceuticals, metallurgy, etc.



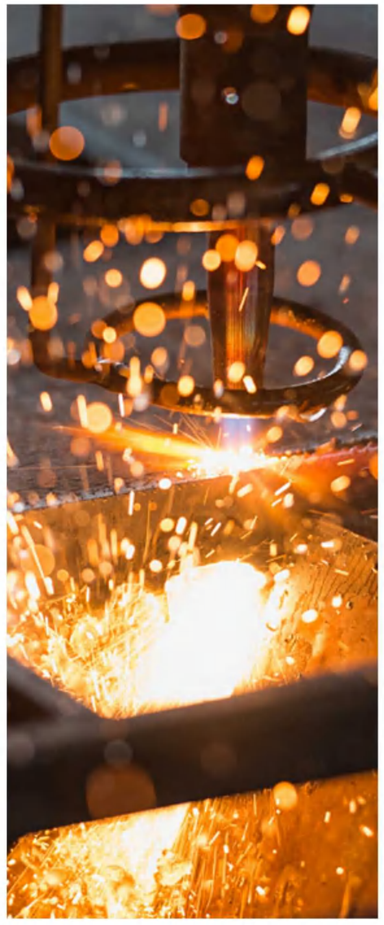
Petroleum

Chemical Industry

Natural Gas

Aviation Kerosene

Food & Medicine



Metallurgy

www.plugvalveworld.com

ZZJG VALVE

ZZJG VALVE

CONTENTS

01 GENERAL VALVE ORBIT PLUG VALVE

Double Block and Bleed Plug Valve (Full Bore)

Double Block and Bleed Plug Valve (Reduced Bore)

02 NON-LUBRICATED PLUG VALVE

Sleeve Plug Valve

Full Port Sleeve Plug Valve

Lined Plug Valve

Jacketed Plug Valve

03 LUBRICATED PLUG VALVE

Full Bore Inverted Lubricated Pressure Balance Plug Valve

Inverted Lubricated Pressure Balance Plug Valve

Forged Pressure Balance Plug Valve

04 OTHER PLUG VALVE

3 Way Plug Valve

4 Way Plug Valve

Eccentric Plug Valve

Lifting Plug Valve

Single (Double) Plug Valve

www.plugvalveworld.com

DOUBLE BLOCK AND BLEED PLUG VALVE

ZZJG VALVE

Application

Double block and bleed plug valves and venting function valves are suitable for use in pipelines carrying aviation kerosene, crude oil, light oil, natural gas, liquefied gas, pipeline gas, chemical media, etc., serving as ideal devices for cutting off the medium.

Feature

1.**Non-contact Sealing**: The seals do not touch during operation, preventing wear and ensuring long life with low operating torque.

2.**Easy Maintenance**: The valve can be serviced in-line by simply replacing the slide plates, eliminating pipeline removal.

3.**Full-Bore Design**: Provides zero flow resistance and allows for pipeline pigging.

4.**Hard Chrome-Plated Body**: The internal sealing surface is hard and smooth for enhanced durability.

5.**Advanced Seal Construction**: Features a molded fluoroelastomer seal backed by a fire-safe metal-to-metal seal.

6.**Automatic Pressure Relief (Optional)**: Prevents cavity over-pressurization and allows for seat testing after closure.

Technical Specifications

- Designed and manufactured: API 6D.
- Flange connection dimensions: ANSI B16.5, JB 79, HG 20592, GB/T 9113.
- Structural length of the valve: ANSI B16.10, GB 12221-89, JB/T 5298.
- Inspection and test: API 598 and API 6D.

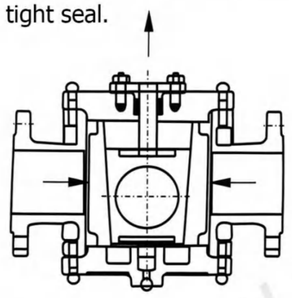
PRESSURE TEST								
Pressure level	150Lb	1.6MPa	300Lb	2.5MPa	600Lb	4.0MPa	900Lb	6.4MPa
Strength test	3.0MPa	2.4MPa	7.7MPa	3.75MPa	15.4MPa	6.0MPa	23.0MPa	9.6MPa
High pressure seal test	2.2MPa	1.8MPa	5.62MPa	2.75MPa	11.23MPa	4.4MPa	16.85MPa	7.1MPa
Low pressure seal test	0.6MPa	0.6MPa	0.6MPa	0.6MPa	0.6MPa	0.6MPa	0.6MPa	0.6MPa

Working Principle

The key to the working principle of the double-block-and-bleed valve and venting function valve lies in the movement of the two sealing slides mounted on the plug.

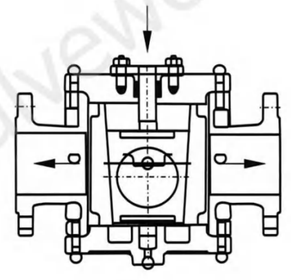
Valve Closing

Rotate the handwheel 90° to turn the plug and slides, then lower the plug. This pushes the slides against the valve body, compressing the elastic seals to form a tight seal.



Valve Opening

Raise the plug to retract the slides from the sealing surfaces. Once fully clear, rotate the handwheel 90° to open the valve fully.



About Sealing

The elastic sealing ring, compression-molded into the sliding plate, compresses during operation. A secondary, fire-safe metal-to-metal seal between the machined plate and valve body prevents over-compression.

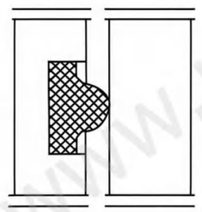
Double Block and Bleed and Release

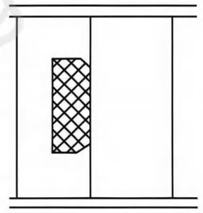
Isolates pipeline sections with two shut-off valves.
Vents any leakage via the central bleed valve for safety.

Dual Sealing Mode

Two independent sealing surfaces are pressed against both ends of the valve port (double block). When the valve is closed, the bleed valve is opened to verify sealing performance (bleed).

Before the elas sealing ring is compressed





After the elastic sealing ring is compressed

DOUBLE BLOCK AND BLEED PLUG VALVE

ZZJG VALVE

Analysis of DBB Plug Valves

The Double Block and Bleed (DBB) Valve surpasses conventional valves in sealing and lifespan, integrating critical functions like fire safety and online maintenance to optimize pipeline design and reduce operating costs.

Dual Sealing: Combines resilient primary seals and metal-to-metal secondary seals.
Fire-Safe Design: Meets industry standards for fire safety.
Full-Bore Design: Minimizes pressure drop and allows for pipeline pigging.
Online Maintenance: Enables maintenance under pressure, reducing downtime.
Double Block and Bleed (DBB): Provides positive isolation and allows for cavity pressure relief.

Structure of Double & Bleed Valve

1. Valve Body

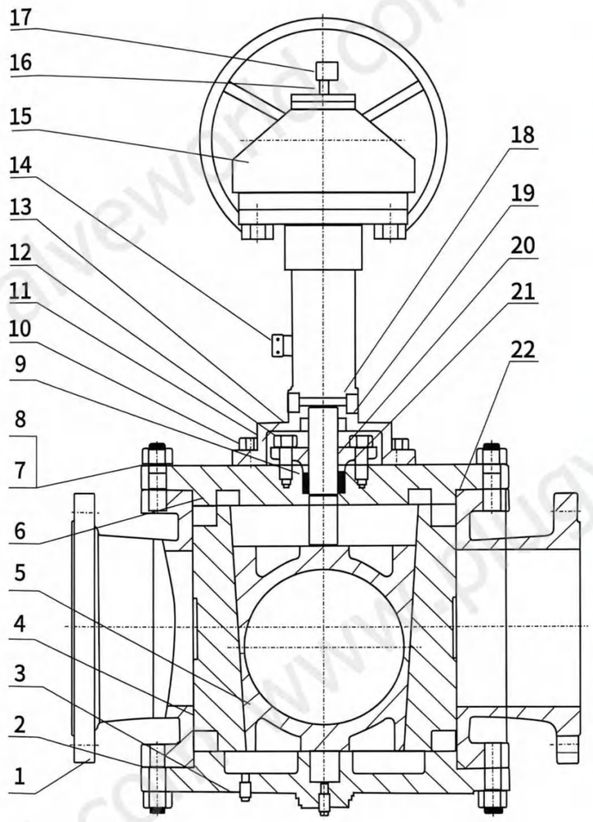
The valve body primarily comprises components such as the body, core, disc, and end cover. The valve core is secured by trunnions and features dovetail guides on its wedge surfaces that connect to the two valve discs. As the primary seal, the disc's cylindrical surface achieves Class B hard-seal precision. A groove on this surface, embedded with a rubber seal, enables a hard-soft dual seal.

2. Actuator

The actuator, primarily composed of an indicator plate, handwheel, main shaft, sleeve, ball pin, and bracket, is fixed to the end cover. It connects to the valve core rod via a linkage pin. As the executive mechanism, the actuator operates as follows:

Closing: Rotating the handwheel clockwise first turns the valve core 90°, aligning the discs with the valve body's flow channel. The core then moves linearly downward, driving the discs to expand radially against the inner wall until the soft seal compresses into its groove, completing the shut-off.

Opening: Rotating the handwheel counterclockwise first raises the valve core linearly. After reaching a specific position, it then rotates 90° to open the flow path.



Full Bore DBB Plug Valve

MAIN PARTS MATERIALS		
NO.	Part name	Material
1	Body	WCB
2	Bottom cover	WCB
3	Plug	35#
4	Slide	QT500-7
5	Cock	WCB
6	Cover	WCB
7	Stud	35#
8	Nut	45#
9	Packing	Flexible graphite
10	Bolt	35#
11	Packing gland	WCB
12	Bolt	35#
13	Bracket	WCB
14	Bolt	35#
15	Manipulator	Component
16	Indicator rod	ICr13
17	Indicator	21401
18	Pin	65Mn
19	Dustproof device	Pvc
20	O-ring	Fluororubber
21	O-ring	Fluororubber
22	O-ring	Fluororubber

In the closed position, the valve employs a dual-sealing design with both upstream and downstream discs. Each disc features a combination of soft and hard seals to ensure zero leakage. The soft seal rotates without contact to prevent wear, while the hard seal provides protection and fire safety.

The valve core and trunnion are an integrated unit, supported by sliding (or rolling for DN>500) bearings. This monolithic structure minimizes friction, allows for precise machining of sealing clearances, and ensures the seal remains unaffected by pressure differentials across the valve—a key difference from standard ball or gate valves.

DOUBLE BLOCK AND BLEED PLUG VALVE

ZZJG VALVE

Fire Safety and Sealing Performance

In oil and gas systems, handling flammable media necessitates valves with reliable sealing and fire resistance. Double block and bleed valves achieve this with a combined soft and hard seal design. The soft seal ensures zero leakage during normal operation. During a fire, if the soft seal fails, the hard seal engages as the primary barrier to prevent major leakage.

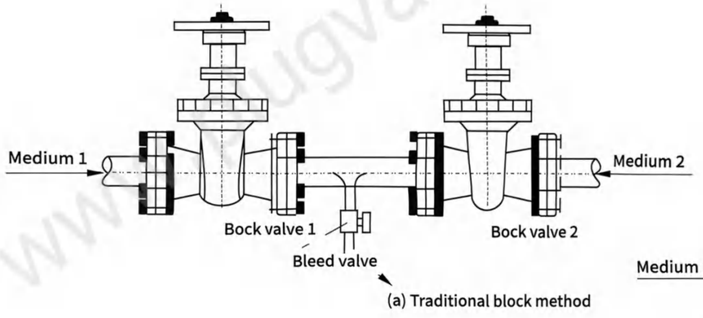
This design offers an advantage over gate valves, which use hard seals for fire safety but may not guarantee long-term zero leakage, and ball valves, which provide excellent normal sealing with soft seals but typically lack fire-safe capabilities.

Online Maintenance Capability

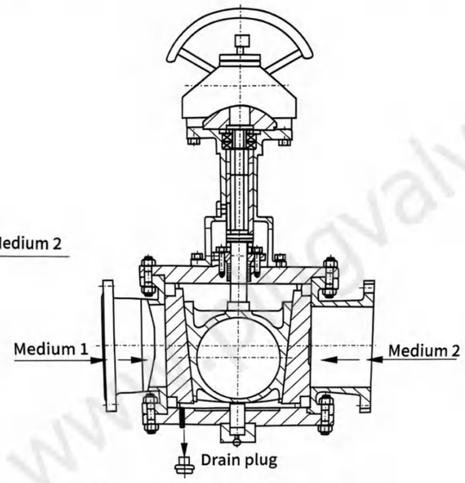
The valve allows for online maintenance without pipeline removal or depressurization. If the soft seal is damaged or the actuator fails, both can be repaired or replaced in-situ. This contrasts with gate or ball valves, which typically require removal from the line for seal repair, often leading to extended downtime or complete valve replacement.

Double Block and Bleed Function

The double block and bleed (DBB) function prevents media mixing by providing two sealing points and a bleed port. Traditional setups require two separate valves with a bleed valve in between (Fig. 2a). In contrast, a single double block and bleed valve integrates this function (Fig. 2b). Its bottom bleed plug allows for venting leakage from either seal, draining sediment, evacuating residual media for maintenance, or removing water to prevent freezing.



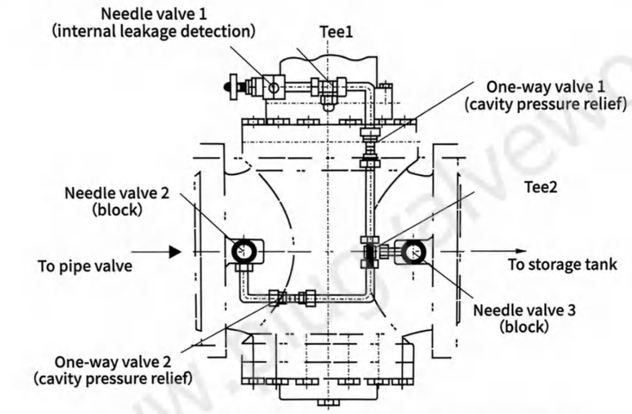
(a) Traditional block method



(B)Double block and bleed valve

With a Middle Cavity Pressure Relief Function

The API 6D specification stipulates that "for all double-sealed valves used in liquid service, a pressure differential relief function must be provided." The pressure differential to be relieved is generated by changes in ambient temperature. In the normally closed state, the pressure in the middle cavity of a double-sealed valve increases rapidly due to temperature rise. If this pressure differential is not relieved in a timely manner, it will severely impact the operation of the valve.



Comprehensive drawing of differential heat pressure relief and pipeline pressure reduction

(1) Manual Pressure Relief System:

This system typically uses a needle valve mounted on the end cover. It is suitable for liquids that can be safely vented in small quantities to the atmosphere.

(2) Differential Thermal Pressure Relief System:

This system consists of a pipeline with a check valve (see Figure 3). Needle Valve 1 (normally closed), Tee 1, Check Valve 1, Tee 2, and Needle Valve 3 (normally open) form the assembly. It is used when the medium cannot be vented to the atmosphere, typically relieving pressure to the upstream pipeline.

Internal Leakage Test Function

Testing a standard valve's seal is difficult, but with a double block and bleed valve, it's straightforward: simply open the needle valve on the end cover. Any leakage across the seats will cause medium to weep from this port.

If the medium cannot be safely vented to the atmosphere, a pressure gauge can be connected to the needle valve. A pressure rise on the gauge indicates internal leakage.

DOUBLE BLOCK AND BLEED PLUG VALVE

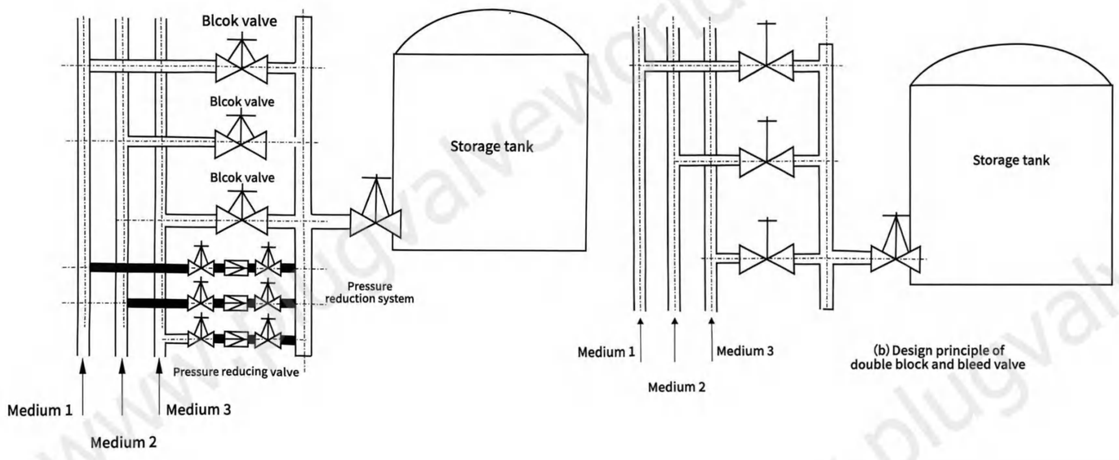
ZZJG VALVE

Fire Safe Design & Overpressure Protection

In pipeline design for tank farms, overpressure protection is a critical consideration. When the primary isolation valve is closed, the pipeline segment remains filled with fluid. A subsequent rise in ambient temperature can cause rapid pressure buildup within this trapped volume. If the temperature increase is significant, the resulting pressure may exceed the pipeline's pressure rating, potentially leading to leaks or failure. Therefore, pressure relief systems are essential.

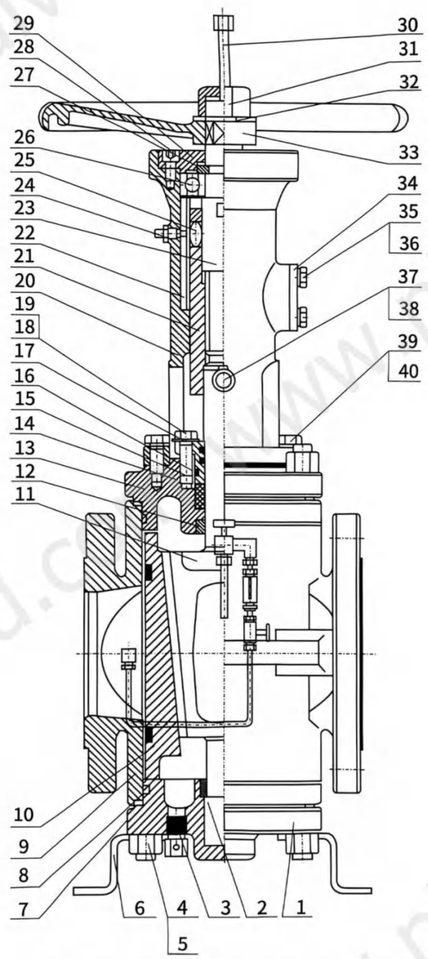
A conventional overpressure protection design is shown in Figure 4(a). It involves a dedicated relief loop piped between the upstream and downstream sides of the main valve. This loop typically consists of two block valves (such as gate, ball, or globe valves) with a relief valve installed between them. However, this system is costly, space-intensive, and adds operational complexity.

Figure 4(b) illustrates a design using a double block and bleed (DB&B) valve as the main isolation valve. Here, the pressure relief function is integrated directly into the valve body. This approach offers a significantly simpler design, requires minimal space, and is a more economical solution.



Fire Safety and Sealing Performance

In oil and gas systems, handling flammable media necessitates valves with reliable sealing and fire resistance. Double block and bleed valves achieve this with a combined soft and hard seal design. The soft seal ensures zero leakage during normal operation. During a fire, if the soft seal fails, the hard seal engages as the primary barrier to prevent major leakage.

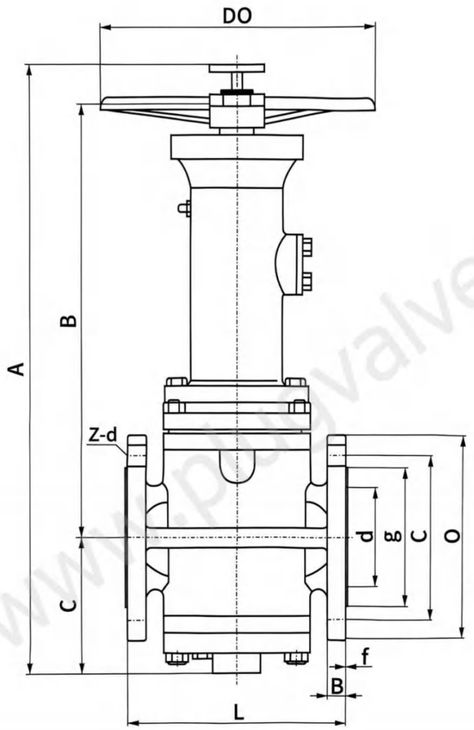


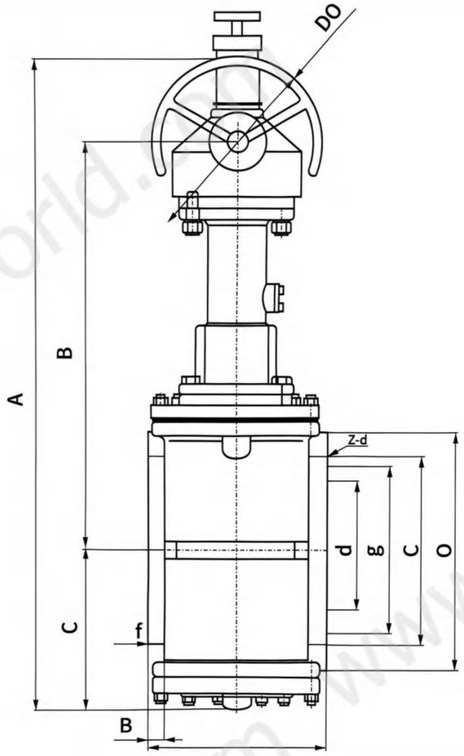
Reduced Bore DBB Plug Valve

MAIN PARTS MATERIALS		
NO.	Part name	Material
1	Bottom cover	A216 WCB
2	Shaft sleeve	C28000
3	Blowdown valve	SS304
4	Stud	A193 B7
5	Nut	A194 2H
6	Columns	Q235A
7	Winding gasket	SS304+Graphite
8	O-rings	Viton
9	Body	A216 WCB
10	Slide	QT500-7+Viton
11	Cock	A216 WCB
12	Shaft sleeve	C28000
13	Bonnet	A216 WCB
14	Packing	Flexible graphite
15	Packinggland	A216 WCB
16	O-rings	Viton
17	O-rings	Viton
18	Outer hexagon bolt	8.8
19	Flat washer	A3
20	Holder	A216 WCB
21	Drive sleeve	QT500-7
22	Locating sleeve	1045
23	Transmission shaft	A182 F6a
24	Oilcup	M10X1
25	Rolling pin	T10
26	Deepgroove ball bearings	GCr15
27	Split ring	A276 410
28	Hexagon socket screw	8.8
29	Bearing gand	Q235A
30	Indicator rod	Q235A
31	Pressing sleeve nut	1035
32	Butterfly spring	65Mn
33	Handwheel	QT400-18
34	Guidepin	A276 410
35	Outer hexagon bolt	8.8
36	Springwashers	65Mn
37	Pin shaft	A276 410
38	Retaining ring	65Mn
39	Outer hexagon bolt	8.8
40	Springwashers	65Mn

DOUBLE BLOCK AND BLEED PLUG VALVE

ZZJG VALVE





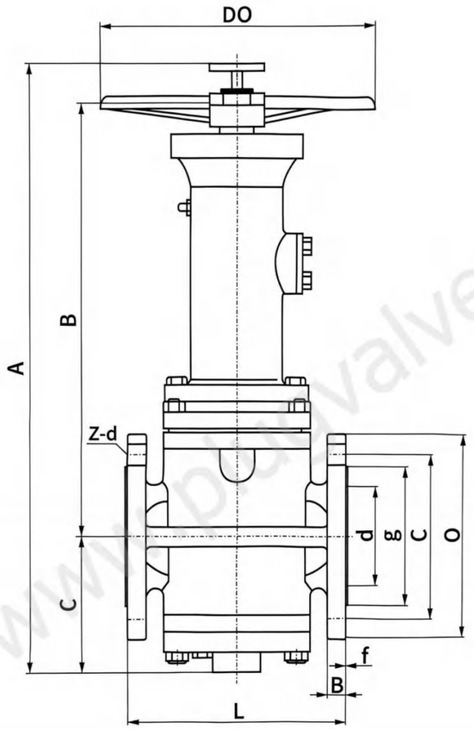
Main Dimensions 300LB Reduced Bore, Handwheel, Gear Operation													
DN	IN	L	0	C	g	d	B	f	A	B	C	D0	Z-d
50	2	216	Φ165	Φ127	Φ92	49	23	2	530	382	135	Φ200	8-Φ19
75	3	282	Φ210	Φ168.5	Φ127	74	29	2	590	395	129	Φ250	8-Φ22
100	4	305	Φ255	Φ200	Φ157	100	32.2	2	671	425	171	Φ300	8-Φ22
150	6	403	Φ320	Φ270	Φ216	150	37	2	805	520	210	Φ350	12-Φ22
200	8	419	Φ380	Φ330	Φ270	201	42	2	1096	645	253	Φ400	12-Φ25
250	10	457	Φ445	Φ387.5	Φ324	252	48.1	2	1283	753	280	Φ500	16-Φ29
300	12	502	Φ520	Φ451	Φ381	303	51.3	2	1385	777	331	Φ550	16-Φ32
350	14	762	Φ585	Φ514.5	Φ413	334	54.5	2	1395	790	341	Φ550	20-Φ32
400	16	838	Φ650	Φ571.5	Φ470	385	57.6	2	1654	948	406	Φ600	20-Φ35
450	18	914	Φ710	Φ628.5	Φ533.5	436	60.8	2	1680	960	420	Φ600	24-Φ35
500	20	991	Φ775	Φ686	Φ584	487	64	2	1892	1060	482	Φ600	24-Φ35

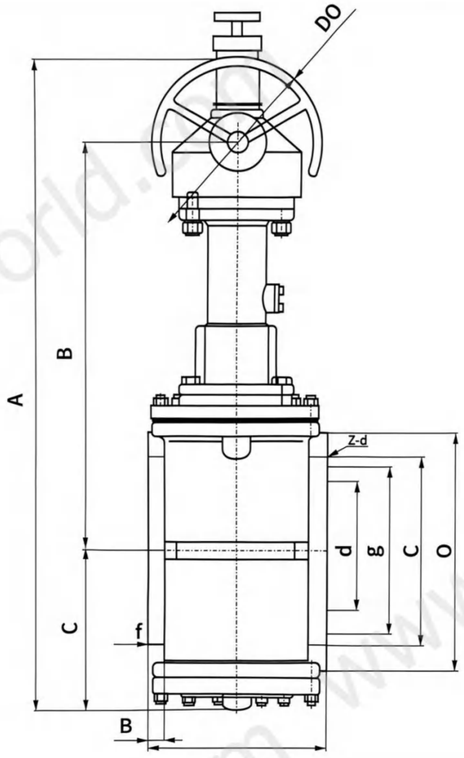
Main Dimensions 150LB Reduced Bore, Handwheel, Gear Operation													
DN	IN	L	O	C	g	d	B	f	A	B	C	D0	Z-d
50	2	178	Φ150	Φ120.5	Φ92	49	16.5	2	530	382	135	Φ200	4-Φ19
75	3	203	Φ190	Φ152.5	Φ127	74	19.5	2	590	395	129	Φ250	4-Φ19
100	4	229	Φ230	Φ190.5	Φ157	100	24.5	2	671	425	171	Φ300	8-Φ19
150	6	267	Φ280	Φ241.5	Φ216	150	26	2	805	520	210	Φ350	8-Φ22
200	8	292	Φ345	Φ298.5	Φ270	201	29	2	1096	645	253	Φ400	8-Φ22
250	10	330	Φ405	Φ362	Φ324	252	31	2	1283	753	280	Φ500	12-Φ25
300	12	356	Φ485	Φ432	Φ381	303	32.5	2	1385	777	331	Φ550	12-Φ25
350	14	381	Φ535	Φ476.5	Φ413	334	35.5	2	1395	790	341	Φ550	12-Φ29
400	16	406	Φ595	Φ540	Φ470	385	37	2	1654	948	406	Φ600	16-Φ29
450	18	864	Φ635	Φ578	Φ533.5	436	40.1	2	1680	960	420	Φ600	16-Φ32
500	20	914	Φ700	Φ635	Φ584	487	43.3	2	1892	1060	482	Φ600	20-Φ32

Main Dimensions 600LB Reduced Bore, Handwheel, Gear Operation													
DN	IN	L	0	C	g	d	B	f	A	B	C	D0	Z-d
50	2	292	Φ165	Φ127	Φ92	49	25.4	2	530	382	135	Φ250	8-Φ19
75	3	356	Φ210	Φ168.3	Φ127	74	31.8	2	590	395	129	Φ300	8-Φ22
100	4	432	Φ275	Φ216	Φ157	100	38.1	2	671	425	171	Φ350	8-Φ25
150	6	559	Φ355	Φ292	Φ216	150	47.7	2	805	520	210	Φ350	12-Φ29
200	8	660	Φ420	Φ349	Φ270	201	55.6	2	1096	645	253	Φ400	12-Φ32
250	10	787	Φ510	Φ432	Φ324	252	63.5	2	1283	753	280	Φ500	16-Φ35
300	12	838	Φ560	Φ489	Φ381	303	66.7	2	1385	777	331	Φ550	20-Φ35
350	14	889	Φ605	Φ527	Φ413	334	69.9	2	1395	790	341	Φ550	20-Φ38
400	16	991	Φ685	Φ603	Φ470	385	76.2	2	1654	948	406	Φ600	20-Φ41
450	18	1092	Φ745	Φ654	Φ533.5	436	82.6	2	1680	960	420	Φ600	20-Φ44
500	20	1194	Φ815	Φ724	Φ584	487	88.9	2	1892	1060	482	Φ600	24-Φ44

DOUBLE BLOCK AND BLEED PLUG VALVE

ZZJG VALVE





Main Dimensions
PN25 Reduced Bore, Handwheel, Gear Operation

DN	IN	L	0	C	g	d	B	f	A	B	C	D0	Z-d
50	2	216	Φ165	Φ125	Φ102	49	20	2	530	382	135	Φ200	4-Φ18
80	3	282	Φ200	Φ160	Φ138	74	24	2	590	395	129	Φ250	8-Φ18
100	4	305	Φ235	Φ190	Φ162	100	24	2	671	425	171	Φ300	8-Φ22
150	6	403	Φ300	Φ250	Φ218	150	28	2	805	520	210	Φ350	8-Φ26
200	8	419	Φ360	Φ310	Φ278	201	30	2	1096	645	253	Φ400	12-Φ26
250	10	457	Φ425	Φ370	Φ335	252	32	2	1283	753	280	Φ500	12-Φ30
300	12	502	Φ485	Φ430	Φ395	303	34	2	1385	777	331	Φ550	16-Φ30
350	14	762	Φ555	Φ490	Φ450	334	38	2	1395	790	341	Φ550	16-Φ33
400	16	838	Φ620	Φ550	Φ505	385	40	2	1654	948	406	Φ600	16-Φ36
450	18	914	Φ670	Φ600	Φ555	436	46	2	1680	960	420	Φ600	20-Φ36
500	20	991	Φ730	Φ660	Φ615	487	48	2	1892	1060	482	Φ600	20-Φ36

Main Dimensions
PN16 Reduced Bore, Handwheel, Gear Operation

DN	IN	L	0	C	g	d	B	f	A	B	C	DO	Z-d
50	2	178	Φ165	Φ125	Φ102	49	18	2	530	382	135	Φ200	4-Φ18
80	3	203	Φ200	Φ160	Φ138	74	20	2	590	395	129	Φ250	8-Φ18
100	4	229	Φ220	Φ180	Φ158	100	20	2	671	425	171	Φ300	8-Φ18
150	6	267	Φ285	Φ240	Φ212	150	22	2	805	520	210	Φ350	8-Φ22
200	8	292	Φ340	Φ295	Φ268	201	24	2	1096	645	253	Φ400	12-Φ22
250	10	330	Φ405	Φ355	Φ320	252	26	2	1283	753	280	Φ500	12-Φ26
300	12	356	Φ460	Φ410	Φ378	303	28	2	1385	777	331	Φ550	12-Φ26
350	14	381	Φ520	Φ470	Φ428	334	30	2	1395	790	341	Φ550	16-Φ26
400	16	406	Φ580	Φ525	Φ490	385	32	2	1654	948	406	Φ600	16-Φ30
450	18	864	Φ640	Φ585	Φ550	436	40	2	1680	960	420	Φ600	20-Φ30
500	20	914	Φ715	Φ650	Φ610	487	44	2	1892	1060	482	Φ600	20-Φ33

Main Dimensions
PN40 Reduced Bore, Handwheel, Gear Operation

DN	IN	L	0	C	g	d	B	f	A	B	C	D0	Z-d
50	2	216	Φ165	Φ125	Φ102	49	20	2	580	382	135	Φ250	4-Φ18
80	3	282	Φ200	Φ160	Φ138	74	24	2	590	395	129	Φ300	8-Φ18
100	4	305	Φ235	Φ190	Φ162	100	24	2	671	425	171	Φ350	8-Φ22
150	6	403	Φ300	Φ250	Φ218	150	28	2	805	520	210	Φ350	8-Φ26
200	8	419	Φ375	Φ320	Φ285	201	34	2	1096	645	253	Φ400	12-Φ30
250	10	457	Φ450	Φ385	Φ345	252	38	2	1283	753	280	Φ500	12-Φ33
300	12	502	Φ515	Φ450	Φ410	303	42	2	1385	777	331	Φ550	16-Φ33
350	14	762	Φ580	Φ510	Φ465	334	46	2	1395	790	341	Φ550	16-Φ36
400	16	838	Φ660	Φ585	Φ535	385	50	2	1654	948	406	Φ600	16-Φ39
450	18	914	Φ685	Φ610	Φ560	436	57	2	1680	960	420	Φ600	20-Φ39
500	20	991	Φ755	Φ670	Φ615	487	57	2	1892	1060	482	Φ600	20-Φ42

SLEEVE PLUG VALVE

ZZJG VALVE

Overview

Sleeve Plug Valve is a conical or cylindrical plug with a through hole. It can be quickly opened and closed by rotating 90 degrees. It is particularly suitable for high-pressure small-diameter pipeline systems that require frequent operation and strict sealing requirements. It can withstand corrosive media and high working pressure. It is widely used in petrochemical, hydraulic systems and other fields.

Application

Sleeve-type soft-sealed plug valves are suitable for pipelines in petroleum, chemical, pharmaceutical, fertilizer, electric power industries, and various working conditions, with a nominal pressure of CLASS 150–900 LBS and an operating temperature of –29°C to 180°C, to cut off or connect the pipeline medium.

Feature

1. The product features a well-designed structure, reliable sealing performance, and an aesthetically pleasing appearance.

2. Sealing is achieved through a sealing face around the sleeve, which incorporates a unique 360-degree metal edge that provides secure protection and fixation.

3. The valve is designed without internal cavities, preventing any accumulation of media.

4. The metal edge also enables a self-cleaning function during plug rotation, making it suitable for handling viscous or contamination-prone operating conditions.

5. Its bidirectional flow characteristic allows for more convenient installation and use.

6. The materials and flange dimensions are customizable to meet specific operating conditions and customer requirements, ensuring adaptability to diverse engineering needs.

Technical Performance Specification

Technical Performance Specification		ASME				DIN				
Design Standard		API599,API6D				Refer to API599				
Face-to-face Dimensions		ASME B16.10 and factory standards				DIN 3202 and factory standards				
Connection Flanges		ASME B16.5				/				
BW Ends		ASME B16.25				Refer to ASME B16.25				
SW Ends		ASME B16.11				Refer to ASME B16.11				
Threaded Ends		ASME B1.20.1				Refer to ASME B1.20.1				
Inspection and Testing		API598.API6D				Refer to API598				
Test Pressure	Nominal Pressure	150	300	600	900	1.6	2.5	4.0	10.0	16.0
	Shell Test	3.0	7.5	15.0	22.5	2.4	3.75	6.0	15.0	24.0
	Seal Test	2.2	5.5	11.0	16.5	1.76	2.75	4.4	11.0	17.6
Applicable Temperature		<150℃								
Applicable Medium		Water,steam and oil tec.								
Actuation Methods		Manual,gear operated,pneumatic operator,electric actuator								

Note:Valve connection sizes can be designed and manufactured according to customers'requirements.

Operating Torques for Plug Valve Stem (NM)

Diameter	NPS	1/2	3/4	1	1 1/4	1 /1/2	2	2 1/2	3	4	5	6	8	10	12	14	16	18
	DN	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350	400	450
Average torque of trunnion		4	4	9.4	10.8	10.8	18	23	26	73	146	189	413	783	827	1170	1587	1825

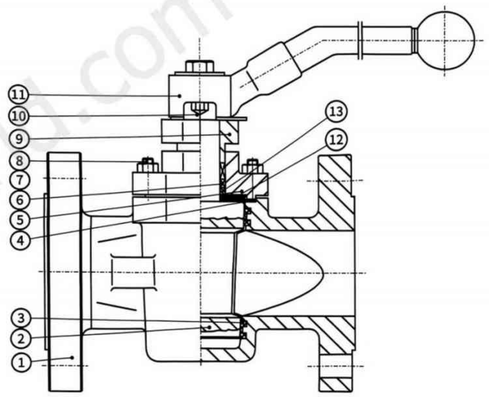
Note:Safety factor should be taken into consideration by customers when selecting actuators.

Approximative Flow Coefficients of Plug Valve (CV)

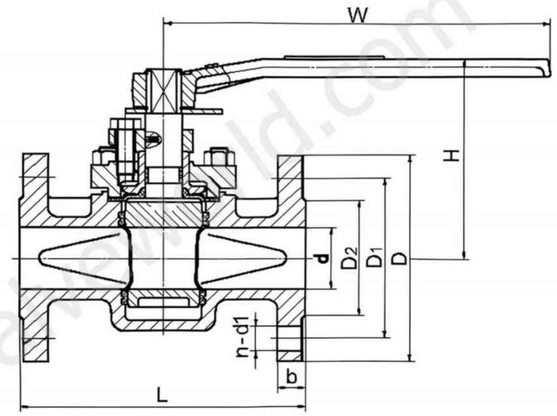
Diameter	NPS	1/2	3/4	1	1 1/4	1 /1/2	2	2 1/2	3	4	5	6	8	10	12	14	16	18
	DN	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350	400	450
CV		7.4	19.5	48.8	/	83.5	153	/	322	555	/	955	1859	2361	3400	3430	7000	/

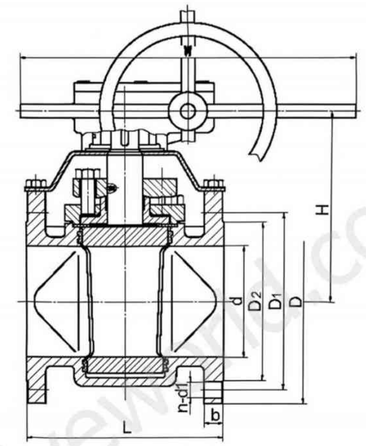
API SLEEVE PLUG VALVE

ZZJG VALVE



Flangle Connection CLASS150





MAIN PARTS MATERIALS

NO.	Part name	Material
1	Body	ASTM A216 WCB, ASTMA217 WC1, WC6, WC9, C5 ASTMA351 CF8, CF8M, CF3, CF3M
2	Plug	ASTM A216 WCB, ASTM A217 WC1, WC6, WC9, C5 ASTM A351 CF8, CF8M, CF3, CF3M
3	Sleeve(Seat)	PTFE, RPTFE, PPL, PEEK, Nylon
4	Gasket	Flexible graphite+stainless steel, PTFE
5	Bonnet	ASTM A216 WCB, ASTMA217 WC1, WC6, WC9, C5 ASTMA351 CF8, CF8M, CF3, CF3M
6	Packing	PTFE
7	Bolt	ASTMA193 B7, A320 B8, A193 B8M
8	Nut	ASTMA194 2H, A194 8, A194 8M
9	Gland	ASME A216 WCB ASME A217 WC1WC6 WC9, C5 ASME A351 CF8, CF8M, CF3, CF3M
10	Adjusting gasket	ASTMA193 B7, A320 B8, A193 B8M
11	Wrench	ASTMA216 WCB
12	Adjusting pad	SS304, SS316
13	Packing pad	SS304, SS316

Main Dimensions

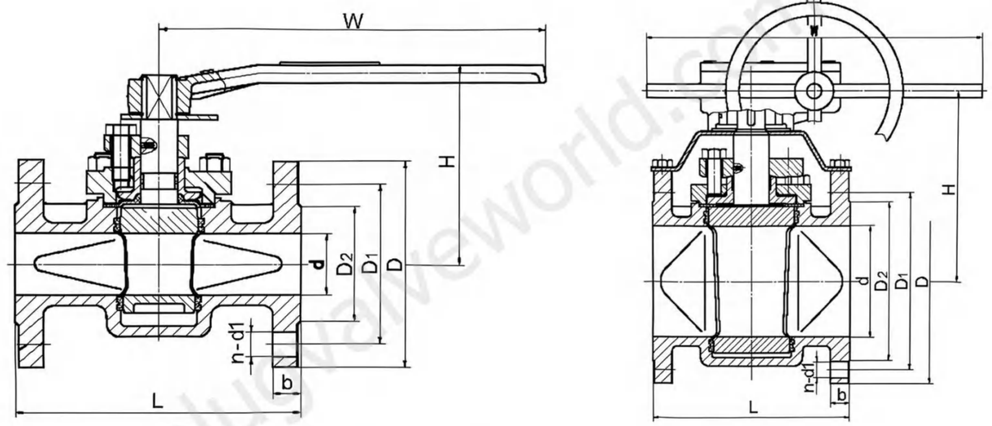
Nominal diameter		Standard value							Reference value		
DN (mm)	NPS (inch)	L	D	D1	D2	f	b	Z-d	W	H	G(kg)
		CLASS150									
15	1/2	108	89	60.5	35	2	11	4-Φ15	120	85	2
20	3/4	117	98	70	43	2	11	4-Φ15	140	95	3
25	1	127	108	79.5	51	2	12	4-Φ15	140	105	4.5
32	1 1/4	140	117	89	64	2	13	4-Φ15	200	115	5.2
40	1 1/2	165	127	98.5	73	2	15	4-Φ15	250	125	7.5
50	2	178	152	120.5	92	2	16	4-Φ19	250	140	11
65	2 1/2	190	178	139.5	105	2	18	4-Φ19	300	150	17.1
80	3	203	190	152.5	127	2	19	4-Φ19	300	185	18
100	4	229	229	190.5	157	2	24	8-Φ19	350	200	34
125	5	254	254	216	186	2	24	8-Φ22	350	215	39
150	6	267	279	241.5	216	2	26	8-Φ22	200*	455	68
200	8	292	343	298.5	270	2	29	8-Φ22	240*	495	115
250	10	330	406	362	324	2	31	12-Φ25	280*	555	195
300	12	356	483	432	381	2	32	12-Φ25	320*	605	305
350	14	686	533	476	413	2	35	12-Φ29	320*	680	325
400	16	762	597	540	470	2	37	16-Φ29	360*	715	846
450	18	864	635	578	533	2	40	16-Φ32	400*	755	885

* Gear operator

API SLEEVE PLUG VALVE

ZZJG VALVE

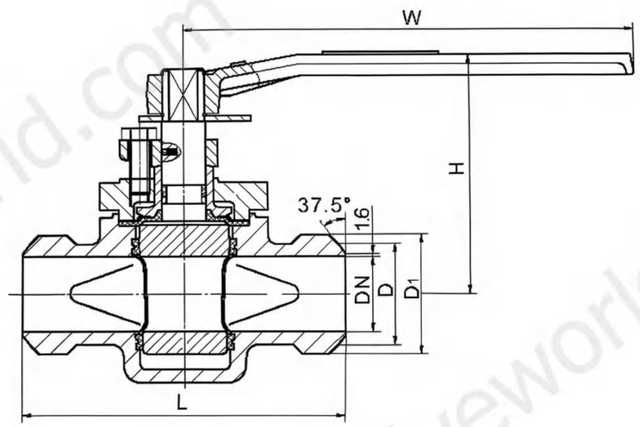
Flangle Connection CLASS300~600



Main Dimensions											
Nominal diameter		Standard value							Reference value		
DN (mm)	NPS (inch)	L	D	D1	D2	f	b	Z-d	W	H	G(kg)
		CLASS300									
15	1/2	140	95	66.5	35	2	15	4-Φ15	160	85	2.5
20	3/4	152	117	82.5	43	2	16	4-Φ19	160	95	4
25	1	165	124	89	51	2	18	4-Φ19	200	105	5
32	1 1/4	178	133	98.5	64	2	19	4-Φ19	250	115	6
40	1 1/2	190	156	114.5	73	2	21	4-Φ22	250	125	8.5
50	2	216	165	127	92	2	23	8-Φ19	300	140	13
65	2 1/2	241	190	149	105	2	26	8-Φ22	300	150	15
80	3	283	210	168.5	127	2	29	8-Φ22	350	185	24
100	4	305	254	200	157	2	32	8-Φ22	350	200	27
125	5	381	279	235	186	2	35	8-Φ22	400	225	40
150	6	403	318	270	216	2	37	12-Φ22	200*	460	65
200	8	419	381	330	270	2	42	12-Φ25	240*	495	145
250	10	457	445	387.5	324	2	48	16-Φ29	280*	560	255
300	12	502	521	451	381	2	51	16-Φ32	320*	610	325
350	14	762	584	514.5	413	2	54	20-Φ32	360*	685	355
CLASS600											
25	1	216	124	89	51	7	18	4-Φ19	250	125	7
32	1 1/4	229	133	98.5	64	7	21	4-Φ19	250	135	8.2
40	1 1/2	241	156	114.5	73	7	23	4-Φ22	300	140	10.8
50	2	292	165	127	92	7	26	8-Φ19	350	150	12.5
65	2 1/2	330	190	149	100	7	29	8-Φ22	350	175	15.3
80	3	356	210	168	127	7	32	8-Φ22	400	195	25
100	4	432	273	216	157	7	38	8-Φ25	400	215	29.5
150	6	559	356	292	216	7	48	12-Φ29	280*	500	70

* Gear operator

Butt-welding Ends CLASS150~900

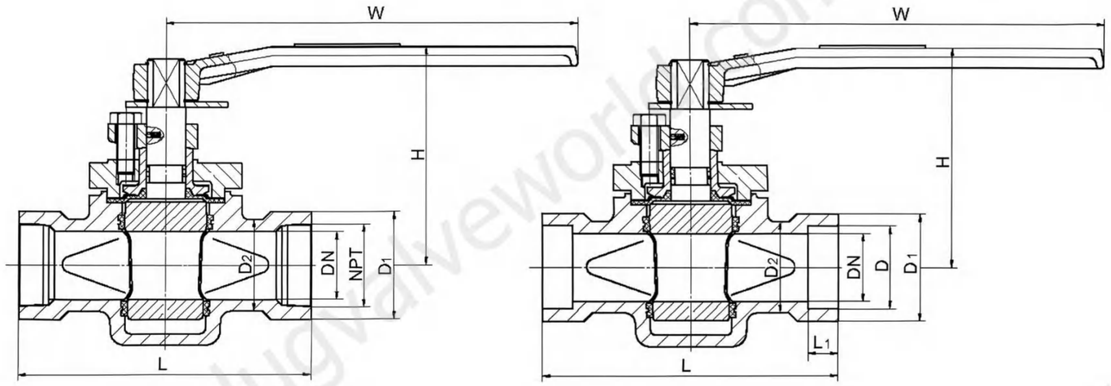


Main Dimensions														
Nominal diameter		Standard Value			Reference Value			Standard Value			Reference Value			
DN (mm)	NPS (inch)	L	D1	D	W	H	G(kg)	L	D1	D	W	H	W(kg)	
		CLASS150						CLASS300						
15	1/2	165	28	25	160	85	3.4	165	28	25	160	85	3.7	
20	3/4	190	33	30	160	85	4.2	190	33	30	190	90	4.6	
25	1	216	38	35	190	90	5.8	216	38	35	190	100	6.2	
32	1 1/4	229	45	42	190	100	6.7	229	45	42	240	110	7.2	
40	1 1/2	241	56	50	240	110	8.4	241	56	50	305	120	8.9	
50	2	267	70	62	305	120	9.1	267	70	62	305	130	9.4	
65	2 1/2	305	88	75	305	130	11.8	305	88	75	450	135	12.3	
80	3	330	104	91	450	135	13.4	330	104	91	500	150	14	
100	4	356	126	117	600	150	26.1	356	126	117	600	160	27.2	

Nominal diameter		Standard Value			Reference Value			Standard Value			Reference Value		
DN (mm)	NPS (inch)	L	D1	D	W	H	G(kg)	L	D1	D	W	H	W(kg)
		CLASS600						CLASS900					
15	1/2	165	31	25	160	90	4.1	190	41	25	190	95	4.7
20	3/4	190	36	30	190	100	4.9	216	46	30	220	100	5.3
25	1	216	41	35	220	110	6.6	254	51	35	240	110	7.4
32	1 1/4	229	49	42	240	120	7.7	279	61	42	305	120	8.6
40	1 1/2	241	59	50	305	130	8.6	305	70	50	325	130	9.6
50	2	292	73	62	325	135	10.2	368	88	62	450	135	11.3
65	2 1/2	330	89	75	450	150	13.1	419	110	75	550	150	14.1
80	3	356	105	91	550	160	15.5	381	128	91	650	165	16.7
100	4	432	132	117	650	180	28	457	157	117	750	185	28.7

API SLEEVE PLUG VALVE

Socket-welding Ends, Screw Thread Ends CLASS150~900

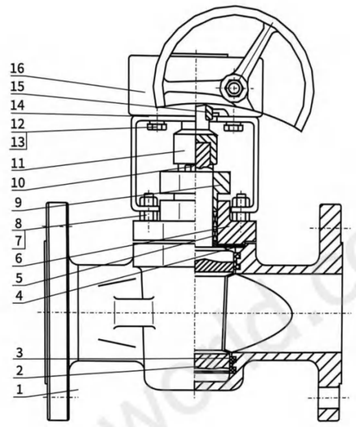


Main Dimensions

Nominal diameter			Standard Value					Reference Value			Standard Value					Reference Value		
DN (mm)	NPS (inch)	NPT	L*	L1	D	D2	D1	W	H	G(kg)	L*	L1	D	D2	D1	W	H	G(kg)
			CLASS150								CLASS300							
15	1/2	1/2	165	10	21.95	28	32	160	85	3	165	10	21.95	28	32	160	85	3.5
20	3/4	3/4	190	13	27.3	33	38	160	85	3.5	190	13	27.3	33	38	190	90	4.1
25	1	1	216	13	34.05	38	46	190	90	5.3	216	13	34.05	38	46	190	100	5.8
32	1 1/4	1 1/4	229	13	42.8	45	55	190	100	6.1	229	13	42.8	45	55	240	110	6.4
40	1 1/2	1 1/2	241	13	48.9	56	63	240	110	7	241	13	48.9	56	63	305	120	7.4
50	2	2	267	16	61.35	70	76	305	120	7.3	267	16	61.35	70	76	305	130	9
65	2 1/2	2 1/2	305	16	74.2	88	95	305	130	11	305	16	74.2	88	95	450	135	12
80	3	3	330	16	90.15	104	114	450	135	13	330	16	90.15	104	114	500	150	14.3
100	4	4	356	19	115.8	126	146	600	150	26.1	356	19	115.8	126	146	600	160	27.2

Nominal diameter			Standard Value					Reference Value			Standard Value					Reference Value		
DN (mm)	NPS (inch)	NPT	L*	L1	D	D2	D1	W	H	G(kg)	L*	L1	D	D2	D1	W	H	G(kg)
			CLASS600								CLASS900							
15	1/2	1/2	165	10	21.95	31	32	160	90	3.7	190	10	21.95	41	41	190	95	4.3
20	3/4	3/4	190	13	27.3	36	38	190	100	4.4	216	13	27.3	46	46	220	100	4.9
25	1	1	216	13	34.05	41	46	220	110	6.1	254	13	34.05	51	51	240	110	7
32	1 1/4	1 1/4	229	13	42.8	49	55	240	120	7.2	279	13	42.8	61	61	305	120	8.1
40	1 1/2	1 1/2	241	13	48.9	59	63	305	130	8.1	305	13	48.9	70	70	325	130	9
50	2	2	292	16	61.35	73	76	325	135	9.8	368	16	61.35	88	88	450	135	10.7
65	2 1/2	2 1/2	330	16	74.2	89	95	450	150	12.6	419	16	74.2	110	110	500	150	13.4
80	3	3	356	16	90.15	105	114	550	160	14.8	381	16	90.15	128	128	650	165	16
100	4	4	432	19	115.8	132	146	650	180	28	457	19	115.8	157	157	750	185	28.7

DIN SLEEVE PLUG VALVE



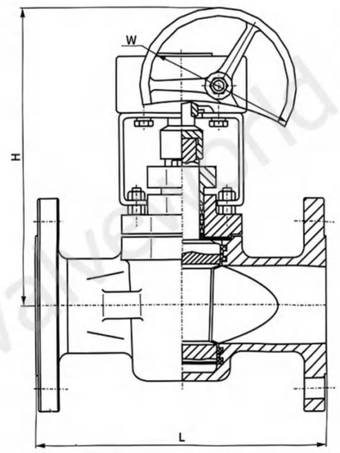
MAIN PARTS MATERIALS

NO.	Part name	Material
1	Body	GS-C251.7363, 1.4308, 1.4408, 1.4306, 1.4301
2	Plug	GS-C251.7363, 1.4308, 1.4408, 1.4306, 1.4301
3	Sleeve(Seat)	PTFE, PRTFE, PPL, PEEK, Nylon
4	Gasket	Flexible graphite+stainless steel, PTFE
5	Packing	PTFE
6	Bonnet	GS-C251.7363, 1.4308, 1.4408, 1.4306, 1.4301
7	Bolt	ASTMA193-B7, A320-B8, A193-B8M
8	Nut	ASTMA194-2H, A194-8, A194-8M
9	Gland	GS-C251.7363,1.4308,1.4408,1.4306,1.4301
10	Bolt	ASTMA193-B7, A320-B8, A193-B8M
11	Connect jacket	AISI 1045
12	Bolt	ASTMA193-B7, A320-B8, A193-B8M
13	Gasket	AISI 1066
14	Yoke	Q235, WCB
15	Key	AISI 1045
16	Worm	ASTM A536 60-40-18 + other

DIN SLEEVE PLUG VALVE

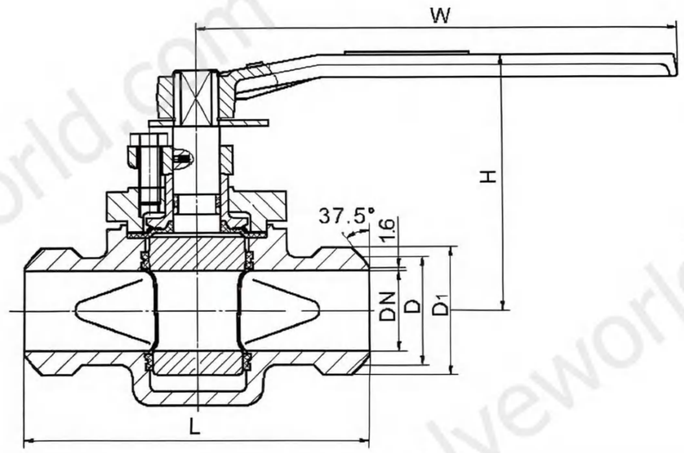
ZZJG VALVE

Flange Connection PN16~64



Main dimensions															
X343F/X43F-16															
DN-mm	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350
L	130	150	160	180	200	230	290	310	350	400	480	600	730	850	980
H	150	155	160	180	190	200	220	230	380	460	520	580	620	680	740
W	195	205	205	315	315	330	400	590	690	300	320	320	350	380	380
X343F/X43F-25															
DN-mm	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350
L	130	150	160	180	200	230	290	310	350	400	480	600	730	850	980
H	150	155	160	180	190	200	220	230	380	460	520	580	620	680	740
W	195	205	205	315	315	330	400	590	690	300	320	320	350	380	380
X343F/X43F-40															
DN-mm	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350
L	130	150	160	180	200	230	290	310	350	400	480	600	730	850	980
H	150	155	160	180	190	200	220	230	380	460	520	580	620	680	740
W	195	205	205	315	315	330	400	590	690	300	320	320	350	380	380
X343F/X43F-64															
DN-mm	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350
L	130	150	160	180	200	230	290	310	350	400	480	600	730	850	980
H	150	155	160	180	190	200	220	230	380	460	520	580	620	680	740
W	195	205	205	315	315	330	400	590	690	300	320	320	350	380	380

Butt-welding Ends PN1.6~40

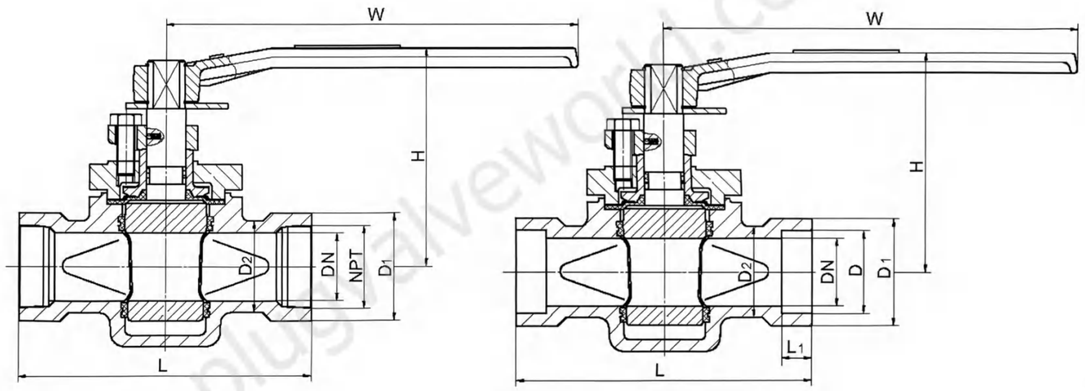


Main Dimensions															
Nominal diameter		Standard Value			Reference Value			Standard Value			Reference Value		
DN (mm)	NPS (inch)	L	D1	D	W	H	G(kg)	L	D1	D	W	H	W(kg)
		PN1.6~2.5(MPa)						PN4.0(MPa)					
15	1/2	130	28	25	160	85	3.3	130	28	25	160	85	3.5
20	3/4	150	33	30	160	85	4.2	150	33	30	190	90	4.4
25	1	160	38	35	190	90	5.8	160	38	35	190	100	6.3
32	1 1/4	180	45	42	190	100	6.8	180	45	42	240	110	7.3
40	1 1/2	200	56	50	240	110	8	200	56	50	305	120	8.5
50	2	230	70	62	305	120	9.1	230	70	62	305	130	9.7
65	2 1/2	290	88	75	305	130	11.8	290	88	75	450	135	12.4
80	3	310	104	91	450	135	13.4	310	104	91	500	150	14.4
100	4	350	126	117	600	150	26.1	350	126	117	600	160	27.2

Nominal diameter		Standard Value			Reference Value			Standard Value			Reference Value		
DN (mm)	NPS (inch)	L	D1	D	W	H	G(kg)	L	D1	D	W	H	W(kg)
		PN10.0(MPa)						PN16.0(MPa)					
15	1/2	165	31	25	160	90	4.1	165	41	25	190	95	4.4
20	3/4	190	36	30	190	100	4.9	190	46	30	220	100	5.3
25	1	216	41	35	220	110	6.6	216	51	35	240	110	7
32	1 1/4	229	49	42	240	120	7.7	229	61	42	305	120	8.1
40	1 1/2	241	59	50	305	130	8.6	241	70	50	325	130	9.1
50	2	292	73	62	325	135	10.2	292	88	62	450	135	10.7
65	2 1/2	330	89	75	450	150	13.1	330	110	75	550	150	13.7
80	3	356	105	91	550	160	15.5	356	128	91	650	165	16.2
100	4	432	132	117	650	180	28	432	157	117	750	185	28.7

DIN SLEEVE PLUG VALVE

Socket-welding Ends, Screw Thread Ends PN1.6~40



Main Dimensions

Nominal diameter			Standard Value					Reference Value			Standard Value					Reference Value		
DN (mm)	NPS (inch)	NPT	L*	L1	D	D2	D1	W	H	G(kg)	L*	L1	D	D2	D1	W	H	G(kg)
			PN1.6~2.5(MPa)								PN4.0(MPa)							
15	1/2	1/2	130	10	21.95	28	32	160	85	3.3	130	10	21.95	28	32	160	85	3.5
20	3/4	3/4	150	13	27.3	33	38	160	85	4.2	150	13	27.3	33	38	190	90	4.4
25	1	1	160	13	34.05	38	46	190	90	5.8	160	13	34.05	38	46	190	100	6.3
32	1 1/4	1 1/4	180	13	42.8	45	55	190	100	6.8	180	13	42.8	45	55	240	110	7.3
40	1 1/2	1 1/2	200	13	48.9	56	63	240	110	8	200	13	48.9	56	63	305	120	8.5
50	2	2	230	16	61.35	70	76	305	120	9.1	230	16	61.35	70	76	305	130	9.7
65	2 1/2	2 1/2	290	16	74.2	88	95	305	130	11.8	290	16	74.2	88	95	450	135	12.4
80	3	3	310	16	90.15	104	114	450	135	13.8	310	16	90.15	104	114	500	150	14.4
100	4	4	350	19	115.8	126	146	600	150	26.1	350	19	115.8	126	146	600	160	27.2

Nominal diameter			Standard Value					Reference Value			Standard Value					Reference Value		
DN (mm)	NPS (inch)	NPT	L*	L1	D	D2	D1	W	H	G(kg)	L*	L1	D	D2	D1	W	H	G(kg)
			PN10.0(MPa)								PN16.0(MPa)							
15	1/2	1/2	165	10	21.95	31	32	160	90	4.1	165	10	21.95	41	41	190	95	4.4
20	3/4	3/4	190	13	27.3	36	38	190	100	4.9	190	13	27.3	46	46	220	100	5.3
25	1	1	216	13	34.05	41	46	220	110	6.6	216	13	34.05	57	57	240	110	7.0
32	1 1/4	1 1/4	229	13	42.8	49	55	240	120	7.7	229	13	42.8	61	61	305	120	8.1
40	1 1/2	1 1/2	241	13	48.9	59	63	305	130	8.6	241	13	48.9	70	70	325	130	9.1
50	2	2	292	16	61.35	73	76	325	135	10.2	292	16	61.35	88	88	450	135	10.7
65	2 1/2	2 1/2	330	16	74.2	89	95	450	150	13.1	330	16	74.2	110	110	550	150	13.7
80	3	3	356	16	90.15	105	114	550	160	15.5	356	16	90.15	128	128	650	165	16.2
100	4	4	432	19	115.8	132	146	650	180	28	432	19	115.8	157	157	750	185	28.7

LINED PLUG VALVE

ZZJG VALVE

ZZJG VALVE

Overview

Fluorine-Lined Plug Valves are engineered for corrosive, abrasive, or high-purity media. Featuring a fully fluoroplastic-lined interior—typically PTFE—that covers all wetted parts, these valves utilize a rotating plug for quick shut-off, regulation, or flow diversion. Their design ensures reliable sealing, simplifies piping systems, and maintains isolation integrity.

Feature

- **Corrosion & Abrasion Resistant**: Full PTFE/fluoroplastic lining for aggressive and abrasive media.
- **Low Flow Resistance**: Straight-through flow design minimizes pressure drop.
- **Self-Cleaning Action**: Plug rotation wipes sealing surfaces, suitable for slurries and sticky fluids.
- **Thermal Compensation**: Double-groove sealing rings secure lining and absorb thermal deformation.
- **Quick 90° Operation**: Enables rapid open/close or flow diversion.
- **Multi-Port Options**: Three-way and multi-way designs simplify system layout.
- **Easy Maintenance**: Adjustable flange allows seal compensation and inline servicing.

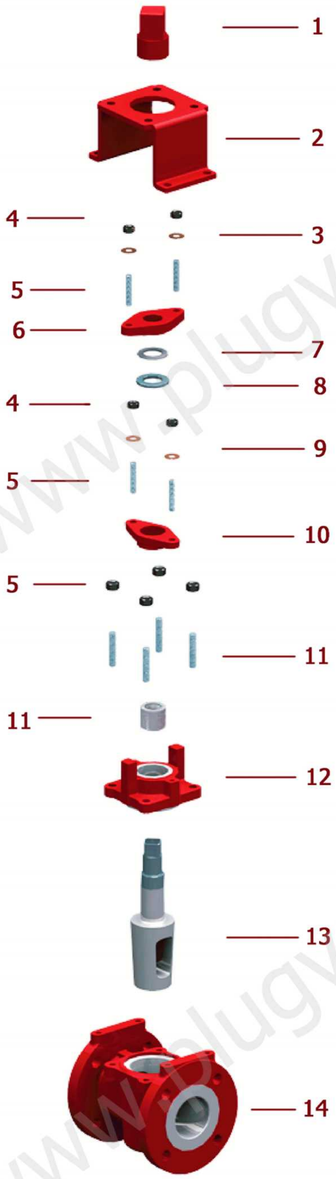
Application

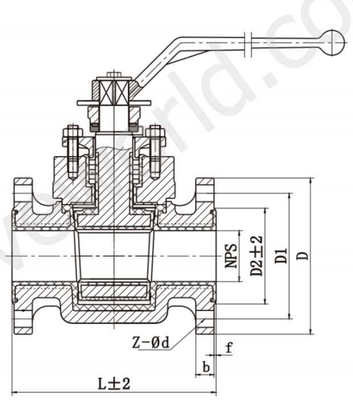
Widely utilized for handling corrosive, abrasive, and high-purity fluids across industries including chemical processing, pharmaceuticals, metallurgy, water treatment, and power generation—particularly in FGD systems and chemical dosing applications.

Technical specifications

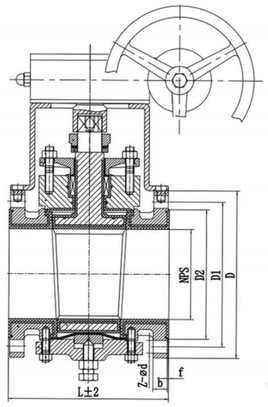
Design	Face to Face	Flange Dimensions	Test	Marking	Supply
GB/T 22130, HG/T 3704	GB/T 12221	HG/T 20592	GB/T 13927 (Spark Test)	GB/T 12220	GB/T 12252
API 599, ASME B16.34	ASME B16.10	ASME B16.5	API 598 (Spark Test)	ASME B16.34, MSS SP-25	API 599

LINED PLUG VALVE





lange type lever operated plug valve (Fully lined)

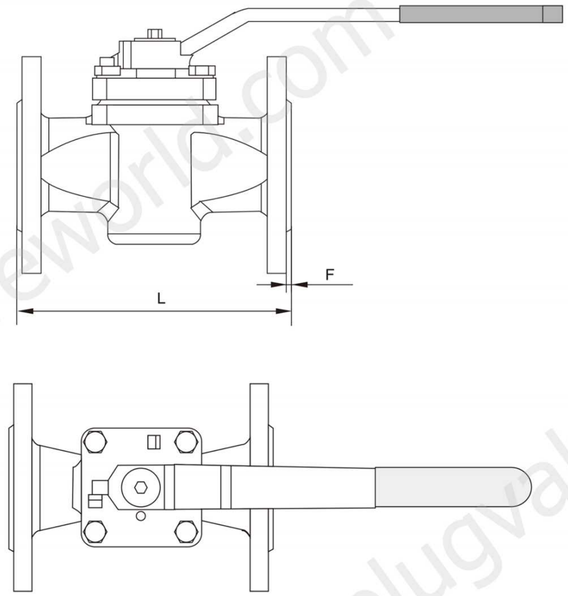


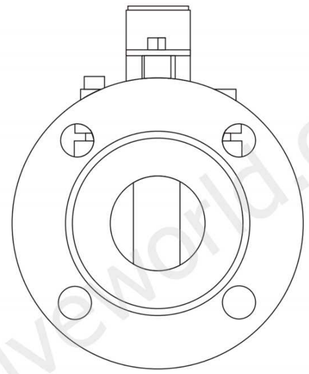
Flange type gear operated plug valve (Fully lined)

Main Parts Material			
No.	Description	Material	Material
1	Joint shaft	A105	A182 F304
2	Yoke	A216 WCB	A351 CF8
3	Belleville Spring	17-7	17-7
4	Nut	A194 2H	A194 8
5	Bolt	A193 B7	A193 B8
6	Plug Adjustment Flange	A216 WCB	A351 CF8
7	PTFE Gasket	PTFE	PTFE
8	Metal Washer	A3	304
9	Belleville Spring	17-7	17-7
10	Gland Flange	A216 WCB	A351 CF8
11	Packing	PTFE	PTFE
12	Bonnet	A216 WCB+F46/PFA	A216 WCB+F46/PFA
13	Plug	A216 WCB+F46/PFA	A216 WCB+F46/PFA
14	Body	A216 WCB+F46/PFA	A216 WCB+F46/PFA

LINED PLUG VALVE

ZZJG VALVE





Main Dimensions									
DN	NPS	ASME B16.5		JIS B221210K		DIN2532 PN10		Weight	CV
mm	in	L	f	L	f	L	f	[kg]	
15	1/2	108	2	130	2	130	2	2.4	10
20	3/4	117	2	150	2	150	2	2.4	12
25	1	127	2	160	2	160	2	3.4	17
40	1 1/2	165	2	200	2	200	2	4.9	39
50	2	178	2	230	2	230	2	6	70
80	3	203	2	310	2	310	2	9	180
100	4	229	2	350	2	350	2	19	305
150	6	267	2	480	2	480	2	48	712
200	8	292	2	600	2	600	2	65	1011
250	10	330	2	730	2	730	2	88	1840
300	12	356	2	850	2	850	2	125	2435

JACKET PLUG VALVE

ZZJG VALVE

Overview

A jacketed plug valve is a specially designed industrial valve that incorporates an insulation/cooling jacket layer around the body of a standard plug valve. This jacket forms a sealed cavity through which steam, hot oil, hot water (for heating), or coolant (for cooling) can be circulated.

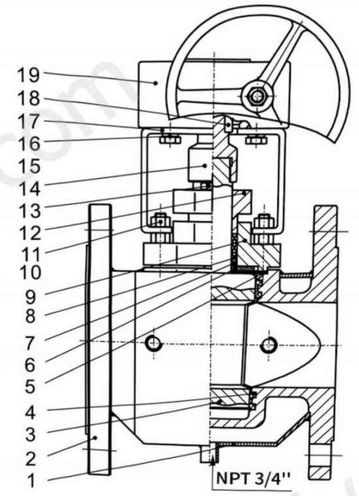
Its core purpose is to maintain or control the temperature of the fluid within the pipeline, preventing it from solidifying, crystallizing, or becoming excessively viscous at the valve section due to ambient temperature influences. This ensures the continuity, stability, and safety of the process flow.

Feature

1. Temperature Control – Prevents media solidification or crystallization.
2. Compact & Low Resistance – Straight-through flow with minimal pressure drop.
3. Quick Operation – 90° turn for full open/close.
4. Reliable Seal – Tapered plug design ensures tight shut-off.
5. Versatile – Suitable for viscous, heating, or cooling media.

Application

Used to handle fluids that must stay warm or cool to flow properly. Common in:
· Chemical/Petrochemical: asphalt, heavy oil, wax
· Food/Pharma: chocolate, syrup, fats
· Coatings & Adhesives: paint, resin, glue
· Slurry Systems: e.g., in environmental scrubbing
Suitable for any pipeline where temperature control prevents clogging.



Main Parts Material		
NO.	Part name	Material
1	Jacket	ASTM A283Gr D, SS304, SS316
2	Body	A216 WCB, A351 CF8, A351 CF8M, A351CF3M, A351 CN7M, 904L
3	Plug	A351CF8, A351 CF8M, A351 CF3M, A351 CN7M, 904L
4	Seat	PTFE, RPTFE, PPL, NyLon, PEEK
5	Gasket	PTFE, RPTFE, PPL, SS304+Graphite
6	Packing pad	SS304, SS316, SS316L
7	Packing pad	SS304, SS316, SS316L
8	Packing	Graphite, PTFE, RPTFE, PPL
9	Bonnet	A216WCB, A351 CF8, A351 CF8M, A351 CF3M, A351CN7M, 904L
10	Bolt	A193 B7M, A193 B8M, A193 B8, A193 B7
11	Nut	A194 2HM, A194 8M, A194 8, A194 2H
12	Gland flange	A216 WCB, A351 CF8
13	Bolt	A193 B7M, A193 B8M, A193 B8, A193 B7
14	Connecting sleeve	AISI 1045
15	Bolt	A193 B7M, A193 B8M, A193 B8, A193 B7
16	Gasket	AISI 1566
17	Yoke	ASTM A283 GRD, SS304
18	Key	AISI 1045
19	Worm	A53660-40-18, WCB

Inverted Lubricated Pressure Balance Plug Valve

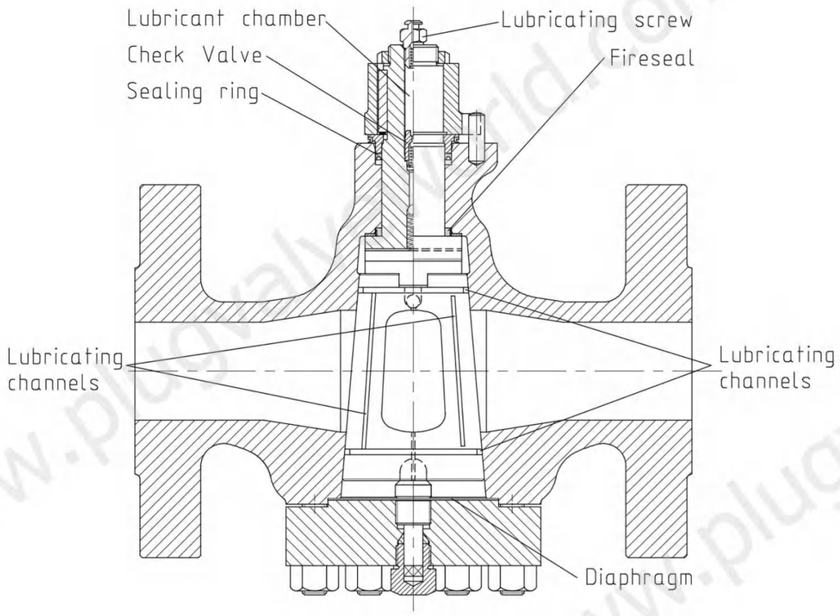
ZZJG VALVE

Overview

The inverted pressure balanced lubricated plug valve is a high-performance valve designed for critical applications. Its hollow plug design equalizes internal pressure, ensuring remarkably low operating torque. Combined with a forced grease lubrication system that provides a reliable seal and reduces friction, this valve is exceptionally durable and ideal for demanding services in oil & gas, petrochemicals, and pipelines.

Feature

The Pressure Balanced Lubricated Plug Valve is designed for isolating or connecting pipeline media in industries including petroleum, chemical, and power. It is suitable for nominal pressures from CLASS 150 to 2500 and operating temperatures ranging from -46°C to 550°C.



Operation

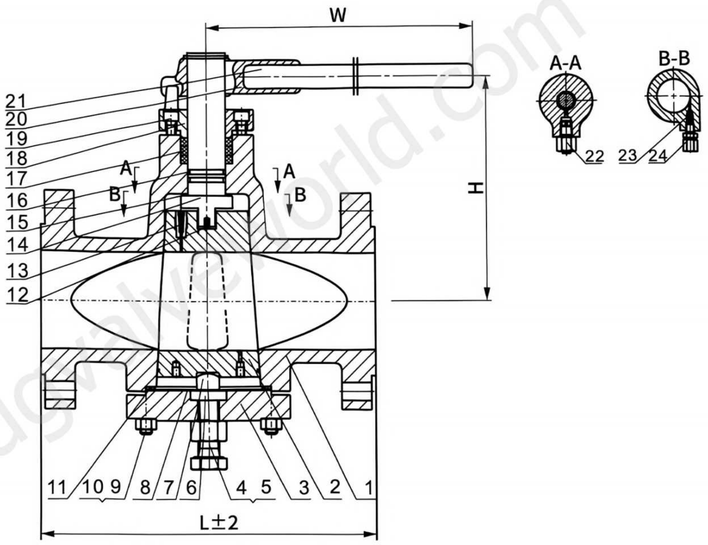
For the Inverted Pressure Balanced Lubricated Plug Valve, the simplest method of operation is via a hand lever. For straight-through valves, opening and closing is achieved through a 90° rotation. For three-way valves, the flow direction is determined by different rotation angles, such as 90°, 180°, 270°, or 360°. The hand lever can be mounted in any of eight different positions, maximizing space efficiency during installation. Additionally, the hand lever is typically used for relatively smaller valves, as specified in the valve's dimensional drawings.

Installation Instructions

1. **Pre-Installation Setup.** Position the plug in the "Open" position before installation.
2. **Orientation.** The valve may be installed in any required orientation (horizontal, vertical, etc.).
3. **Passageway Inspection.** Ensure the valve passageway is free of trapped materials before installing it into the piping system. Remove any debris if present.
4. **Avoid Pipe Stress.** The piping layout should be designed to minimize stresses, and the valve must not be subjected to excessive pipe tension.
5. **Accessibility.** Lubrication points on the valve must remain easily accessible after installation.
6. **Operation and Maintenance Clearance.** Sufficient space must be provided for valve operation and future maintenance, including removal of the bottom cover.
7. **Lubricant Screw Care.** Avoid damaging the lubricant screw. If damaged, replace it before proceeding.
8. **Lifting Guidelines**
   - Large, heavy valves should be lifted using the dedicated lifting lugs on the valve body.
   - Smaller valves without lugs may be lifted with soft lifting straps wrapped around the body.
   - Important: If the valve is fitted with an actuator or extension, never lift the assembly by the actuator. The main lift must always be applied to the valve body. Straps on the actuator should only be used for positioning control. Soft straps are recommended to avoid damaging the valve coating.
9. **Pre-Pressure Test Lubrication.** Relubricate the valve before pressure testing. Even after initial factory lubrication, minor air pockets may remain, which could cause leaks. Therefore, re-lubrication prior to testing is required.

Inverted Lubricated Pressure Balance Plug Valve

ZZJG VALVE



Technical Performance Specification											
Design Standard		GB/T19672				API599, API6D, BS5353					
Pressure-Temperature Rating		GB/T12224				API609, ASME B16.34					
Face-Face		GB/T12221				API609, ISO5752, ASME B16.10, API 6D					
Flange Ends		GB/T9113, JB/T79				ASME B16.5\B16.47					
Inspection &Test		JB/T9092, GB/T13927, GB/T19672				API598, AP 6D					
Norminal Pressure		PN				CLASS					
		1.6	2.5	4.0	6.3	150	300	600	900	1500	2500
Test Pressure （MPa）	Shell Test	2.4	3.75	6.0	9.45	2.93	7.58	15.3	23.0	38.3	63.8
	High Pressure Seal Teat	1.76	2.75	4.4	6.93	2.07	5.52	11.03	16.8	28.0	46.8
	Low Pressure Seal Teat	0.6				0.6					
Applicable Temperature		Different raw material for different work temperature									
Applicable Medium		Water, oil, gas and other causticity medium(Different raw material for different medium)									
Note:Pressure testing value in the above list will be determined based upon the pressure temperature rating for WCB.											

NO.	Part name	Material
1	Body	A216 WCB
2	Plug	A217 CA15+N
3	Cover	A216 WCB
4	Bolt	A193 B7
5	Nut	A1942H
6	Adjustment block	A276410
7	Adjustment block	A276410
8	Metal diaphragm	SS304
9	Bolt	A193 B7
10	Nut	A1942H
11	Spiral gasket	SS304+flexible graphite
12	Spring	SS304
13	Check valve	UCA
14	Stem	A182F6a
15	Gasket	PTFE
16	O-ring	Viton
17	Packing	graphite
18	Gland	A216 WCB
19	Bolt	A193 B7
20	The pipe	A570
21	Handle	A216 WCB
22	Sealing emergency device	UCA
23	Check valve	UCA
24	Grease valve	UCA

INVERTED PRESSURE BALANCE LUBRICATED PLUG VALVE

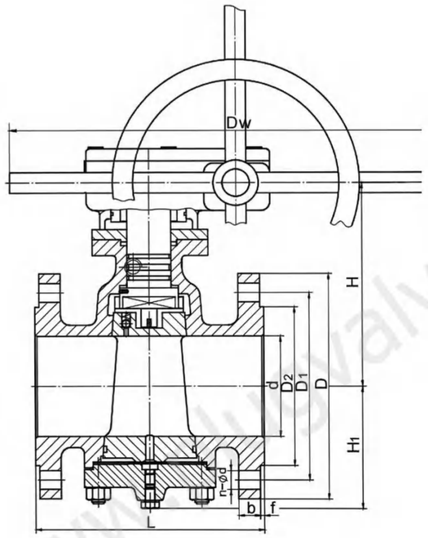
Stem Torques(NM)of Plug Valve (Product Range)

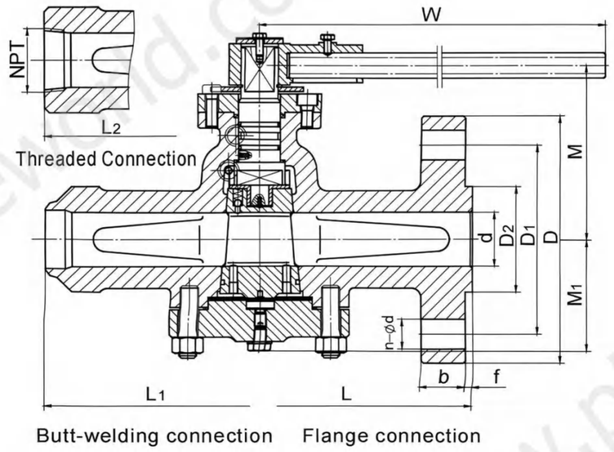
Size	Class 150			Class 300			Class 600		Class 900		Class 1500		Class2500	Size
	Short	Regular	Venturi	Short	Regular	Venturi	Regular	Venturi	Regular	Venturi	Regular	Venturi	Regular	
15	/	/	/	/	/	/	47	/	54	/	54	/	244	1/2
20	/	/	/	/	/	/	61	/	69	/	74	/	515	3/4
25	/	/	/	/	/	/	81	/	96	/	101	/	691	1
40	/	/	/	81	/	/	149	/	157	/	162	/	976	1 1/2
50	67	67	/	94	/	/	189	/	212	/	216	/	2400	2
80	162	162	/	230	/	/	366	/	474	/	542	/	6640	3
100	237	237	/	338	/	/	677	/	705	/	745	/	△	4
150	296	570	/	/	610	423	1080	677	1490	/	2400	1090	△	6
200	949	1360	/	/	1220	610	2030	1080	2710	/	/	3250	/	8
250	1360	1650	/	/	1900	1220	2580	2030	4730	/	/	△	/	10
300	1900	2510	/	/	2200	2440	4070	2980	△	4390	/	△	/	12
350	/	/	1900	/	/	3120	/	4070	/	△	/	△	/	14
400	/	/	2510	/	/	3800	/	5420	/	5400	/	△	/	16
450	/	/	2710	/	/	4610	/	6620	/	△	/	△	/	18
500	/	/	2850	/	/	5420	/	9450	/	8100	/	/	/	20
600	/	/	3660	/	/	6750	/	12150	/	△	/	/	/	24
650	/	/	/	/	/	/	/	△	/	/	/	/	/	26
750	/	/	△	/	/	△	/	△	/	/	/	/	/	30
900	/	/	△	/	/	△	/	△	/	/	/	/	/	36

Note: Salety factor should be taken into consideration when selecting actuators;
△ means that customers can consult with interrelated department of our company;
/ means that there is no answer.

Inverted Lubricated Pressure Balance Plug Valve

ZZJG VALVE





Nominal Diameter		Standard Value								ReferenceValue				
DN (mm)	NPS (inch)	L	L1	D	D1	D2	f	b	Z-d	W	M	Dw	H	W(kg)
		CLASS150 Regular Pattem												RF
50	2	203	/	152	120.5	92	2	16	4-Φ19	600	215	/	/	22
80	3	241	/	190	152.5	127	2	19	4Φ19	820	270	/	/	38
100	4	305	/	229	190.5	157	2	24	8-Φ19	1050	287	/	/	60
150	6	394	/	279	241.5	216	2	26	8-Φ22	/	/	350	495	92
200	8	457	/	345	298.5	270	2	29	8-Φ22	/	/	400	685	182
250	10	533	/	405	362	324	2	31	12-Φ25	/	/	450	685	282
300	12	610	/	485	432	381	2	32	12-Φ25	/	/	450	913	403
Note:When NPS>4", being for gearacuator sizes.														

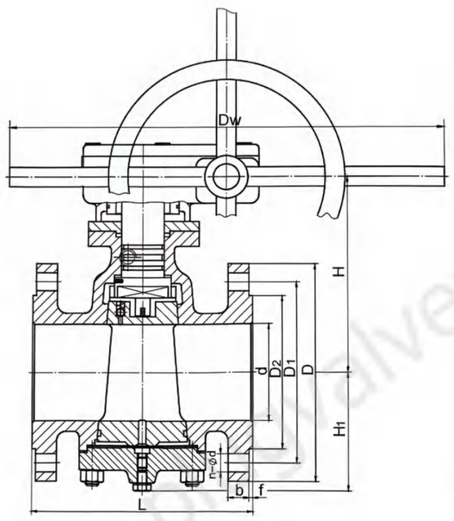
Main Dimensions

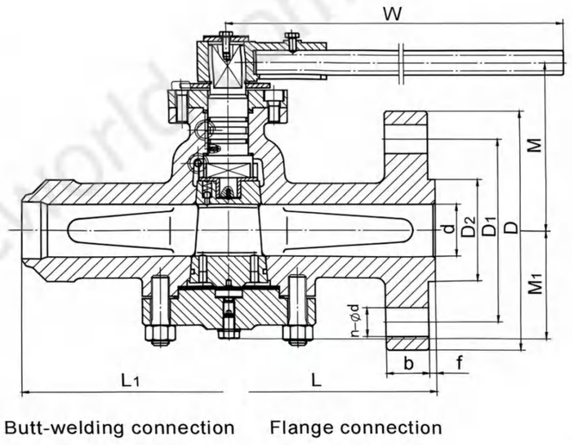
Nominal Diameter		Standard Value									Reference Value				
DN (mm)	NPS (inch)	L	L1	L	D	D1	Dz	f	b	Z-d	W	M	Dw	H	W(kg)
		CLASS150 Short Pattern													RF Th
15	1/2	108	/	89	89	60.5	35	2	11	4-Φ15	400	180	/	/	10 2.5
20	3/4	117	/	133	98	70	43	2	11	4-Φ15	400	180	/	/	12 6.8
25	1	127	/	133	108	79.5	51	2	12	4-Φ15	500	185	/	/	14 6.8
32	1 1/4	140	/	/	120	89	64	2	13	4-Φ15	500	200	/	/	17 /
40	1 1/2	165	/	229	127	98.5	73	2	15	4-Φ15	600	210	/	/	19 22
50	2	178	267	229	152	120.5	92	2	16	4-Φ19	600	215	/	/	21 24.5
65	2 1/2	190	305	/	178	139.5	105	2	18	4-Φ19	820	250	/	/	29 /
80	3	203	330	/	190	152.5	127	2	19	4-Φ19	820	270	/	/	33 /
100	4	229	356	/	229	190.5	157	2	24	8-Φ19	/	/	300	300	48 /
125	5	254	/	/	255	216	186	2	24	8-Φ22	/	/	300	340	75 /
150	6	267	457	/	279	241.5	216	2	26	8-Φ22	/	/	320	365	98 /
200	8	292	521	/	345	298.5	270	2	29	8-Φ22	/	/	320	400	158 /
250	10	330	559	/	405	362	324	2	31	12-Φ25	/	/	350	450	171 /
300	12	356	635	/	485	432	381	2	32	12-Φ25	/	/	380	510	245 /
350	14	381	/	/	535	476	413	2	35	12-Φ29	/	/	380	590	370 /
Note:When NPS>4",being for gear actuator sizes.Screw thread connection being regular pattern.															

Nominal Diameter		Standard Value									Reference Value		
DN (mm)	NPS (inch)	L	L1	LRJ	D	D1	D_2	f	b	Z-d	Dw	H	Wkg)
		CLASS150 VenturiPaterm											RF
250	10	533	533	546	405	362	324	2	31	12-Φ25	600	40B	350
300	12	610	610	622	485	432	381	2	32	12-Φ25	800	457	475
350	14	686	686	699	535	476	413	2	35	12-Φ29	800	49B	670
400	16	762	762	775	600	540	470	2	37	16-Φ29	800	525	785
450	18	864	864	876	635	578	533	2	40	16-Φ32	560	565	885
500	20	914	914	927	700	635	584	2	43	20-Φ32	560	590	966
600	24	1067	1067	1080	815	749.5	692	2	48	20-Φ35	560	635	1856
750	30	1295	1295	/	984	914.4	857	2	75	28-Φ35	800	/	/
900	36	1600	1600	/	116B	1086	1022	2	90	32-Φ41	800	/	/
Note:NPS>24" Flanges diameter and thickness comply with MSSSP-44.													

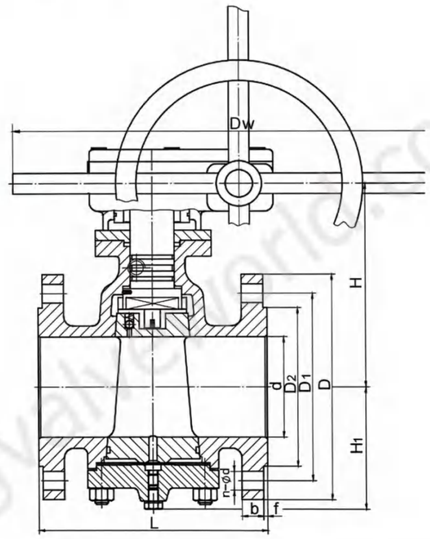
Inverted Lubricated Pressure Balance Plug Valve

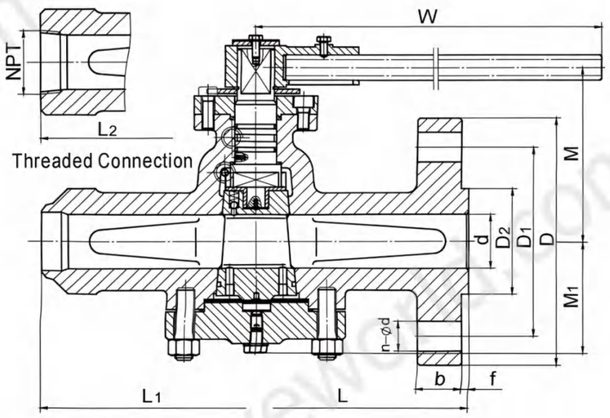
ZZJG VALVE





Butt-welding connection Flange connection





Butt-welding connection Flange connection

Main Dimensions

Nominal Diameter		Standard Value							Reference Value		
DN (mm)	NPS (inch)	L	D	D1	D2	f	b	Z-Φd	W	M	W(kg)
		CLASS300 Short Pattern									
40	1 1/2	190	156	114.5	73	2	21	4-Φ22	610	169	16
50	2	216	165	127	92	2	23	8-Φ19	610	178	21
80	3	283	210	168.5	127	2	29	8-Φ22	860	219	38
100	4	305	254	200	157	2	32	8-Φ22	940	235	60

Nominal Diameter		Standard Value							Reference Value		
DN (mm)	NPS (inch)	L	D	D1	D_2	f	b	Z-Φd	Dw	H	W(kg)
		CLASS300 Short Pattern									
150	6	403	318	270	216	2	37	12-Φ22	560	578	178
200	8	502	381	330	270	2	42	12-Φ25	560	624	276
250	10	568	445	387.5	324	2	48	16-Φ29	610	738	356
300	12	711	521	451	381	2	51	16-Φ32	610	761	508

Nominal Diameter		Standard Value								Reference Value		
DN (mm)	NPS (inch)	L	L1	LRJ	D	D1	D2	f	b	Z-Φd	Dw	H	W(kg)
		CLASS300 Venturi Pattern											RF
150	6	403	457	457	318	270	216	2	37	12-Φ22	500	509	121
200	8	419	521	521	381	330	270	2	42	12-Φ25	500	579	192
250	10	457	559	559	445	387.5	324	2	48	16-Φ29	5000	614	281
300	12	502	635	635	521	451	381	2	51	16-Φ32	750	685	508
350	14	762	762	762	584	514.5	413	2	54	20-Φ32	750	720	796
400	16	838	838	838	650	571.5	470	2	58	20-Φ35	560	755	902
450	18	914	914	914	710	628.5	533	2	61	24-Φ35	560	765	1097
500	20	991	991	991	775	686	584	2	64	24-Φ35	800	940	1576
600	24	1143	1143	1143	915	813	692	2	70	24-Φ41	800	970	2060
750	30	1397	1397	1397	1092	997	857	2	92	28-Φ48	800	1080	/
900	36	1727	1727	1727	1270	1168.4	1022	2	105	32-Φ54	800	1270	/

Main Dimensions

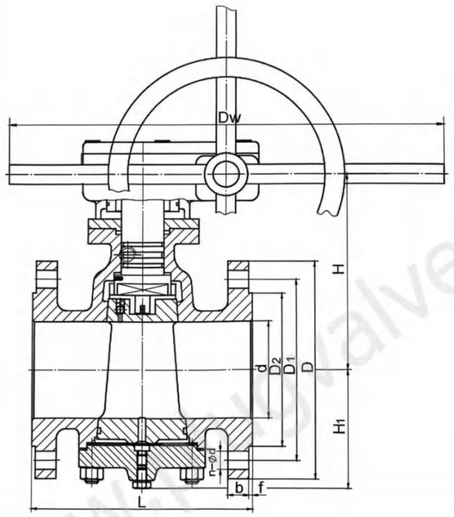
Nominal Diameter		Standard Value									Reference Value		
DN (mm)	NPS (inch)	L	L2	LRJ	D	D1	D2	f	b	Z-Φd	W	M	W(kg)
		CLASS600 Regular Pattem											RF Th
15	1/2	165	89	165	95	66.7	35	6.4	15	4-Φ16	400	104	5.3 2.5
20	3/4	190	133	190	120	82.5	43	6.4	16	4-Φ19	450	127	9 6.8
25	1	216	133	216	124	89	51	6.4	18	4-Φ19	500	127	10 6.8
40	1 1/2	241	229	241	156	114.5	73	6.4	23	4-Φ22	600	176	22 10
50	2	292	229	295	165	127	92	6.4	26	8-Φ19	600	196	24.5 21

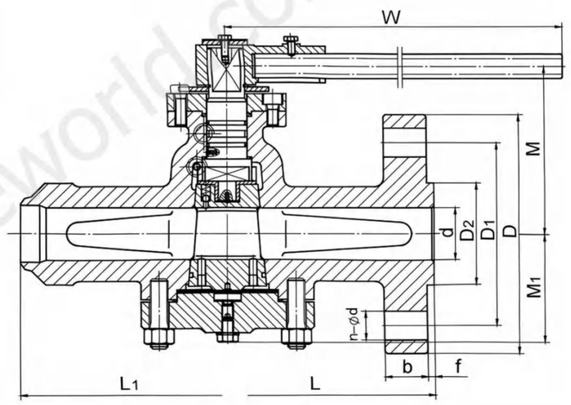
Nominal Diameter		Standard Value									ReferenceValue				
DN (mm)	NPS (inch)	L	L1	LRJ	D	D1	D2	f	b	Z-Φd	W	M	Dw	H	W(kg)
		CLASS600 Regular Pattem													RF BW
50	2	292	292	295	165	127	92	6.4	26	8-Φ19	600	196	/	/	24.5 21
80	3	356	356	359	210	168	127	6.4	32	8-Φ22	800	217	/	/	46 41
100	4	432	432	435	273	216	157	6.4	38	8-Φ25	950	232	/	/	85 51
150	6	559	559	562	355	292	216	6.4	48	12-Φ29	/	/	560	568	254 168
200	8	660	660	664	420	349.2	270	6.4	56	12-Φ32	/	/	560	704	406 284
250	10	787	787	791	510	431.8	324	6.4	64	16-Φ35	/	/	650	745	584 412
300	12	838	838	841	560	489	381	6.4	67	20-Φ35	/	/	650	775	620 486

Nominal Diameter		Standard Value								ReferenceValue			
DN (mm)	NPS (inch)	L	L1	LRJ	D	D1	D2	f	b	Z-Φd	DW	H	W(kg)
		CLASS600 VenturiPattern											RF
150	6	559	559	562	355	292	216	6.4	48	12-Φ29	560	568	150
200	8	660	660	664	420	349.2	270	6.4	56	12-Φ32	560	704	304
250	10	787	787	791	510	431.8	324	6.4	64	16-Φ35	650	745	437
300	12	838	838	841	560	489	381	6.4	67	20-Φ35	650	775	616
350	14	889	889	892	605	527	413	6.4	70	20-Φ39	800	825	864
400	16	991	991	994	685	603.2	470	6.4	77	20-Φ42	800	845	1168
450	18	1092	1092	1095	745	654	533	6.4	83	20-Φ45	800	870	1653
500	20	1194	1194	1200	815	723.9	584	6.4	89	24-Φ45	800	900	1850
600	24	1397	1397	1407	940	838.2	692	6.4	102	24-Φ51	650	945	2161
650	26	1448	1448	1460	1016	914.4	749	6.4	108	28-Φ5	650	978	/
750	30	1651	1651	1664	1130	1022.4	857	6.4	114	28-Φ55	650	1022	/
900	36	2083	2083	2098	1314	1194	1022	6.4	124	28-Φ67	650	1055	/

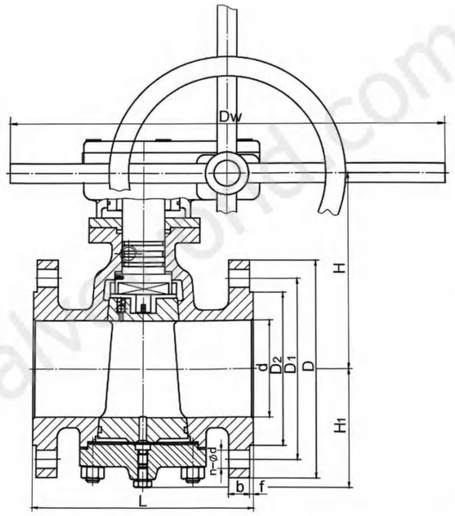
Inverted Lubricated Pressure Balance Plug Valve

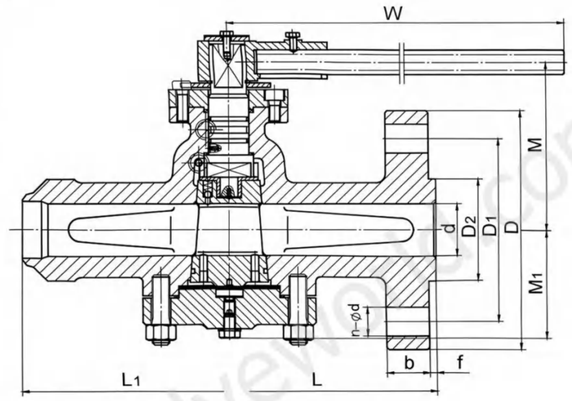
ZZJG VALVE





Butt-welding connection Flange connection





Butt-welding connection Flange connection

Main Dimensions

Nominal Diameter		Standard Value								Reference Value		
DN (mm)	NPS (inch)	L	LRJ	D	D1	D2	f	b	Z-Φd	Dw	H	W(kg)
		CLASS900 Regular Pattern										RF
80	3	381	384	240	190.5	127	6.4	38.5	8-Φ26	650	217	114
100	4	457	460	290	235	157	6.4	44.5	8-Φ32	650	232	125
150	6	610	613	380	317.5	216	6.4	56	12-Φ32	800	595	264
200	8	737	740	470	393.7	270	6.4	63.5	12-Φ39	800	657	591
250	10	838	841	545	469.9	324	6.4	70	16-Φ39	800	725	662
300	12	965	968	610	533.4	381	6.4	79.5	20-Φ39	800	775	/

Nominal Diameter		Standard Value								Reference Value		
DN (mm)	NPS (inch)	L	LRJ	D	D1	D2	f	b	Z-Φd	Dw	H	W(kg)
		CLASS900 Regular Pattern										RF
300	12	965	968	610	533.4	381	6.4	79.5	20-Φ39	650	775	/
350	14	1029	1038	640	558.8	413	6.4	86	20-Φ42	800	825	/
400	16	1130	1140	705	616	470	6.4	89	20-Φ45	800	845	/
450	18	1219	1232	785	685.8	533	6.4	102	20-Φ51	800	870	/
500	20	1321	1334	855	749.3	584	6.4	108	20-Φ55	800	900	/
600	24	1549	1568	1040	901.7	692	6.4	140	20-Φ68	650	945	/

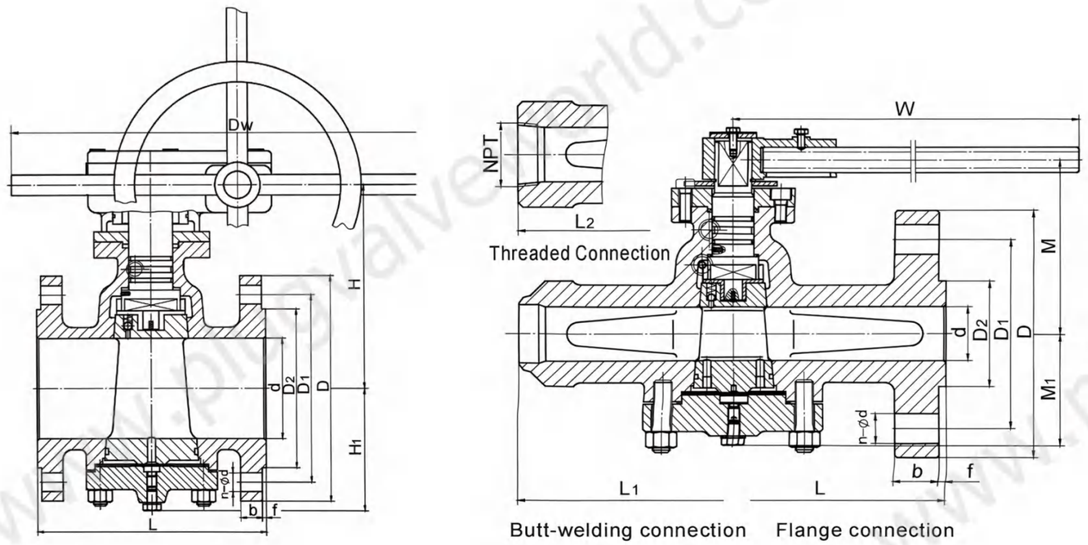
Main Dimensions

Nominal Diameter		Standard Value								Reference Value				
DN (mm)	NPS (inch)	L	LRJ	D	D1	D2	f	b	Z-φd	W	M	Dw	H	W(kg)
		CLASS1500 Regular Pattern												RF
15	1/2	216	216	120	82.6	35	6.4	22.5	4-φ22	500	104	/	/	4.5
20	3/4	229	229	130	88.9	43	6.4	25.5	4φ22	500	127	/	/	8.5
25	1	254	254	150	101.6	51	6.4	29	4-φ26	600	127	/	/	13.5
40	1 1/2	305	305	180	123.8	73	6.4	32	4-φ29	600	164	/	/	16
50	2	368	372	215	165.1	92	6.4	38.5	8-φ26	800	174	/	/	68
80	3	470	473	265	203.2	127	6.4	48	8-φ32	800	212	/	/	118
100	4	546	549	310	241.3	157	6.4	54	8-φ35	/	/	560	508	161
150	6	705	711	395	317.5	216	6.4	83	12-φ39	/	/	560	556	/

Note:When NPS>4",being for gear actuator sizes.

Nominal Diameter		Standard Value										
DN (mm)	NPS (inch)	L	LRJ	D	D1	D_2	f	b	Z-φd	Dw	H	W(kg)
		CLASS1500Venturi Pattern										RF
150	6	705	711	395	317.5	216	6.4	83	12-φ39	650	653	257
200	8	832	841	485	393.7	270	6.4	92	12-φ45	650	720	521
250	10	991	1000	585	482.6	324	6.4	108	12-φ51	650	755	/
300	12	1130	1146	675	571.5	381	6.4	124	16-φ55	800	775	/
350	14	1257	1276	750	635	413	6.4	133.5	16-φ60	800	825	/
400	16	1384	1407	825	704.8	470	6.4	146.5	16-φ68	800	845	/
450	18	1537	1559	915	774.7	533	6.4	162	16-φ74	800	870	/

Inverted Lubricated Pressure Balance Plug Valve



Main Dimensions

Nominal Diameter		Standard Value									Reference Value				
DN (mm)	NPS (inch)	L	L2	LRJ	D	D1	D_2	f	b	Z-Φd	W	M	Dw	H	W(kg)
		CLASS2500 Regular Pattern													RF
15	1/2	264	89	264	135	88.9	35	6.4	30.5	4-Φ22	600	104	/	/	4.5
20	3/4	273	133	273	140	95.2	43	6.4	32	4-Φ22	600	127	/	/	8.5
25	1	308	133	308	160	108	51	6.4	35	4-Φ26	800	127	/	/	13.5
40	1 1/2	384	229	387	205	146	73	6.4	44.5	4-Φ32	800	187	/	/	16
50	2	451	229	454	235	171.4	92	6.4	51	8-Φ29	800	219	/	/	68
80	3	578	/	584	305	228.6	127	6.4	67	8-Φ35	1000	253	/	/	118
100	4	673	/	683	355	273	157	6.4	76.5	8-Φ42	/	/	800	508	161
150	6	914	/	927	485	368.3	216	6.4	108	8-Φ55	/	/	800	556	/
200	8	1022	/	1038	550	438.2	270	6.4	127	12-Φ55	/	/	800	605	/
250	10	1270	/	1292	675	593.8	324	6.4	165.5	12-Φ67	/	/	800	712	/
300	12	1422	/	1445	760	619.1	381	6.4	184.5	12-Φ74	/	/	800	836	/

ZZJG VALVE

Forged Plug Valve

Overview

A Forged Steel Plug Valve is a type of quarter-turn valve that controls fluid flow by rotating a cylindrical or conical plug (the core component) inside the valve body. The plug has a through port. When the port is aligned with the flow path, the valve is open; a 90-degree rotation blocks the flow path completely, closing the valve.

The key distinction is the "Forged" manufacturing process. Major pressure-containing components like the body, bonnet, and plug are made from solid steel billets shaped under immense pressure (forging). This creates a denser, more reliable grain structure compared to casting, making it ideal for demanding services.

Feature

1. **Superior Pressure Integrity** – Forged construction delivers maximum density and strength, ensuring unmatched reliability in high-pressure and critical safety applications.
2. **Zero-Leakage Sealing** – Precision-machined tapered plug with adjustable compression creates a bubble-tight seal, often enhanced by lubricant injection for long-term integrity.
3. **Full-Bore Flow Efficiency** – Straight-through flow path minimizes turbulence and pressure drop, providing near-zero flow resistance for optimal system efficiency.
4. **Rapid Quarter-Turn Operation** – 90-degree open/close actuation enables immediate flow control. Fire-safe design maintains metal-to-metal seal integrity under extreme conditions.
5. **Bidirectional & Maintenance-Friendly** – Excellent sealing performance independent of flow direction. In-service lubrication capability extends service life with minimal downtime.

Application

Forged steel plug valves are engineered for the most demanding applications. Their unmatched strength and leak-proof reliability make them the preferred solution in critical, high-pressure, and high-risk systems across industries. They are indispensable in upstream oil & gas (wellheads, pipelines), refining & petrochemicals, power generation (high-pressure steam), and offshore/marine environments, where safety, integrity, and performance cannot be compromised.

3-WAY/4-WAY PLUG VALVE

ZZJG VALVE

Overview

Three-way and four-way plug valves enable multi-directional flow control with a single valve. The three-way type diverts, mixes, or switches flow between one inlet and two outlets (L/T-port). The four-way type provides complete flow reversal or crossover between two independent lines. Both offer a key advantage: simplifying complex piping, allowing rapid, reliable switching with fewer leaks.

Feature

1.Superior Design for reliable sealing and performance in a compact form.

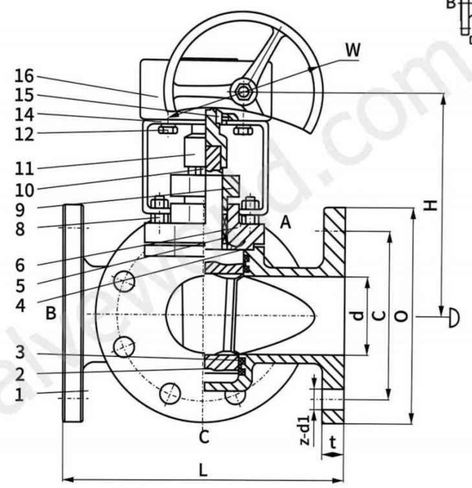
2.High Customization through selectable flow patterns (L/T-port), materials (cast iron/steel/stainless), and sealing types (hard/lubricated).

3. Engineered Flexibility, allowing precise matching of components like flange specs to specific project needs.

TECHNICAL SPECIFICASTION	
Structural style	BB-BG
Driving mode	Wrench wheel, worm&worm gear, pneumatic, electric-actuated
Design standard	API599、API 6D、GB/T22130
Design criteria	ASME B16.10、GB12221、EN558
Connecting flange	ASME B16.5、HB20592、EN1092
Test and inspection	API598、API6D、GB/T13927、EN12266

Pressure	Shell test (MPa)	Sealing test (MPa)
150	3.0	2.2
300	7.7	5.62
600	15.4	11.23
900	23.0	16.85

Pressure	Shell test (MPa)	Sealing test (MPa)
1.6	2.4	1.76
2.5	3.75	2.75
4.0	6.0	4.4
6.4	9.6	7.04
10.0	15.0	11.0
16.0	24.0	17.6



MAIN PARTS MATERIALS		
NO.	Part name	Material
1	Body	B148-C95800
2	Plug	B148-C95800
3	Seat	PTFE
4	Gasket	PTFE
5	Packing	PTFE
6	Bonnet	B148-C95800
7	Bolt	A193-B8M
8	Nut	A194-8M
9	Gland	B148-C95800
10	Bolt	A193-B8M
11	Connecting sleeve	AISI-1045
12	Bolt	AISI-1035
13	Gasket	AISI-1066
14	Yoke	CS
15	Pin	AISI-1045
16	Worm	A536 60-40-18+other

3-WAY/4-WAY PLUG VALVE

MULTIPORT VALVES

ZZJG VALVE Multiport Sleeved Plug Valves bring economy and more compact systemdeslgn to thousands of applIcatlons.

BI-DIRECTIONAL FLOW

In the diagrams the color indicates the path of fluld flow, Bl-directional flowpermits more system design options.

3-WAY ARRANGEMENTS

Only the Type A plug will shut off the flow. With the Type Ax, C, and D plugs, there isalways flow between the bottom port and one of the side ports.

4-WAY AND 5-WAY VALVES

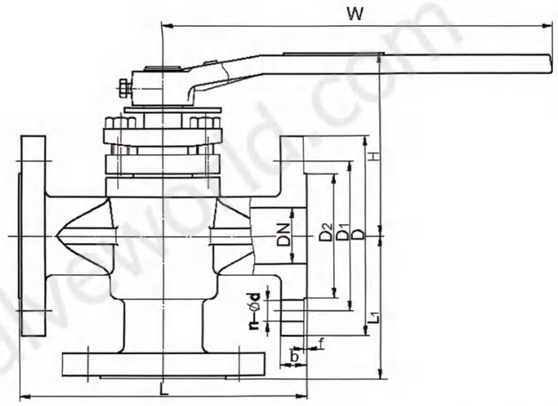
For optimum system flexiblIty 4-way and 5-way multiported valves are avallable.For detalls such as sizes avallable and dimensional informatlon visit www.plugvalveworld.com or contact the factory.

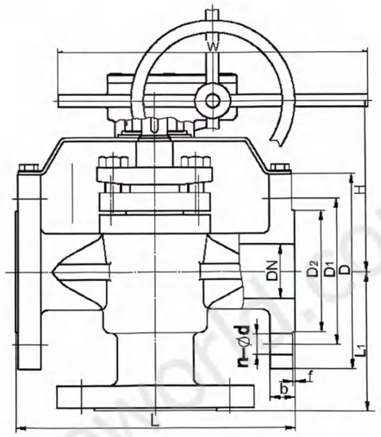
	Type A	Type AX	Type C	Type C Pos. 1&2 Only	Type C Pos. 2&3 Only	Type D	Type D Pos. 1&2 Only	Type D Pos. 2&3 Only
								
0° Position								
90° Position								
180° Position								

ZZJG VALVE

ZZJG VALVE

SLEEVE TYPE SOFT SEALING 3-WAY PLUG VALVE ACC.TO ASME





Main Dimensions

Nominal Diameter		Standard Value								Reference Value		
DN (mm)	NPS (inch)	L	L1	D	D1	D2	f	b	n-Φd	W	H	G(kg)
		CLASS150										
15	1/2	108	76	89	60.5	35	2	11	4-Φ15	120	85	2.8
20	3/4	117	76	98	70	43	2	11	4-Φ15	140	95	4.2
25	1	127	89	108	79.5	51	2	12	4-Φ15	140	105	6.3
32	1 1/4	140	98	117	89	64	2	13	4-Φ15	200	115	7.3
40	1 1/2	165	105	127	98.5	73	2	15	4-Φ15	250	125	10.5
50	2	178	114	152	120.5	92	2	16	4-Φ19	250	140	15.4
65	2 1/2	190	124	178	139.5	105	2	18	4-Φ19	300	150	23.9
80	3	203	130	190	152.5	127	2	19	4-Φ19	300	185	25.2
100	4	229	152	229	190.5	157	2	24	8-Φ19	350	200	47.6
125	5	254	170	254	216	186	2	24	8-Φ22	200*	275	54.6
150	6	267	190	279	241.5	216	2	26	8-Φ22	200*	455	95.2
200	8	292	229	343	298.5	270	2	29	8-Φ22	240*	495	161
250	10	330	311	406	362	324	2	31	12-Φ25	280*	555	273

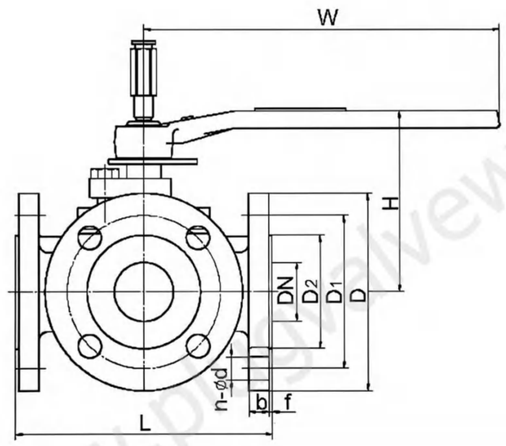
Gear operator for those of NPS>6

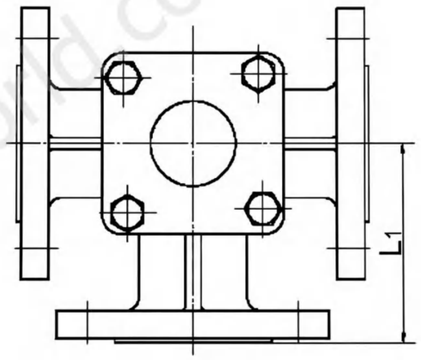
Nominal Diameter		Standard Value								Reference Value		
DN (mm)	NPS (inch)	L	L1	D	D1	D2	f	b	n-Φd	W	H	G(kg)
		CLASS300										
15	1/2	140	76	95	66.5	35	2	15	4-Φ15	160	85	3.5
20	3/4	152	76	117	82.5	43	2	16	4-Φ19	160	95	5.6
25	1	165	95	124	89	51	2	18	4-Φ19	200	105	7
32	1 1/4	178	102	133	98.5	64	2	19	4-Φ19	250	115	8.4
40	1 1/2	190	111	156	114.5	73	2	21	4-Φ22	250	125	11.9
50	2	216	121	165	127	92	2	23	8-Φ19	300	140	18.2
65	2 1/2	241	130	190	149	105	2	26	8-Φ22	300	150	21
80	3	283	141	210	168.5	127	2	29	8-Φ22	350	185	33.6
100	4	305	171	254	200	157	2	32	8-Φ22	350	200	37.8
125	5	381	190	279	235	186	2	35	8-Φ22	400	225	56
150	9	403	216	318	270	216	2	37	12-Φ22	200*	460	91
200	8	419	254	381	330	270	2	42	12-Φ25	240*	495	203
250	10	457	311	445	387.5	324	2	48	16-Φ29	280*	560	357

Gear operator for those of NPS>6

3-WAY/4-WAY PLUG VALVE

SLEEVE TYPE SOFT SEALING 3-WAY PLUG VALVE ACC.TO ASME





RF FACE(LEVER)

Main Dimensions

Nominal Diameter		Standard Value								Reference Value	
DN (mm)	NPS (inch)	L	L1	D	D1	D2	f	b	n-Φd	W	H
		CLASS150 Regular Pattem									
25	1	184	92	108	79.5	51	2	12	4-Φ15	140	105
40	1 1/2	235	118	127	98.5	73	2	15	4-Φ15	250	125
50	2	241	121	152	120.5	92	2	16	4-Φ19	250	140
80	3	362	131	190	152.5	127	2	19	4-Φ19	300	185
100	4	400	200	229	190.5	157	2	24	8-Φ19	350	200

Nominal Diameter		Standard Value								Reference Value	
DN (mm)	NPS (inch)	L	L1	D	D1	D2	f	b	n-Φd	W	H
		CLASS300 Regular Pattem									
25	1	191	95	124	89	51	2	18	4-Φ19	200	105
40	1 1/2	241	121	156	114.5	73	2	21	4-Φ22	250	125
50	2	248	124	165	127	92	2	23	8-Φ19	300	140
80	3	375	188	210	168.5	127	2	29	8-Φ22	350	185
100	4	413	207	254	200	157	2	32	8-Φ22	350	200

ZZJG VALVE

ECCENTRIC PLUG VALVE

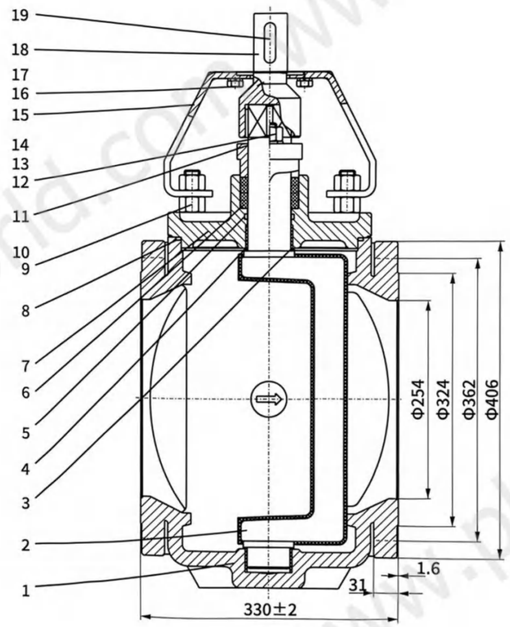
ZZJG VALVE

Overview

Elastic-seat eccentric plug valves are a new type of plug valve designed for large-diameter pipelines (DN200 and above) and applications such as sewage or slurry transport. They provide excellent sealing and corrosion resistance, feature low operating torque and minimal flow resistance, and offer a long service life. These characteristics make them an ideal choice for regulation or shut-off in wastewater, sludge, or clean water systems.

Structure Type

The elastic-seat eccentric plug valve incorporates a streamlined, fully rubber-coated plug with a curved shaft. The seat can be constructed either by overlay welding a corrosion-resistant alloy or by being cast as an integral part of the valve body. The sealing surfaces utilize an eccentric offset design, and the flow passage features a rectangular cross-section.



MAIN PARTS MATERIALS	
NO.	Part Name
1	Body
2	Plug+NBR
3	Gasket
4	Sliding Bearing
5	O-ring
6	Packing
7	Cover
8	O-ring
9	Stud
10	Nut
11	Packing gland
12	Flat gasket
13	Stud
14	Nut
15	Bracket
16	Bolt
17	Spring washer
18	Connecting rod
19	Flat key

ECCENTRIC PLUG VALVE

Overview

This flexible-seat eccentric plug valve utilizes a crank-shaft eccentric mechanism. The plug is designed with an aerodynamically streamlined profile and is entirely encased in rubber through hot-vulcanization molding. This ensures excellent adhesion, a uniform surface finish, accurate sealing dimensions, and improved performance in corrosion resistance, sealing integrity, and part interchangeability.

Featuring a compact sealing interface and an eccentric alignment relative to the plug's sealing center, the valve seat is available in either corrosion-resistant alloy cladding or as a solid construction. This design guarantees leak-tight sealing, lowers operational torque, and increases service longevity. The rectangular flow channel enables near-linear control characteristics when used for throttling applications.

Operation relies on a dual-offset motion: the plug is eccentrically positioned relative to the valve body center, while the seat is offset from the plug's rotational axis. In the fully open position, the plug retracts completely from the flow path, offering unimpeded media passage with minimal pressure loss. During flow modulation, the plug gradually obstructs the passage to regulate throughput. When closed, the plug and seat achieve full surface contact. The eccentric rotation eliminates sliding friction between the plug, seat, and body, thereby preventing wear and seizure—a design particularly advantageous for automated control systems. Sealing force is amplified by both actuation torque and line pressure, further ensuring dependable sealing performance.

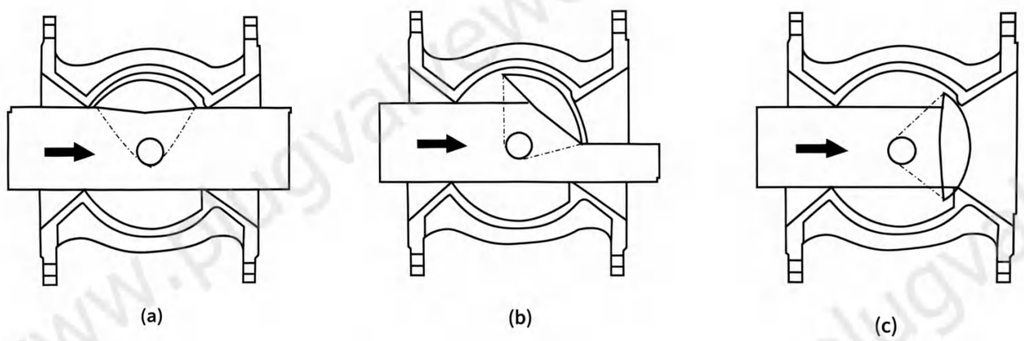


Figure 2. Working principle
(a)Fully-opened position (b) Regulating position(c)Fully-closed position

ZZJG VALVE

ZZJG VALVE

Feature

1. Elastic Sealing – Rubber-coated plug with corrosion-resistant seat ensures zero leakage.
2. Eccentric Design – Low operating torque, no wear, self-compensating seal.
3. Full Rubber Encapsulation – Superior corrosion/erosion resistance across all sizes.
4. Interchangeable Seat – Durable welded seat allows easy plug replacement.
5. Rectangular Flow Path – Low head loss, excellent linear flow control.
6. Integral Arched Stem – High strength, retracts fully when open, lightweight.
7. Removable Cover – Enables in-line maintenance without valve removal.
8. Ductile Iron Body – High strength, pressure-resistant, lighter than gray iron.
9. Wide Temperature Range – Suitable for –29 °C to 150 °C fluids, including hot/cold water.
10. Custom Surface Treatment – Adaptable protection for harsh/corrosive environments.

Application

It is an ideal upgrade for handling industrial wastewater, municipal sewage, sludge, and media with high solids content, and is widely used in water and wastewater treatment and industrial systems worldwide.

In clean water applications, the valve can be installed horizontally or vertically. For sewage or raw water systems, it must be installed horizontally with the plug positioned at the top of the pipeline (see Figure 3) to prevent clogging and allow solids to be flushed through.

Installation should be in the forward direction (seat facing the flow) for clean water. For media containing solids, horizontal installation with the plug oriented upward is required. The valve has limited reverse-pressure resistance; only forward sealing is guaranteed. Consult the manufacturer if reverse pressure capability is required.

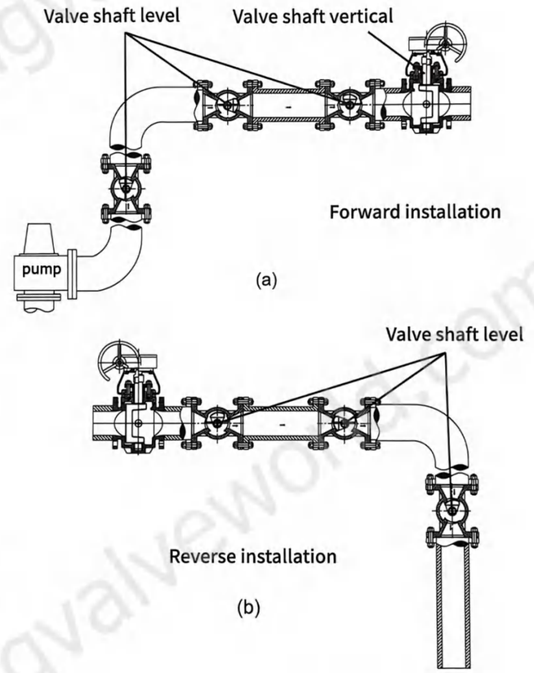
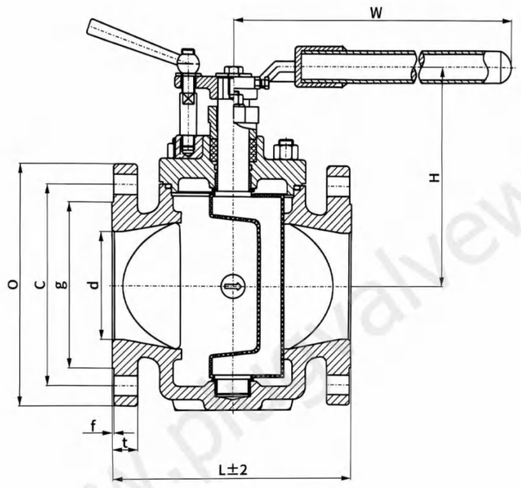


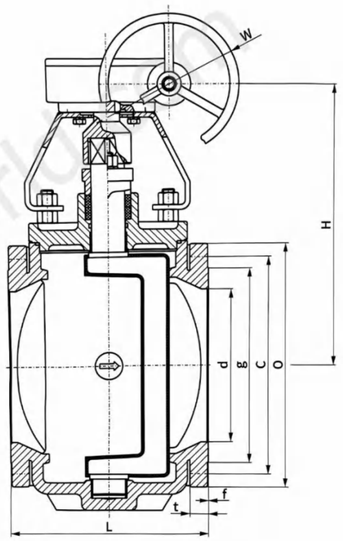
Figure 4 installation method

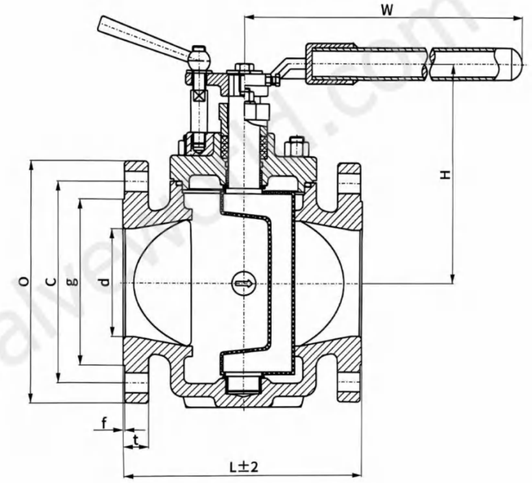
Forward installation Reverse installation

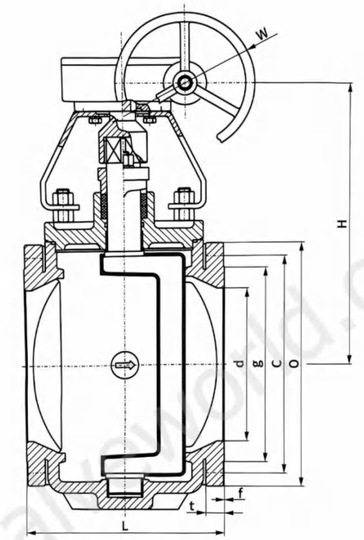
ECCENTRIC PLUG VALVE

ZZJG VALVE









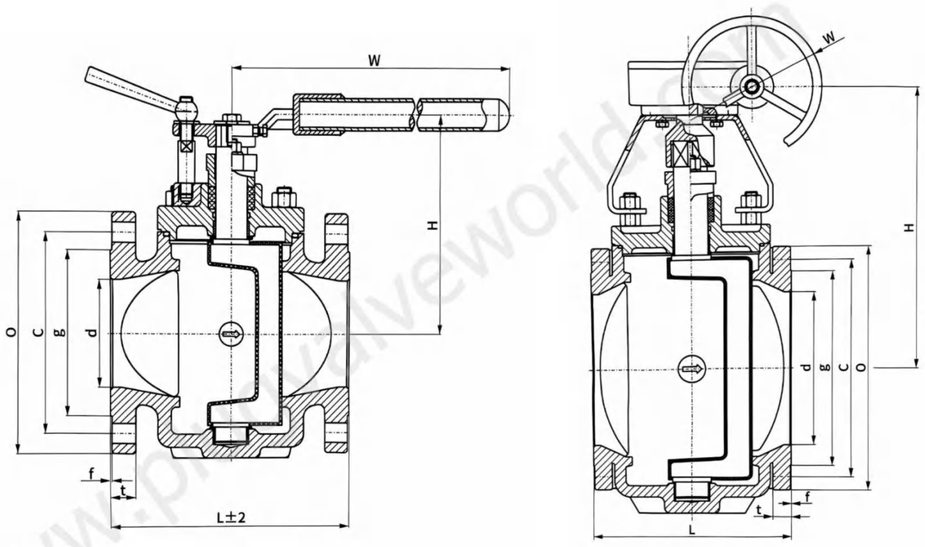
MAIN DIMENSIONS OF GB OR DIN ECCENTRIC PLUG
PN10 REDUCED BORE, HANDWHEEL, TURBINE OPERATED

Model	Size(DN)	L	O	C	g	d	t	f	H	W	n-d
PLVX43X	50	178	Φ165	Φ125	Φ102	51	18	3	145	Φ300	4-Φ18
PLVX43X	80	203	Φ200	Φ160	Φ138	76	20	3	180	Φ350	8-Φ18
PLVX43X	100	229	Φ220	Φ180	Φ158	102	20	3	207	Φ450	8-Φ18
PLVX43X	150	267	Φ285	Φ240	Φ212	152	22	3	280	Φ800	8-Φ22
PLVX343X	200	292	Φ340	Φ295	Φ268	203	24	3	382	Φ300	8-Φ22
PLVX343X	250	330	Φ395	Φ350	Φ320	254	26	3	455	Φ400	12-Φ22
PLVX343X	300	356	Φ445	Φ400	Φ370	305	26	4	480	Φ400	12-Φ22
PLVX343X	350	432	Φ505	Φ460	Φ430	337	26	4	515	Φ400	16-Φ22
PLVX343X	400	450	Φ565	Φ515	Φ482	387	26	4	560	Φ500	16-Φ26
PLVX343X	450	546	Φ615	Φ565	Φ532	438	28	4	620	Φ500	20-Φ26
PLVX343X	500	597	Φ670	Φ620	Φ585	489	28	4	690	Φ500	20-Φ26
PLVX343X	600	813	Φ780	Φ725	Φ685	591	30	5	817	Φ600	20-Φ30
PLVX343X	700	900	Φ895	Φ840	Φ800	692	35	5	900	Φ600	24-Φ30
PLVX343X	800	1000	Φ1015	Φ950	Φ905	779	38	5	950	Φ650	24-Φ33
PLVX343X	900	1321	Φ1115	Φ1050	Φ1005	874	38	5	1100	Φ700	28-Φ33

MAIN DIMENSIONS OF GB OR DIN ECCENTRIC PLUG
PN16 REDUCED BORE, HANDWHEEL, TURBINE OPERATED

Model	Size(DN)	L	0	C	g	d	t	f	H	W	n-d
PLVX43X	50	178	Φ165	Φ125	Φ102	51	18	3	145	Φ300	4-Φ18
PLVX43X	80	203	Φ200	Φ160	Φ138	76	20	3	180	Φ350	8-Φ18
PLVX43X	100	229	Φ220	Φ180	Φ158	102	20	3	207	Φ450	8-Φ18
PLVX43X	150	267	Φ285	Φ240	Φ212	152	22	3	280	Φ800	8-Φ22
PLVX343X	200	292	Φ340	Φ295	Φ268	203	24	3	382	Φ300	12-Φ22
PLVX343X	250	330	Φ405	Φ355	Φ320	254	26	3	455	Φ400	12-Φ26
PLVX343X	300	356	Φ460	Φ410	Φ378	305	28	4	480	Φ400	12-Φ26
PLVX343X	350	432	Φ520	Φ470	Φ438	337	30	4	515	Φ400	16-Φ26
PLVX343X	400	450	Φ580	Φ525	Φ490	387	32	4	560	Φ500	16-Φ30
PLVX343X	450	546	Φ640	Φ585	Φ550	438	34	4	620	Φ500	20-Φ30
PLVX343X	500	597	Φ715	Φ650	Φ610	489	36	4	690	Φ500	20-Φ33
PLVX343X	600	813	Φ840	Φ770	Φ725	591	40	5	817	Φ600	20-Φ36
PLVX343X	700	900	Φ910	Φ840	Φ795	692	40	5	900	Φ600	24-Φ36
PLVX343X	800	1000	Φ1025	Φ950	Φ900	779	41	5	950	Φ650	24-Φ39
PLVX343X	900	1321	Φ1125	Φ1050	Φ1000	874	48	5	1100	Φ700	28-Φ39

ECCENTRIC PLUG VALVE



MAIN DIMENSIONS OF GB OR DIN ECCENTRIC PLUG
CLASS150 REDUCED BORE, HANDWHEEL, TURBINE OPERATED

Model	Size(DN)	L	0	C	g	d	t	f	H	W	n-d
PLVX43X	2	178	Φ150	Φ120.5	Φ92	51	16.3	2	145	Φ300	4-Φ19
PLVX43X	3	203	Φ190	Φ152.5	Φ127	76	19.5	2	180	Φ350	4-Φ19
PLVX43X	4	229	Φ230	Φ190.5	Φ157	102	24.3	2	207	Φ450	8-Φ19
PLVX43X	6	267	Φ280	Φ241.5	Φ216	152	26	2	280	Φ800	8-Φ22
PLVX343X	8	292	Φ345	Φ298.5	Φ270	203	29	2	382	Φ300	8-Φ22
PLVX343X	10	330	Φ405	Φ362	Φ324	254	31	2	455	Φ400	12-Φ25
PLVX343X	12	356	Φ485	Φ432	Φ381	305	32.2	2	480	Φ400	12-Φ25
PLVX343X	14	432	Φ535	Φ476	Φ413	337	35	2	515	Φ400	12-Φ29
PLVX343X	16	450	Φ595	Φ540	Φ470	387	37	2	560	Φ500	16-Φ29
PLVX343X	18	546	Φ635	Φ577.9	Φ533	438	40.1	2	620	Φ500	16-Φ32
PLVX343X	20	597	Φ700	Φ635	Φ584	489	43.3	2	690	Φ500	20-Φ32
PLVX343X	24	813	Φ815	Φ749.3	Φ692	591	48.1	2	817	Φ600	20-Φ35
PLVX343X	28	900	Φ925	Φ863.6	Φ800	692	71.9	2	900	Φ600	28-Φ35
PLVX343X	30	1000	Φ985	Φ914.4	Φ857	779	75.1	2	950	Φ650	28-Φ35
PLVX343X	36	1321	Φ1170	Φ1085.8	Φ1022	874	90.9	2	1100	Φ70oel:	32-Φ41

LIFTING PLUG VALVE

Overview

Lifting plug valves are simple and rugged, making them suitable for severe applications at high temperatures or highly abrasive or erosive materials, chemical / petrochemical products (cracking applications) crystallizing fluids, cryogceni fluids, abrasive fluids.

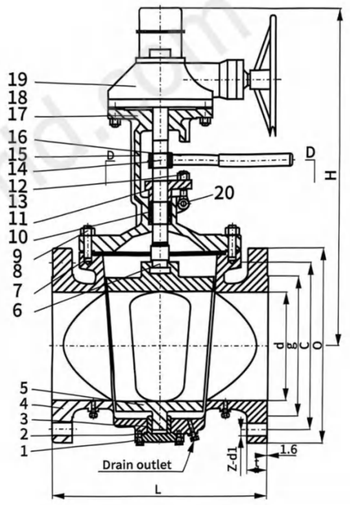
The core structure of a lift-type plug valve is a "plug + lifting mechanism". When opening, the valve stem first lifts the plug from the valve seat, then rotates it 90° to fully open; when closing, the operation is reversed, and the plug falls and fits tightly against the valve seat. It solves the problem of hard friction between the plug and the valve seat during opening and closing in ordinary plug valves, and is an improved version of the traditional plug valve.

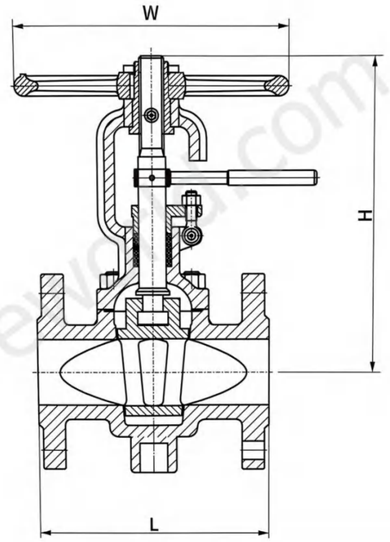
TECHNICAL SPECIFICATION	
Structural style	BC
Driving mode	BB-BG-QS&Y
	Hand wheel、bevel gear、wrench
Design standard	API599、API6D
Structure length	ASME B16.10
Connecting flange	ASME B16.5
Test and inspection	API598.API6D

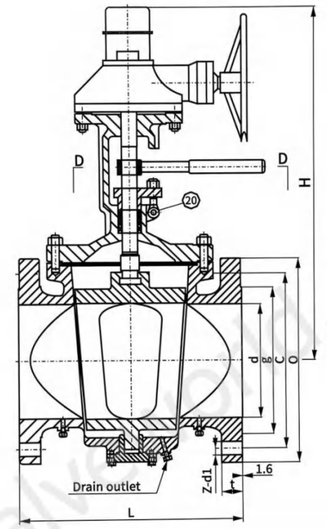
Note:the size of serial valve connecting flange can be designed according to customers' requirement.

PRODUCT PERFORMANCE SPECIFICATION				
Norminal pressure (LB)	Shell test (MPa)	Sealing test (MPa)	Suitable temp (°C)	Suitable medium
150	3.0	2.2	-29-550°C	Water, gas and oil.
300	7.7	5.62		
600	15.4	11.23		
900	23.0	16.85		
1500	38.3	28.10		
2500	63.80	46.80		

LIFTING PLUG VALVE







MAIN PARTS MATERIALS

NO.	Part Name	Material
1	Bolt	A193 B16
2	Gasket	SS304 + Graphite
3	Bottomcover	A217 C5
4	Body	ASTMA216 WCB, ASTMA217 WC1, WC6, WC9, C5 ASTMA351 CF8, CF8M, CF3, CF3M
5	Plug	ASTMA216 WCB, ASTMA217 WC1, WC6, WC9, C5 ASTMA351 CF8, CF8M, CF3, CF3M
6	Stem	A276410
7	Gasket	Flexible graphite + stainless steel, PTFE
8	Bolt	ASTMA193 B7, A320 B8, A193 B8M
9	Nut	ASTMA194 2H, A194 8, A194 8M
10	Packing	Flexible graphite, PTFE
11	Gland	ASTMA216 WCB, ASTMA217 WC1, WC6, WC9, C5 ASTMA351 CF8, CF8M, CF3, CF3M
12	Bolt	ASTMA193 B7, A320 B8, A193 B8M
13	Nut	ASTMA194 2H, A194 8, A194 8M
14	Pin	SS304
15	Valve cover	ASTMA216 WCB, ASTMA217 WC1, WC6, WC9, C5 ASTMA351 CF8, CF8M, CF3, CF3M
16	Handle	ASTMA216 WCBASTMA351 CF8, CF8M, CF3, CF3M
17	Bolt	ASTMA193 B7, A320 B8, A193 B8M
18	Nut	ASTMA194 2H, A194 8, A194 8M
19	Gear	UCA
20	Pin	SS304

MAIN DIMENSIONS

TSX543W/TSX43W-150LB

Size															
mm	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350
in	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6	8	10	12	14
L	108	117	127	140	165	178	190	203	229	254	267	292	330	356	381
H	190	195	225	260	280	310	250	395	300	470	535	590	630	680	720
W	180	180	180	220	220	220	250	250	300	350	350	400	500	500	600

TSX543W/TSX43W-300LB

Size															
mm	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350
in	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6	8	10	12	14
L	140	152	165	178	190	216	241	283	305	381	403	419	457	502	762
H	190	195	225	260	280	310	340	395	435	470	535	590	630	680	720
W	180	180	180	220	220	220	250	250	300	350	350	400	500	500	600

TSX543W/TSX43W-600LB

Size															
mm	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350
in	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6	8	10	12	14
L	165	190	216	229	241	292	330	356	432	508	559	660	787	838	889
H	190	195	225	260	280	310	340	395	435	470	535	590	630	680	720
W	180	180	180	220	220	220	250	250	300	350	350	400	500	500	600

TSX543W/TSX43W-900LB

Size															
mm	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350
in	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6	8	10	12	14
L	216	229	254	279	305	368	419	381	457	559	610	737	838	965	1029
H	190	195	225	260	280	310	340	395	435	470	535	590	630	680	720
W	180	180	180	220	220	220	250	250	300	350	350	400	500	500	600

SINGLE (DOUBLE) PLUG VALVE

Overview

Single and double flush plug valves are special valves designed for cleaning new pipelines or pipeline systems that require regular flushing. Their core design allows for the connection and disconnection of the flushing device without affecting the main pipeline.

Key Performance & Selection Parameters

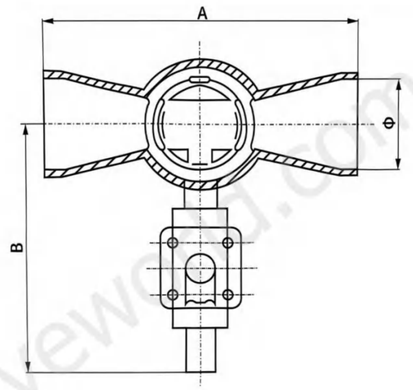
Pressure and Diameter Range: Common nominal pressure ratings are Class 150 and Class 300, sufficient for most industrial applications. A wide range of nominal diameters is available, from DN50 (2″) to DN250 (10″) or larger.

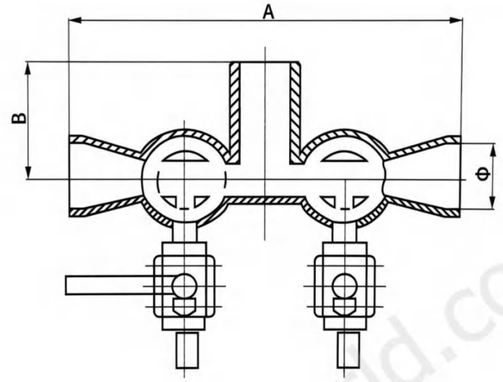
Material Selection: Valve body material must be selected based on the characteristics of the medium. Common choices include carbon steel (WCB) for general applications, stainless steel (304/316) for corrosive media or in the food and pharmaceutical industries, and alloy steel for high-temperature and high-pressure environments.

Sealing and Actuation: Sealing structures are available in soft seals (e.g., PTFE, good sealing performance) and hard seals (metal-to-metal, resistant to high temperature and pressure). Actuation methods support manual, worm gear, pneumatic, or electric, selectable according to automation requirements.

Main Technical Specification	
Nominal Pressure Range	CLASS150~300Lb
Nominal Diameter Range	NPS2~10 (DN50~250)
Design &Manufacture	ASME B16.34, API 6D, API 559
Face-to-face Dimensions	ASME B16.10
Flange Connection Sizes	ASME B16.5
Sizes of Butt-welding Ends	ASME B16.11
Pressure-temperature Rating	ASME B16.34
Inspection and Testing	API 598, API 6D
Actuation Methods	Manual, gear box, electric actuator, pneumatic acturtor
Main Materials	WCB, WCB, LCB, CF8, CF8M, CF3, CF3M, CF8C, CN7M, A105, F304, F304L, F316, F316L, F321

ZZJG VALVE





MAIN DIMENSIONS				
NPS(in)	150LB (SINGLE FLUSH)			
	A	B	C	Φ
2	216	278	/	54.8
3	283	278	/	82.8
4	305	293	/	108.2
6	403	308	/	161.5
8	419	320	/	211.6
10	457	333	/	264.7
NPS(in)	150LB (DOUBLE FLUSH)			
	A	B	C	Φ
2	356	115	278	54.8
3	406	140	293	82.8
4	458	150	308	108.2
6	534	200	320	161.5
8	584	270	270	211.6
10	660	350	350	264.7
NPS(in)	300LB (SINGLE FLUSH)			
	A	B	C	Φ
2	216	278	/	54.8
3	283	278	/	82.8
4	305	293	/	108.2
6	403	308	/	161.5
8	419	320	/	211.6
10	457	333	/	264.7
NPS(in)	300LB (DOUBLE FLUSH)			
	A	B	C	Φ
2	432	115	278	54.8
3	566	140	293	82.8
4	610	150	308	108.2
6	806	200	320	161.5
8	838	270	270	211.6
10	914	350	350	264.7