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QILONG 浙江祺隆阀门有限公司
地址：浙江温州东瓯工业园区正大工业园
电话：0577-57889277　0577-57883577
传真：0577-57880377　0577-57883277
Http://www.chinaqiufa.com/famen/
Http://www.ql-ballvalve.com(国外销售)
E-mail:sales@chinaqiufa.com

QILONG ZHEJIANG QILONG Valve Co., Ltd.
ADD:Zhengda Bearing park Dong'ou industrial Zone
Oubei Yongjia County Wenzhou City Zhejiang Province
TEL：0577-57889277　0577-57883577
FAX：0577-57880377　0577-57883277
Http://www.chinaqiufa.com/famen/
Http://www.ql-ballvalve.com(Foreign sales)
E-mail:sales@chinaqiufa.com

球阀——专业制造商
ball valve——professional manufacturer

QILONG

浙江祺隆阀门有限公司
ZHEJIANG QILONG VALVE CO., LTD.

# 球阀——专业制造商

# ball valve ——
# professional manufacturer



# 企业简介 BRIEF INTRODUCTION

中国浙江祺隆阀门有限公司位于中国泵阀之乡温州瓯北东瓯北工业园区。数十年来祺隆公司专业致力于科研、技术开发、生产销售为主体的自主创新型球阀制造企业。

公司主要生产设备277余台套，最大生产球阀口径56寸900LB，工程技术人员占总人数的三分之一多，其中大学学历占37%。公司主要生产金属硬密封耐磨球阀，金属硬密封耐磨三通、四通球阀，煤气化装置硬密封锁渣阀，灰水、黑水、灰浆、煤浆特种金属硬密封耐磨球阀，金属硬密封V型球阀，超低温球阀，全焊接球阀，上装式球阀，保温夹套式球阀，轨道球阀，整体斜面球阀等特色品种。产品设计生产符合ANSI/API、JIS、DIN、BS、NF、GB等标准，广泛应用于石油、石化、煤化工、天然气、冶金、电力、太阳能多晶硅、食品、制药、造纸环保设备等行业，并百分之九十五出口，销往日本、德国、美国、英国、意大利、俄罗斯、中东、西班牙、新加坡等国家。祺隆球阀圆滑无限的回转技术和超精度的定位技术，保证了产品在应用范围内的绝对可靠性，深受用户好评。

祺隆公司十分注重人才培养，从公司成立起设有培训中心，制度化地对每位员工进行专业培训，不断提高员工素质和技能，在创新的企业精神指导下，尊重每一位员工的个性，激发每一位员工能力，全面发挥人力资源优势，为每位员工创造机会，并为产业发展和技术进步做出了积极的贡献。科学的管理，为优秀的企业团队造就了优秀的产品和优秀的企业。

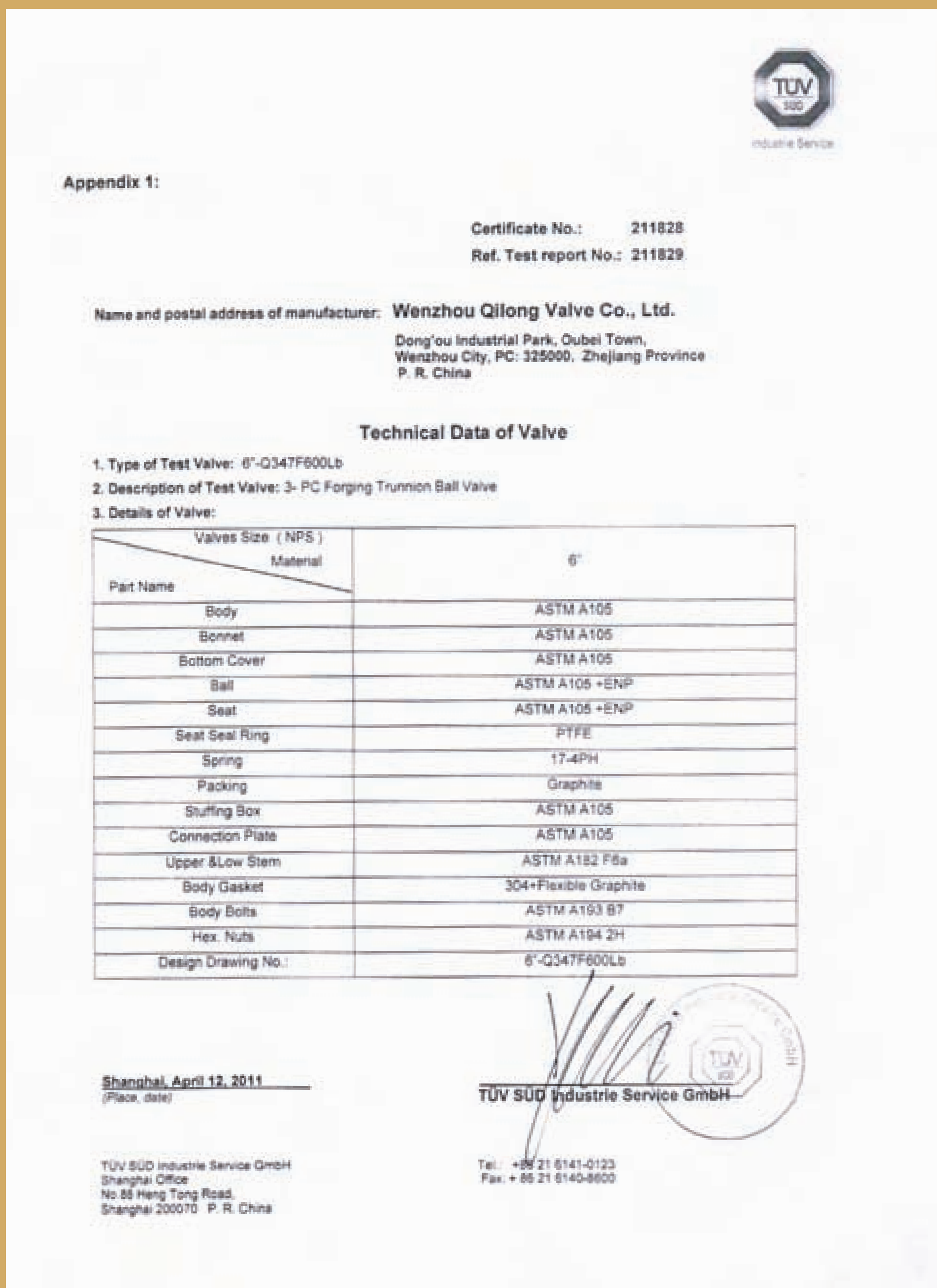
China Wenzhou QILONG Valve Co., Ltd. is located in Oubei Dongou Industrial Zone of Wenzhou which is named the hometown of Chinese Pump&Valve. QILONG is an professional and innovative manufacturer of ball valve with scientific research, Technological development, manufacturing and selling in a chain.

Equipped with 277 processing and testing equipments, the production capacity of QILONG can reach size 56inch ball valve at 900LB class. There are 30% engineers and technicians in total workers. QILONG mainly produce metal sealed wearproof ball valve, metal sealed wearproof three-way and four-way ball valve, metal sealed V type ball valve, low temperature ball valve, fully-welded ball valve, top entryball valve, wafer type jacketed ball valve, orbit ball valve etc, which are designed according to standard ANSI/API,JIS,DIN,BS,NF,Chinese GB.Our valve are widely used in the field of petroleum, chemical, metallurgical, power, fuel gas, city pipeline networks, most of our products have exported to oversea market, such as Japan, German,USA, UK, Italy, Russia, Middle East, Spain, Singapore. With high content of technology, reliable quality, competitive price and perfect service, our products have gained highly praise from all of the customers, and satisfy all kinds of operating demand.

QILONG always has high attention on talent-development, and does many professional training to every staff, in order to make a excellent team and guarantee the superior quality.

用心做好我们的专业：球阀系列

We will be engaged in developing our major on ball valve and creating a well-known brand all the time.



Appendix 1:

Certificate No.: 211828
Ref. Test report No.: 211829

Name and postal address of manufacturer: Wenzhou Qilong Valve Co., Ltd.
Dong'ou Industrial Park, Oubei Town,
Wenzhou City, PC: 325000, Zhejiang Province
P. R. China

Technical Data of Valve

1. Type of Test Valve: 6"-Q347F600Lb
2. Description of Test Valve: 3- PC Forging Trunnion Ball Valve
3. Details of Valve:

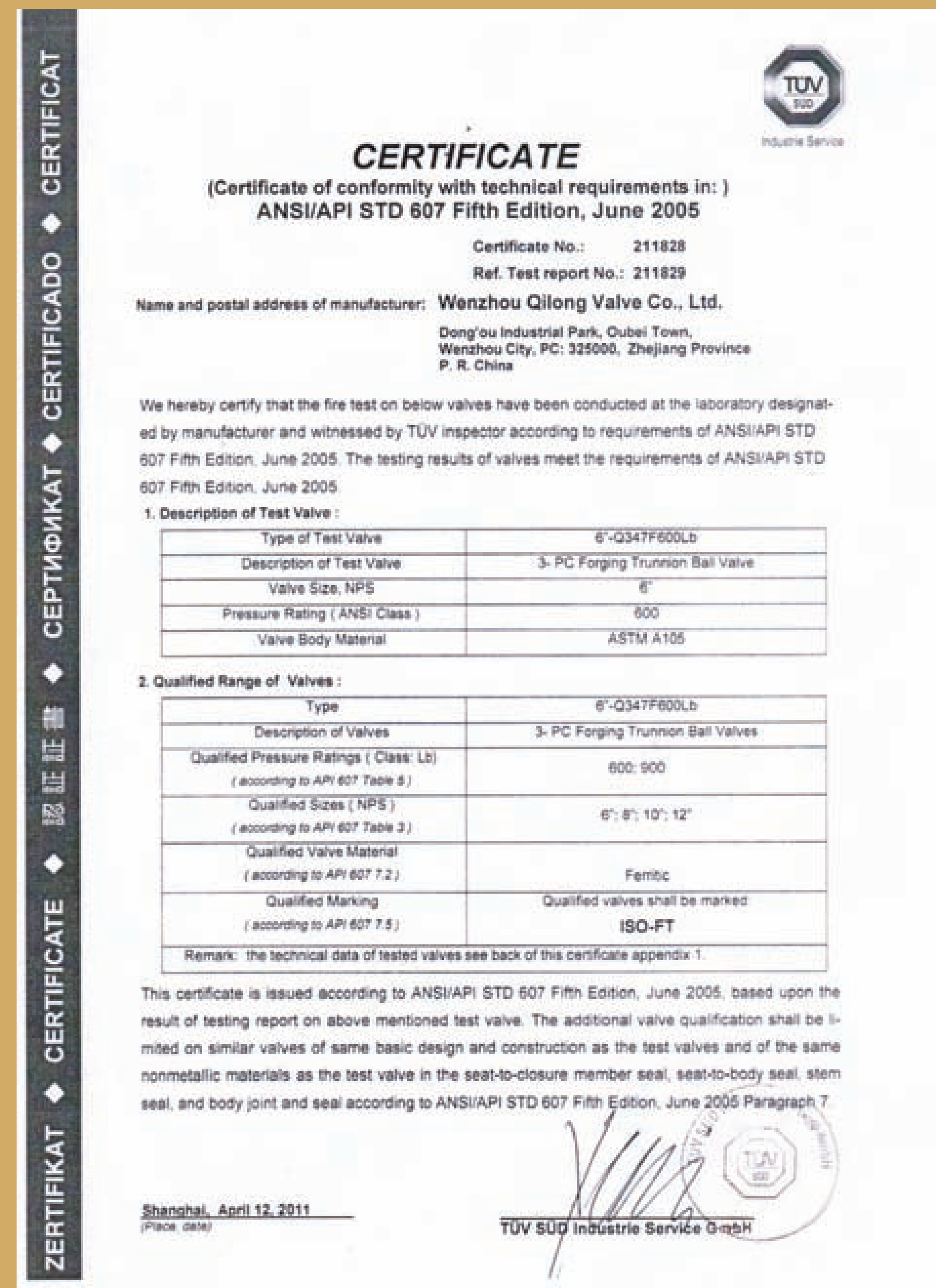
| Part Name / Valves Size (NPS) / Material | 6" |
|---|---|
| Body | ASTM A105 |
| Bonnet | ASTM A105 |
| Bottom Cover | ASTM A105 |
| Ball | ASTM A105 +ENP |
| Seat | ASTM A105 +ENP |
| Seat Seal Ring | PTFE |
| Spring | 17-4PH |
| Packing | Graphite |
| Stuffing Box | ASTM A105 |
| Connection Plate | ASTM A105 |
| Upper &Low Stem | ASTM A182 F6a |
| Body Gasket | 304+Flexible Graphite |
| Body Bolts | ASTM A193 B7 |
| Hex. Nuts | ASTM A194 2H |
| Design Drawing No.: | 6"-Q347F600Lb |

Shanghai, April 12, 2011
(Place, date)

TÜV SÜD Industrie Service GmbH

TÜV SÜD Industrie Service GmbH
Shanghai Office
No.88 Heng Tong Road,
Shanghai 200070 P. R. China

Tel.: +86 21 6141-0123
Fax: + 86 21 6140-8600



ZERTIFIKAT ◆ CERTIFICATE ◆ 認証証書 ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT

CERTIFICATE
(Certificate of conformity with technical requirements in: )
ANSI/API STD 607 Fifth Edition, June 2005

Certificate No.: 211828
Ref. Test report No.: 211829

Name and postal address of manufacturer: Wenzhou Qilong Valve Co., Ltd.
Dong'ou Industrial Park, Oubei Town,
Wenzhou City, PC: 325000, Zhejiang Province
P. R. China

We hereby certify that the fire test on below valves have been conducted at the laboratory designated by manufacturer and witnessed by TÜV inspector according to requirements of ANSI/API STD 607 Fifth Edition, June 2005. The testing results of valves meet the requirements of ANSI/API STD 607 Fifth Edition, June 2005

1. Description of Test Valve :

| | |
|---|---|
| Type of Test Valve | 6"-Q347F600Lb |
| Description of Test Valve | 3- PC Forging Trunnion Ball Valve |
| Valve Size, NPS | 6" |
| Pressure Rating ( ANSI Class ) | 600 |
| Valve Body Material | ASTM A105 |

2. Qualified Range of Valves :

| | |
|---|---|
| Type | 6"-Q347F600Lb |
| Description of Valves | 3- PC Forging Trunnion Ball Valves |
| Qualified Pressure Ratings ( Class: Lb) ( according to API 607 Table 5 ) | 600; 900 |
| Qualified Sizes ( NPS ) ( according to API 607 Table 3 ) | 6"; 8"; 10"; 12" |
| Qualified Valve Material ( according to API 607 7.2 ) | Ferritic |
| Qualified Marking ( according to API 607 7.5 ) | Qualified valves shall be marked ISO-FT |

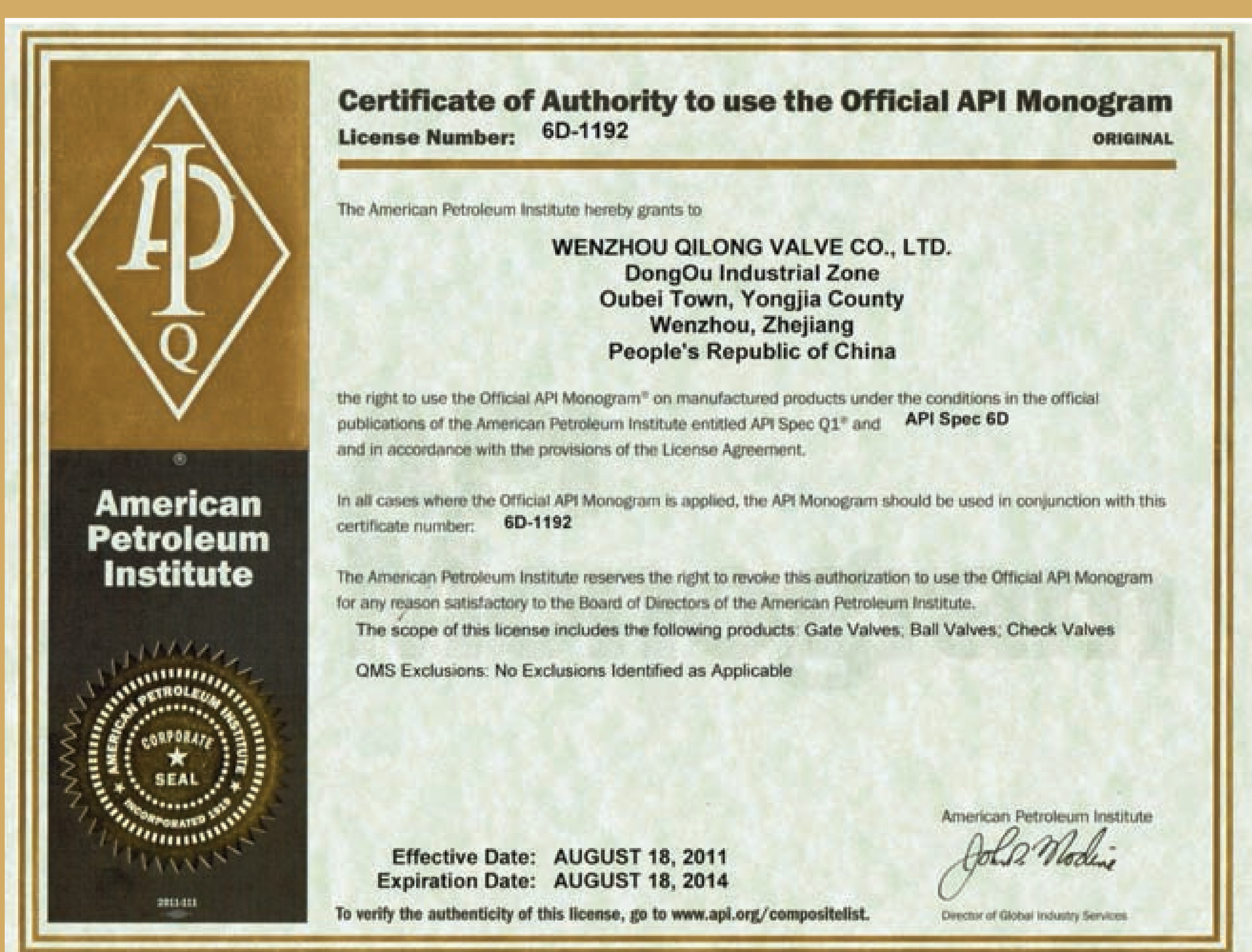
Remark: the technical data of tested valves see back of this certificate appendix 1.

This certificate is issued according to ANSI/API STD 607 Fifth Edition, June 2005, based upon the result of testing report on above mentioned test valve. The additional valve qualification shall be limited on similar valves of same basic design and construction as the test valves and of the same nonmetallic materials as the test valve in the seat-to-closure member seal, seat-to-body seal, stem seal, and body joint and seal according to ANSI/API STD 607 Fifth Edition, June 2005 Paragraph 7.

Shanghai, April 12, 2011
(Place, date)

TÜV SÜD Industrie Service GmbH

防火证书 Fire safe Certificate



American Petroleum Institute

Certificate of Authority to use the Official API Monogram

License Number: 6D-1192 ORIGINAL

The American Petroleum Institute hereby grants to

WENZHOU QILONG VALVE CO., LTD.
DongOu Industrial Zone
Oubei Town, Yongjia County
Wenzhou, Zhejiang
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 Spec 6D and in accordance with the provisions of the License Agreement.

In all cases where the Official API Monogram is applied, the API Monogram should be used in conjunction with this certificate number: 6D-1192

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 products: Gate Valves; Ball Valves; Check Valves

QMS Exclusions: No Exclusions Identified as Applicable

Effective Date: AUGUST 18, 2011
Expiration Date: AUGUST 18, 2014

American Petroleum Institute
Director of Global Industry Services

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

API 6D 证书 API 6D Certificate

Certificate CN13/21025

The management system of

**WENZHOU QILONG VALVE CO., LTD.**

DongOu Industrial Zone, Oubei Town,Yongjia County, Wenzhou, Zhejiang Province, P.R. China

has been assessed and certified as meeting the requirements of

**ISO 9001:2008**

For the following activities

**Design and manufacture of ball valves, gate valves, check valves and shutoff valves**

Further clarifications regarding the scope of this certificate and the applicability of ISO 9001:2008 requirements may be obtained by consulting the organisation

This certificate is valid from 14 May 2013 until 14 May 2016 and remains valid subject to satisfactory surveillance audits. Re certification audit due before 26 April 2016 Issue 1. Certified since 14 May 2013

Authorised by

SGS United Kingdom Ltd Systems & Services Certification Rossmore Business Park Ellesmere Port Cheshire CH65 3EN UK t +44 (0)151 350-6666 f +44 (0)151 350-6600 www.sgs.com

SGS 9001-8 01 0311

Page 1 of 1

UKAS MANAGEMENT SYSTEMS 005

此为证书 CN13/21025 译本

**温州祺隆阀门有限公司**

中国浙江省温州市永嘉县瓯北镇东瓯工业园区

**ISO 9001:2008**

**球阀, 闸阀, 止回阀和截止阀的设计与制造**

该证书的有效期自 2013-05-14 至 2016-05-14
并须经过符合要求的监督审核保持有效
持续认证需在 2016-04-26 之前执行
版本号 1, 初始注册日期 2013-05-14

SGS United Kingdom Ltd Systems & Services Certification Rossmore Business Park Ellesmere Port Cheshire CH65 3EN UK t +44 (0)151 350-6666 f +44 (0)151 350-6600 www.sgs.com

SGS 9001-8 01 1108

第1页 共1页

UKAS MANAGEMENT SYSTEMS 005

ISO9001证书 ISO9001Certificate

# Certificate

*Certificate of Conformity with Fire Testing*
**According to API 6FA 3ED: 1999(R2008)**

| | |
|---|---|
| Certificate no.: | **01 202 CHN/K-130016** |
| Name and address of the applicant / license holder : | **Wenzhou Qilong Valve Co.,Ltd Zhengda Bearing Park Dong' ou industrial Zone Oubei Yongjia County Wenzhou City Zhejiang Province** |

***We hereby certify that the results of tests carried out under our witness on the industrial valve(s) below meeting the requirements in the standard mentioned above.***

***This certificate does not imply assessment of the product production. It reflects only our witness findings at the time and the place of test and does not refer to any other matters.***

| | |
|---|---|
| Model Identification: | Q347F-CL600 NPS8 |
| Type of Valve : | Q347F-CL600 NPS8, 3-PC Full Port Raised Face Flanged End Ball Valve, symmetric, Double- Direction |
| Description of tested valve: | NPS 8, Class 600, Body ASTM A 105, symmetric, Double-Direction,Seat Ring: RPTFE. |
| Manufacturing Drawing No./Rev.: | 8" Q347F-600Lb |
| Test Report No.: | 委 FM201306053 |
| Qualified Range: | NPS 8,10,12,14,16 API 6D;9,11API 6A; DN 200,250,300,350,400 Class 600; 900 API 6D; 2 000, 3 000 API 6A; PN 110, 150 |
| Name, Address of Manufacturer : | **Wenzhou Qilong Valve Co.,Ltd Zhengda Bearing Park Dong' ou industrial Zone Oubei Yongjia County Wenzhou City Zhejiang Province** |
| Valid until: | **July 11, 2023** |

**TÜV Rheinland (China) Ltd.**
**Industrial Services**

Beijing/China, 2013/07/11

*Zhao Jun*

TÜV Rheinland Inspection Body

www.tuv.com

TÜVRheinland®
Precisely Right.


# Certificate

*Certificate of Conformity with Fire Testing*
**According to API 6FA 3ED: 1999(R2008)**

Certificate no.: **01 202 CHN/K-130016**

Name and address of the applicant / license holder : **Wenzhou Qilong Valve Co.,Ltd Zhengda Bearing Park Dong' ou industrial Zone Oubei Yongjia County Wenzhou City Zhejiang Province**

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Model Identification: Q347F-CL600 NPS8

Type of Valve : Q347F-CL600 NPS8, 3-PC Full Port Raised Face Flanged End Ball Valve, symmetric, Double- Direction

Description of tested valve: NPS 8, Class 600, Body ASTM A 105, symmetric, Double-Direction,Seat Ring: RPTFE.

Manufacturing Drawing No./Rev.: 8" Q347F-600Lb

Test Report No.: 委 FM201306053

Qualified Range: NPS 8,10,12,14,16 API 6D;9,11API 6A; DN 200,250,300,350,400 Class 600; 900 API 6D; 2 000, 3 000 API 6A; PN 110, 150

Name, Address of Manufacturer : **Wenzhou Qilong Valve Co.,Ltd Zhengda Bearing Park Dong' ou industrial Zone Oubei Yongjia County Wenzhou City Zhejiang Province**

Valid until: **July 11, 2023**

**TÜV Rheinland (China) Ltd.**
**Industrial Services**

Beijing/China, 2013/07/11

*Zhao Jun*

TÜV Rheinland Inspection Body

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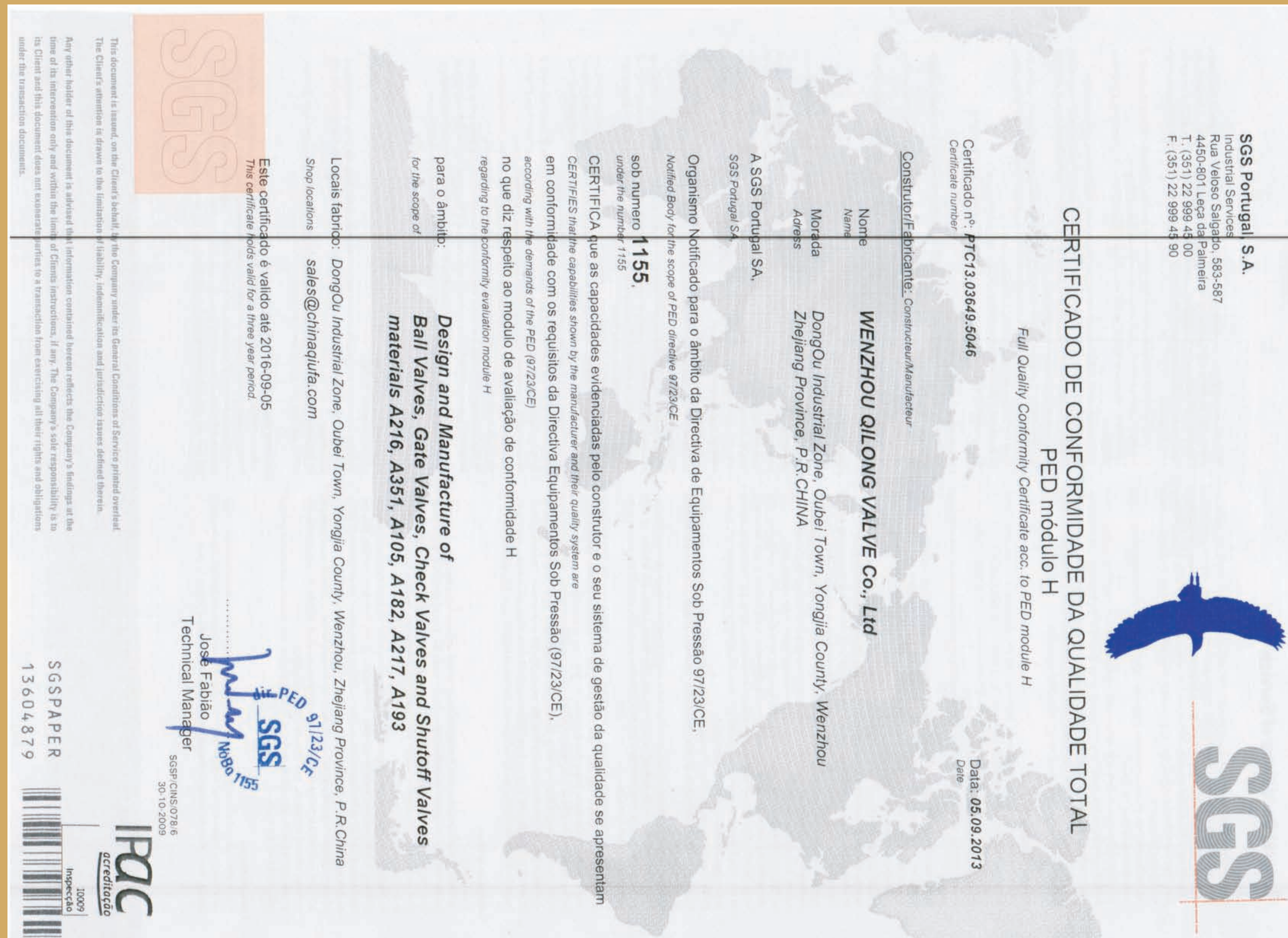
防火证书 Fire safe Certificate


SGS Portugal, S.A.
Industrial Services
Rua Veloso Salgado, 583-587
4450-801 Leça da Palmeira
T. (351) 22 999 45 00
F. (351) 22 999 45 90

SGS

CERTIFICADO DE CONFORMIDADE DA QUALIDADE TOTAL
PED módulo H
*Full Quality Conformity Certificate acc. to PED module H*

Certificado nº: **PTC13.03649.5046**
*Certificate number*

Data: **05.09.2013**
*Date*

Construtor/Fabricante: *Constructeur/Manufacturer*

Nome *Name*: ***WENZHOU QILONG VALVE Co., Ltd***

Morada *Adress*: *DongOu Industrial Zone, Oubei Town, Yongjia County, Wenzhou Zhejiang Province, P.R.CHINA*

A SGS Portugal SA,
*SGS Portugal SA*

Organismo Notificado para o âmbito da Directiva de Equipamentos Sob Pressão 97/23/CE,
*Notified Body for the scope of PED directive 97/23/CE*

sob numero **1155**,
*under the number 1155*

CERTIFICA que as capacidades evidenciadas pelo construtor e o seu sistema de gestão da qualidade se apresentam
*CERTIFIES that the capabilities shown by the manufacturer and their quality system are*
em conformidade com os requisitos da Directiva Equipamentos Sob Pressão (97/23/CE),
*according with the demands of the PED (97/23/CE)*
no que diz respeito ao modulo de avaliação de conformidade H
*regarding to the conformity evaluation module H*

para o âmbito: ***Design and Manufacture of***
*for the scope of* ***Ball Valves, Gate Valves, Check Valves and Shutoff Valves***
***materials A216, A351, A105, A182, A217, A193***

Locais fabrico: *DongOu Industrial Zone, Oubei Town, Yongjia County, Wenzhou, Zhejiang Province, P.R.China*
*Shop locations* *sales@chinaqiufa.com*

Este certificado é valido até 2016-09-05
*This certificate holds valid for a three year period.*

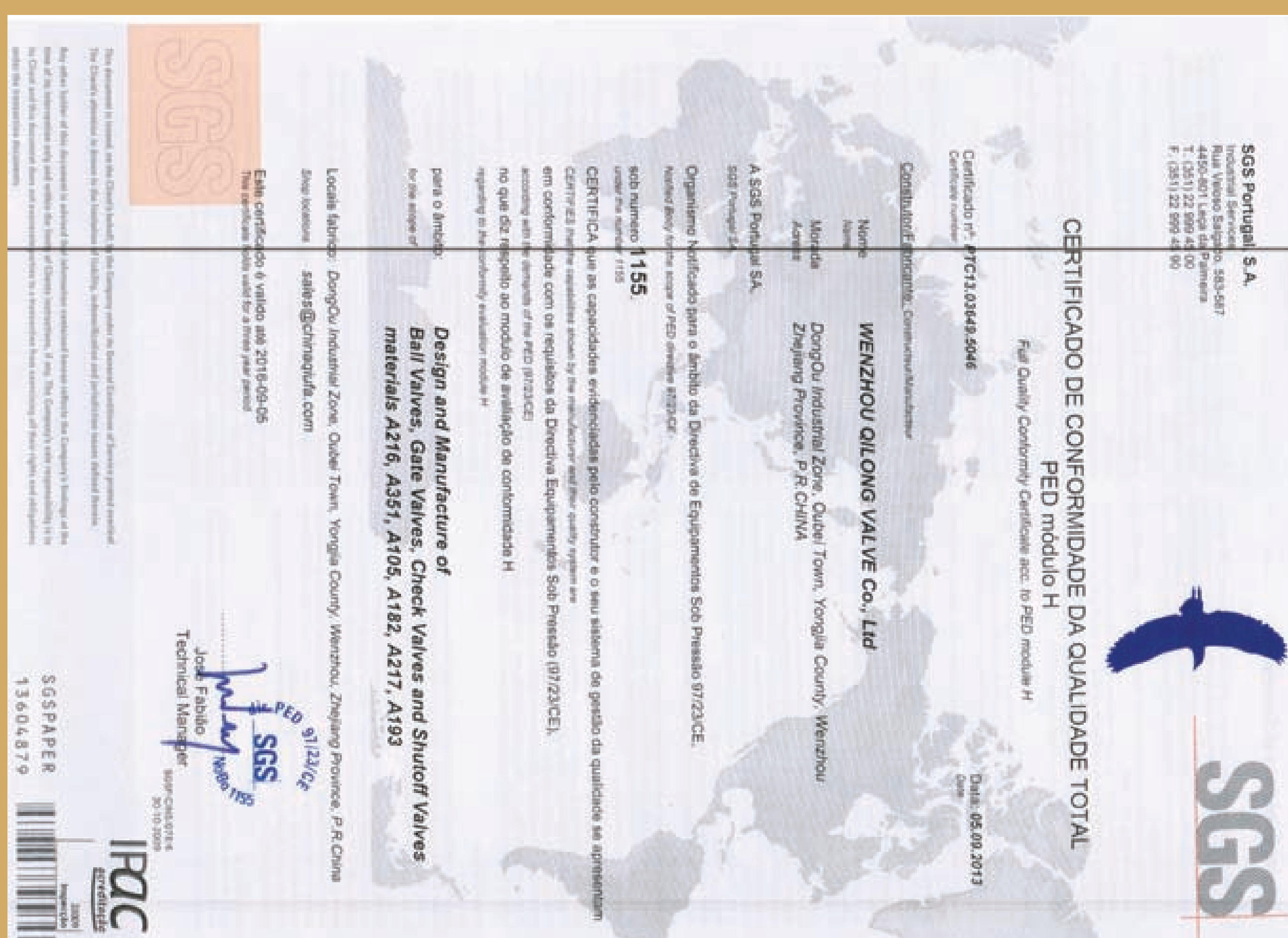
PED 97/23/CE SGS NoBo 1155

José Fabião
Technical Manager

SGSP/CINS/078/6
30-10-2009

IPAC acreditação

SGSPAPER
13604879


SGS Portugal, S.A.
Industrial Services
Rua Veloso Salgado, 583-587
4450-801 Leça da Palmeira
T. (351) 22 999 45 00
F. (351) 22 999 45 90

SGS

CERTIFICADO DE CONFORMIDADE DA QUALIDADE TOTAL
PED módulo H
*Full Quality Conformity Certificate acc. to PED module H*

Certificado nº: **PTC13.03649.5046**
*Certificate number*

Data: **05.09.2013**
*Date*

Construtor/Fabricante: *Constructeur/Manufacturer*

Nome *Name*: ***WENZHOU QILONG VALVE Co., Ltd***

Morada *Adress*: *DongOu Industrial Zone, Oubei Town, Yongjia County, Wenzhou Zhejiang Province, P.R.CHINA*

A SGS Portugal SA,
*SGS Portugal SA*

Organismo Notificado para o âmbito da Directiva de Equipamentos Sob Pressão 97/23/CE,
*Notified Body for the scope of PED directive 97/23/CE*

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***materials A216, A351, A105, A182, A217, A193***

Locais fabrico: *DongOu Industrial Zone, Oubei Town, Yongjia County, Wenzhou, Zhejiang Province, P.R.China*
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PED 97/23/CE SGS NoBo 1155

José Fabião
Technical Manager

SGSP/CINS/078/6
30-10-2009

IPAC acreditação

SGSPAPER
13604879

**Ce证书 CE Certificate**


（美国尼通）手提式光谱仪
(USA Thermo Niton)Portable Spectrometer


（德国斯派克）落地式直读光谱仪
(Germany Speicher) Floor type
direct reading spectrometer


化学分析室
Chemical Analysis Laboratory

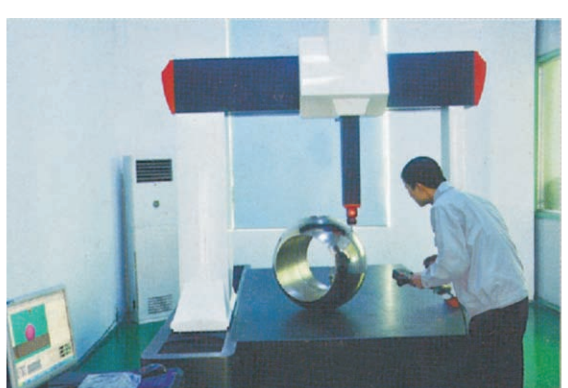

高速引燃炉火红外碳硫分析仪
High-speed Ignited The Fire Infrared
Carbon Sulfur Analyzer


液压式万能材料试验机
Hydraulic Testing Machine for
Universal Material

冲击试验 Impact Testing

电子式弹簧拉压试验机
Electronic Spring Tension and
Compression Testing Machine

硬度计 Hardness Tester



三坐标测量仪
Trilinear Coordinates
Measuring Instrument

低温试验
Low Temperature Testing

高温试验
High Temperature Testing

氦质谱检漏仪
Helium Mass Spectrometer Leak Detector

## 球阀生产车间
## workshop


煤气化装置用锁渣阀
slag Lock valve used for Coal gastification

锻钢球阀 forged steel ball valve

燃气球阀 ball valve for fuel gas

灰浆用特种硬密封球阀
for mortar metal sealed ball valve

祺隆阀门研制的耐磨球阀、锁渣阀、灰水黑水灰浆及煤用特种金属硬密封球阀、超高压夹套保温球阀等成功应用于国内煤制油项目。

The products made by QILONG are successfully used in kerosene project,such as wearproof ball valve,slag Lock valve,special type metal seated ball valve for lye,effluent,mortar,coal, high temperature jacketed ball valve.

# 球阀生产车间
# workshop

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| | | |
|---|---|---|
| 公称压力或压力级 Pressure Rating | | PN10~420、Class150~2500、JIS10~20K |
| 公称通经或口径 Normal Diameter | | DN6~1200、NPS1/4~60 |
| 适用温度 Applicable Temperature | | –196℃~540℃ |
| 驱动方式 Operation Type | | 手动、蜗轮蜗杆传动、气动、电动、液动、气液联动、电液联动<br>manual、worm gear、pneumatic、electric、hydraulic、pneumatic–hydraulic、electric–hydraulic |
| 标准与规范 Standards and specifications | 设计与制造 Design Specifications | API 6D《管线阀门》<br>API 608《法兰、螺纹和焊接连接的金属球阀》<br>ASME B16.34《法兰、螺纹和焊接连接的阀门》<br>ANSI/AWWA C507《6英寸至48英寸球阀》<br>BFCI 70–2《控制阀门阀座泄漏》<br>MSS SP–72《法兰和对焊连接的一般用球阀》<br>ISO 17292《石油、石化及相关工业用金属球阀》<br>BS 5351《石油、石化及相关工业用钢制球阀》<br>BS 6364《低温球阀》<br>NACE Mr0175《用于石油和天然气工业的抗硫化氢的材料》<br>GB/T 12237《石油、石化及相关工业用的钢制球阀》<br>GB/T 21385《金属密封球阀》<br>GB/T 19672《管线阀门 技术要求》<br>ISO 5211《部分回转阀门驱动装置的连接》 |
| | 连接端尺寸 Connection Ends | ASME B16.5《管道法兰和法兰管件》<br>ASME B16.47《大直径钢制法兰NPS26至NPS60》<br>ISO 7005–1《金属法兰 第一部分 钢制法兰》<br>GB/T 9112~9124《钢制法兰》<br>GB/T 13402《大直径钢制法兰NPS26至NPS60》<br>HG/T 20592《钢制管法兰(PN系列)》<br>HG/T 20615《钢制管法兰(Class列)》<br>SH 3406《石油化工钢制管法兰》<br>JB/T 74~90《管路法兰》<br>JIS B2238《钢制管法兰通则》<br>ASME B16.25《对接焊端》<br>ASME B16.11《承插焊和螺纹连接的锻造管件》<br>BS 12627《工业阀门 钢制阀门的对焊端》<br>BS12760《阀门 钢制阀门的承插焊端》 |
| | 结构长度 Face to Face Dimension | ASME B16.10《阀门的结构长度》<br>ISO 5752《法兰连接金属阀门 结构长度》<br>BS 558《工业阀门 法兰连接管道系统用金属阀门的结构长度》<br>Bs12982《工业阀门 对焊端阀门的结构长度》<br>GB/T 12221《金属阀门 结构长度》 |
| | 试验与检验 Testing &Inspection | API 598《阀门的检查与试验》<br>API 6D《管线阀门》<br>API 607《转1/4周软阀座阀门的耐火试验》<br>API 6FA《阀门耐火试验规范》<br>GB/T 13927《工业阀门 压力试验》<br>GB/T 26480《阀门的检验与试验》<br>JB/T 6899《阀门的耐火与试验》<br>BS 6755 第1篇《阀门的试验 第1篇 产品压力试验的要求规范》<br>BS 6755 第2篇《阀门的试验 第2篇 燃烧试验的要求规范》<br>BS 12569《工业阀门 化工和石油化工加工工业用阀门要求和试验》<br>MSS SP–82《阀门压力试验方法》<br>MSS SP–61《锻钢阀门的压力试验》 |


## 用 途 Application

浮动球阀适用于Class150~Class1500、PN16~PN100、JIS10K~JIS20K的各种管路上，用于截断或接通管路中的介质，选用不同的材质，可分别适用于水、蒸汽、油品、液化气、天然气、煤气、硝酸、醋酸、氧化性介质、尿素等多种介质。驱动方式为手动、涡轮蜗杆传动、气动或电动。浮动球阀一般采用法兰连接，也可采用对焊连接。

Floating ball valves are suitable for using on various kinds of pipelines of Class 150 to Class 1500, PN16 to PN100,and JIS 10K to JIS 20K to turn on or off the pipeline medium, of which the operation types include manual, worm gear and pneumatic or electric actuators.

## 型号、材料及主要参数 Material and Main Valve Data

| 配管法兰 Pipe flange | 公称压力 Pressure rating | 法兰密封面 Flange face | 常规产品型号 Type | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| ASME B16.5 GB/T9112–9124 HG/T 20592 JB/T 74~90 | Class150 | 凸面 RF | Q41F–A1C | Q41F–A1P | Q41F–A1P8 | Q41F–A1P3 | Q41F–A1R | Q41F–A1R8 | Q41F–A1R3 |
| | Class300 | | Q41F–A3 | Q41F–A3P | Q41F–A3P8 | Q41F–A3P3 | Q41F–A3R | Q41F–A3R8 | Q41F–A3R3 |
| | Class600 | | Q41F–A6 | Q41F–A6P | Q41F–A6P8 | Q41F–A6P3 | Q41F–A6R | Q41F–A6R8 | Q41F–A6R3 |
| | Class900 | | Q41F–A9 | Q41F–A9P | Q41F–A9P8 | Q41F–A9P3 | Q41F–A9R | Q41F–A9R8 | Q41F–A9R3 |
| | Class1500 | | Q41F–A15 | Q41F–A15P | Q41F–A15P8 | Q41F–A15P3 | Q41F–A15R | Q41F–A15R8 | Q41F–A15R3 |
| GB/T9112~9124 HG/T 20592 JB/T 74~90 | PN16 | 凸面 RF | Q41F–A16C | Q41F–A16P | Q41F–A16P8 | Q41F–A16P3 | Q41F–A16R | Q41F–A16R8 | Q41F–A16R3 |
| | PN25 | | Q41F–A25 | Q41F–A25P | Q41F–A25P8 | Q41F–A25P3 | Q41F–A25R | Q41F–A25R8 | Q41F–A25R3 |
| | PN40 | 凹凸面 MF | Q41F–A40 | Q41F–A40P | Q41F–A40P8 | Q41F–A40P3 | Q41F–A40R | Q41F–A40R8 | Q41F–A40R3 |
| | PN63 | | Q41F–A63 | Q41F–A63P | Q41F–A63P8 | Q41F–A63P3 | Q41F–A63R | Q41F–A63R8 | Q41F–A63R3 |
| | PN100 | | Q41F–A100 | Q41F–A100P | Q41F–A100P8 | Q41F–A100P3 | Q41F–A100R | Q41F–A100R8 | Q41F–A100R3 |
| JIS B2238 | 10K | 凸面 RF | Q41F–K1C | Q41F–K1P | Q41F–K1P8 | Q41F–K1P3 | Q41F–K1R | Q41F–K1R8 | Q41F–K1R3 |
| | 20K | | Q41F–K2 | Q41F–K2P | Q41F–K2P8 | Q41F–K2P3 | Q41F–K2R | Q41F–K2R8 | Q41F–K2R3 |
| 主要零件材料 Main parts material | 阀体Body | | WCB A105 | ZG1Cr18Ni9Ti 1Cr18Ni9Ti | CF8 304 | CF3 304L | ZG1Cr18Ni12Mo2Ti 1Cr18Ni12Mo2Ti | CF8M 316 | CF3M 316L |
| | 球体、阀杆 Ball、Stem | | 2Cr13 | 1Cr18Ni19Ti | 0Cr18Ni19 (304) | 0Cr19Ni10 (304L) | 1Cr18Ni12Mo2Ti | 0Cr17Ni12Mo2 (316) | 00Cr17Ni14Mo2 (316L) |
| | 密封面 sealing surface | | 增强聚四氟乙烯、对位聚苯 RPTFE、PPL | | | | | | |
| 适用工况 Applicable condition | 适用介质 Applicable medium | | 水、蒸汽、油品、煤气、液化气、天然气等 Water、Steam Oils、Coal gas、Liquefied gas、gas | | 硝酸类腐蚀性介质 Nitric acid corrosion medium | 强氧化性介质 Strong oxidizing medium | 醋酸类腐蚀性介质 Acetic acid corrosive medium | | 尿素类腐蚀性介质 Urea corrosive medium |
| | 适用温度 Applicable temperature | | ≤180℃（增强聚四氟乙烯）≤300℃（对位聚苯） | | | | | | |
| 涡轮蜗杆传动球阀 worm gear ball valve | | | 在相应的手动型号的Q后插入“3”表示，示例：Q341F–A1C | | | | | | |
| 气动球阀 pneumatic ball valve | | | 在相应的手动型号的Q后插入“6”表示，示例：Q641F–A1C | | | | | | |
| 电动球阀 electric ball valve | | | 在相应的手动型号的Q后插入“9”表示，示例：Q941F–A1C | | | | | | |
| 缩径球阀 reduced bore ball valve | | | 在相应的全通径球阀的型号前加“S”表示，示例：SQ941F–A1C | | | | | | |
| 注：本表为常规法兰连接浮动球阀的型号编制、主要零件材料及适用工况，其他要求及其型号见球阀型号编制方法 Note: This table is about the model preparation,main parts material and applicable condition of flange ends matal to metal sealed ball valve. | | | | | | | | | |



# 浮动球阀的结构设计特点
Construction and features of floating ball valve

## 阀座的可靠密封 Reliable seat seal

浮动球阀采用弹性密封圈结构设计。当介质压力较小时，密封圈与球体接触面积较小，在密封圈与球体接触处形成较大的密封比压，确保可靠密封。当介质压力较大时，随着密封圈的弹性变形，密封圈与球体的接触面积增大，密封圈与球体的接触面积增大，密封圈能承受较大的介质推力而不会损坏。

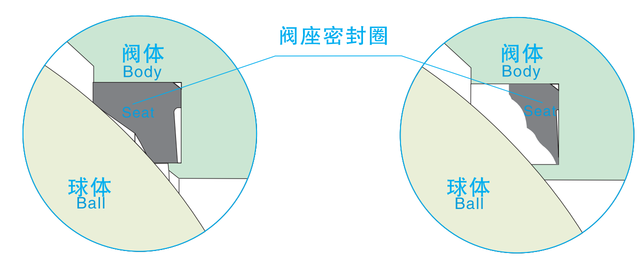
The structure design of elastic sealing ring has been adopted for floating ball valves. This seat design features a bigger sealing pressure ratio between the ring surface and the ball when medium pressure gets lower, where the contacting area is smaller. Thus, the reliable seal is ensured. When the medium pressure gets higher, the contacting area between seat ring and ball becomes bigger as the Ball sealing ring transforms elastically to undertake the bigger force pushed by the medium without any damage.


介质压力较小时
At lower medium pressure
弹性阀座
Resilient seated
介质压力较大时
At higher medium pressure

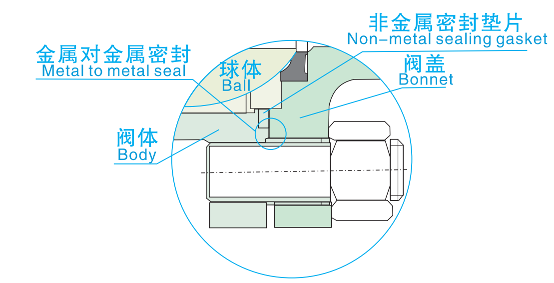
## 防火结构设计 Fire safe design

在阀门的使用现场发生火灾时，当聚四氟乙烯等非金属材料制作的阀座密封圈、阀杆上密封垫、阀杆密封填料以及中法兰密封垫片在高温下分解或破坏后，祺隆球阀能够借助于特别设计的金属对金属密封结构，有效地控制阀门的内漏和外漏。对于用户有防火要求的浮动球阀，祺隆公司的防火设计均符合API607、API16FA、BS6755及JB/T6899等规范要求。

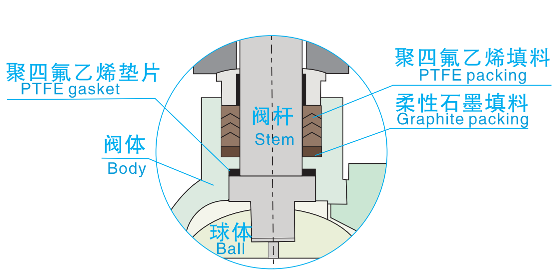
With the valve heated in a fire application, the non–metal material parts such as seat sealing ring of PTFE, stem back seat gasket, gland packing, and the sealing gasket between body and bonnet might disintegrate or be damaged due to high temperature. QILONG's specially designed structure of auxiliary metal to metal seal is provided to effectively prevent both internal and external Ball leakage of the valve. As required by customers, QILONG's floating ball valves with fire safe design can meet the requirement of API 607, API 6FA, BS 6755 and JB/T 6899.



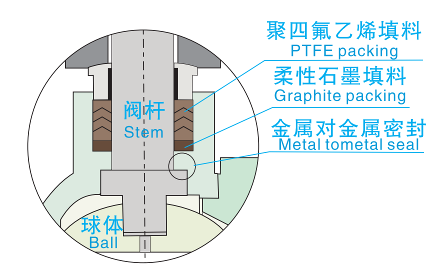

阀座的防火结构设计
Fire safe design of seat




中法兰密封的防火结构设计
Fire safe design of valve body and bonnet flanges




火烧前
Before fire




火烧后
After fire

阀杆的防火结构设计
Fire safe design of stem

浮动球阀 Floating ball valve
祺隆阀门 QILONG QILONG VALVE

## 阀杆的可靠密封 Reliable stem seal

阀杆采用防喷出结构设计，即使在阀腔异常升压以及填料压板失效等极端情况下，也能保证阀杆不会被介质喷出。阀杆采用有倒密封的下装式结构设计，倒密封的密封力随着介质压力的增高而增大，故能在各种压力下均能确保阀杆的可靠密封。

The blow–out proof design has been adopted for the stem to ensure that even if the pressure in the body cavity is risen accidently and the packing flange becomes invalid, the stem may not be blown out by medium. The stem features the design with a back seat, being assembled from underneath. The sealing force against the backseat gets higher as the medium pressure becomes higher. So the reliable seal of the stem can be assured under variable medium pressure.

下装式阀杆不会被介质压力吹出
Stem assembled from underneath may not be blown out by medium

阀杆的防喷出结构设计
blow–out proof design of stem

上装式阀杆有被介质压力吹出的可能
Stem assembled downward may be blown out

阀杆采用V型填料密封结构，V型填料能将填料压盖的压紧力及介质压力有效地转化成阀杆的密封力。
V type packing structure has been employed to effectively transform the pushing force of the gland flange and the medium pressure into the sealing force against the stem.

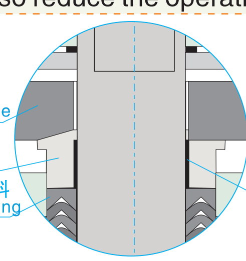

填料压紧前
Packing before pressed

阀杆采用V型填料密封结构
V type packing structure of stem

填料压紧后
Packing after pressed

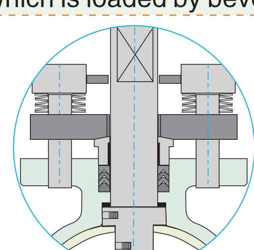
将传统的填料压盖改进为填料压板与填料压套的两体式结构设计，填料压套与填料压板采用球形接触，确保填料压套始终垂直，并在填料压套内部设置了聚四氟乙烯衬套，避免了阀杆与填料压套的擦伤与磨损，并减小了阀门的操作力矩。

The traditional packing flange design has been improved to be two–piece structure, i.e., being as a gland flange and gland, the latter contacts the gland flange with spherical surface. Thus, the gland remains vertical always, and is lined internally with a PTFE bush to prevent the galling against and friction between the stem, which can also reduce the operation torque of the valve.




防止阀杆使用中的磨损
Stem galling prevented in application

可根据用户的需要，可以采用蝶形弹簧加载填料压紧机构，使阀杆填料的密封更可靠。
Based on customers' requirement, a packing tightening design may be employed to obtain more reliable stem packing seal, which is loaded by beveling spring.



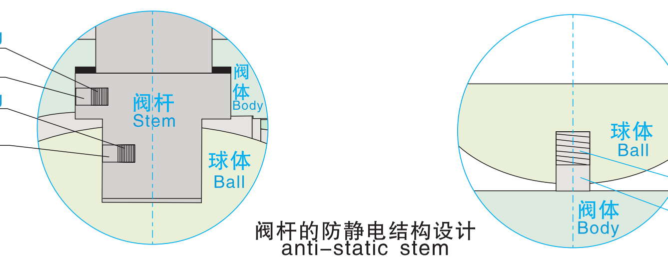
采用蝶形弹簧加载的填料压紧机构
a packing tightening design loaded by beveling spring



## 防静电结构 Anti–static feature

根据用户要求，球阀可以设有防静电结构。采用弹簧–钢球（或柱塞）静电引出装置，使球体与阀体之间直接形成静电通道（对于DN≤25的球阀）或通过阀杆使球体与阀体之间形成静电通道（对于DN≤32的球阀）。从而可将球体与阀座开关过程中摩擦产生的静电通过阀体引到大地，防止静电火花可能引起的火灾或爆炸等危险。

The traditional packing flange design has been improved to be of two piece structure, i.e., being as a packing flange plate and a follower, the latter contacts the flange plate with spherical surface. Thus, the follower remains vertical always, and is lined internally with a PTFE bush to prevent the galling against and friction between the stem, which can also reduce the operation torque of the valve.



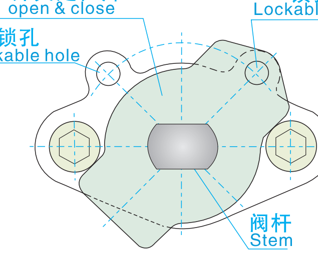

阀杆的防静电结构设计
anti–static stem

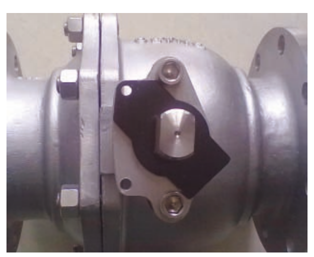
Anti–Static design for ball valve ≥32mm    Anti–Static design for ball valve ≤25mm

## 防止误操作 Wrong operation prevention

设置了带锁孔的90° 开关定位片，根据需要可以加锁，防止误操作。阀杆头部安装手柄的部位采用扁型设计，当阀门开启时，手柄与管道平行，当阀门关闭时，手柄与管道垂直，能够确保阀门的开关指示不会发生错误。

To prevent the ball valve from wrong operation, the key lock with 90 of open and close positioning pad has been provided, which can be lockable as required. At the stem head, where the lever fixes, a flat is so designed that the valve opens with the lever in parallel to piping, and with the lever right–angled to the piping, the valve is closed. So, it is ensured that the valve indicator of open and close can never make mistake.



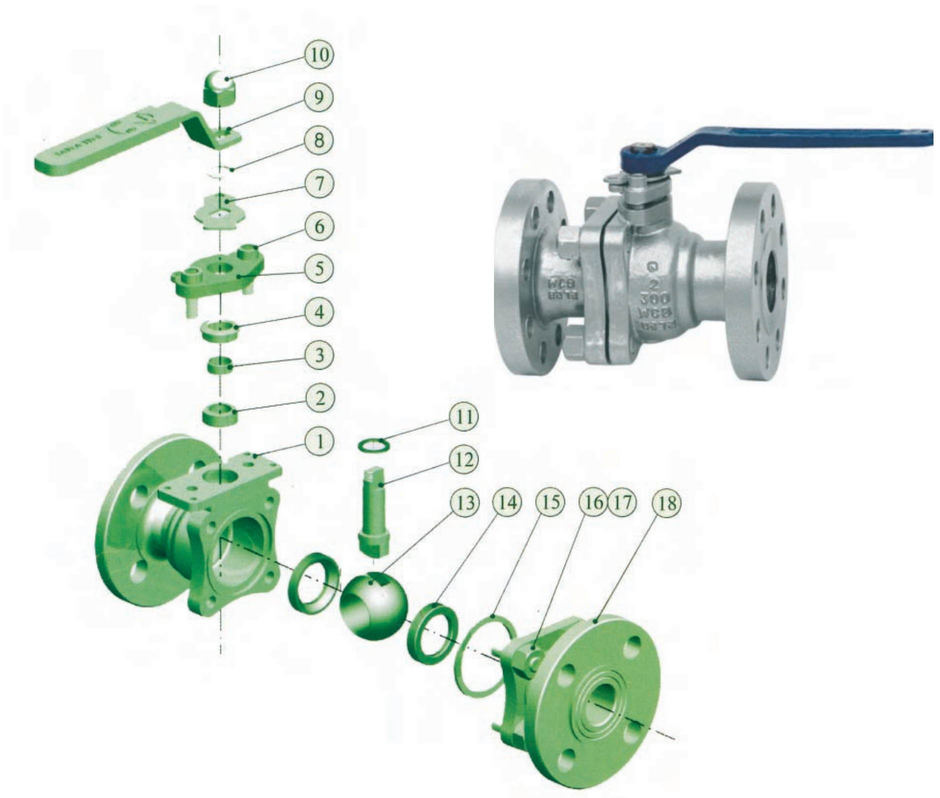
防止误操作的结构设计
Structural design to prevent misoperation

## 驱动装置安装平台的设置 Mounting pad provided

祺隆公司的浮动球阀均设置了安装驱动装置的支架平台，通过驱动装置支架，可以方便的安装涡轮蜗杆传动装置、气动装置或 电动装置。

QILONG company has provided for floating ball valve with a mounting pad , through which it is easy to fix the actuators, such as worm gear, pneumatic and electric actuators.

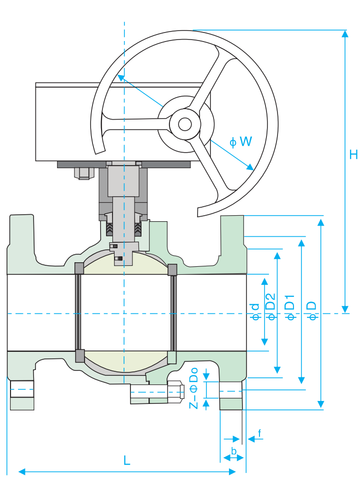
支架平台的设置能够方便的安装驱动装置
The mounting pad is designed to match with the actuator easily.



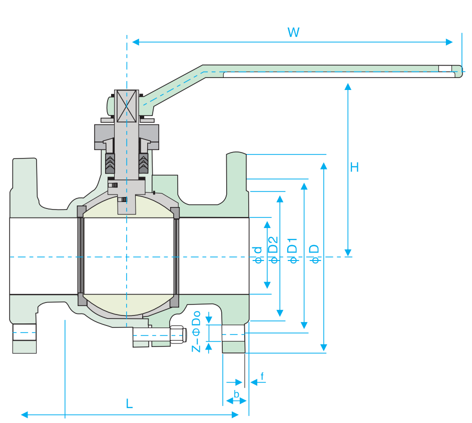
| | |
|---|---|
| 1–阀体； | 1–Body |
| 2–填料； | 2–Packing |
| 3–衬套； | 3–Bush |
| 4–填料压套； | 4–Gland |
| 5–填料压板； | 5–Gland flange |
| 6–螺钉； | 6–Bolt |
| 7–定位片； | 7–Stop collar |
| 8–挡圈； | 8–Circlip |
| 9–扳手； | 9–Lever |
| 10–螺母； | 10–Nut |
| 11–上密封垫； | 11–Thrust washer |
| 12–阀杆； | 12–Stem |
| 13–球体； | 13–Ball |
| 14–密封圈； | 14–Seat |
| 15–垫片； | 15–Gasket |
| 16–螺柱； | 16–Gasket |
| 17–螺母； | 17–Stud |
| 18–阀盖； | 18–Bonnet |

浮动球阀典型结构及零部件组成
Typical drawing of Floating ball valve and parts composition

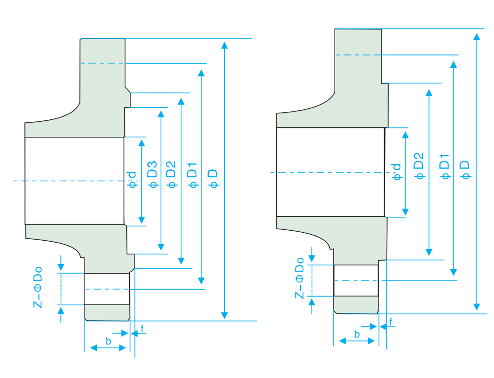
## 主要尺寸及重量 Main size and weight




涡轮蜗杆传动球阀
worm gear ball valve




手动球阀
manual ball valve




PN40–PN100法兰、CLASS600~CLASS1500法兰
PN40–PN100FLANGE、CLASS600~CLASS1500FLANGE

| 公称压力 Pressure Rating | 公称尺寸 Dimensions | | 尺寸Dimensions ( mm ) | | | | | | | | | | | | | 重量 Weight ( Kg ) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | DN | NPS | L | | d | D | D1 | D2 | b | f | Z–φdo | W | | H | | | |
| | | | RF | RJ | | | | | | | | 手动 Hand wheel | 蜗轮 Gear box | 手动 Hand wheel | 蜗轮 Gear box | 手动 Hand wheel | 蜗轮 Gear box |
| Class150 PN20 | 15 | $\frac{1}{2}$ | 108 | 119 | 14 | 89 | 60.5 | 35 | 11.5 | 1.6 | 4–15 | 140 | – | 85 | – | 3 | – |
| | 20 | $\frac{3}{4}$ | 117 | 130 | 19 | 98 | 70 | 43 | 11.5 | 1.6 | 4–15 | 140 | – | 90 | – | 4 | – |
| | 25 | 1 | 127 | 140 | 25 | 108 | 79.5 | 51 | 11.5 | 1.6 | 4–15 | 150 | – | 99 | – | 5 | – |
| | 32 | $1\frac{1}{4}$ | 140 | 153 | 32 | 117 | 89 | 64 | 13 | 1.6 | 4–15 | 180 | – | 105 | – | 7 | – |
| | 40 | $1\frac{1}{2}$ | 165 | 178 | 38 | 127 | 98.5 | 73 | 14.5 | 1.6 | 4–15 | 200 | – | 126 | – | 8 | – |
| | 50 | 2 | 178 | 191 | 51 | 152 | 120.5 | 92 | 16 | 1.6 | 4–19 | 250 | – | 140 | – | 12 | – |
| | 65 | $2\frac{1}{2}$ | 190 | 203 | 64 | 178 | 139.5 | 105 | 17.5 | 1.6 | 4–19 | 300 | – | 165 | – | 18 | – |
| | 80 | 3 | 203 | 216 | 76 | 190 | 152.5 | 127 | 19.5 | 1.6 | 4–19 | 350 | – | 178 | – | 24 | – |
| | 100 | 4 | 229 | 242 | 102 | 229 | 190.5 | 157 | 24 | 1.6 | 8–19 | 500 | 305 | 230 | 380 | 38 | 53 |
| | 125 | 5 | 356 | 369 | 127 | 254 | 216 | 186 | 24 | 1.6 | 8–22 | 800 | 305 | 280 | 405 | 60 | 79 |
| | 150 | 6 | 394 | 407 | 152 | 279 | 241.5 | 216 | 25.5 | 1.6 | 8–22 | 800 | 305 | 310 | 460 | 82 | 102 |
| | 200 | 8 | 457 | 470 | 203 | 343 | 298.5 | 270 | 29 | 1.6 | 8–22 | 1000 | 305 | 350 | 550 | 145 | 185 |
| | 250 | 10 | 533 | 546 | 254 | 406 | 362 | 324 | 31 | 1.6 | 12–25 | – | 400 | – | 706 | – | 280 |
| Class300 Pn50 | 15 | $\frac{1}{2}$ | 140 | 151 | 14 | 95 | 66.5 | 35 | 14.5 | 1.6 | 4–15 | 140 | – | 85 | – | 3 | – |
| | 20 | $\frac{3}{4}$ | 152 | 165 | 19 | 117 | 82.5 | 43 | 16 | 1.6 | 4–19 | 140 | – | 90 | – | 5 | – |
| | 25 | 1 | 165 | 178 | 25 | 124 | 89 | 51 | 17.5 | 1.6 | 4–19 | 150 | – | 99 | – | 6 | – |
| | 32 | $1\frac{1}{4}$ | 178 | 191 | 32 | 133 | 98.5 | 64 | 19.5 | 1.6 | 4–19 | 180 | – | 105 | – | 8 | – |
| | 40 | $1\frac{1}{2}$ | 190 | 203 | 38 | 156 | 114.5 | 73 | 21 | 1.6 | 4–22 | 200 | – | 126 | – | 11 | – |
| | 50 | 2 | 216 | 232 | 51 | 165 | 127 | 92 | 22.5 | 1.6 | 8–19 | 250 | – | 142 | – | 16 | – |
| | 65 | $2\frac{1}{2}$ | 241 | 257 | 64 | 190 | 149 | 105 | 25.5 | 1.6 | 8–22 | 300 | – | 165 | – | 24 | – |
| | 80 | 3 | 283 | 299 | 76 | 210 | 168.5 | 127 | 29 | 1.6 | 8–22 | 350 | – | 178 | 330 | 34 | 52 |
| | 100 | 4 | 305 | 321 | 102 | 254 | 200 | 157 | 32 | 1.6 | 8–22 | 500 | 305 | 230 | 380 | 56 | 76 |
| | 125 | 5 | 381 | 397 | 127 | 279 | 235 | 186 | 35 | 1.6 | 8–22 | 800 | 305 | 280 | 420 | 86 | 124 |
| | 150 | 6 | 403 | 419 | 152 | 318 | 270 | 216 | 37 | 1.6 | 12–22 | 800 | 305 | 310 | 480 | 125 | 163 |
| | 200 | 8 | 502 | 518 | 203 | 381 | 330 | 270 | 41.5 | 1.6 | 12–25 | 1000 | 305 | 350 | 560 | 222 | 267 |
| Class600 Pn110 | 15 | $\frac{1}{2}$ | 165 | 164 | 14 | 95 | 66.5 | 35 | 14.5 | 6.4 | 4–15 | 140 | – | 79 | – | 5 | – |
| | 20 | $\frac{3}{4}$ | 190 | 190 | 19 | 118 | 82.5 | 43 | 16 | 6.4 | 4–19 | 140 | – | 83 | – | 7 | – |
| | 25 | 1 | 216 | 216 | 25 | 124 | 89 | 5 | 17.5 | 6.4 | 4–19 | 200 | – | 114 | – | 9 | – |
| | 32 | $1\frac{1}{4}$ | 229 | 229 | 32 | 133 | 98.5 | 64 | 21 | 6.4 | 4–19 | 200 | – | 120 | – | 13 | – |
| | 40 | $1\frac{1}{2}$ | 241 | 241 | 38 | 156 | 114.5 | 73 | 22.5 | 6.4 | 4–22 | 250 | – | 125 | – | 17 | – |
| | 50 | 2 | 292 | 295 | 51 | 165 | 127 | 92 | 25.5 | 6.4 | 8–19 | 300 | – | 156 | – | 25 | – |
| | 65 | $2\frac{1}{2}$ | 330 | 333 | 64 | 190 | 149 | 105 | 29 | 6.4 | 8–22 | 350 | – | 172 | – | 42 | – |
| | 80 | 3 | 356 | 359 | 76 | 210 | 168 | 127 | 32 | 6.4 | 8–22 | 500 | 305 | 220 | 370 | 56 | 76 |
| | 100 | 4 | 432 | 435 | 102 | 273 | 216 | 157 | 38.5 | 6.4 | 8–25 | 650 | 305 | 250 | 400 | 85 | 123 |
| Class900 Pn150 | 15 | $\frac{1}{2}$ | 216 | 216 | 14 | 121 | 82.5 | 35 | 22.5 | 6.4 | 4–23 | 150 | – | 98 | – | 9 | – |
| | 20 | $\frac{3}{4}$ | 229 | 229 | 20 | 130 | 88.9 | 43 | 25.5 | 6.4 | 4–23 | 150 | – | 105 | – | 13 | – |
| | 25 | 1 | 254 | 254 | 25 | 149 | 101.6 | 51 | 29 | 6.4 | 4–26 | 200 | – | 110 | – | 16 | – |
| | 32 | $1\frac{1}{4}$ | 279 | 279 | 32 | 159 | 111.1 | 64 | 29 | 6.4 | 4–26 | 250 | – | 120 | – | 24 | – |
| | 40 | $1\frac{1}{2}$ | 305 | 305 | 38 | 178 | 123.8 | 73 | 32 | 6.4 | 4–29 | 250 | – | 125 | – | 31 | – |
| | 50 | 2 | 368 | 371 | 50 | 216 | 165.1 | 92 | 38.5 | 6.4 | 8–26 | 350 | – | 160 | – | 45 | – |
| Class1500 Pn260 | 15 | $\frac{1}{2}$ | 216 | 216 | 14 | 121 | 82.5 | 35 | 22.5 | 6.4 | 4–23 | 182 | – | 98 | – | 10 | – |
| | 20 | $\frac{3}{4}$ | 229 | 229 | 20 | 130 | 88.9 | 43 | 25.5 | 6.4 | 4–23 | 200 | – | 105 | – | 14 | – |
| | 25 | 1 | 254 | 254 | 25 | 149 | 101.6 | 51 | 29 | 6.4 | 4–26 | 250 | – | 110 | – | 17 | – |
| | 32 | $1\frac{1}{4}$ | 279 | 279 | 32 | 159 | 111.1 | 64 | 29 | 6.4 | 4–26 | 300 | – | 120 | – | 25 | – |
| | 40 | $1\frac{1}{2}$ | 305 | 305 | 38 | 178 | 123.8 | 73 | 32 | 6.4 | 4–29 | 350 | – | 130 | – | 33 | – |
| | 50 | 2 | 368 | 371 | 50 | 216 | 165.1 | 92 | 38.5 | 6.4 | 8–26 | 500 | – | 160 | – | 48 | – |

注：1、RF表示凸面法兰，RJ表示环连接面法兰。
2、本表法兰尺寸按ASME B16.5标准。

note:1.RF means raised flange,RJ means ring joint flange.
2.This table of flange size is as per standard ASME B16.5

浮动球阀
Floating ball valve
祺隆阀门 QILONG QILONG VALVE

| 公称压力 Pressure Rating | 公称尺寸 Dimensions DN | 尺寸Dimensions ( mm ) | | | | | | | | | | | | 重量 ( Kg ) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | d | D | D1 | D2 | D3 | b | f | Z–ϕdo | W | | H | | | |
| | | | | | | | | | | | 手动 Hand wheel | 蜗轮 Gear box | 手动 Hand wheel | 蜗轮 Gear box | 手动 Hand wheel | 蜗轮 Gear box |
| PN16 | 15 | 130 | 14 | 95 | 65 | 45 | – | 16 | 2 | 4–18 | 140 | – | 85 | – | 3 | – |
| | 20 | 130 | 19 | 105 | 75 | 58 | – | 18 | 2 | 4–14 | 140 | – | 90 | – | 4 | – |
| | 25 | 140 | 25 | 115 | 85 | 68 | – | 18 | 2 | 4–14 | 150 | – | 99 | – | 5 | – |
| | 32 | 165 | 32 | 140 | 100 | 78 | – | 18 | 2 | 4–18 | 180 | – | 105 | – | 7 | – |
| | 40 | 165 | 38 | 150 | 110 | 88 | – | 18 | 3 | 4–18 | 200 | – | 126 | – | 8 | – |
| | 50 | 203 | 51 | 165 | 125 | 102 | – | 18 | 3 | 4–18 | 250 | – | 140 | – | 12 | – |
| | 65 | 222 | 64 | 185 | 145 | 122 | – | 18 | 3 | 8–18 | 300 | – | 165 | – | 17 | – |
| | 80 | 241 | 76 | 200 | 160 | 138 | – | 20 | 3 | 8–18 | 350 | – | 178 | – | 23 | – |
| | 100 | 305 | 102 | 220 | 180 | 158 | – | 20 | 3 | 8–18 | 500 | 305 | 230 | 380 | 35 | 53 |
| | 125 | 356 | 127 | 250 | 210 | 188 | – | 22 | 3 | 8–18 | 800 | 305 | 280 | 405 | 52 | 79 |
| | 150 | 394 | 152 | 285 | 240 | 212 | – | 22 | 3 | 8–22 | 800 | 305 | 310 | 460 | 76 | 102 |
| | 200 | 457 | 203 | 340 | 295 | 268 | – | 24 | 3 | 12–22 | 1000 | 305 | 350 | 550 | 134 | 185 |
| PN25 | 15 | 130 | 14 | 95 | 65 | 45 | – | 16 | 2 | 4–14 | 140 | – | 85 | – | 3 | – |
| | 20 | 130 | 19 | 105 | 75 | 58 | – | 18 | 2 | 4–14 | 140 | – | 90 | – | 4 | – |
| | 25 | 140 | 25 | 115 | 85 | 68 | – | 18 | 2 | 4–14 | 150 | – | 99 | – | 5 | – |
| | 32 | 165 | 32 | 140 | 100 | 78 | – | 18 | 2 | 4–18 | 180 | – | 105 | – | 7 | – |
| | 40 | 165 | 38 | 150 | 110 | 88 | – | 18 | 3 | 4–18 | 200 | – | 126 | – | 9 | – |
| | 50 | 203 | 51 | 165 | 125 | 102 | – | 20 | 3 | 4–18 | 250 | – | 140 | – | 12 | – |
| | 65 | 222 | 64 | 185 | 145 | 122 | – | 22 | 3 | 8–18 | 300 | – | 165 | – | 19 | – |
| | 80 | 241 | 76 | 1200 | 160 | 138 | – | 24 | 3 | 8–18 | 350 | – | 178 | – | 23 | – |
| | 100 | 305 | 102 | 235 | 190 | 162 | – | 24 | 3 | 8–22 | 500 | 305 | 230 | 380 | 45 | 53 |
| | 125 | 356 | 127 | 270 | 220 | 188 | – | 26 | 3 | 8–26 | 800 | 350 | 280 | 405 | 67 | 79 |
| | 150 | 394 | 152 | 300 | 250 | 218 | – | 28 | 3 | 8–26 | 800 | 305 | 310 | 460 | 95 | 102 |
| | 200 | 457 | 203 | 360 | 310 | 278 | – | 30 | 3 | 12–26 | 1000 | 305 | 350 | 550 | 170 | 185 |
| PN40 | 15 | 130 | 14 | 95 | 65 | 45 | 40 | 16 | 2 | 4–14 | 140 | – | 85 | – | 3 | – |
| | 20 | 150 | 19 | 105 | 75 | 58 | 51 | 18 | 2 | 4–14 | 140 | – | 90 | – | 4 | – |
| | 25 | 160 | 25 | 115 | 85 | 68 | 58 | 18 | 2 | 4–14 | 150 | – | 99 | – | 5 | – |
| | 32 | 180 | 32 | 140 | 100 | 78 | 66 | 18 | 2 | 4–18 | 180 | – | 105 | – | 8 | – |
| | 40 | 200 | 38 | 150 | 110 | 88 | 76 | 18 | 3 | 4–18 | 200 | – | 126 | – | 11 | – |
| | 50 | 230 | 51 | 165 | 125 | 102 | 88 | 20 | 3 | 4–18 | 250 | – | 142 | – | 15 | – |
| | 65 | 290 | 64 | 185 | 145 | 122 | 110 | 22 | 3 | 8–18 | 300 | – | 165 | – | 20 | – |
| | 80 | 31 | 76 | 200 | 160 | 138 | 121 | 24 | 3 | 8–18 | 350 | 305 | 178 | 330 | 29 | 47 |
| | 100 | 350 | 102 | 235 | 190 | 162 | 150 | 24 | 3 | 8–22 | 500 | 350 | 230 | 380 | 48 | 68 |
| | 125 | 400 | 127 | 270 | 220 | 188 | 176 | 26 | 3 | 8–26 | 800 | 305 | 280 | 420 | 68 | 88 |
| | 150 | 403 | 152 | 300 | 250 | 218 | 204 | 28 | 3 | 8–26 | 80 | 305 | 310 | 480 | 98 | 136 |
| | 200 | 502 | 203 | 375 | 320 | 285 | 260 | 34 | 3 | 12–30 | 1000 | 405 | 350 | 560 | 178 | 223 |
| PN63 | 15 | 130 | 14 | 105 | 75 | 45 | 40 | 18 | 2 | 4–14 | 140 | – | 79 | – | 5 | – |
| | 20 | 150 | 19 | 1360 | 90 | 58 | 51 | 20 | 2 | 4–18 | 140 | – | 83 | – | 7 | – |
| | 25 | 160 | 25 | 140 | 100 | 68 | 58 | 22 | 2 | 4–18 | 200 | – | 114 | – | 9 | – |
| | 32 | 180 | 32 | 155 | 110 | 78 | 66 | 24 | 2 | 4–23 | 200 | – | 120 | – | 13 | – |
| | 40 | 200 | 38 | 170 | 125 | 88 | 76 | 24 | 3 | 4–23 | 250 | – | 125 | – | 17 | – |
| | 50 | 292 | 51 | 180 | 135 | 102 | 88 | 26 | 3 | 4–23 | 300 | – | 156 | – | 25 | – |
| | 65 | 330 | 64 | 205 | 160 | 122 | 110 | 28 | 3 | 8–23 | 350 | – | 172 | – | 42 | – |
| | 80 | 356 | 76 | 215 | 170 | 138 | 121 | 30 | 3 | 8–23 | 500 | 305 | 220 | 390 | 56 | 76 |
| | 100 | 406 | 102 | 250 | 200 | 162 | 150 | 32 | 3 | 8–25 | 650 | 350 | 250 | 440 | 85 | 123 |
| PN100 | 15 | 165 | 14 | 105 | 75 | 55 | 40 | 20 | 2 | 4–14 | 140 | – | 79 | – | 5 | – |
| | 20 | 190 | 19 | 125 | 90 | 68 | 51 | 22 | 2 | 4–18 | 140 | – | 83 | – | 7 | – |
| | 25 | 216 | 25 | 135 | 100 | 78 | 58 | 24 | 2 | 4–18 | 200 | – | 114 | – | 9 | – |
| | 32 | 229 | 32 | 150 | 110 | 82 | 66 | 26 | 2 | 4–22 | 200 | – | 120 | – | 13 | – |
| | 40 | 241 | 38 | 165 | 125 | 95 | 76 | 28 | 3 | 4–22 | 250 | – | 125 | – | 17 | – |
| | 50 | 292 | 51 | 195 | 145 | 112 | 88 | 26 | 3 | 4–22 | 300 | – | 156 | – | 25 | – |
| | 65 | 330 | 64 | 220 | 170 | 138 | 110 | 26 | 3 | 8–22 | 350 | – | 172 | – | 42 | – |
| | 80 | 356 | 76 | 230 | 180 | 148 | 121 | 28 | 3 | 8–22 | 500 | 305 | 220 | 390 | 56 | 76 |
| | 100 | 432 | 102 | 265 | 210 | 172 | 150 | 30 | 3 | 8–26 | 650 | 350 | 250 | 440 | 85 | 123 |

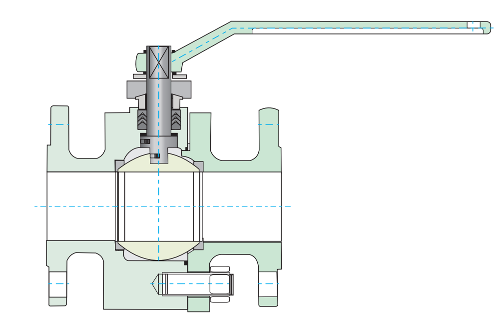


| 公称压力 Pressure Rating | 公称尺寸 Dimensions DN | 尺寸Dimensions ( mm ) | | | | | | | | | | | 重量 Weight ( Kg ) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | d | D | D1 | D2 | b | f | Z–ϕdo | W | | H | | | |
| | | | | | | | | | | 手动 Hand wheel | 蜗轮 Gear box | 手动 Hand wheel | 蜗轮 Gear box | 手动 Hand wheel | 蜗轮 Gear box |
| JIS 10K | 15 | 108 | 14 | 95 | 70 | 51 | 12 | 1 | 4–15 | 140 | – | 85 | – | 3 | – |
| | 20 | 117 | 19 | 100 | 75 | 56 | 14 | 1 | 4–15 | 140 | – | 90 | – | 4 | – |
| | 25 | 127 | 25 | 125 | 90 | 67 | 14 | 1 | 4–19 | 150 | – | 99 | – | 5 | – |
| | 32 | 140 | 32 | 135 | 100 | 76 | 16 | 2 | 4–19 | 180 | – | 105 | – | 7 | – |
| | 40 | 165 | 38 | 140 | 105 | 81 | 16 | 2 | 4–19 | 200 | – | 126 | – | 8 | – |
| | 50 | 178 | 51 | 155 | 120 | 960 | 16 | 2 | 4–19 | 250 | – | 140 | – | 12 | – |
| | 65 | 190 | 64 | 175 | 140 | 116 | 18 | 2 | 4–19 | 300 | – | 165 | – | 18 | – |
| | 80 | 203 | 76 | 185 | 150 | 126 | 18 | 2 | 8–19 | 350 | – | 178 | – | 24 | – |
| | 100 | 229 | 102 | 210 | 175 | 151 | 18 | 2 | 8–19 | 500 | 305 | 230 | 380 | 38 | 53 |
| | 125 | 356 | 127 | 250 | 210 | 182 | 20 | 2 | 8–23 | 800 | 305 | 280 | 405 | 60 | 79 |
| | 150 | 394 | 152 | 280 | 240 | 212 | 22 | 2 | 8–23 | 800 | 305 | 310 | 460 | 82 | 102 |
| | 200 | 457 | 203 | 330 | 290 | 262 | 22 | 2 | 12–23 | 1000 | 305 | 350 | 550 | 145 | 185 |
| | 250 | 533 | 254 | 400 | 355 | 324 | 24 | 2 | 12–23 | – | 400 | – | 706 | – | 280 |
| JIS 20K | 15 | 140 | 14 | 950 | 70 | 51 | 14 | 1 | 4–15 | 140 | – | 85 | – | 3 | – |
| | 20 | 152 | 19 | 100 | 75 | 56 | 16 | 1 | 4–15 | 140 | – | 90 | – | 5 | – |
| | 25 | 165 | 25 | 125 | 90 | 67 | 16 | 1 | 4–19 | 150 | – | 99 | – | 6 | – |
| | 32 | 178 | 32 | 135 | 100 | 76 | 18 | 2 | 4–19 | 180 | – | 105 | – | 8 | – |
| | 40 | 190 | 38 | 140 | 105 | 81 | 18 | 2 | 4–19 | 200 | – | 126 | – | 11 | – |
| | 50 | 216 | 51 | 155 | 120 | 96 | 18 | 2 | 8–19 | 250 | – | 142 | – | 15 | – |
| | 65 | 241 | 64 | 175 | 140 | 116 | 20 | 2 | 8–19 | 300 | – | 165 | – | 23 | – |
| | 80 | 283 | 76 | 200 | 160 | 132 | 22 | 2 | 8–23 | 350 | – | 178 | 330 | 33 | 52 |
| | 100 | 305 | 102 | 225 | 185 | 160 | 24 | 2 | 8–23 | 500 | 305 | 230 | 380 | 53 | 76 |
| | 125 | 381 | 127 | 270 | 225 | 195 | 26 | 2 | 8–25 | 800 | 305 | 280 | 420 | 82 | 124 |
| | 150 | 403 | 152 | 305 | 260 | 230 | 28 | 2 | 12–25 | 800 | 305 | 310 | 480 | 120 | 163 |
| | 200 | 502 | 203 | 350 | 305 | 275 | 30 | 2 | 12–25 | 1000 | 400 | 350 | 560 | 212 | 267 |

## 锻钢球阀 Forged steel ball valve

祺隆阀门的浮动球阀一般采用铸钢阀体，根据用户要求， 也可采用锻钢阀体，锻钢球阀的法兰连接尺寸、结构长度等主要尺寸与铸钢球阀相同

The floating ball valve manufactured by QILONG company is generally employing casted steel valve body, however, as required by customers, forged steel valve body is also available, of which the main sizes such as flange connections and face to face dimensions are as same as that of the cast steel ball valve.



法兰连接锻钢浮动球阀
flange ends forged steel floating ball valve

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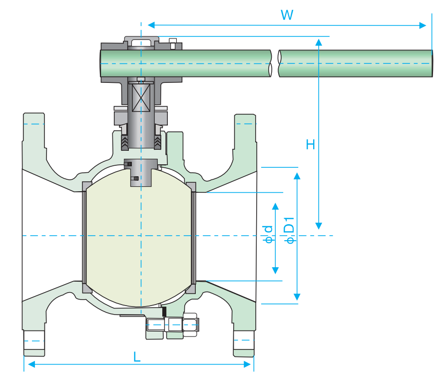
## 缩径球阀Reduced bore ball valve

祺隆阀门除了生产全通径浮动阀门以外，还生产缩径浮动球阀，以满足用户的不同需求。缩径球阀不仅能适当的降低成本及价格，而且能满足用户的一些特定要求。

In addition to the full bore floating ball valve, QILONG company is also manufacturing the floating ball valve with reduced bore to satisfy different requirement of customers, which can not only lower the cost and the pricing, but also meet customers' special requirement.






| 公称尺寸 Dimensions | | Class150、PN20 | | | | | | Class300、PN50 | | | | | | Class600、PN110 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DN | NPS | L 长 Long | L 短 Short | D | D1 | H | W | L 长 Long | L 短 Short | D | D1 | H | W | L | D | D1 | H | W |
| 15 | 1/2 | 108 | | 10 | 14 | 80 | 140 | 140 | | 10 | 14 | 80 | 140 | 165 | 10 | 14 | 75 | 140 |
| 20 | 3/4 | 117 | | 14 | 19 | 85 | 140 | 152 | | 14 | 19 | 85 | 140 | 190 | 14 | 19 | –79 | 140 |
| 25 | 1 | 127 | | 20 | 25 | 90 | 140 | 165 | | 20 | 25 | 90 | 140 | 216 | 20 | 25 | 83 | 140 |
| 32 | 1 1/4 | 140 | | 25 | 32 | 99 | 150 | 178 | | 25 | 32 | 99 | 150 | 229 | 25 | 32 | 114 | 150 |
| 40 | 1 1/2 | 165 | | 32 | 38 | 105 | 180 | 190 | | 32 | 38 | 105 | 180 | 241 | 32 | 38 | 120 | 200 |
| 50 | 2 | 178 | | 38 | 51 | 126 | 200 | 216 | | 38 | 51 | 126 | 200 | 292 | 38 | 51 | 125 | 250 |
| 65 | 2 1/2 | 190 | | 51 | 64 | 140 | 250 | 241 | | 51 | 64 | 140 | 250 | 330 | 51 | 64 | 156 | 300 |
| 80 | 3 | 203 | | 64 | 76 | 165 | 300 | 283 | | 64 | 76 | 165 | 300 | 356 | 64 | 76 | 172 | 350 |
| 100 | 4 | 229 | | 76 | 102 | 178 | 350 | 305 | | 76 | 102 | 178 | 350 | 432 | 76 | 102 | 220 | 500 |
| 125 | 5 | 356 | | 102 | 127 | 230 | 500 | 381 | | 102 | 127 | 230 | 500 | 508 | 102 | 127 | 250 | 650 |
| 150 | 6 | 394 | 267 | 127 | 152 | 280 | 800 | 403 | | 127 | 152 | 280 | 800 | – | – | – | – | – |
| 200 | 8 | 457 | 292 | 152 | 203 | 310 | 800 | 502 | 419 | 152 | 203 | 310 | 800 | – | – | – | – | – |
| 250 | 10 | 533 | 330 | 203 | 254 | 350 | 1000 | 568 | 457 | 203 | 254 | 350 | 1000 | – | – | – | – | – |

注：1、缩径球阀的连接法兰尺寸与全通径球阀相同
2、部分规格的缩径球阀，其结构长度有长系列和短系列两个系列

Note: 1. Sizes of flange connection of the ball valve with reduced bore are the same as that of full bore ball valves.
2. There are two series of face to face dimensions, i.e., the long series and the short series, for some of ball valves with reduced bore.

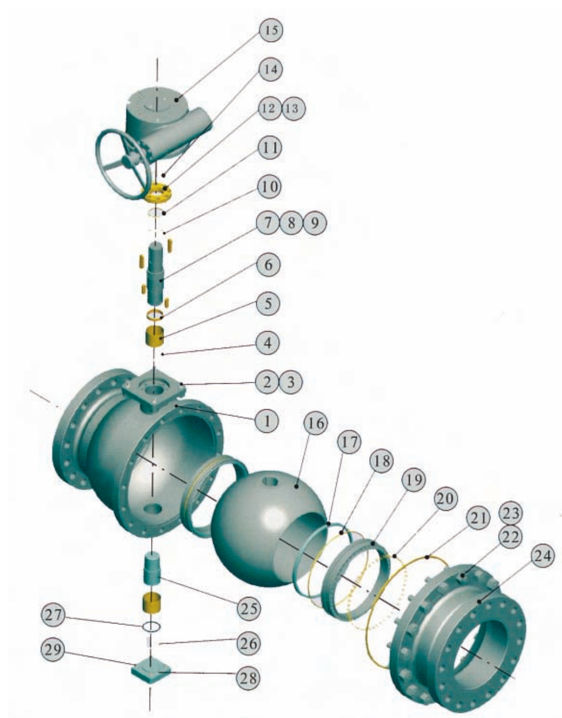


## 用途 Application

固定球阀适用于Class150~Class2500、PN16~PN160、JIS 10K~JIS 20K的各种管路上，用于截断或接通管路中的介质，选用不同材质，可分别适用于水、蒸汽、油品、液化气、天然气、煤气、硝酸、醋酸、氧化性介质、尿素等多种介质。固定球阀的驱动方式为蜗轮蜗杆传动、手动、气动或电动。固定球阀一般采用法兰连接，也可采用对焊连接。

Trunnion Mounted ball valves are suitable for using on various kinds of pipelines of Class 150 Class 2500, PN16PN160 , JIS10KJIS20K to cut off or turn on the pipeline medium, of which the operation types include worm gear, manual, pneumatic or electric actuators, being in general of flange connection, and butt welding end connectian as well.





## 固定球阀典型结构及零部件组成 Typical drawing of trunnion ball valve and parts composition

1–阀体；2–螺柱；3–螺母；4O型圈；5–轴套；6–隔圈；7–阀杆；；8–键；9–键；10–O型圈；11–垫片；12–压盖；13螺钉；14–O型圈；15–蜗轮蜗杆传动装置；16–球体；17–密封圈；18–O型圈；19–阀座；20–弹簧；21–垫片；22–螺柱；23–螺母；24–阀盖；25–下轴；26–O型圈；27–调整垫；28–下端盖；29–螺钉

1 –Body;2 –Stud;3 –Nut;4 –O ring;5 –Bush;6 –Washer;7 –Stem;8 –Key;9 –Key;10–O ring;11–Gasket;12–Gland;13–Bolt;14–O ring;1 5–Worm gear;16–Ball;17–seat;18–O ring;19–Seat;20–Spring;21–Gasket;22–St ud;23–Nut;24–Bonnet;25–Trunnion;26–O ring;27–Adjusting chshion;28–Down end cap;29–Bolt

固定球阀 Trunnion Mounted ball valve
祺隆阀门 QILONG QILONG VALVE

## 型号、材料及主要参数 Material and Main Valve Data

| 配管法兰 Pipe flange | 公称压力 Pressure rating | 法兰密封面 Flange face | 常规产品型号 Type | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| ASME B16.5 GB/T9112~9124 HG/T 20615 | Class150 | 凸面 RF | Q347F-A1C | Q347F-A1P | Q347F-A1P8 | Q347F-A1P3 | Q347F-A1R | Q347F-A1R8 | Q347F-A1R3 |
| | Class300 | | Q347F-A3 | Q347F-A3P | Q347F-A3P8 | Q347F-A3P3 | Q347F-A3R | Q347F-A3R8 | Q347F-A3R3 |
| | Class600 | | Q347F-A6 | Q347F-A6P | Q347F-A6P8 | Q347F-A6P3 | Q347F-A6R | Q347F-A6R8 | Q347F-A6R3 |
| | Class900 | | Q347F-A9 | Q347F-A9P | Q347F-A9P8 | Q347F-A9P3 | Q347F-A9R | Q347F-A9R8 | Q347F-A9R3 |
| | Class1500 | | Q347F-A15 | Q347F-A15P | Q347F-A15P8 | Q347F-A15P3 | Q347F-A15R | Q347F-A15R8 | Q347F-A15R3 |
| | Class2500 | | Q347F-A25 | Q347F-A25P | Q347F-A25P8 | Q347F-A25P3 | Q347F-A25R | Q347F-A25R8 | Q347F-A25R3 |
| GB/T9112~9124 HG/T 20592 JB/T 74~90 | PN16 | 凸面 RF | Q347F-16C | Q347F-16P | Q347F-16P8 | Q347F-16P3 | Q347F-16R | Q347F-16R8 | Q347F-16R3 |
| | PN25 | | Q347F-25 | Q347F-25P | Q347F-25P8 | Q347F-25P3 | Q347F-25R | Q347F-25R8 | Q347F-25R3 |
| | PN40 | 凹凸面 MF | Q347F-40 | Q347F-40P | Q347F-40P8 | Q347F-40P3 | Q347F-40R | Q347F-40R8 | Q347F-40R3 |
| | PN63 | | Q347F-63 | Q347F-63P | Q347F-63P8 | Q347F-63P3 | Q347F-63R | Q347F-63R8 | Q347F-63R3 |
| | PN100 | | Q347F-100 | Q347F-100P | Q347F-100P8 | Q347F-100P3 | Q347F-100R | Q347F-100R8 | Q347F-100R3 |
| | PN160 | | Q347F-160 | Q347F-160P | Q347F-160P8 | Q347F-160P3 | Q347F-160R | Q347F-160R8 | Q347F-160R3 |
| JIS B2238 | 10k | 凸面 RF | Q347F-K1C | Q347F-K1P | Q347F-K1P8 | Q347F-K1P3 | Q347F-K1R | Q347F-K1R8 | Q347F-K1R3 |
| | 20k | | Q347F-K2 | Q347F-K2P | Q347F-K2P8 | Q347F-K2P3 | Q347F-K2R | Q347F-K2R8 | Q347F-K2R3 |
| 主要零件材料 Main parts material | 阀体Body | | WCB A105 | ZG1Cr18Ni9Ti 1Cr18Ni9Ti | CF8 304 | CF3 304L | ZG1Cr18Ni12Mo2Ti 1Cr18Ni12Mo2Ti | CF8M 316 | CF3M 316L |
| | 球体、阀杆 Ball、Stem | | 2Cr13 | 1Cr18Ni19Ti | 0Cr18Ni19 (304) | 00Cr19Ni10 (304L) | 1Cr18Ni12Mo2Ti | 0Cr17Ni12Mo2 (316) | 00Cr17Ni14Mo2 (316L) |
| | 密封面 sealing surface | | 增强聚四氟乙烯、对位聚苯、尼龙 RPTFE、PPL、NYLO | | | | | | |
| 适用工况 Applicable condition | 适用介质 Applicable medium | | 水、蒸汽、油品、煤气、液化气、天然气等 Water、Steam Oils、Coal gas、Liquefied gas、gas | | 硝酸类腐蚀性介质 Nitric acid corrosion medium | 强氧化性介质 Strong oxidizing medium | 醋酸类腐蚀性介质 Acetic acid corrosive medium | | 尿素类腐蚀性介质 Urea corrosive medium |
| | 适用温度 Applicable temperature | | ≤180℃（增强聚四氟乙烯）、≤300℃（对位聚苯）、≤100℃（尼龙） | | | | | | |
| 手动球阀 manual ball valve | | | 在相应的蜗轮蜗杆型号的Q后去掉“3”表示，示例：Q47F-A1C | | | | | | |
| 气动球阀 pneumatic ball valve | | | 在相应的蜗轮蜗杆型号的Q后“3”改为“6”表示，示例：Q647F-A1C | | | | | | |
| 电动球阀 electric ball valve | | | 在相应的蜗轮蜗杆型号的Q后“3”改为“9”表示，示例：Q947F-A1C | | | | | | |
| 缩径球阀 reduced bore ball valve | | | 在相应的全通径球阀的型号前加“S”表示，示例：SQ947F-A1C | | | | | | |

注：本表为常规法兰连接蜗轮蜗杆传动固定球阀的型号编制、主要零件材料及适用工况，其他要求及其型号编制见球阀型号编制方法。
Note: This table is about the model preparation,main parts material and applicable condition of flange ends matal to metal sealed ball valve.



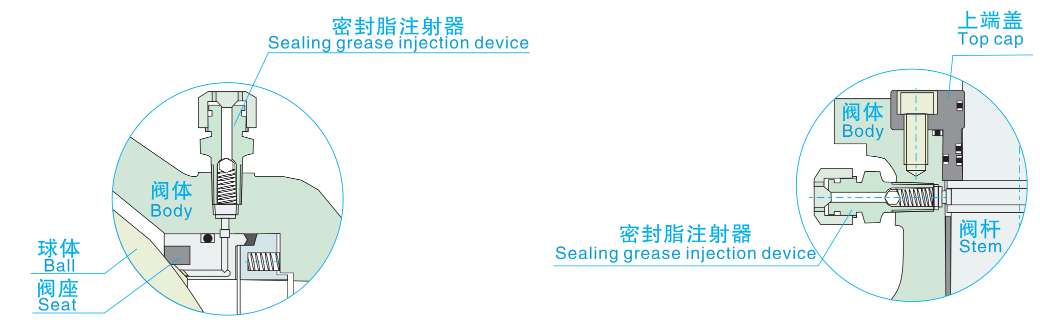


# 固定球阀的结构设计
Design features of trunnion mounted ball valve

## 密封脂紧急注射装置 Urgent grease injection device

根据用户要求，祺隆固定球阀可以设置密封脂紧急注射装置，对于DN150(NPS6)以上的固定球阀，在阀杆和阀座上均装有密封脂注射装置，而对于DN125以下的固定球阀，在阀门中腔装有密封脂注射装置。当阀座密封圈或阀杆O型密封圈因意外事故损坏时，可通过密封脂注射装置注射密封脂，以防止介质通过阀座密封圈和阀杆的泄漏。

According to customers' requirement, the trunnion mounted ball valves made by QILONG company are provided with devices for urgent grease injection, which are on both the stem and seat for the trunnion mounted ball valves of DN > 150mm (NPS6), and in the body cavity for the valve of DN < 125mm. When the O–ring of stem or the body seat ring is damaged due to accident, the medium leakage between body and stem can be prevented by injecting the sealing grease through the device.

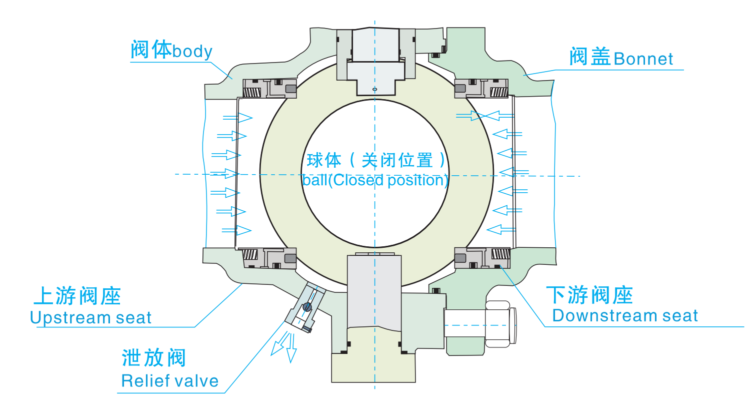



密封脂注射器
Sealing grease injection device

## 双阻断及泄放功能 Double–block and bleed functions

祺隆固定球阀一般采用球前阀座密封结构。固定球阀的两个阀座能独立切断进口端和出口端的介质，实现双阻断功能。当球阀关闭时，即使阀门进出口两端同时受压，阀门中腔和两端通道也可以被相互阻断，中腔内的剩余介质可以通过泄放阀排出。

In general, QILONG's trunnion mounted ball valve features the front ball sealing design structure. Each seat of the ball valve can separately cut off the medium at both inlet and outlet of the valve to realize double–block functions. When the ball valve is closed, body cavity and two of the body ends can be blocked with each other even if both the inlet and outlet are under pressure, when the medium left in the body cavity might be bled through the relief valve



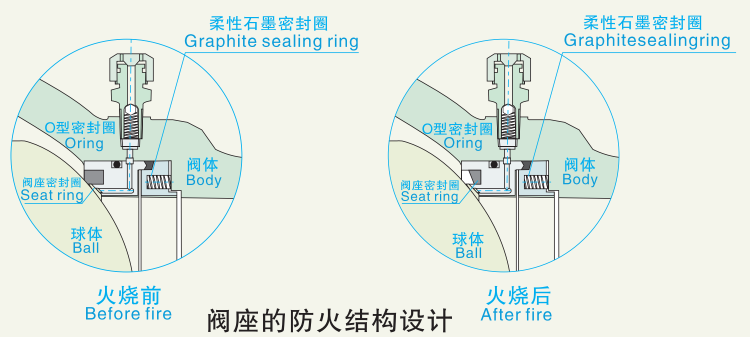

双阻断及泄放功能
Double–block and bleed functions

固定球阀 Trunnion Mounted ball valve
祺隆阀门 QILONG QILONG VALVE

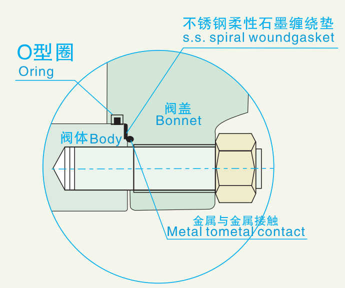
## 防火结构设计 Fire safe design

在阀门的使用现场发生火灾时，当聚四氟乙烯、橡胶等非金属材料制作的阀座密封圈、阀杆的O型圈以及中法兰O型密封圈在高温下损坏后，祺隆固定球阀能够借助于特别设计的金属对金属辅助密封结构或柔性石墨密封结构，有效地控制阀门内漏和外漏。对于用户有防火要求的固定球阀，祺隆公司的防火结构设计均符合API 607、API 6FA、BS6755及JB/T6899等标准规范的要求。

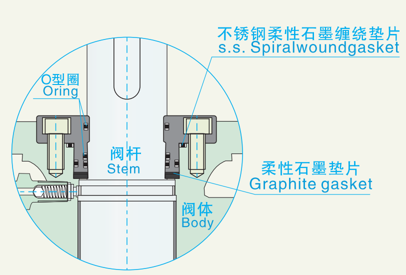
With the valve heated in a fire application, the non-metal material parts such as seat sealing ring of PTFE, O ring for the stem, and sealing gasket for body and bonnet,might be damaged due to high temperature .QILONG's special design of auxiliary metal to metal or the graphite seal is provided for the trunnion ball valve to effectively prevent both internal and external leakage of the valve. As required by customers ,QILONG's fire safe design for the trunnion ball valve meets the requirement of API 607,API 6Fa, BS 6755 and JB/T 6899.




阀座的防火结构设计
Fire safe design of seat




中法兰密封的防火结构设计
Fire safe design of valve body and bonnet flanges



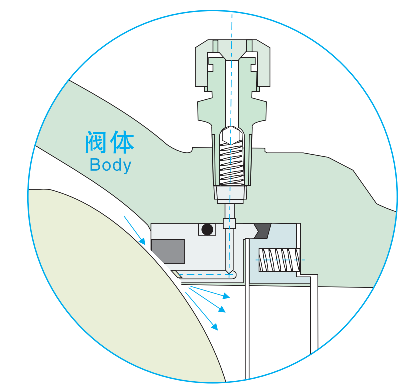

阀杆的防火结构设计
Fire safe design of stem



## 阀门中腔的自动泄压 Self–relief in the body cavity

当滞留在阀门中腔的液体介质由于温度升高而汽化，导致中腔压力异常升高时，中腔内的介质能够依靠其本身的作用力推动阀座而自动泄压，从而确保阀门的安全。

As the liquid medium left in the body cavity gasifies due to increased temperature, the pressure in the body cavity becomes abnormally higher, when the medium itself in the cavity would propel the seat and self–relieves the pressure to ensure the safety of valve.

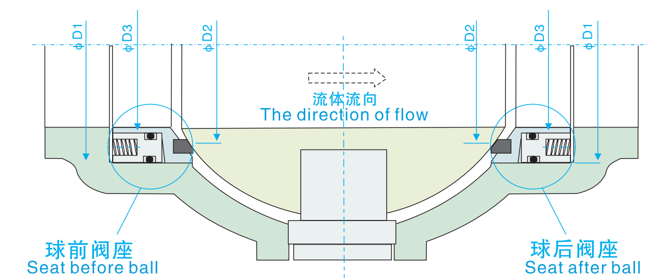



阀门中腔的自动泄压
Self–relief in the body cavity

## 球前球后双重密封结构设计 Trunnion ball valve with the Bi–sealing design structure,i.e. seat sealing in front of the bal l and seat seal ing behind the ball

对于某些特定的工况要求以及用户要求，祺隆固定球阀可以采用球前球后双重密封结构设计，即使其中一个密封圈因意外情况出现失效，阀门仍然能够正常工作，从而提高了阀门的密封可靠性。

According to some special working conditions and customers' requirement, QILONG has provided the trunnion mounted ball. Valve with the double–sealing design structure, i.e. seat sealing in front of the ball and seat sealing behind the ball, thus the reliable sealing of the valve is ensured because the valve can perform normally even if one of the effective sealing designs becomes lost due to the abnormal condition.




球前球后双密封结构设计
Trunnion ball valve with the Bi–sealing design structure,i.e.
seat sealing in front of the bal l and seat seal ing behind the ball

对于球前阀座，由D1、D2的面积差形成的活塞效应，在阀座前后的介质压差作用下，加上弹簧的预紧力使球前阀座与球体紧密接触而密封，并且密封力随着介质压差的增大而增加。

对于球后阀座，由D2、D3的面积差形成活塞效应，在阀座前后的介质压差作用下，加上弹簧的预紧力使球后阀座与球体紧密接触而密封，并且密封力随着介质压差的增大而增加。

Regarding the seat in front of the ball, the piston effect formed by the area difference between D1 and D2 ,plus the pre–tightened force of a spring would cause the seat in front of the ball by the pressure difference of the medium before and after the valve to touch the ball closely to form the tightness, of

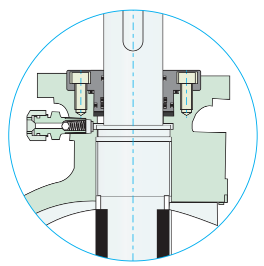
Regarding the seat after the ball, the piston effect formed by the area difference between D2 and D3 ,plus the pretightened force of a spring would cause the seat behind the ball to touch the ball closely to form the tightness, of which the sealing force will become bigger as the pressure difference gets higher.

固定球阀 Trunnion Mounted ball valve
祺隆阀门 QILONG QILONG VALVE

## 阀杆的防 吹出结构设计 Blow–out proof stem

阀杆采用防吹出结构设计。下端大上端小的阀杆在上端盖和螺钉的定位下，即使在阀腔异常升压的情况下，也能保证阀杆不会被介质喷出。

Blow–out proof structure is provided with for the stem, which is positioned by the up– end cap and screw, being guaranteed not to be blown–out by the medium even if at abnormal risen pressure in the cavity.

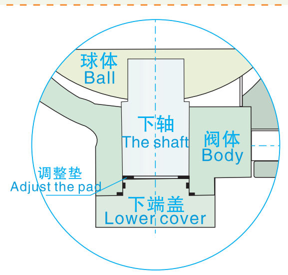


阀杆的防吹出结构设计
Blow–out proof stem

## 防静电结构 Anti–static design

固定球阀的球体通过相互间紧密接触下轴、调整垫、下端盖，与阀体形成静电通道。从而可将球体与阀座开关过程中摩擦产生的静电通过阀体引到大地，防止静电火花可能引起的火灾或爆炸等危险。

The ball of the trunnion mounted ball valve gets close contact with each other through the trunnion, adjusting cushion, and down–end cap, the passage of static electricity thus forms together with the valve , which may lead the static electricity caused by sparks generated by friction between the ball and seat during On and off performance to the ground to prevent the possible risk of fire or explosion.




防静电结构设计
Anti–static design

## 驱动装置安装平台的设置 Mounting pad provided

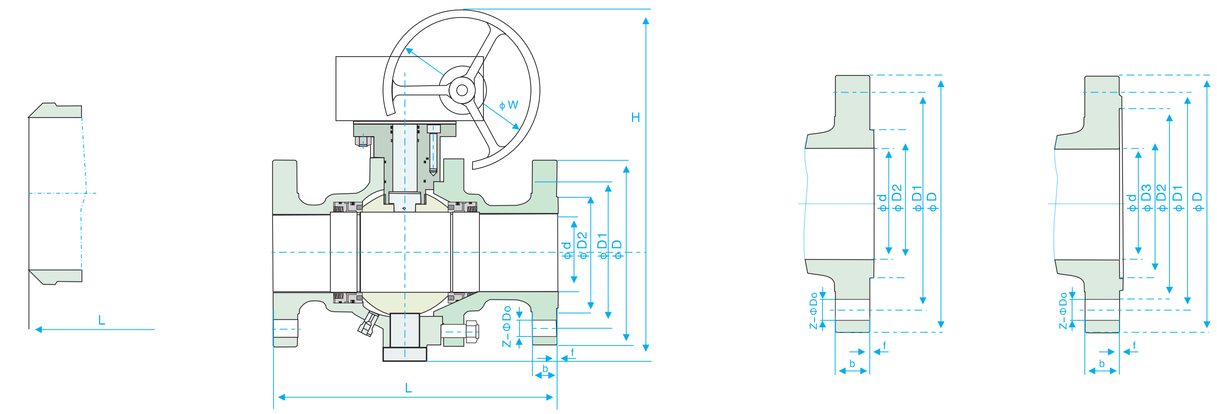
祺隆公司的固定球阀均设置了安装驱动装置的支架平台，可以方便的安装蜗轮蜗杆传动装置、气动装置、电动装置、液动装置以及气液联动装置等。

QILONG company has provided for trunnion mounted ball valve with a mounting pad for fixing the actuators, such as worm gear, pneumatic, electric, hydraulic, and pneumatic & hydraulic actuators .

支架平台的设置能够方便的安装驱动装置
The mounting pad is designed to match with the actuator easily.



## 主要尺寸及重量Main size and weight




| 公称压力 Pressure Rating | 公称尺寸 Dimensions | | 尺寸Dimensions ( mm ) | | | | | | | | | | | | | 重量 Weight ( Kg ) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | DN | NPS | L | | d | D | D1 | D2 | b | f | Z–ϕdo | H | H1 | W | | |
| | | | RF | 对焊BW | | | | | | | | | | | | |
| Class150 PN20 | 100 | 4 | 229 | 305 | 102 | 229 | 190.5 | 157 | 24 | 1.6 | 8–19 | 330 | 135 | 300 | | 60 |
| | 125 | 5 | 356 | 381 | 127 | 254 | 216 | 186 | 24 | 1.6 | 8–22 | 360 | 165 | 300 | | 80 |
| | 150 | 6 | 394 | 457 | 152 | 279 | 241.5 | 216 | 25.5 | 1.6 | 8–22 | 392 | 193 | 300 | | 101 |
| | 200 | 8 | 457 | 521 | 203 | 343 | 298.5 | 270 | 29 | 1.6 | 8–22 | 492 | 240 | 300 | | 166 |
| | 250 | 10 | 533 | 5590 | 254 | 406 | 362 | 324 | 31 | 1.6 | 12–25 | 548 | 293 | 300 | | 283 |
| | 300 | 12 | 610 | 635 | 305 | 483 | 432 | 381 | 32 | 1.6 | 12–25 | 688 | 340 | 400 | | 463 |
| | 350 | 14 | 686 | 762 | 337 | 533 | 476 | 413 | 35 | 1.6 | 12–29 | 722 | 372 | 400 | | 622 |
| | 400 | 16 | 762 | 838 | 387 | 597 | 540 | 470 | 37 | 1.6 | 16–29 | 722 | 415 | 400 | | 900 |
| | 450 | 18 | 864 | 914 | 438 | 635 | 578 | 533 | 40 | 1.6 | 16–32 | 804 | 462 | 500 | | 1150 |
| | 500 | 20 | 914 | 991 | 489 | 699 | 635 | 584 | 43 | 1.6 | 20–32 | 952 | 511 | 600 | | 1360 |
| | 600 | 24 | 1067 | 1143 | 591 | 813 | 749.5 | 692 | 48 | 1.6 | 20–35 | 1080 | 601 | 750 | | 2514 |
| | 650 | 26 | 1143 | 1245 | 633 | 786 | 744.5 | 711 | 40 | 1.6 | 36–22 | 1150 | 660 | 750 | | 3200 |
| | 700 | 28 | 1245 | 1346 | 684 | 837 | 795.5 | 762 | 43 | 1.6 | 40–22 | 1200 | 680 | 750 | | 4000 |
| | 750 | 30 | 1295 | 1397 | 735 | 887 | 846 | 813 | 43 | 1.6 | 44–22 | 1280 | 710 | 750 | | 4800 |
| | 800 | 32 | 1372 | 1524 | 779 | 941 | 900 | 864 | 44 | 1.6 | 48–22 | 1336 | 750 | 750 | | 5800 |
| | 900 | 36 | 1524 | 1727 | 874 | 1057 | 1009.5 | 972 | 51 | 1.6 | 44–26 | 1490 | 851 | 750 | | 8000 |
| | 1000 | 40 | 1900 | 1840 | 976 | 1175 | 1120.5 | 1080 | 56 | 1.6 | 44–28 | 1570 | 919 | 800 | | 9800 |
| | 1050 | 42 | 2050 | 1960 | 1020 | 1226 | 1171.5 | 1130 | 59 | 1.6 | 48–28 | 1640 | 980 | 800 | | 11000 |
| | 1200 | 48 | 2180 | 2100 | 1166 | 1392 | 1335.0 | 1289 | 65 | 1.6 | 44–32 | 1780 | 1050 | 900 | | 14000 |
| | 1400 | 56 | 2388 | 2422 | 1360 | 1746 | 1651 | 1571 | 124 | 1.6 | 48–48 | 1920 | 1073 | 960 | | 29400 |
| | 1500 | 60 | 2540 | 2574 | 1458 | 1854 | 1759 | 1676 | 132 | 1.6 | 52–48 | 2070 | 1127 | 960 | | 36000 |
| Class300 PN50 | 100 | 4 | 305 | 305 | 102 | 254 | 200 | 157 | 32 | 1.6 | 8–22 | 340 | 140 | 300 | | 70 |
| | 125 | 5 | 381 | 381 | 127 | 279 | 235 | 186 | 35 | 1.6 | 8–22 | 370 | 170 | 300 | | 95 |
| | 150 | 6 | 403 | 457 | 152 | 318 | 270 | 216 | 37 | 1.6 | 12–22 | 402 | 192 | 300 | | 128 |
| | 200 | 8 | 502 | 521 | 203 | 381 | 330 | 270 | 41.5 | 1.6 | 12–25 | 498 | 246 | 300 | | 234 |
| | 250 | 10 | 568 | 559 | 254 | 445 | 387.5 | 324 | 48 | 1.6 | 16–29 | 655 | 303 | 400 | | 403 |
| | 300 | 12 | 648 | 535 | 305 | 521 | 451 | 381 | 51 | 1.6 | 16–32 | 658 | 348 | 400 | | 602 |
| | 350 | 14 | 762 | 762 | 337 | 584 | 514.5 | 413 | 54 | 1.6 | 20–32 | 686 | 378 | 400 | | 803 |
| | 400 | 16 | 838 | 838 | 387 | 648 | 571.5 | 470 | 58 | 1.6 | 20–35 | 880 | 429 | 600 | | 1273 |
| | 450 | 18 | 914 | 914 | 438 | 711 | 628.5 | 533 | 61 | 1.6 | 24–35 | 1050 | 518 | 750 | | 1450 |
| | 500 | 20 | 991 | 991 | 489 | 775 | 686 | 584 | 64 | 1.6 | 24–35 | 1110 | 540 | 750 | | 1700 |
| | 600 | 24 | 1143 | 1143 | 591 | 914 | 813 | 692 | 70 | 1.6 | 24–41 | 1400 | 650 | 750 | | 3100 |
| | 650 | 26 | 1245 | 1245 | 633 | 867 | 803.5 | 737 | 87 | 1.6 | 32–35.5 | 1500 | 750 | 750 | | 4500 |
| | 700 | 28 | 1346 | 1346 | 684 | 921 | 857 | 787 | 87 | 1.6 | 36–35.5 | 1600 | 800 | 750 | | 6000 |
| | 750 | 30 | 1397 | 1397 | 735 | 991 | 921 | 845 | 92 | 1.6 | 36–39 | 1720 | 860 | 750 | | 7500 |
| | 800 | 32 | 1524 | 1524 | 779 | 1054 | 978 | 902 | 102 | 1.6 | 32–42 | 1800 | 900 | 750 | | 9000 |
| | 900 | 36 | 1727 | 1727 | 874 | 1172 | 1089 | 1010 | 102 | 1.6 | 32–45 | 2200 | 1020 | 600 | | 12000 |
| | 1000 | 40 | 1930 | 1952 | 976 | 1238 | 1156 | 1086 | 114 | 1.6 | 32–45 | 1468 | 819 | 960 | | 11730 |
| | 1050 | 42 | 2032 | 2054 | 1020 | 1289 | 1207 | 1137 | 119 | 1.6 | 32–45 | 1532 | 844 | 960 | | 16300 |
| | 1200 | 48 | 2388 | 2410 | 1166 | 1467 | 1372 | 1302 | 133 | 1.6 | 32–51 | 1670 | 933 | 960 | | 20160 |
| | 1400 | 56 | 2642 | 2664 | 1360 | 1708 | 1600 | 1518 | 154 | 1.6 | 28–60 | 1920 | 1054 | 960 | | 30860 |
| | 1500 | 60 | 2946 | 2986 | 1458 | 1810 | 1702 | 1626 | 164 | 1.6 | 32–60 | 2070 | 1105 | 960 | | 37800 |

| 公称压力 Pressure Rating | 公称尺寸 Dimensions | | 尺寸Dimensions ( mm ) | | | | | | | | | | | | | | 重量 Weight ( Kg ) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | DN | NPS | L | | | d | D | D1 | D2 | b | f | Z-φdo | H | H1 | W | |
| | | | RF | RJ | 对焊BW | | | | | | | | | | | |
| Class600 PN110 | 50 | 2 | 292 | 295 | 292 | 51 | 165 | 127 | 92 | 26 | 6.4 | 8-19 | 240 | 94 | 300 | 32 |
| | 65 | 2½ | 330 | 333 | 330 | 64 | 190 | 149 | 105 | 29 | 6.4 | 8-22 | 290 | 115 | 300 | 47 |
| | 80 | 3 | 356 | 359 | 356 | 76 | 210 | 168 | 127 | 32 | 6.4 | 8-22 | 340 | 136 | 300 | 68 |
| | 100 | 4 | 432 | 435 | 432 | 102 | 273 | 216 | 157 | 38 | 6.4 | 8-25 | 358 | 152 | 300 | 106 |
| | 125 | 5 | 508 | 511 | 508 | 127 | 330 | 266.5 | 186 | 45 | 6.4 | 8-29 | 400 | 180 | 300 | 170 |
| | 150 | 6 | 559 | 562 | 559 | 152 | 356 | 292 | 216 | 48 | 6.4 | 12-29 | 445 | 209 | 400 | 241 |
| | 200 | 8 | 660 | 664 | 660 | 203 | 419 | 349 | 270 | 56 | 6.4 | 12-32 | 498 | 263 | 400 | 444 |
| | 250 | 10 | 787 | 791 | 787 | 254 | 508 | 432 | 324 | 64 | 6.4 | 16-35 | 653 | 312 | 400 | 668 |
| | 300 | 12 | 838 | 841 | 838 | 305 | 559 | 489 | 381 | 67 | 6.4 | 20-35 | 665 | 354 | 500 | 1050 |
| | 350 | 14 | 889 | 892 | 889 | 334 | 603 | 527 | 413 | 70 | 6.4 | 20-38 | 738 | 389 | 600 | 1317 |
| | 400 | 16 | 991 | 994 | 991 | 385 | 686 | 603 | 470 | 77 | 6.4 | 20-41 | 920 | 440 | 750 | 1800 |
| | 450 | 18 | 1092 | 1095 | 1092 | 436 | 743 | 654 | 533 | 83 | 6.4 | 20-44 | 1100 | 530 | 750 | 2400 |
| | 500 | 20 | 1194 | 1200 | 1194 | 487 | 813 | 724 | 584 | 89 | 6.4 | 24-44 | 1200 | 560 | 750 | 3000 |
| | 600 | 24 | 1397 | 1407 | 1397 | 589 | 940 | 838 | 692 | 102 | 6.4 | 24-52 | 1480 | 670 | 750 | 5400 |
| | 650 | 26 | 1448 | 1461 | 1448 | 633 | 1016 | 914.4 | 749 | 108 | 6.4 | 28-51 | 1089 | 650 | 960 | 5830 |
| | 700 | 28 | 1549 | 1562 | 1549 | 684 | 1073 | 965.2 | 800 | 111 | 6.4 | 28-55 | 1155 | 686 | 960 | 6700 |
| | 750 | 30 | 1561 | 1664 | 1651 | 735 | 1130 | 1022.4 | 857 | 114 | 6.4 | 28-55 | 1211 | 715 | 960 | 7450 |
| | 800 | 32 | 1778 | 1794 | 1778 | 779 | 1194 | 1079.3 | 914 | 117 | 6.4 | 28-60 | 1316 | 747 | 960 | 8470 |
| | 850 | 34 | 1930 | 1946 | 1930 | 830 | 1245 | 1130.3 | 965 | 121 | 6.4 | 28-60 | 1361 | 822 | 960 | 10360 |
| | 900 | 36 | 2083 | 2099 | 2083 | 874 | 1314 | 1194 | 1022 | 124 | 6.4 | 28-67 | 1433 | 857 | 960 | 12080 |
| | 1000 | 40 | 2337 | 2359 | 2337 | 976 | 1321 | 1213 | 1111 | 159 | 6.4 | 32-60 | 1521 | 860 | 960 | 15420 |
| | 1050 | 42 | 2387 | 2409 | 2387 | 1020 | 1403 | 1283 | 1168 | 168 | 6.4 | 28-67 | 1586 | 901 | 960 | 18180 |
| | 1200 | 48 | 2540 | 2562 | 2540 | 1166 | 1594 | 1460.5 | 1334 | 189 | 6.4 | 32-73 | 1735 | 997 | 960 | 25260 |
| | 1400 | 56 | 2667 | 2689 | 2667 | 1360 | 1854 | 1695 | 1543 | 217 | 6.4 | 32-86 | 1945 | 1127 | 960 | 38670 |
| | 1500 | 60 | 2950 | 2972 | 2950 | 1458 | 1994 | 1822 | 1657 | 233 | 6.4 | 28-94 | 2054 | 1197 | 960 | 47360 |
| Class900 PN150 | 50 | 2 | 368 | 371 | 368 | 51 | 216 | 165.1 | 92 | 38.5 | 6.4 | 8-26 | 250 | 98 | 300 | 45 |
| | 65 | 2½ | 419 | 422 | 419 | 64 | 244 | 190.5 | 105 | 41.5 | 6.4 | 8-29 | 300 | 120 | 300 | 55 |
| | 80 | 3 | 381 | 384 | 381 | 76 | 241 | 190.5 | 127 | 38.5 | 6.4 | 8-26 | 345 | 140 | 300 | 94 |
| | 100 | 4 | 457 | 460 | 457 | 102 | 292 | 234.9 | 157 | 44.5 | 6.4 | 8-32 | 415 | 162 | 300 | 141 |
| | 125 | 5 | 559 | 562 | 559 | 127 | 349 | 279.4 | 186 | 51 | 6.4 | 8-35 | 446 | 188 | 300 | 230 |
| | 150 | 6 | 6120 | 613 | 610 | 152 | 381 | 317.5 | 216 | 56 | 6.4 | 12-32 | 477 | 213 | 400 | 325 |
| | 200 | 8 | 737 | 740 | 737 | 203 | 470 | 393.7 | 270 | 63.5 | 6.4 | 12-39 | 520 | 270 | 400 | 580 |
| | 250 | 10 | 838 | 841 | 838 | 254 | 545 | 469.9 | 324 | 70 | 6.4 | 16-39 | 628 | 322 | 400 | 850 |
| | 300 | 12 | 965 | 968 | 965 | 305 | 610 | 533.4 | 381 | 79.5 | 6.4 | 20-39 | 680 | 360 | 500 | 1330 |
| | 350 | 14 | 1029 | 1038 | 1029 | 322 | 640 | 558.8 | 413 | 86 | 6.4 | 20-42 | 750 | 400 | 600 | 1660 |
| | 400 | 16 | 1130 | 1140 | 1130 | 373 | 705 | 615.9 | 470 | 89 | 6.4 | 20-45 | 940 | 460 | 750 | 2280 |
| | 450 | 18 | 1219 | 1232 | 1219 | 423 | 785 | 685.8 | 533 | 102 | 7 | 20-51 | 730 | 532 | 800 | 2770 |
| | 500 | 20 | 1321 | 1334 | 1321 | 471 | 855 | 749.3 | 584 | 108 | 7 | 20-55 | 780 | 577 | 800 | 3740 |
| | 600 | 24 | 1549 | 1568 | 1549 | 570 | 1040 | 901.7 | 692 | 140 | 7 | 20-68 | 995 | 720 | 800 | 5560 |
| | 650 | 26 | 1651 | 1674 | 1651 | 617 | 1086 | 952.5 | 749 | 140 | 7 | 20-73 | 1038 | 743 | 800 | 7070 |
| | 700 | 28 | 1753 | 1775 | 1753 | 665 | 1168 | 1022.3 | 800 | 143 | 7 | 20-80 | 1088 | 784 | 800 | 8070 |
| | 750 | 30 | 1880 | 1902 | 1880 | 712 | 1232 | 1085.9 | 857 | 149 | 7 | 20-80 | 1157 | 816 | 800 | 9680 |
| | 800 | 32 | 2032 | 2054 | 2032 | 760 | 1314 | 1155.7 | 914 | 159 | 7 | 20-86 | 1190 | 857 | 960 | 11000 |
| | 900 | 36 | 2286 | 2315 | 2286 | 855 | 1461 | 1289 | 1022 | 171.5 | 7 | 20-94 | 1292 | 930 | 960 | 15700 |
| | 1000 | 40 | 2410 | 2438 | 2410 | 959 | 1511 | 1339.9 | 1162 | 206 | 7 | 24-94 | 1361 | 955 | 960 | 20040 |
| | 1200 | 48 | 2620 | 2652 | 2620 | 1155 | 1784 | 1587.5 | 1384 | 233 | 7 | 24-105 | 1568 | 1112 | 960 | 32830 |
| Class1500 PN260 | 40 | 1½ | 305 | 305 | 305 | 38 | 178 | 123.8 | 73 | 32 | 6.4 | 4-29 | 280 | 100 | 300 | 44 |
| | 50 | 2 | 368 | 371 | 368 | 51 | 216 | 165.1 | 92 | 38.5 | 6.4 | 8-26 | 320 | 113 | 300 | 67 |
| | 65 | 2½ | 419 | 422 | 419 | 64 | 244 | 190.5 | 105 | 41.5 | 6.4 | 8-29 | 340 | 125 | 300 | 80 |
| | 80 | 3 | 470 | 473 | 470 | 76 | 267 | 203.2 | 127 | 48 | 6.4 | 8-32 | 385 | 138 | 300 | 130 |
| | 100 | 4 | 546 | 549 | 546 | 102 | 311 | 241.3 | 157 | 54 | 6.4 | 8-35 | 415 | 171 | 300 | 192 |
| | 125 | 5 | 673 | 676 | 673 | 125 | 375 | 292.1 | 186 | 73.5 | 6.4 | 8-42 | 480 | 200 | 400 | 335 |
| | 150 | 6 | 705 | 711 | 705 | 144 | 394 | 317.5 | 216 | 83 | 6.4 | 12-39 | 580 | 222 | 400 | 475 |
| | 200 | 8 | 832 | 841 | 832 | 192 | 483 | 393.7 | 270 | 92 | 6.4 | 12-45 | 584 | 280 | 400 | 820 |
| | 250 | 10 | 991 | 1000 | 991 | 239 | 585 | 482.6 | 324 | 108 | 6.4 | 12-51 | 650 | 340 | 500 | 1320 |
| | 300 | 12 | 1130 | 1146 | 1130 | 287 | 675 | 571.5 | 381 | 124 | 6.4 | 16-54 | 700 | 370 | 600 | 2050 |
| | 350 | 14 | 1257 | 1276 | 1257 | 315 | 203 | 635 | 413 | 133.5 | 7 | 16-60 | 561 | 515 | 800 | 3240 |
| | 400 | 16 | 1384 | 1407 | 1384 | 360 | 235 | 704.8 | 470 | 146.5 | 7 | 16-68 | 601 | 552 | 800 | 4645 |
| | 450 | 18 | 1537 | 1559 | 1537 | 371 | 267 | 774.7 | 533 | 162 | 7 | 16-74 | 688 | 657 | 800 | 6035 |
| | 500 | 20 | 1664 | 1686 | 1664 | 416 | 305 | 831.8 | 584 | 178 | 7 | 16-80 | 727 | 692 | 800 | 8077 |
| | 600 | 24 | 1943 | 1972 | 1943 | 498 | 356 | 990.6 | 692 | 203.5 | 7 | 16-94 | 803 | 785 | 800 | 12357 |
| Class2500 PN420 | 40 | 1½ | 384 | 387 | 384 | 38 | 419 | 146 | 73 | 44.5 | 6.4 | 4-32 | 290 | 105 | 300 | 72 |
| | 50 | 2 | 451 | 454 | 451 | 42 | 483 | 171.4 | 92 | 51 | 6.4 | 8-29 | 320 | 120 | 300 | 104 |
| | 65 | 2½ | 508 | 514 | 508 | 52 | 550 | 196.8 | 105 | 57.5 | 6.4 | 8-32 | 350 | 130 | 300 | 140 |
| | 80 | 3 | 578 | 584 | 578 | 62 | 750 | 228.6 | 127 | 67 | 6.4 | 8-35 | 400 | 150 | 300 | 202 |
| | 100 | 4 | 673 | 683 | 673 | 87 | 825 | 273 | 157 | 76.5 | 6.4 | 8-42 | 425 | 180 | 400 | 305 |
| | 125 | 5 | 794 | 807 | 794 | 100 | 915 | 323.8 | 186 | 92.5 | 6.4 | 8-48 | 500 | 210 | 400 | 530 |
| | 150 | 6 | 914 | 927 | 914 | 131 | 985 | 368.3 | 216 | 108 | 6.4 | 8-54 | 590 | 230 | 500 | 760 |
| | 200 | 8 | 1022 | 1038 | 1022 | 179 | 1170 | 438.1 | 270 | 127 | 6.4 | 12-54 | 610 | 290 | 500 | 1200 |
| | 250 | 10 | 1270 | 1292 | 1270 | 223 | 675 | 539.7 | 324 | 165.5 | 6.4 | 12-67 | 660 | 350 | 600 | 2080 |
| | 300 | 12 | 1422 | 1445 | 1422 | 265 | 760 | 619.1 | 381 | 184.5 | 17.8 | 12-74 | 638 | 580 | 800 | 3050 |

注：1、RF表示凸面法兰，RJ表示环连接面法兰。
2、对于NPS≤24的阀门，本表法兰尺寸按ASME B16.5标准。根据用户要求，法兰尺寸也可按GB/T 9112~9124、HG/T 20615、SH3406设计制造。
3、对于NPS≥26的阀门，本表法兰尺寸按ASME B16.47标准的B系列及GB/T 13402标准，根据用户要求，法兰尺寸也可按ASME B16.47标准的A系列标准。

Note: 1. RF indicates rased flange, RFJ means ring joint flange, and BWis butt welding ends connection.
2. Flange dimensions of the above table for valves of NPS≤24 conforms to ASME B 16.5.
3. For valves of NPS ≥26, the flange dimensions of above table conforms to B series of ASME B16.47 and API 605. As required by customers, flange dimensions may also conform to A series of ASME B16.47 and MSS–SP–44.





| 公称压力 Pressure Rating | 公称尺寸 Dimensions | 尺寸Dimensions ( mm ) | | | | | | | | | | | | | 重量 Weight ( Kg ) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | DN | L | | d | D | D1 | D2 | D3 | b | f | Z-φdo | H | H1 | W | |
| | | 法兰 | 对焊 | | | | | | | | | | | | |
| PN16 | 150 | 394 | 457 | 152 | 285 | 240 | 212 | – | 22 | 3 | 8-22 | 392 | 193 | 300 | 98 |
| | 200 | 457 | 521 | 203 | 340 | 295 | 268 | – | 24 | 3 | 12-22 | 492 | 240 | 300 | 160 |
| | 250 | 533 | 559 | 254 | 405 | 355 | 320 | – | 26 | 3 | 12-26 | 548 | 293 | 300 | 282 |
| | 300 | 610 | 635 | 305 | 460 | 410 | 378 | – | 28 | 4 | 12-26 | 688 | 340 | 400 | 455 |
| | 350 | 686 | 762 | 337 | 520 | 470 | 438 | – | 30 | 4 | 16-26 | 722 | 372 | 400 | 615 |
| | 400 | 762 | 838 | 387 | 580 | 525 | 490 | – | 32 | 4 | 16-30 | 722 | 415 | 400 | 889 |
| | 450 | 864 | 914 | 438 | 640 | 585 | 550 | – | 40 | 4 | 20-30 | 804 | 462 | 500 | 1150 |
| | 500 | 914 | 991 | 489 | 715 | 650 | 610 | – | 44 | 4 | 20-33 | 952 | 511 | 600 | 1360 |
| | 600 | 1067 | 1143 | 591 | 840 | 770 | 725 | – | 54 | 5 | 20-36 | 1154 | 601 | 750 | 2530 |
| | 700 | 1245 | 1346 | 684 | 910 | 840 | 795 | – | 58 | 5 | 24-36 | 1200 | 680 | 750 | 4200 |
| | 800 | 1372 | 1524 | 779 | 1025 | 950 | 900 | – | 62 | 5 | 24-39 | 1336 | 750 | 750 | 6000 |
| | 900 | 1524 | 1727 | 874 | 1125 | 1050 | 1000 | – | 64 | 5 | 28-39 | 1490 | 851 | 750 | 7200 |
| | 1000 | 1900 | 1840 | 976 | 1255 | 1170 | 1115 | – | 68 | 5 | 28-42 | 1570 | 919 | 800 | 9900 |
| | 1200 | 2180 | 2100 | 1166 | 1485 | 1390 | 1330 | – | 78 | 5 | 32-48 | 1780 | 1050 | 900 | 14000 |
| PN25 | 150 | 394 | 457 | 152 | 300 | 250 | 218 | – | 28 | 3 | 8-26 | 392 | 193 | 300 | 108 |
| | 200 | 457 | 521 | 203 | 360 | 310 | 278 | – | 30 | 3 | 12-26 | 492 | 240 | 300 | 175 |
| | 250 | 533 | 559 | 254 | 425 | 370 | 335 | – | 32 | 3 | 12-30 | 548 | 293 | 300 | 295 |
| | 300 | 610 | 635 | 305 | 485 | 430 | 395 | – | 34 | 4 | 16-30 | 688 | 340 | 400 | 475 |
| | 350 | 686 | 762 | 337 | 5855 | 490 | 450 | – | 38 | 4 | 16-33 | 722 | 372 | 400 | 638 |
| | 400 | 762 | 838 | 387 | 620 | 550 | 505 | – | 40 | 4 | 16-36 | 722 | 415 | 400 | 930 |
| | 450 | 864 | 914 | 438 | 670 | 600 | 555 | – | 46 | 4 | 20-36 | 804 | 462 | 500 | 1200 |
| | 500 | 914 | 991 | 489 | 730 | 660 | 615 | – | 48 | 4 | 20-36 | 952 | 511 | 600 | 1400 |
| | 600 | 1067 | 1143 | 591 | 845 | 770 | 720 | – | 58 | 5 | 20-39 | 1154 | 601 | 750 | 2580 |
| | 700 | 1245 | 1346 | 684 | 960 | 875 | 820 | – | 60 | 5 | 24-42 | 1200 | 680 | 750 | 4500 |
| | 800 | 1372 | 1524 | 779 | 1085 | 990 | 930 | – | 66 | 5 | 24-48 | 1336 | 750 | 750 | 6400 |
| | 900 | 1524 | 1727 | 874 | 1185 | 1090 | 1030 | – | 70 | 5 | 28-48 | 1490 | 851 | 750 | 7600 |
| | 1000 | 1900 | 1840 | 976 | 1320 | 1210 | 1140 | – | 74 | 5 | 28-56 | 1570 | 919 | 800 | 10500 |
| | 1200 | 2180 | 2100 | 1166 | 1530 | 1420 | 1350 | – | 86 | 5 | 32-56 | 1780 | 1050 | 900 | 14800 |
| PN40 | 150 | 403 | 457 | 152 | 300 | 250 | 218 | 204 | 28 | 3 | 8-26 | 402 | 192 | 300 | 120 |
| | 200 | 502 | 521 | 203 | 375 | 320 | 285 | 260 | 34 | 3 | 12-30 | 498 | 246 | 300 | 228 |
| | 250 | 568 | 559 | 254 | 450 | 385 | 345 | 313 | 38 | 3 | 12-33 | 655 | 303 | 400 | 395 |
| | 300 | 648 | 635 | 305 | 515 | 450 | 410 | 364 | 42 | 4 | 16-33 | 658 | 348 | 400 | 598 |
| | 350 | 762 | 762 | 337 | 580 | 510 | 465 | 422 | 46 | 4 | 16-36 | 686 | 378 | 400 | 790 |
| | 400 | 838 | 838 | 387 | 660 | 585 | 535 | 474 | 50 | 4 | 16-39 | 880 | 429 | 600 | 1278 |
| | 450 | 914 | 914 | 438 | 685 | 610 | 560 | 524 | 57 | 4 | 20-39 | 1050 | 518 | 750 | 1440 |
| | 500 | 991 | 991 | 489 | 755 | 670 | 615 | 576 | 57 | 4 | 40-42 | 1110 | 540 | 750 | 1680 |
| | 600 | 1143 | 1143 | 591 | 890 | 795 | 735 | 678 | 72 | 5 | 20-48 | 1400 | 650 | 750 | 3000 |
| PN64 | 100 | 406 | 406 | 102 | 250 | 200 | 162 | 150 | 30 | 3 | 8-26 | 402 | 192 | 300 | 70 |
| | 125 | 457 | 457 | 127 | 295 | 240 | 188 | 176 | 34 | 3 | 8-30 | 498 | 246 | 300 | 99 |
| | 150 | 495 | 495 | 152 | 345 | 280 | 218 | 204 | 36 | 3 | 8-33 | 655 | 303 | 400 | 135 |
| | 200 | 597 | 597 | 203 | 415 | 345 | 285 | 260 | 42 | 3 | 12-36 | 658 | 348 | 400 | 248 |
| | 250 | 673 | 673 | 254 | 4701 | 400 | 345 | 313 | 46 | 3 | 12-36 | 686 | 378 | 400 | 416 |
| | 300 | 762 | 762 | 305 | 530 | 460 | 410 | 364 | 52 | 4 | 16-36 | 880 | 429 | 600 | 612 |
| | 350 | 826 | 826 | 337 | 600 | 525 | 465 | 422 | 56 | 4 | 16-39 | 1050 | 518 | 750 | 820 |
| | 400 | 902 | 902 | 387 | 670 | 585 | 535 | 474 | 60 | 4 | 16-42 | 1110 | 540 | 750 | 1300 |
| PN100 | 50 | 292 | 292 | 51 | 195 | 145 | 102 | 88 | 30 | 3 | 4-26 | 240 | 94 | 300 | 36 |
| | 65 | 330 | 330 | 64 | 220 | 170 | 122 | 110 | 34 | 3 | 8-26 | 290 | 115 | 300 | 52 |
| | 80 | 356 | 356 | 76 | 230 | 180 | 138 | 121 | 36 | 3 | 8-26 | 340 | 136 | 300 | 72 |
| | 100 | 432 | 432 | 102 | 265 | 210 | 162 | 150 | 40 | 3 | 8-30 | 358 | 152 | 300 | 104 |
| | 125 | 508 | 508 | 127 | 315 | 250 | 188 | 176 | 40 | 3 | 8-33 | 400 | 180 | 300 | 162 |
| | 150 | 559 | 559 | 152 | 355 | 290 | 218 | 204 | 44 | 3 | 12-33 | 445 | 209 | 300 | 238 |
| | 200 | 660 | 660 | 203 | 430 | 360 | 285 | 260 | 52 | 3 | 12-36 | 498 | 263 | 300 | 448 |
| | 250 | 787 | 787 | 254 | 505 | 430 | 345 | 313 | 60 | 3 | 12-39 | 653 | 312 | 400 | 660 |
| | 300 | 838 | 838 | 305 | 585 | 500 | 410 | 364 | 68 | 4 | 16-42 | 665 | 354 | 400 | 1070 |
| | 350 | 889 | 889 | 337 | 655 | 560 | 465 | 422 | 74 | 4 | 16-48 | 738 | 389 | 500 | 1335 |

固定球阀 Trunnion Mounted ball valve
祺隆阀门 QILONG QILONG VALVE

| 公称压力 Pressure Rating | 公称尺寸 Dimensions | | 尺寸Dimensions（mm） | | | | | | | | | | | | 重量 Weight（Kg） |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | DN | L | | d | D | D1 | D2 | D3 | b | f | Z-φdo | H | H1 | W | |
| | | 法兰 | 对焊 | | | | | | | | | | | | |
| PN160 | 50 | 368 | 368 | 51 | 215 | 165 | 132 | 88 | 36 | 3 | 8-25 | 250 | 98 | 300 | 44 |
| | 65 | 419 | 419 | 64 | 245 | 190 | 152 | 110 | 44 | 3 | 8-30 | 300 | 120 | 300 | 56 |
| | 80 | 381 | 381 | 76 | 260 | 205 | 168 | 121 | 46 | 3 | 8-30 | 345 | 140 | 300 | 99 |
| | 100 | 457 | 457 | 102 | 300 | 245 | 200 | 150 | 48 | 3 | 8-34 | 415 | 162 | 300 | 148 |
| | 125 | 559 | 559 | 127 | 355 | 285 | 238 | 176 | 60 | 3 | 8-41 | 446 | 188 | 300 | 240 |
| | 150 | 610 | 610 | 152 | 390 | 318 | 270 | 204 | 66 | 3 | 12-41 | 477 | 213 | 300 | 338 |
| | 200 | 737 | 737 | 203 | 480 | 400 | 345 | 260 | 78 | 3 | 12-48 | 520 | 270 | 400 | 595 |
| | 250 | 838 | 838 | 254 | 580 | 485 | 425 | 313 | 88 | 3 | 12-54 | 628 | 322 | 400 | 878 |
| | 300 | 965 | 965 | 305 | 665 | 570 | 510 | 364 | 100 | 4 | 16-54 | 680 | 360 | 500 | 1400 |

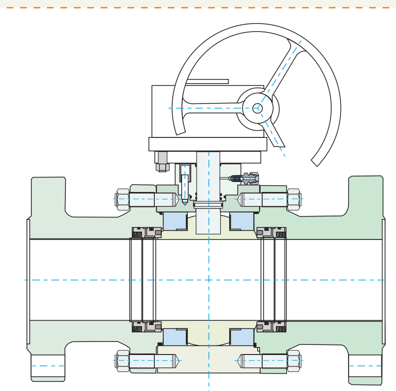
注:本表（PN16~PN160）法兰尺寸按GB/T9112~9124标准尺寸。根据用户要求，法兰尺寸也可按HG/T 20592、及JB/T 74~90标准设计制造。
Note:this table of flange size is as per standard ASME B16.5,it also can be designed and produced as per customer's requirement or GB/G9112-9124,HG/T20592,JB/T74~90.

| 公称压力 Pressure Rating | 公称尺寸 Dimensions DN | 尺寸（mm） | | | | | | | | | | 重量（Kg） |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | d | D | D1 | D2 | b | f | Z-φdo | H | H1 | W | |
| JIS 10K | 100 | 229 | 102 | 210 | 175 | 151 | 18 | 2 | 8-19 | 330 | 135 | 300 | 57 |
| | 125 | 356 | 127 | 250 | 210 | 182 | 20 | 2 | 8-23 | 360 | 165 | 300 | 77 |
| | 150 | 394 | 152 | 280 | 240 | 212 | 22 | 2 | 8-23 | 392 | 193 | 300 | 98 |
| | 200 | 457 | 203 | 330 | 290 | 262 | 22 | 2 | 12-23 | 492 | 240 | 300 | 160 |
| | 250 | 533 | 254 | 400 | 355 | 324 | 24 | 2 | 12-25 | 548 | 293 | 300 | 279 |
| | 300 | 610 | 305 | 445 | 400 | 368 | 24 | 3 | 16-25 | 688 | 340 | 400 | 448 |
| | 350 | 686 | 337 | 490 | 445 | 413 | 26 | 3 | 16-25 | 722 | 372 | 400 | 604 |
| | 400 | 762 | 387 | 560 | 510 | 475 | 28 | 3 | 16-27 | 722 | 415 | 400 | 880 |
| | 450 | 864 | 438 | 620 | 565 | 530 | 30 | 3 | 20-27 | 804 | 462 | 500 | 1120 |
| | 500 | 914 | 489 | 675 | 620 | 585 | 30 | 3 | 20-27 | 952 | 511 | 600 | 1310 |
| | 600 | 1067 | 591 | 795 | 730 | 690 | 32 | 3 | 24-33 | 1154 | 601 | 750 | 2480 |
| JIS 20K | 100 | 305 | 102 | 225 | 185 | 160 | 24 | 2 | 8-23 | 340 | 140 | 300 | 65 |
| | 125 | 381 | 127 | 270 | 225 | 195 | 26 | 2 | 8-25 | 370 | 170 | 300 | 91 |
| | 150 | 403 | 152 | 305 | 260 | 230 | 28 | 2 | 12-25 | 402 | 192 | 300 | 120 |
| | 200 | 502 | 203 | 350 | 305 | 275 | 30 | 2 | 12-25 | 498 | 246 | 300 | 220 |
| | 250 | 568 | 254 | 430 | 380 | 345 | 34 | 2 | 12-27 | 655 | 303 | 400 | 388 |
| | 300 | 648 | 305 | 480 | 430 | 395 | 36 | 3 | 16-27 | 658 | 348 | 400 | 580 |
| | 350 | 762 | 337 | 540 | 480 | 440 | 40 | 3 | 16-33 | 686 | 378 | 400 | 780 |
| | 400 | 838 | 387 | 605 | 540 | 495 | 46 | 3 | 16-33 | 880 | 429 | 600 | 1220 |
| | 450 | 914 | 438 | 675 | 605 | 560 | 48 | 3 | 20-33 | 1050 | 518 | 750 | 1400 |
| | 500 | 991 | 489 | 730 | 660 | 615 | 50 | 3 | 20-33 | 1110 | 540 | 750 | 1640 |
| | 600 | 1143 | 591 | 845 | 770 | 720 | 54 | 3 | 24-39 | 1400 | 650 | 750 | 3000 |

## 锻钢固定球阀 Forged Steel Trunnion Mounted ball valve

祺隆公司的固定球阀一般采用铸钢阀体，根据用户要求，也可采用锻钢，锻钢固定球阀的法兰尺寸及结构长度与铸钢固定球阀相同。

QILONG company manufactures in general trunnion mounted ball valve of casted steel valve body. However, if required by customers, forged steel valve body is also available, of which the flange dimensions and face to face dimensions are the same as that of cast steel trunnion mounted ball valve.

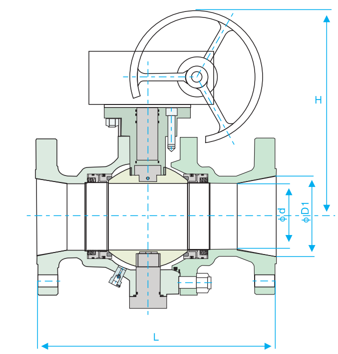




## 缩径固定球阀 Reduced bore trunnion mounted ball valve

祺隆公司除了生产全通径固定球阀外，还生产缩径固定球阀，以满足用户的不同需求。缩径固定球阀不仅能适当的降低成本及价格，而且能满足用户的一些特点要求。

Except for full bore ball valves ,QILONG company manufactures also the ball valve with reduced bore to meet different requirement of customers, which not only lowers the cost and pricing, but also satisfies the special requirement of customers .



| 公称尺寸 Dimensions | | 压力级 Pressure rating | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Class150、PN20 | | | | Class300、PN50 | | | | Class600、PN110 | | | | |
| | | 尺寸（mm） | | | | | | | | | | | | |
| DN | NPS | L | d | d1 | H | L | d | d1 | H | L | | d | d1 | H |
| | | | | | | | | | | RF | RJ | | | |
| 125 | 5 | 356 | 102 | 127 | 330 | 381 | 102 | 127 | 340 | 508 | 511 | 102 | 127 | 358 |
| 150 | 6 | 394 | 102 | 152 | 330 | 403 | 102 | 152 | 340 | 559 | 562 | 102 | 152 | 358 |
| 200 | 8 | 457 | 152 | 203 | 392 | 502 | 152 | 203 | 402 | 660 | 664 | 152 | 203 | 445 |
| 250 | 10 | 533 | 203 | 254 | 492 | 568 | 203 | 254 | 498 | 787 | 791 | 203 | 254 | 498 |
| 300 | 12 | 610 | 254 | 305 | 548 | 648 | 254 | 305 | 655 | 838 | 841 | 254 | 305 | 653 |
| 350 | 14 | 686 | 305 | 337 | 688 | 762 | 305 | 337 | 658 | 889 | 892 | 305 | 337 | 665 |
| 400 | 16 | 762 | 305 | 387 | 688 | 838 | 305 | 387 | 658 | 991 | 994 | 305 | 387 | 665 |
| 450 | 18 | 864 | 337 | 438 | 722 | 914 | 337 | 438 | 686 | 1092 | 1095 | 337 | 438 | 738 |
| 500 | 20 | 914 | 387 | 489 | 750 | 991 | 387 | 489 | 880 | 1194 | 1200 | 387 | 489 | 920 |
| 600 | 24 | 1067 | 489 | 591 | 952 | 1143 | 489 | 591 | 1110 | 1397 | 1407 | 489 | 591 | 1200 |
| 650 | 26 | 1143 | 538 | 633 | 1050 | 1245 | 538 | 633 | 1250 | – | – | – | – | – |
| 700 | 28 | 1245 | 591 | 684 | 1154 | 1346 | 591 | 684 | 1400 | – | – | – | – | – |
| 750 | 30 | 1295 | 633 | 735 | 1300 | 1397 | 633 | 735 | 1500 | – | – | – | – | – |
| 800 | 32 | 1375 | 684 | 779 | 1550 | 1524 | 684 | 779 | 1600 | – | – | – | – | – |
| 900 | 36 | 1524 | 779 | 874 | 1740 | 1727 | 779 | 874 | 1800 | – | – | – | – | – |

| 公称尺寸 Dimensions | | Class900、PN150 | | | | | Class1500、PN260 | | | | | Class2500、PN420 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DN | NPS | L | | d | d1 | H | L | | d | d1 | H | L | | d | d1 | H |
| | | RF | RJ | | | | RF | RJ | | | | RF | RJ | | | |
| 65 | $2\frac{1}{2}$ | 419 | 422 | 50 | 64 | 250 | 419 | 422 | 50 | 64 | 320 | 508 | 514 | 42 | 52 | 320 |
| 80 | 3 | 381 | 384 | 64 | 76 | 300 | 470 | 473 | 64 | 76 | 340 | 578 | 584 | 52 | 62 | 350 |
| 100 | 4 | 457 | 460 | 76 | 102 | 345 | 546 | 549 | 76 | 102 | 385 | 673 | 683 | 62 | 87 | 400 |
| 125 | 5 | 559 | 562 | 102 | 127 | 415 | 673 | 676 | 102 | 127 | 415 | 794 | 807 | 87 | 100 | 425 |
| 150 | 6 | 610 | 613 | 102 | 152 | 415 | 705 | 711 | 102 | 144 | 480 | 914 | 927 | 87 | 131 | 500 |
| 200 | 8 | 737 | 740 | 152 | 203 | 477 | 832 | 841 | 144 | 192 | 580 | 1022 | 1038 | 131 | 179 | 590 |
| 250 | 10 | 838 | 841 | 203 | 254 | 520 | 991 | 1000 | 192 | 239 | 584 | 1270 | 1292 | 179 | 223 | 610 |
| 300 | 12 | 965 | 968 | 254 | 305 | 628 | 1130 | 1146 | 239 | 287 | 650 | 1422 | 1445 | 223 | 265 | 660 |
| 350 | 14 | 1029 | 1038 | 305 | 322 | 680 | – | – | – | – | – | – | – | – | – | – |
| 400 | 16 | 1130 | 1140 | 305 | 373 | 680 | – | – | – | – | – | – | – | – | – | – |

注：缩径固定球阀的法兰尺寸与全通径固定球阀相同。
Note: Flange dimentions of ball valve with reduced bore are the same as that of full bore ball valve.

## 采用先进的球体和阀座硬化技术 Advanced hardening technology employed for ball and seat

祺隆公司金属硬密封球阀的球体与阀座完全采用金属对金属的密封方式，为了确保阀门在各种温度和压力下的可靠密封，针对用户的不同使用工况和要求，可以采用多种先进的球体和阀座的硬化技术，包括超音速喷涂、镍基喷焊、表面特殊硬化、硬质合金喷焊以及采用高强度高硬度陶瓷材料等，球体和阀座的表面硬度一般可以达到HRC60以上，最高可达HRC74以上。密封面材料耐温一般可达540℃，最高可达980℃。材料的结合强度可以达到10000PSI以上。密封面材料还具有很好的耐磨擦、耐冲击等性能。祺隆金属硬密封球阀能够适用于绝大多数的苛刻工况条件。

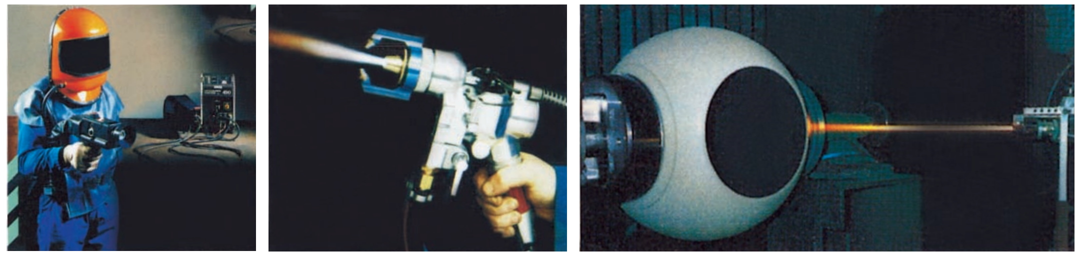
Metal to metal sealed design has been employed perfectly for the ball and seat, which has also adopted the advanced hardening technologies, such as ultro-sonic spray coating, nickel base spray welding, surface specially hardening, stellite spray welding, ceramic material with high strength and hardness, and so on. Surface hardness of the ball and seat may generally reach more than HRC60, Maximun is up to HRC74, and application temperature of the material may be up to 540℃Maximun is 980℃. Combining strength of the material gets to more than 10000 PSI. Besides, the surface materials posses also very good resistance properties of friction and impact. Metal to metal sealed ball valves made by QILONG are suitable for use in most criticle working conditions.

## 金属硬密封球阀的结构设计特点
Design features of metal to metal sealed ball valve

祺隆公司金属硬密封球阀除了具有防止误操作、防止阀杆飞出、设置驱动装置安装平台等结构特点外，还具有如下独特的特点。

Except for such features as wrong operation prevention, stem blow-out proof, mounting pad provided, the metal to metal sealed ball valves made by QILONG posses the following unique features.

### 采用先进的球体和阀座硬化技术
Advanced hardening technology employed for ball and seat



球体及阀座的超音速喷涂
Ultra-sonic spray coating for bal l and seat

### 防止阀门在高温下的涨死 Valve stuck prevented under high temperature

高温工况下由于热膨胀而容易引起球体与阀座的涨死，从而导致阀门无法开启。祺隆金属硬密封球阀采用了蝶簧或弹簧加载的独特密封结构，在高温下零部件的热膨胀可以被蝶簧或弹簧所吸收，故能够保证阀门在高温下不会被涨死，并能够在高温下灵活启闭。

In the case of high temperature working condition, the valve seat and ball would easily get stuck due to heat expansion, and the valve could not be open. Metal to metal sealed ball valves made by QILONG employ the patented design of bevelling spring loading, which would absorb the heat expansion of parts caused by the bevelling spring. So, it is ensured that the valve would not get stuck and be open and close easily in the case of high temperature condition.

### 优异的密封性能 Excellent tightness function

采用独特的球体研磨工艺，通过球体与研磨器具在空间不同方位的旋转，使球体表面达到极高的圆度和光洁度，阀门的密封性能完全达到或超过标准要求。

A unique technique has been employed for the ball grinding, which makes the ball surface reach extreme round and smooth by rotating the ball and grinding apparatus at different directions in space. The tightness function of t he valve meets completely and exceeds the standard requirement.

### 完全的防火结构设计 An entire fire safe structure

阀门的密封面采用金属对金属密封结构，填料采用柔性石墨，垫片采用不锈钢+柔性石墨结构。因此，阀门即使在火灾情况下也能确保可靠的密封

The metal to metal sealed structure has been adopted for the valve sealing surface design. Packing is so designed with graphite, and gasket is so designed with stainless steel, plus graphite that the valve can assure reliable tightness even if under fire condition.

### 自然的防静电结构设计 Natural anti-static structure

金属硬密封球阀的阀体、阀座、球体等金属零件紧密接触，自然形成了静电通道。因此，金属硬密封球阀不需要设置专门的防静电装置。

Metal to metal sealed ball valve with its body seat, ball, other metal parts , and so forth, closely contact with each other , having naturally formed a static electricity passage. In this respect, there is no need to provide special anti-static device.

### 双阻断及泄放功能 Double-block and bleed function

祺隆金属硬密封固定球阀一般采用用球前阀座密封结构。金属硬密封固定球阀的两个阀座能独立切断进口端和出口端的介质，实现双阻断功能。当球阀关闭时，即使阀门进口两端同时受压，阀门中腔和两端通道也可以被相互阻断，中腔内的剩余介质可以通过泄放阀排除。

祺隆金属硬密封浮动球阀采用用球后阀座密封结构。一般采用单向密封，并在阀体上标有流向。如用户有特殊要求，可以采用祺隆双向密封的专利结构。

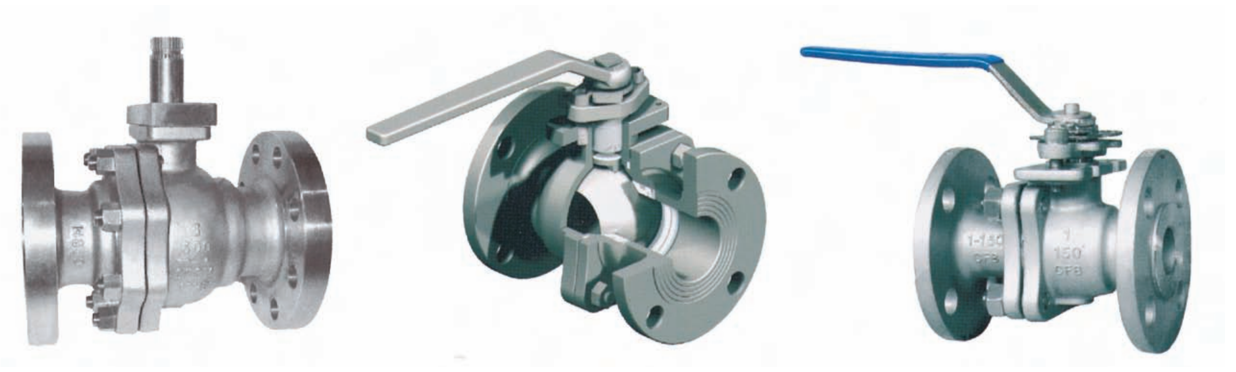
QILONG's metal to metal sealed trunnion mounted ball valve is in general of the front ball sealing structure .Actually, the seats of the metal to metal sealed trunnion ball valve can both cut off separately the medium atinlet and out let to realize double-block function. When the valve is closed, the body cavity and both thebore ends can be blocked with each other even if both ends of the valve are under pressure at the same time ,Where as the medium left in the body cavity may relieve through the relief valve.

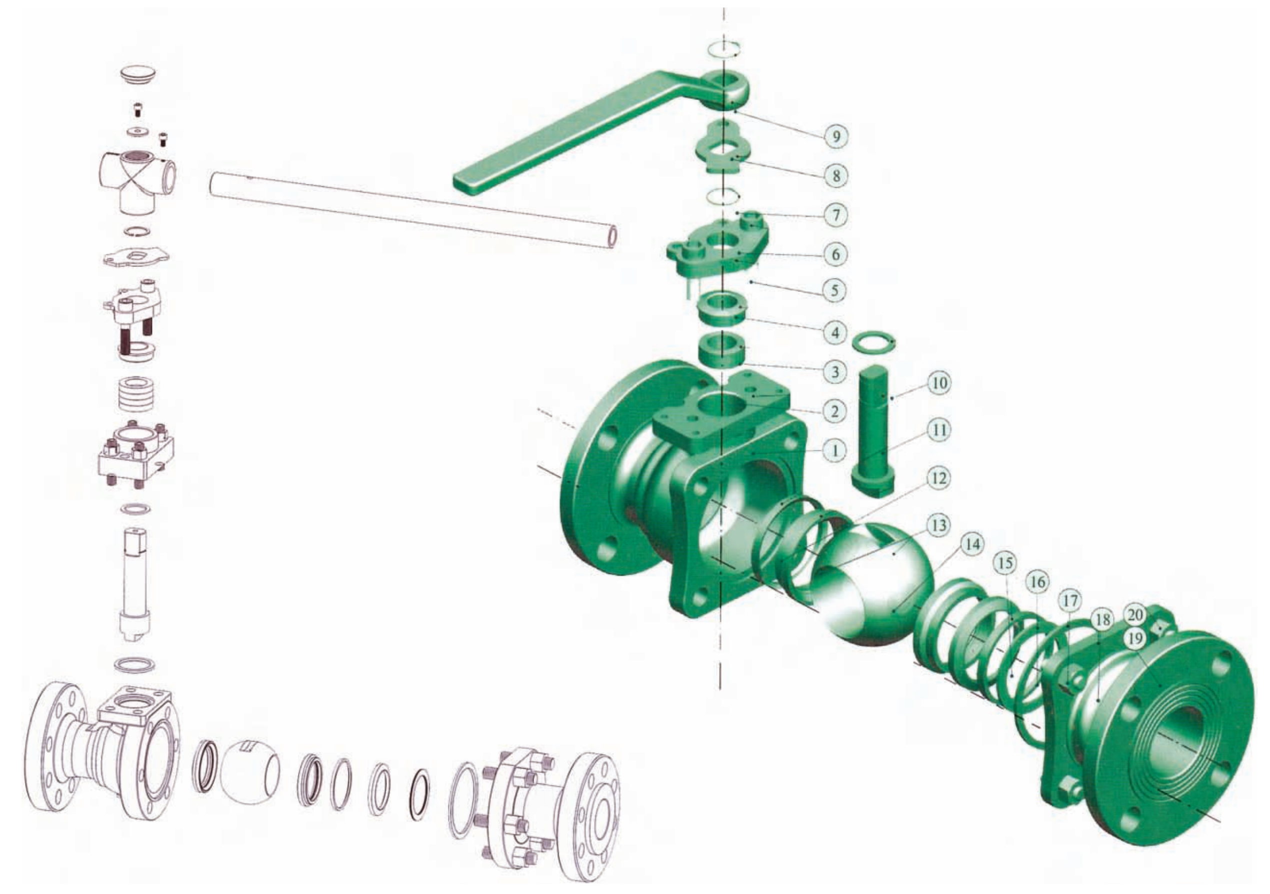
QILONG's metal to metal sealed floating ball valve is of behind ball sealing structure, employing in general single direction tightness. The flow direction is indicated on the valve body. If specially required by customers, QILONG's patent of bi-direction Sealling design maybe selected.





## 金属硬密封浮动球阀
Metal to metal sealed floating ball valve






### 金属硬密封浮动球阀典型结构及零部件组成 Typical drawing of metal to metal sealed floating ball valve and parts composition

1-阀体；2-填料；3-填料压套；4-填料压板；5-螺钉；6-挡圈；7-定位片；8-扳手；9-挡圈；10-上密封垫；11-阀杆；12-阀座密封垫；13-阀座；14-球体；15-压圈；16-蝶簧；17-垫片；18-阀盖；19-螺柱；20-螺母。

1-Body；2-Packing；3-Gland；4-Gland flange；5-Bolt；6-Circlip；7-Stop collar；8-Lever；9-Circlip；10-Thrust washer；11-Stem；12-seat seal washer；13-Seat；14-Ball；15-pressing ring；16-Spring；17-Gasket；18-Bonnet；19-Packing；20-Nut

金属硬密封浮动球阀 Metal to metal sealed Floating ball valve
祺隆阀门 QILONG QILONG VALVE

## 型号、材料及主要参数 Material and Main Valve Data

| 配管法兰 Pipe flange | 公称压力 Pressure Rating | 法兰密封面 Flange face | 常规产品型号 Type | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| ASME B16.5 GB/T9112~9124 HG/T 20615 | Class150 | 凸面 RF | Q41Y-A1C | Q41Y-A1P | Q41Y-A1P8 | Q41Y-A1P3 | Q41Y-A1R | Q41Y-A1R8 | Q41Y-A1R3 |
| | Class300 | | Q41Y-A3 | Q41Y-A3P | Q41Y-A3P8 | Q41Y-A3P3 | Q41Y-A3R | Q41Y-A3R8 | Q41Y-A3R3 |
| | Class600 | | Q41Y-A6 | Q41Y-A6P | Q41Y-A6P8 | Q41Y-A6P3 | Q41Y-A6R | Q41Y-A6R8 | Q41Y-A6R3 |
| | Class900 | | Q41Y-A9 | Q41Y-A9P | Q41Y-A9P8 | Q41Y-A9P3 | Q41Y-A9R | Q41Y-A9R8 | Q41Y-A9R3 |
| | Class1500 | | Q41Y-A15 | Q41Y-A15P | Q41Y-A15P8 | Q41Y-A15P3 | Q41Y-A15R | Q41Y-A15R8 | Q41Y-A15R3 |
| GB/T9112~9124 HG/T 20592 JB/T 74~90 | PN16 | 凸面 RF | Q41Y-16C | Q41Y-16P | Q41Y-16P8 | Q41Y-16P3 | Q41Y-16R | Q41Y-16R8 | Q41Y-16R3 |
| | PN25 | | Q41Y-25 | Q41Y-25P | Q41Y-25P8 | Q41Y-25P3 | Q41Y-25R | Q41Y-25R8 | Q41Y-25R3 |
| | PN40 | 凹凸面 MF | Q41Y-40 | Q41Y-40P | Q41Y-40P8 | Q41Y-40P3 | Q41Y-40R | Q41Y-40R8 | Q41Y-40R3 |
| | PN63 | | Q41Y-63 | Q41Y-63P | Q41Y-63P8 | Q41Y-63P3 | Q41Y-63R | Q41Y-63R8 | Q41Y-63R3 |
| | PN100 | | Q41Y-100 | Q41Y-100P | Q41Y-100P8 | Q41Y-100P3 | Q41Y-100R | Q41Y-100R8 | Q41Y-100R3 |
| 主要零件材料 Main parts material | 阀体Body | | WCB A105 | ZG1Cr18Ni9Ti 1Cr18Ni9Ti | CF8 304 | CF3 304L | ZG1Cr18Ni12Mo2Ti 1Cr18Ni12Mo2Ti | CF8M 316 | CF3M 316L |
| | 阀杆Stem | | 2Cr13 | 1Cr18Ni19Ti | 0Cr18Ni9 (304) | 00Cr19Ni10 (304L) | 1Cr18Ni12Mo2Ti | 0Cr17Ni12Mo2 ( 316 ) | 00Cr17Ni14Mo2 ( 316L ) |
| | 球体Ball | | 2Cr13+镍基合金（或钨钴合金） | 1Cr18Ni19Ti +镍基合金（或钨钴合金） | 0Cr18Ni9 +镍基合金（或钨钴合金） | 00Cr19Ni10 +镍基合金（或钨钴合金） | 1Cr18Ni12Mo2Ti +镍基合金（或钨钴合金） | 0Cr17Ni12Mo2 +镍基合金（或钨钴合金） | 00Cr17Ni14Mo2 +镍基合金（或钨钴合金） |
| | 阀座Seat | | 2Cr13+硬质合金 | 1Cr18Ni19Ti +硬质合金 | 0Cr18Ni9 +硬质合金 | 00Cr19Ni10 +硬质合金 | 1Cr18Ni12Mo2Ti +硬质合金 | 0Cr17Ni12Mo2 +硬质合金 | 00Cr17Ni14Mo2 +硬质合金 |
| | 垫片Gasket | | 304+柔性石墨缠绕垫片 304+Flexible graphite gasket | | | 304L+柔性石墨缠绕垫片 304L+Flexible graphite gasket | 316+柔性石墨缠绕垫片 316+Flexible graphite gasket | | 316L+柔性石墨缠绕垫片 316L+Flexible graphite gasket |
| | 填料Packing | | 柔性石墨 Flexible graphite | | | | | | |
| 适用工况 Applicable condition | 适用介质 Applicable medium | | 非腐蚀性介质或弱腐蚀性介质 Non–corrosive medium or Weak corrosive medium | | 硝酸类腐蚀介质 Nitric acid corrosion medium | 强氧化性介质 Strong oxidizing medium | 醋酸类腐蚀性介质 Acetic acid corrosive medium | | 尿素类腐蚀性介质 Urea corrosive medium |
| | 适用温度 Applicable temperature | | ≤425℃ | ≤540℃ | | ≤425℃ | ≤540℃ | | ≤455℃ |
| 涡轮蜗杆传动金属硬密封球阀 worm gear Metal to metal sealed Floating ball valve | | | 在相应的手动型号的Q后插入“3”表示，示例：Q341Y-A1C | | | | | | |
| 气动金属硬密封球阀 pneumatic Metal to metal sealed Floating ball valve | | | 在相应的手动型号的Q后插入“6”表示，示例：Q641Y-A1C | | | | | | |
| 电动金属硬密封球阀 electric Metal to metal sealed Floating ball valve | | | 在相应的手动型号的Q后插入“9”表示，示例：Q941Y-A1C | | | | | | |
| 缩径金属硬密封球阀 reduced bore Metal to metal sealed Floating ball valve | | | 在相应的全通径球阀的型号前加“S”表示，示例：SQ941Y-A1C | | | | | | |

注：本表为常规法兰连接金属硬密封球阀的型号编制、主要零件材料及适用工况，其他要求及其型号见球阀型号编制方法
Note: This table is about the model preparation,main parts material and applicable condition of flange ends matal to metal sealed ball valve.

## 主要尺寸及重量 Main sizes and weights

金属硬密封浮动球阀的主要尺寸及重量参见浮动球阀，金属硬密封浮动球阀的连接法兰尺寸及结构长度尺寸与浮动球阀相同。

Refer to that of floating ball valve for main dimensions and weights of metal to metal sealed floating ball valve. The flange dimensions and face to face dimensions are the same as that of floating ball valve .



## 产品范围 Products range

金属硬密封浮动球阀的产品范围见下表。
Products range of metal to metal sealed floating ball valve as follows.

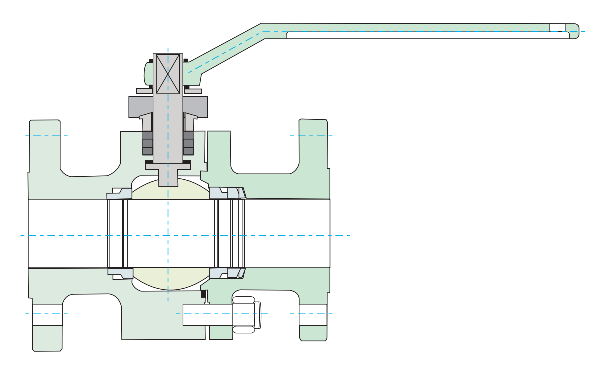
| 公称尺寸 Dimensions | DN | 15 | 20 | 25 | 32 | 40 | 50 | 65 | 80 | 100 | 125 | 150 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | NPS | ½ | ¾ | 1 | 1¼ | 1½ | 2 | 2½ | 3 | 4 | 5 | 6 |
| 公称压力 Press ure stage or nominal pressure | Class150 PN20 | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | △ | △ | △ |
| | Class300 PN50 | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | △ | △ | △ | — | — |
| | Class600 PN110 | ☆ | ☆ | ☆ | ☆ | ☆ | △ | △ | △ | — | — | — |
| | Class900 PN150 | ☆ | ☆ | ☆ | ☆ | △ | △ | △ | — | — | — | — |
| | Class1500 PN260 | ☆ | ☆ | ☆ | ☆ | △ | △ | — | — | — | — | — |
| | PN16 | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | △ | △ | △ |
| | PN25 | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | △ | △ | △ | △ |
| | PN40 | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | △ | △ | △ | △ |
| | PN63 | ☆ | ☆ | ☆ | ☆ | ☆ | △ | △ | △ | △ | — | — |
| | PN100 | ☆ | ☆ | ☆ | ☆ | ☆ | △ | △ | △ | △ | — | — |

注：对于手动球阀，☆表示采用扳手，△表示采用蜗轮蜗杆传动。
Note: For the manual ball valve, ☆ indicates that Lever is suggested , △ indicates that worm gear is suggested.

## 锻钢金属硬密封浮动球阀 Forged steel metal to metal sealed floating ball valve

祺隆公司的金属硬密封浮动球阀一般采用铸钢阀体、根据用户要求，也可采用锻钢阀体，锻钢球阀的法兰连接尺寸、结构长度等主要尺寸与铸钢球阀相同。

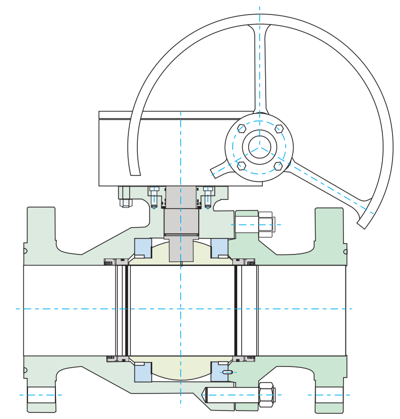
QILONG's metal to metal sealed floating ball valve is in general employing casting steel valve body. If required by customers, forged steel valve body is also available, of which the flange dimensions and face to face dimensions are the same as that of cast steel ball valve.

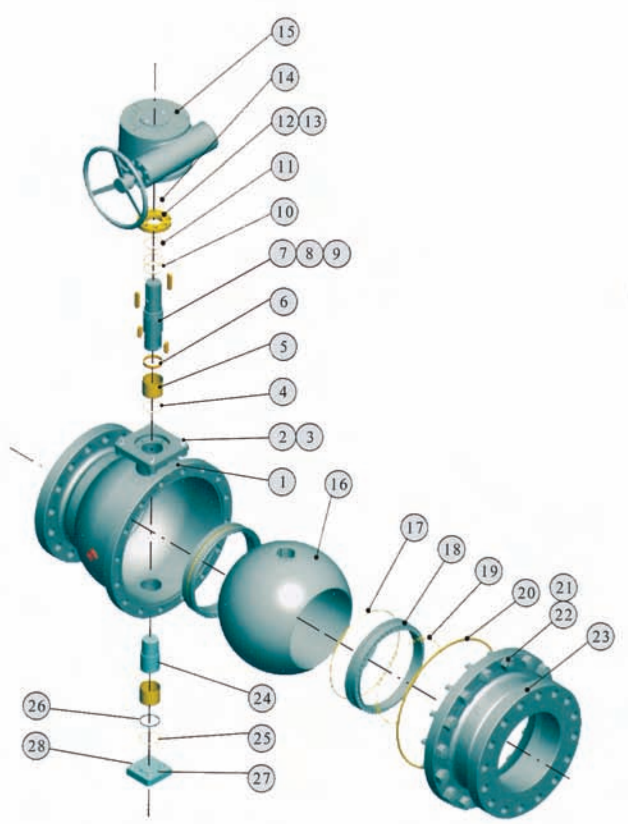


锻钢金属硬密封浮动球阀
Forged steel Metal to metal sealed Floating ball valve

金属硬密封固定球阀
Metal to metal sealed trunnion mounted ball valve
祺隆阀门
QILONG QILONG VALVE

## 金属密封固定球阀
Metal to metal sealed trunnion mounted ball valve





- 1–阀体； 1 –Body
- 2–螺柱； 2 –Stud
- 3–螺母； 3 –Nut
- 4–O型圈； 4 –O ring
- 5–轴套； 5 –Bush
- 6–隔圈； 6 –Washer
- 7–阀杆； 7 –Stem
- 8–键； 8 –Key
- 9–键； 9 –Key
- 10–O型圈； 10–O ring
- 11–垫片； 11–Gasket
- 12–压盖； 12–Gland
- 13–螺钉； 13–Bolt
- 14–O型圈； 14–O ring
- 15–蜗轮蜗杆传动装置； 1 5–Worm gear
- 16–球体； 16–Bal l
- 17–O型圈； 17–O ring
- 18–阀座； 18–Seat
- 19–弹簧； 19–Spring
- 20–垫片； 20–Gasket
- 21–螺柱； 21–Stud
- 22–螺母； 22–Nut
- 23–阀盖； 23–Bonnet
- 24–下轴； 24–Trunnion
- 25–O型圈； 25–O ring
- 26–调整垫； 26–Adjusting cushion
- 27–下端盖； 27–Down end cap
- 28–螺钉； 28–Bolt

金属硬密封固定球阀典型结构及零件组成
Typical drawing of metal to metal sealed trunnion mounted ball valve and parts composition

## 型号材料及主要参数 Material and Main Valve Data

| 配管法兰 Pipe flange | 公称压力 Pressure Rating | 法兰密封面 Flange face | 常规产品型号 Type | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| ASME B16.5 GB/T9112–9124 HG/T 20615 | Class150 | 凸面 RF | Q347Y–A1C | Q347Y–A1P | Q347Y–A1P8 | Q347Y–A1P3 | Q347Y–A1R | Q347Y–A1R8 | Q347Y–A1R3 |
| | Class300 | | Q347Y–A3 | Q347Y–A3P | Q347Y–A3P8 | Q347Y–A3P3 | Q347Y–A3R | Q347Y–A3R8 | Q347Y–A3R3 |
| | Class600 | | Q347Y–A6 | Q347Y–A6P | Q347Y–A6P8 | Q347Y–A6P3 | Q347Y–A6R | Q347Y–A6R8 | Q347Y–A6R3 |
| | Class900 | | Q347Y–A9 | Q347Y–A9P | Q347Y–A9P8 | Q347Y–A9P3 | Q347Y–A9R | Q347Y–A9R8 | Q347Y–A9R3 |
| | Class1500 | | Q347Y–A15 | Q347Y–A15P | Q347Y–A15P8 | Q347Y–A15P3 | Q347Y–A15R | Q347Y–A15R8 | Q347Y–A15R3 |
| | Class2500 | | Q347Y–A25 | Q347Y–A25P | Q347Y–16P8 | Q347Y–A25P3 | Q347Y–A25R | Q347Y–A25R8 | Q347Y–A25R3 |
| GB/T9112~9124 HG/T 20592 JB/T 74~90 | PN16 | 凸面 RF | Q347Y–16C | Q347Y–16P | Q347Y–25P8 | Q347Y–16P3 | Q347Y–16R | Q347Y–16R8 | Q347Y–16R3 |
| | PN25 | | Q347Y–25 | Q347Y–25P | Q347Y–25P8 | Q347Y–25P3 | Q347Y–25R | Q347Y–25R8 | Q347Y–25R3 |
| | PN40 | 凹凸面 MF | Q347Y–40 | Q347Y–40P | Q347Y–40P8 | Q347Y–40P3 | Q347Y–40R | Q347Y–40R8 | Q347Y–40R3 |
| | PN63 | | Q347Y–63 | Q347Y–63P | Q347Y–63P8 | Q347Y–63P3 | Q347Y–63R | Q347Y–63R8 | Q347Y–63R3 |
| | PN100 | | Q347Y–100 | Q347Y–100P | Q347Y–100P8 | Q347Y–100P3 | Q347Y–100R | Q347Y–100R8 | Q347Y–100R3 |
| | PN160 | | Q347Y–160 | Q347Y–160P | Q347Y–160P8 | Q347Y–160P3 | Q347Y–160R | Q347Y–160R8 | Q347Y–160R3 |
| 主要零件材料 Main parts material | 阀体Body | | WCB A105 | ZG1Cr18Ni9Ti 1Cr18Ni9Ti | CF8 304 | CF3 304L | ZG1Cr18Ni12Mo2Ti 1Cr18Ni12Mo2Ti | CF8M 316 | CF3M 316L |
| | 阀杆Stem | | 2Cr13 | 1Cr18Ni19Ti | 0Cr18Ni9 (304) | 00Cr19Ni10 (304L) | 1Cr18Ni12Mo2Ti | 0Cr17Ni12Mo2 ( 316 ) | 00Cr17Ni14Mo2 ( 316L ) |
| | 球体Ball | | 2Cr13+镍基合金（或钨钴合金） | 1Cr18Ni19Ti +镍基合金（或钨钴合金） | 0Cr18Ni9 +镍基合金（或钨钴合金） | 00Cr19Ni10 +镍基合金（或钨钴合金） | 1Cr18Ni12Mo2Ti +镍基合金（或钨钴合金） | 0Cr17Ni12Mo2 +镍基合金（或钨钴合金） | 00Cr17Ni14Mo2 +镍基合金（或钨钴合金） |
| | 阀座Seat | | 2Cr13+硬质合金 | 1Cr18Ni19Ti +硬质合金 | 0Cr18Ni9 +硬质合金 | 00Cr19Ni10 +硬质合金 | 1Cr18Ni12Mo2Ti +硬质合金 | 0Cr17Ni12Mo2 +硬质合金 | 00Cr17Ni14Mo2 +硬质合金 |
| 适用工况 Applicable condition | 适用介质 Applicable medium | | 非腐蚀性介质或弱腐蚀性介质 Non–corrosive medium or Weak corrosive medium | 硝酸类腐蚀性介质 Nitric acid corrosion medium | | 强氧化性介质 Strong oxidizing medium | 醋酸类腐蚀性介质 Acetic acid corrosive medium | | 尿素类腐蚀性介质 Urea corrosive medium |
| | 适用温度 Applicable temperature | | ≤180℃ | | | | | | |
| | | | ≤425℃ | ≤540℃ | | ≤425℃ | ≤540℃ | | ≤455℃ |
| 手动金属硬密封球阀 manual Metal to metal sealed trunnion mounted ball valve | | | 将相应的手动型号的Q后插入“3”表示，示例：Q347Y–A1C | | | | | | |
| 气动金属硬密封球阀 pneumatic Metal to metal sealed trunnion mounted ball valve | | | 将相应的手动型号的Q后插入“6”表示，示例：Q647Y–A1C | | | | | | |
| 电动金属硬密封球阀 electric Metal to metal sealed trunnion mounted ball valve | | | 将相应的手动型号的Q后插入“9”表示，示例：Q947Y–A1C | | | | | | |
| 缩径金属硬密封球阀 reduced bore Metal to metal sealed trunnion mounted ball valve | | | 将相应的全通径球阀的型号前加“S”表示，示例：SQ947Y–A1C | | | | | | |

注：本表为常规法兰连接蜗轮蜗杆硬密封固定球阀的型号编制、主要零件材料及适用工况，其他要求及其型号编制见球阀型号编制方法。金属硬密封固定球阀分为常温型和高温型，当使用温度大于180℃，订货时应注明使用温度。

Note: This table is about the model preparation,main parts material and applicable condition of flange ends matal to metal sealed trunnion mounted ball valve with gear operation. And the matal to metal sealed trunnion mounted ball valves have normal temperature type and high temperature type,please make a notice when order the valve used in 180℃ condition even higher.

## 主要尺寸及重量 Main sizes and weights

金属硬密封固定球阀的主要尺寸及重量参见固定球阀，金属硬密封固定球阀的连接尺寸及结构长度尺寸与固定球阀相同。

Refer to that of trunnion mounted ball valve for main sizes and weights of metal to metal sealed trunnion mounted ball valve,of which the flange dimensions and face to face dimensions are the same as that of trunni on mounted ball valve.

## 产品范围Products range

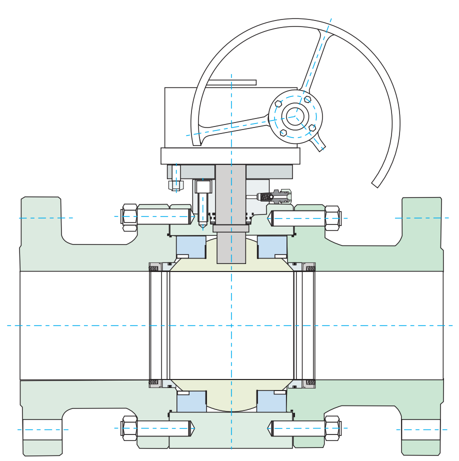
金属硬密封固定球阀的产品范围见下表。
Products range of metal to metal sealed trunnion ball valve is as below table

| 公称尺寸 Dimensions | DN | 100 | 125 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 600 | 700 | 800 | 900 | 1000 | 1200 | 1400 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | NPS | 4 | 5 | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 24 | 28 | 32 | 36 | 40 | 48 | 56 |
| 公称压力 Pressure Rating | Class150 PN20 | △ | △ | △ | △ | △ | △ | △ | △ | △ | △ | △ | △ | △ | △ | △ | △ | △ |
| | Class300 PN50 | △ | △ | △ | △ | △ | △ | △ | △ | △ | △ | △ | △ | △ | △ | △ | △ | △ |
| | Class600 PN110 | △ | △ | △ | △ | △ | △ | △ | △ | △ | △ | △ | △ | △ | △ | △ | △ | △ |
| | Class900 PN150 | △ | △ | △ | △ | △ | △ | △ | △ | △ | △ | △ | △ | △ | △ | △ | △ | △ |
| | Class1500 PN260 | △ | △ | △ | △ | △ | △ | △ | △ | △ | △ | — | — | — | — | — | — | — |
| | Class2500 PN420 | △ | △ | △ | △ | △ | △ | △ | △ | △ | △ | — | — | — | — | — | — | — |
| | PN16 | △ | △ | △ | △ | △ | △ | △ | △ | △ | △ | — | — | — | — | — | — | — |
| | PN25 | △ | △ | △ | △ | △ | △ | △ | △ | △ | △ | — | — | — | — | — | — | — |
| | PN40 | △ | △ | △ | △ | △ | △ | △ | △ | △ | △ | — | — | — | — | — | — | — |
| | PN63 | △ | △ | △ | △ | △ | △ | △ | △ | — | — | — | — | — | — | — | — | — |
| | PN100 | △ | △ | △ | △ | △ | △ | △ | △ | — | — | — | — | — | — | — | — | — |
| | PN160 | △ | △ | △ | △ | △ | — | — | — | — | — | — | — | — | — | — | — | — |

## 锻钢金属硬密封浮动球阀Forged steel metal to metal sealed trunnion ball valve

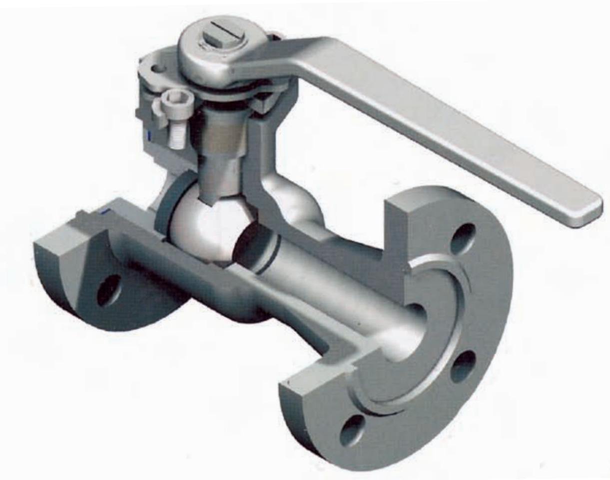
祺隆公司的金属硬密封固定球阀一般采用铸钢阀体、根据用户要求，也可采用锻钢阀体，锻钢金属硬密封固定球阀的法兰连接尺寸及结构长度等主要尺寸与铸钢固定球阀相同。

QILONG company 's metal to metal sealed trunnion mounted ball valve is in general employing casting steel body. As per customers' requirement, forged steel body is also available, of which the flange dimensions and face to face dimensions are the same cast steel trunnion mounted ball valve.



锻钢金属硬密封固定球阀
Forged steel metal to metal sealed trunnion ball valve





## 用 途 Application

整体式球阀适用于Class150~Class300、PN16~40、JIS10K~20K的各种管道上，用于截断或接通管路中的介质，选用不同的材质，可分别适用于水、蒸汽、油品、液化气、天然气、煤气、硝酸、醋酸、氧化性介质、尿素等多种介质。整体式球阀的驱动方式为手动、蜗轮蜗杆传动、气动或电动。整体式球阀采用法兰连接，缩径。

One piece body ball valve is suitable for using on various kinds of pipelines of Class150 to Class300,PN16 to PN40, JI S10K to JIS20K to turn off or on the pipeline medium, of which operation manners are of manual, worm gear, pneumatic or electric actuators, being of flange connection with reduced bore.

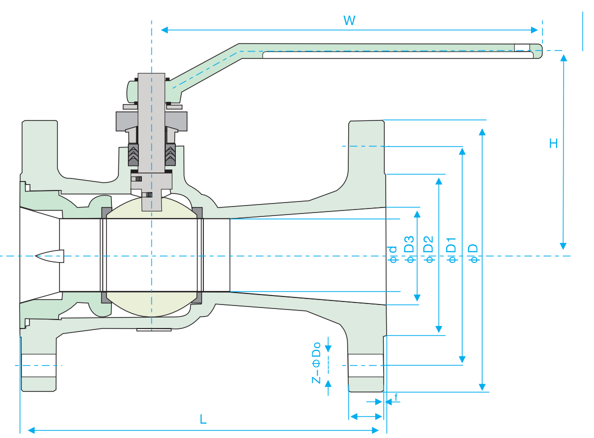
## 型号材料及主要参数 Material and Main Valve Data

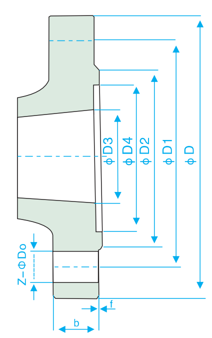
| 配管法兰 Pipe flange | 公称压力 Pressure Rating | 法兰密封面 Flange face | 常规产品型号(法兰连接手动整体式球阀) Conventional product model(flange ends manualone piece body ball valve) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| ASME B16.5 GB/T9112-9124 HG/T 20615 | Class150 | 凸面 RF | QZ41F-A1C | QZ41F-A1P | QZ41F-A1P8 | QZ41F-A1P3 | QZ41F-A1R | QZ41F-A1R8 | QZ41F-A1R3 |
| | Class300 | | QZ41F-A3 | QZ41F-A3P | QZ41F-A3P8 | QZ41F-A3P3 | QZ41F-A3R | QZ41F-A3R8 | QZ41F-A3R3 |
| GB/T9112~9124 HG/T 20592 JB/T 74~90 | PN16 | 凸面 RF | QZ41F-16C | QZ41F-16P | QZ41F-16P8 | QZ41F-16P3 | QZ41F-16R | QZ41F-16R8 | QZ41F-16R3 |
| | PN25 | | QZ41F-25 | QZ41F-25P | QZ41F-25P8 | QZ41F-25P3 | QZ41F-25R | QZ41F-25R8 | QZ41F-25R3 |
| | PN40 | | QZ41F-40 | QZ41F-40P | QZ41F-40P8 | QZ41F-40P3 | QZ41F-40R | QZ41F-40R8 | QZ41F-40R3 |
| JIS B2238 | 10K | 凹凸面 MF | QZ41F-K1C | QZ41F-K1P | QZ41F-K1P8 | QZ41F-K1P3 | QZ41F-K1R | QZ41F-K1R8 | QZ41F-K1R3 |
| | 20K | | QZ41F-K2 | QZ41F-K2P | QZ41F-K2P8 | QZ41F-K2P3 | QZ41F-K2R | QZ41F-K2R8 | QZ41F-K2R3 |
| 主要零件材料 Main parts material | 阀体Body | | WCB A105 | ZG1Cr18Ni9Ti 1Cr18Ni9Ti | CF8 304 | CF3 304L | ZG1Cr18Ni12Mo2Ti 1Cr18Ni12Mo2Ti | CF8M 316 | CF3M 316L |
| | 球体、阀杆 Ball、Stem | | 2Cr13 | 1Cr18Ni19Ti | 0Cr18Ni9 (304) | 00Cr19Ni10 (304L) | 1Cr18Ni12Mo2Ti | 0Cr17Ni12Mo2 (316) | 00Cr17Ni14Mo2 (316L) |
| | 密封面 sealing surface | | 增强聚四氟乙烯、对位苯、钴钨合金、镍基合金及特种硬化材料 RPTFE、PPL、MONE、STELLITEL、SPECIAL ALLOY | | | | | | |
| 适用工况 Applicable condition | 适用介质 Applicable medium | | 水、蒸汽、油品、煤气、液化气、天然气等 Water、Steam Oils、Coal gas、Liquefied gas、gas | 硝酸类腐蚀性介质 Nitric acid corrosion medium | | 强氧化性介质 Strong oxidizing medium | 醋酸类腐蚀性介质 Acetic acid corrosive medium | | 尿素类腐蚀性介质 Urea corrosive medium |
| | 适用温度 Applicable temperature | | ≤180℃（增强聚四氟乙烯）、≤300℃（对位苯）、≤500℃（钴钨合金、镍合金及特种硬化材料） ≤180℃（RPTFE）、≤300℃（PPL）、≤500℃（MONE、STELLITEL、SPECIAL ALLOY） | | | | | | |
| 涡轮蜗杆传动球阀 worm gear ball valve | | | 将相应的手动型号的Q后插入“3”表示，示例：QZ41F-A1C | | | | | | |
| 气动球阀 pneumatic ball valve | | | 将相应的手动型号的Q后插入“6”表示，示例：QZ641F-A1C | | | | | | |
| 电动球阀 electric ball valve | | | 将相应的手动型号的Q后插入“9”表示，示例：QZ941F-A1C | | | | | | |

注：本表为常规法兰连接手动整体式球阀球阀的型号编制、主要零件材料及适用工况，其他要求及其型号编制见球阀型号编制方法。
Note: This table is about the model preparation,main parts material and applicable condition of flange ends matal to metal sealed ball valve.

整体式球阀 One piece body ball valve
祺隆阀门 QILONG VALVE

## 主要尺寸及重量 Main size and weight



PN40法兰

| 公称压力 Pressure Rating | 公称尺寸 Dimensions | | 尺寸Dimensions（mm） | | | | | | | | | | | 重量 Weight（Kg） |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | DN | NPS | L | d | D | D1 | D2 | D3 | b | f | Z–ϕdo | H1 | W | |
| Class150 PN20 | 40 | 1½ | 165 | 28 | 127 | 98.5 | 73 | 38 | 14.5 | 1.6 | 4–15 | 150 | 100 | 6 |
| | 50 | 2 | 178 | 38 | 152 | 120.5 | 92 | 51 | 16 | 1.6 | 4–19 | 200 | 132 | 8 |
| | 65 | 2½ | 190 | 50 | 178 | 139.5 | 105 | 64 | 17.5 | 1.6 | 4–19 | 250 | 142 | 12 |
| | 80 | 3 | 203 | 57 | 190 | 152.5 | 127 | 76 | 19.5 | 1.6 | 4–19 | 300 | 163 | 15 |
| | 100 | 4 | 229 | 76 | 229 | 190.5 | 157 | 102 | 24 | 1.6 | 8–19 | 350 | 178 | 29 |
| | 150 | 6 | 394 | 102 | 279 | 241.5 | 216 | 152 | 2535 | 1.6 | 8–22 | 500 | 230 | 54 |
| Class300 PN50 | 40 | 1½ | 190 | 28 | 156 | 114.5 | 73 | 38 | 21 | 1.6 | 4–22 | 150 | 100 | 9 |
| | 50 | 2 | 216 | 38 | 165 | 127 | 92 | 51 | 22.5 | 1.6 | 8–19 | 200 | 132 | 11 |
| | 65 | 2½ | 241 | 50 | 190 | 149 | 105 | 64 | 25.5 | 1.6 | 8–22 | 250 | 142 | 15 |
| | 80 | 3 | 283 | 57 | 210 | 168.5 | 127 | 76 | 29 | 1.6 | 8–22 | 300 | 164 | 22 |
| | 100 | 4 | 305 | 76 | 254 | 200 | 157 | 102 | 32 | 1.6 | 8–22 | 350 | 183 | 40 |
| | 150 | 6 | 403 | 102 | 318 | 270 | 216 | 152 | 37 | 1.6 | 12–22 | 500 | 230 | 81 |

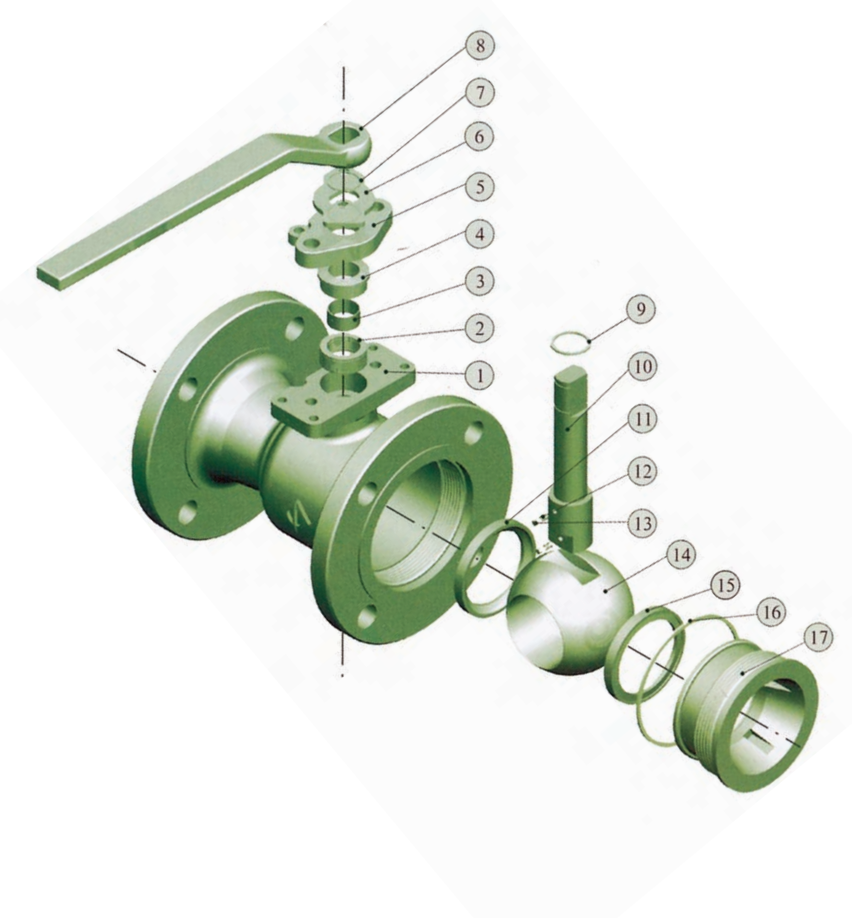
注：本表法兰尺寸按ASME B16.5标准。根据用户要求，法兰尺寸也可按GB/他9112~9124、HG/T 20615、SH 3406设计制造
This table of flange size is as per standard ASME B16.5,it also can be designed and produced as per customer's requirement or GB/G9112–9124,HG/T20615,SH406.

| 公称压力 Pressure Rating | 公称尺寸 Dimensions DN | 尺寸Dimensions（mm） | | | | | | | | | | | 重量 Weight（Kg） |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | d | D | D1 | D2 | D3 | b | f | Z–ϕdo | H1 | W | |
| JIS 10K | 40 | 165 | 28 | 127 | 98.5 | 73 | 38 | 14.5 | 1.6 | 4–15 | 150 | 100 | 6 |
| | 50 | 178 | 38 | 152 | 120.5 | 92 | 51 | 16 | 1.6 | 4–19 | 200 | 132 | 8 |
| | 65 | 190 | 50 | 178 | 139.5 | 105 | 64 | 17.5 | 1.6 | 4–19 | 250 | 142 | 12 |
| | 80 | 203 | 57 | 190 | 152.5 | 127 | 76 | 19.5 | 1.6 | 4–19 | 300 | 163 | 15 |
| | 100 | 229 | 76 | 229 | 190.5 | 157 | 102 | 24 | 1.6 | 8–19 | 350 | 178 | 29 |
| | 150 | 394 | 102 | 279 | 241.5 | 216 | 152 | 2535 | 1.6 | 8–22 | 500 | 230 | 54 |
| JIS 20K | 40 | 190 | 28 | 156 | 114.5 | 73 | 38 | 21 | 1.6 | 4–22 | 150 | 100 | 9 |
| | 50 | 216 | 38 | 165 | 127 | 92 | 51 | 22.5 | 1.6 | 8–19 | 200 | 132 | 11 |
| | 65 | 241 | 50 | 190 | 149 | 105 | 64 | 25.5 | 1.6 | 8–22 | 250 | 142 | 15 |
| | 80 | 283 | 57 | 210 | 168.5 | 127 | 76 | 29 | 1.6 | 8–22 | 300 | 164 | 22 |
| | 100 | 305 | 76 | 254 | 200 | 157 | 102 | 32 | 1.6 | 8–22 | 350 | 183 | 40 |
| | 150 | 403 | 102 | 318 | 270 | 216 | 152 | 37 | 1.6 | 12–22 | 500 | 230 | 81 |



| 公称压力 Pressure Rating | 公称尺寸 Dimensions | 尺寸Dimensions（mm） | | | | | | | | | | | | 重量 Weight（Kg） |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | d | D | D1 | D2 | D3 | D4 | b | f | Z–ϕdo | H1 | W | |
| PN16 | 40 | 165 | 28 | 150 | 110 | 88 | 38 | – | 18 | 3 | 4–18 | 150 | 100 | 7 |
| | 50 | 178 | 38 | 165 | 125 | 102 | 51 | – | 18 | 3 | 4–18 | 200 | 132 | 9 |
| | 65 | 190 | 50 | 185 | 145 | 122 | 64 | – | 18 | 3 | 8–18 | 250 | 142 | 12 |
| | 80 | 203 | 57 | 200 | 160 | 138 | 76 | – | 20 | 3 | 8–18 | 300 | 163 | 16 |
| | 100 | 229 | 76 | 220 | 180 | 158 | 102 | – | 20 | 3 | 8–18 | 350 | 178 | 28 |
| | 150 | 394 | 102 | 285 | 240 | 212 | 152 | – | 22 | 3 | 8–22 | 500 | 230 | 53 |
| PN25 | 40 | 165 | 28 | 150 | 110 | 88 | 38 | – | 18 | 3 | 4–18 | 150 | 100 | 7 |
| | 50 | 178 | 38 | 165 | 125 | 102 | 51 | – | 20 | 3 | 4–18 | 200 | 132 | 10 |
| | 65 | 190 | 50 | 185 | 145 | 122 | 64 | – | 22 | 3 | 8–18 | 250 | 142 | 13 |
| | 80 | 203 | 57 | 200 | 160 | 138 | 76 | – | 24 | 3 | 8–18 | 300 | 163 | 17 |
| | 100 | 229 | 76 | 235 | 190 | 158 | 102 | – | 24 | 3 | 8–22 | 350 | 178 | 30 |
| | 150 | 394 | 102 | 300 | 250 | 212 | 152 | – | 28 | 3 | 8–26 | 500 | 230 | 56 |
| PN40 | 40 | 190 | 28 | 150 | 110 | 88 | 38 | 76 | 18 | 3 | 4–18 | 150 | 100 | 7 |
| | 50 | 216 | 38 | 165 | 125 | 102 | 51 | 88 | 20 | 3 | 4–18 | 200 | 132 | 10 |
| | 65 | 241 | 50 | 185 | 145 | 122 | 64 | 110 | 22 | 3 | 8–18 | 250 | 142 | 13 |
| | 80 | 283 | 57 | 200 | 160 | 138 | 76 | 121 | 24 | 3 | 8–18 | 300 | 163 | 17 |
| | 100 | 305 | 76 | 235 | 190 | 162 | 102 | 150 | 24 | 3 | 8–22 | 350 | 178 | 30 |
| | 150 | 403 | 102 | 300 | 250 | 218 | 152 | 204 | 28 | 3 | 8–26 | 500 | 230 | 56 |

注：本表法兰尺寸按GB/9112~9124标准。根据用户要求，法兰尺寸也可按HG/T 20592及JB/T 74~90标准设计制造
This table of flange size is as per standard GB/9112–9124,it also can be designed and produced as per customer's requirement or HG/T20592,JB/T74–90.




| | |
|---|---|
| 1–阀体； | 1–Body |
| 2–螺柱； | 2–Packing |
| 3–衬套； | 3–Bush |
| 4–填料压套； | 4–Gland |
| 5–填料压板； | 5–Gland flange |
| 6–定位片； | 6–Stop collar |
| 7–挡圈； | 7–Circlip |
| 8–扳手； | 8–Lever |
| 9–上密封垫； | 9–Thrust washer |
| 10–阀杆； | 10–Stem |
| 11–密封圈； | 11–Seat |
| 12–弹簧； | 12–Spring |
| 13–钢球； | 13–St eel ball |
| 14–球体； | 14–Ball |
| 15–密封圈； | 15–Seat |
| 16–垫片； | 16–Gasket |
| 17–端盖； | 17–Body insert |

法兰连接气动V型球阀
Flange ends V type ball valve with pneumatic actuator

对夹连接V型球阀
Wafer ends V type ball valve

## 用 途 Application

V型球阀适用于 Class150~Class300、PN16~40的各种管道上，V型球阀根据用户要求的不同，有两种不同的途径，一种是作为截断阀，用于截断或接通管路中的介质，一种是作为调节阀，用于调节管路中介质的流量等参数。截断V型球阀的驱动方式为手动蜗轮蜗杆传动、气动或电动，调节型V型球阀的驱动方式为气动和电动。

通过选用不同的材质吗，V型球阀可分别适用于水、蒸汽、油品、硝酸、醋酸、氧化性介质、尿素等多种介质。

金属硬密封V型球阀的使用温度一般为≤200℃，特殊订货，金属硬密封V型球阀的使用温度为≤425℃（碳钢阀体）或≤540℃（不锈钢、铬钼钢、铬钼方钢阀体），软密封V型球阀的使用温度一般为≤180℃(增强聚四氟乙烯阀座)。

V型球阀的连接方式为对夹连接或法兰连接。

V type ball valve is suitable for using on various kinds of pipelines of Class150~Class300 , and PN16 ~ PN40 . There aretwo kinds of applications for V type ball valve according to customer s' different requirement. One is used for cutting off or switching on the pipe line medium. The other is used as control valve for regulating the medium flow capacity in pipelines.Operation manners for cutting off type V type ball valve include manual, worm gear, pneumatic or electric actuator s, where as Operation manners for cutting off type V type ball valve include manual, worm gear, pneumatic or electric actuator s, where as for regulating type V type ball valve, operation manners are of pneumatic and electric actuators.for regulating type V type ball valve, operation manners are of pneumatic and electric actuators.

Of the application for metal to metal sealed V type ball valve ,the tempera ture is in general ≤200℃. As specially ordering,the application temperature for metal to metal sealed V type ball valve can be ≤425℃ ( carbon steel valve body ) or ≤540℃(valve body of stainless steel, CrMo steel, and CrMo V steel ).For Soft seated V type ball valve, the application temperaturels in general≤180℃ (reinforced PTFE seat ) .

Connection type for V type ball valve is of wafer flanged connection .

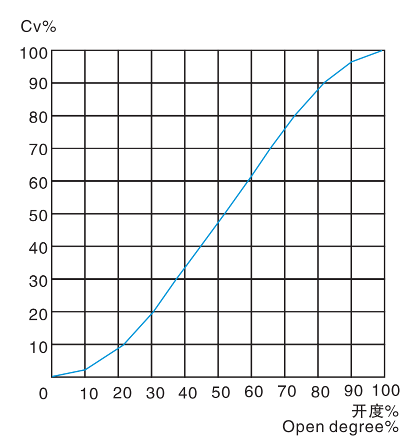
## 特 点 Features

1、V型球阀采用蝶形弹簧或圆柱弹簧加载的可动阀座结构，阀座与V型球阀不会产生卡住或脱离等问题，密封可靠，使用寿命厂。
2、V型切口的球体与金属阀座之间具有剪切作用，特别适用于含纤维、固体颗粒、料浆等介质。
3、金属硬密封的球体与阀座密封面根据用户使用工况的不同。可分别采用喷焊镍基合金(硬度≥HRC60)、超音速喷涂钨钴合金(最高硬度≥HRC70)及特种硬化材料等多种先进工艺，适用于各种苛刻工况。
4、全开时发明流通能力大，压力损失小，且介质不会沉积在阀体中腔。
5、结构紧凑、通用性强。截断型V型球阀密封性能好，可取代闸阀、截止阀及普通球阀等多种阀门。调节型V型球阀可调范围大，调节精度高。

1. For V type ball valve, the bevelling spring or pillar spring loaded movable seat design has been employed, which is reliable in seal and of long service life as there in no such problems as clenching or disjointing.
2. It features the function of slipping between the ball with cutting edge and metal seat, which is particularly suitable for the medium containing fibre, solid particles, thick fluid, and so on.
3. As per different working conditions of customers, several kinds of advanced techniques have been employed separately for the ball and seats urface of metal to metal se aled ball valve, such as nickel base alloy by spraying welding (for hardness ≥HRC60) , stellite alloy by ultra–sonic spraying coating (for max.hardness ≥HRC70) , and specially ha rdened material etc., Which are suitable for many kinds of critical working conditions .
4. When the valve is fully open, flow capacity is big, pressure loss is small, and the medium would not deposit in the body Cavity.
5. Being impact in structure and extensive in common use, the cutting off V type ball valve features perfect sealing property and may replace gate valve, globe valve and general ball valve . For regulating V type ball valve, its regulating scope available is wide, and its regulating accuracy is high.

## 调节型V型球阀的相对开度与流量系数Cv的关系 Relation between corresponding open and flow coefficient Cv

| 公称尺寸 Size | | 相对开度Relative open degree | | | | | |
|---|---|---|---|---|---|---|---|
| | | 10% | 30% | 50% | 70% | 90% | 100% |
| DN | NPS | 流量系数Cv Fl ow volume coeffi cient Cv | | | | | |
| 25 | 1 | 0.2 | 2 | 5.2 | 10 | 19 | 28 |
| 40 | 1½ | 1.2 | 5.7 | 15 | 30 | 54 | 81 |
| 50 | 2 | 1.9 | 8.8 | 23 | 46 | 83 | 125 |
| 65 | 2½ | 3.2 | 14 | 39 | 76 | 138 | 208 |
| 80 | 3 | 4.4 | 20 | 54 | 106 | 192 | 290 |
| 100 | 4 | 7 | 33 | 86 | 170 | 308 | 465 |
| 125 | 5 | 10 | 46 | 122 | 240 | 436 | 658 |
| 150 | 6 | 13 | 60 | 157 | 310 | 564 | 850 |
| 200 | 8 | 21 | 97 | 255 | 503 | 915 | 1380 |
| 250 | 10 | 33 | 152 | 401 | 792 | 1440 | 2170 |
| 300 | 12 | 46 | 216 | 572 | 1130 | 2050 | 3090 |





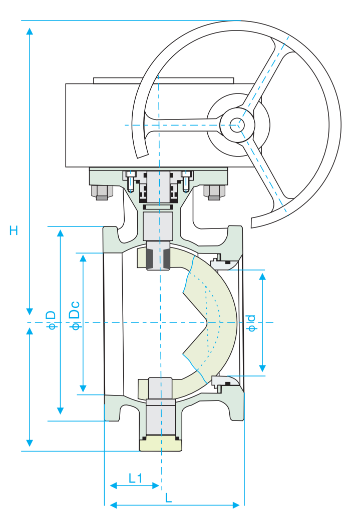

## 型号、材料及主要参数 Material and Main Valve Data

| 作用分类 | 配管法兰 Pipe flange | 公称压力 Pressure Rating | 连接形式 Connection type | 金属硬密封气动V型球阀产品型号 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| V Type ball valve for truncation 截断型V型球阀 | ASME B16.5 GB/T9112–9124 HG/T 20615 | Class150 | 对夹连接 The clip connection | QV677Y–A1C | QV677Y–A1P | QV677Y–A1P8 | QV677Y–A1P3 | QV677Y–A1R | QV677Y–A1R8 | QV677Y–A1R3 |
| | | Class300 | | QV677Y–A3 | QV677Y–A3P | QV677Y–A3P8 | QV677Y–A3P3 | QV677Y–A3R | QV677Y–A3R8 | QV677Y–A3R3 |
| | | Class150 | 法兰连接 Flange connection | QV647Y–A1C | QV647Y–A1P | QV647Y–A1P8 | QV647Y–A1P3 | QV647Y–A1R | QV647Y–A1R8 | QV647Y–A1R3 |
| | | Class300 | | QV647Y–A3 | QV647Y–A3P | QV647Y–A3P8 | QV647Y–A3P3 | QV647Y–A3R | QV647Y–A3R8 | QV647Y–A3R3 |
| | GB/T9112~9124 HG/T 20592 JB/T 74~90 | PN16 | 对夹连接 The clip connection | QV677Y–16C | QV677Y–16P | QV677Y–16P8 | QV677Y–16P3 | QV677Y–16R | QV677Y–16R8 | QV677Y–16R3 |
| | | PN25 | | QV677Y–25 | QV677Y–25P | QV677Y–25P8 | QV677Y–25P3 | QV677Y–25R | QV677Y–25R8 | QV677Y–25R3 |
| | | PN40 | | QV677Y–40 | QV677Y–40P | QV677Y–40P8 | QV677Y–40P3 | QV677Y–40R | QV677Y–40R8 | QV677Y–40R3 |
| | | PN16 | 法兰连接 Flange connection | QV647Y–16C | QV647Y–16P | QV647Y–16P8 | QV647Y–16P3 | QV647Y–16R | QV647Y–16R8 | QV647Y–16R3 |
| | | PN25 | | QV647Y–25 | QV647Y–25P | QV647Y–25P8 | QV647Y–25P3 | QV647Y–25R | QV647Y–25R8 | QV647Y–25R3 |
| | | PN40 | | QV647Y–40 | QV647Y–40P | QV647Y–40P8 | QV647Y–40P3 | QV647Y–40R | QV647Y–40R8 | QV647Y–40R3 |
| V Type ball valve for regulation 调节型V型球阀 | ASME B16.5 GB/T9112–9124 HG/T 20615 | Class150 | 对夹连接 The clip connection | TQV677Y–A1C | TQV677Y–A1P | TQV677Y–A1P8 | TQV677Y–A1P3 | TQV677Y–A1R | TQV677Y–A1R8 | TQV677Y–A1R3 |
| | | Class300 | | TQV677Y–A3 | TQV677Y–A3P | TQV677Y–A3P8 | TQV677Y–A3P3 | TQV677Y–A3R | TQV677Y–A3R8 | TQV677Y–A3R3 |
| | | Class150 | 法兰连接 Flange connection | TQV647Y–A1C | TQV647Y–A1P | TQV647Y–A1P8 | TQV647Y–A1P3 | TQV647Y–A1R | TQV647Y–A1R8 | TQV647Y–A1R3 |
| | | Class300 | | TQV647Y–A3 | TQV647Y–A3P | TQV647Y–A3P8 | TQV647Y–A3P3 | TQV647Y–A3R | TQV647Y–A3R8 | TQV647Y–A3R3 |
| | GB/T9112~9124 HG/T 20592 JB/T 74~90 | PN16 | 对夹连接 The clip connection | TQV677Y–16C | TQV677Y–16P | TQV677Y–16P8 | TQV677Y–16P3 | TQV677Y–16R | TQV677Y–16R8 | TQV677Y–16R3 |
| | | PN25 | | TQV677Y–25 | TQV677Y–25P | TQV677Y–25P8 | TQV677Y–25P3 | TQV677Y–25R | TQV677Y–25R8 | TQV677Y–25R3 |
| | | PN40 | | TQV677Y–40 | TQV677Y–40P | TQV677Y–40P8 | TQV677Y–40P3 | TQV677Y–40R | TQV677Y–40R8 | TQV677Y–40R3 |
| | | PN16 | 法兰连接 Flange connection | TQV647Y–16C | TQV647Y–16P | TQV647Y–16P8 | TQV647Y–16P3 | TQV647Y–16R | TQV647Y–16R8 | TQV647Y–16R3 |
| | | PN25 | | TQV647Y–25 | TQV647Y–25P | TQV647Y–25P8 | TQV647Y–25P3 | TQV647Y–25R | TQV647Y–25R8 | TQV647Y–25R3 |
| | | PN40 | | TQV647Y–40 | TQV647Y–40P | TQV647Y–40P8 | TQV647Y–40P3 | TQV647Y–40R | TQV647Y–40R8 | TQV647Y–40R3 |
| 主要零件材料 Main parts material | 阀体Body | | | WCB | ZG1Cr18Ni9Ti | CF8 | CF3 | ZG1Cr18Ni12Mo2Ti | CF8M | CF3M |
| | 阀杆Stem | | | 2Cr13 | 1Cr18Ni19Ti | 0Cr18Ni9 (304) | 00Cr19Ni10 (304L) | 1Cr18Ni12Mo2Ti | 0Cr17Ni12Mo2 ( 316 ) | 00Cr17Ni14Mo2 ( 316L ) |
| | 球体Ball | | | 镍基合金、钨钴合金、特种硬化材料 MONE、STELLITEL、SPECIAL ALLOY | | | | | | |
| 适用工况 Applicable condition | 适用介质 Applicable medium | | | 水、蒸汽、油品、煤气、液化气、天然气等 Water、Steam Oils、Coal gas、Liquefied gas、gas | | 硝酸类腐蚀性介质 Nitric acid corrosion medium | 强氧化性介质 Strong oxidizing medium | 醋酸类腐蚀性介质 Acetic acid corrosive medium | | 尿素类腐蚀性介质 Urea corrosive medium |
| | 适用温度 Applicable temperature | | | ≤200℃（常见产品）；特殊订货≤425℃（碳钢）或≤540℃（不锈钢、铬钼钢、铬钼钒钢） | | | | | | |
| 涡轮蜗杆传动球阀 worm gear ball valve | | | | 将上述型号中传动方式代号“6”改为“3”，示例：QV377Y–16C | | | | | | |
| 电动球阀 electric ball valve | | | | 将上述型号中传动方式代号“6”改为“9”，示例：QV977Y–16C | | | | | | |

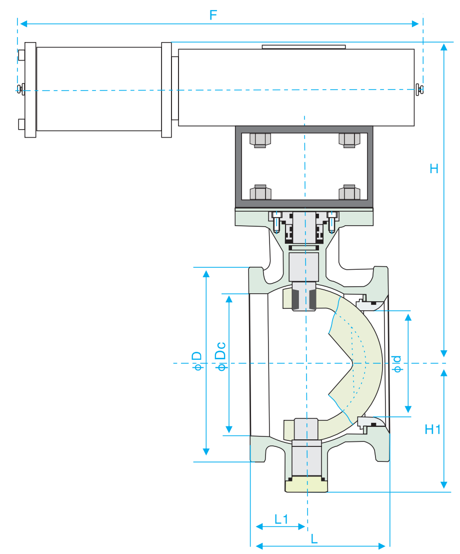
注：本表为气动V型球阀的型号编制、主要零件材料及适用工况，其他要求及其型号见球阀型号编制方法
Note: This table is about the model preparation,main parts material and applicable condition of v type ball valve with pneumatic operation.

V型球阀
V type ball valve
祺隆阀门 QILONG QILONG VALVE

## 对夹连接V型球阀的主要尺寸及重量Main sizes and weights of wafer V type ball valve




蜗轮蜗杆传动
worm gear



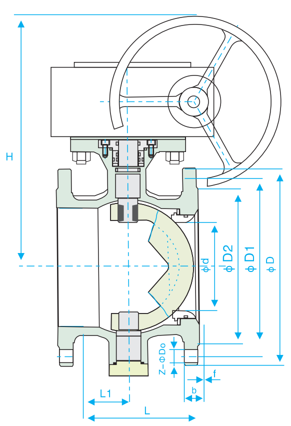

气动
Pneumatic

| 公称压力 Pressure Rating | 公称尺寸 Dimensions DN | NPS | L | L1 | d | D | DC | H1 | F | H 蜗轮 Gear box | H 气动 Pneumatic actuator | 重量 Weight (Kg) 蜗轮 Gear box | 重量 Weight (Kg) 气动 Pneumatic actuator |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Class150 PN20 | 25 | 1 | 50 | 25 | 19 | 65 | 38 | 57 | 400 | 200 | 222 | 8 | 18 |
| | 40 | 1½ | 60 | 25 | 32 | 84 | 49 | 63 | 400 | 205 | 228 | 10 | 20 |
| | 50 | 2 | 75 | 32 | 38 | 103 | 60 | 92 | 400 | 225 | 248 | 14 | 23 |
| | 65 | 2½ | 85 | 38 | 51 | 122 | 75 | 100 | 400 | 235 | 255 | 18 | 27 |
| | 80 | 3 | 100 | 45 | 64 | 135 | 89 | 108 | 400 | 260 | 270 | 22 | 30 |
| | 100 | 4 | 115 | 50 | 76 | 173 | 113 | 117 | 400 | 270 | 278 | 30 | 38 |
| | 125 | 5 | 135 | 55 | 102 | 195 | 140 | 140 | 455 | 320 | 335 | 39 | 46 |
| | 150 | 6 | 160 | 65 | 127 | 220 | 164 | 177 | 455 | 340 | 358 | 52 | 59 |
| | 200 | 8 | 200 | 80 | 152 | 277 | 205 | 200 | 700 | 390 | 405 | 68 | 80 |
| | 250 | 10 | 240 | 92 | 203 | 337 | 259 | 252 | 700 | 420 | 449 | 95 | 120 |
| Class300 PN50 | 25 | 1 | 50 | 25 | 19 | 72 | 38 | 57 | 400 | 200 | 222 | 9 | 190 |
| | 40 | 1½ | 60 | 25 | 32 | 94 | 49 | 63 | 400 | 205 | 228 | 12 | 22 |
| | 50 | 2 | 75 | 32 | 38 | 110 | 60 | 92 | 400 | 225 | 248 | 16 | 25 |
| | 65 | 2½ | 85 | 38 | 51 | 128 | 75 | 100 | 400 | 235 | 255 | 20 | 29 |
| | 80 | 3 | 100 | 45 | 64 | 147 | 89 | 108 | 400 | 260 | 270 | 25 | 33 |
| | 100 | 4 | 115 | 50 | 76 | 479 | 113 | 117 | 400 | 270 | 278 | 30 | 38 |
| | 125 | 5 | 135 | 55 | 102 | 214 | 140 | 140 | 455 | 320 | 335 | 45 | 52 |
| | 150 | 6 | 160 | 65 | 127 | 249 | 164 | 177 | 455 | 340 | 358 | 60 | 67 |
| | 200 | 8 | 200 | 80 | 152 | 305 | 205 | 200 | 700 | 390 | 405 | 80 | 92 |
| | 250 | 10 | 240 | 92 | 203 | 359 | 259 | 252 | 700 | 420 | 449 | 110 | 135 |

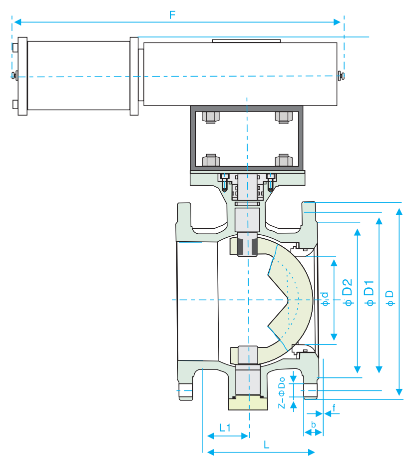


| 公称压力 Pressure Rating | 公称尺寸 Dimensions DN | L | L1 | d | D | DC | H1 | F | H 蜗轮 Gear box | H 气动 Pneumatic actuator | 重量 Weight (Kg) 蜗轮 Gear box | 重量 Weight (Kg) 气动 Pneumatic actuator |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PN16 | 25 | 50 | 25 | 20 | 72 | 38 | 57 | 400 | 200 | 222 | 9 | 19 |
| | 40 | 60 | 25 | 32 | 93 | 49 | 63 | 400 | 205 | 228 | 11 | 21 |
| | 50 | 75 | 32 | 38 | 108 | 60 | 92 | 400 | 225 | 248 | 15 | 24 |
| | 65 | 85 | 38 | 50 | 128 | 75 | 100 | 400 | 235 | 255 | 19 | 28 |
| | 80 | 100 | 45 | 64 | 142 | 89 | 108 | 400 | 260 | 270 | 23 | 31 |
| | 100 | 115 | 50 | 76 | 162 | 113 | 117 | 400 | 270 | 278 | 29 | 37 |
| | 125 | 135 | 55 | 100 | 192 | 140 | 140 | 455 | 320 | 335 | 39 | 46 |
| | 150 | 160 | 65 | 125 | 218 | 164 | 177 | 455 | 340 | 358 | 52 | 59 |
| | 200 | 200 | 80 | 150 | 273 | 205 | 200 | 700 | 390 | 405 | 67 | 79 |
| | 250 | 240 | 92 | 200 | 329 | 259 | 252 | 700 | 420 | 449 | 93 | 118 |
| PN25 | 25 | 50 | 25 | 20 | 72 | 38 | 57 | 400 | 200 | 222 | 9 | 19 |
| | 40 | 60 | 25 | 32 | 93 | 49 | 63 | 400 | 205 | 228 | 11 | 21 |
| | 50 | 75 | 32 | 38 | 108 | 60 | 92 | 400 | 225 | 248 | 15 | 24 |
| | 65 | 85 | 38 | 50 | 128 | 75 | 100 | 400 | 235 | 255 | 19 | 28 |
| | 80 | 100 | 45 | 64 | 142 | 89 | 108 | 400 | 260 | 270 | 23 | 31 |
| | 100 | 115 | 50 | 76 | 168 | 113 | 117 | 400 | 270 | 278 | 30 | 39 |
| | 125 | 135 | 55 | 100 | 194 | 140 | 140 | 455 | 320 | 335 | 40 | 49 |
| | 150 | 160 | 65 | 125 | 224 | 164 | 177 | 455 | 340 | 358 | 54 | 64 |
| | 200 | 200 | 80 | 150 | 284 | 205 | 200 | 700 | 390 | 405 | 70 | 85 |
| | 250 | 240 | 92 | 200 | 341 | 259 | 252 | 700 | 420 | 449 | 98 | 124 |
| PN40 | 25 | 50 | 25 | 20 | 72 | 38 | 57 | 200 | 200 | 222 | 11 | 22 |
| | 40 | 60 | 25 | 32 | 93 | 49 | 63 | 205 | 205 | 228 | 13 | 24 |
| | 50 | 75 | 32 | 38 | 108 | 60 | 92 | 225 | 225 | 248 | 18 | 29 |
| | 65 | 85 | 38 | 50 | 128 | 75 | 100 | 235 | 235 | 255 | 23 | 36 |
| | 80 | 100 | 45 | 64 | 142 | 89 | 108 | 260 | 260 | 270 | 27 | 38 |
| | 100 | 115 | 50 | 76 | 168 | 113 | 117 | 270 | 270 | 278 | 35 | 48 |
| | 125 | 135 | 55 | 100 | 194 | 140 | 140 | 320 | 320 | 335 | 47 | 62 |
| | 150 | 160 | 65 | 125 | 224 | 164 | 177 | 340 | 340 | 358 | 60 | 78 |
| | 200 | 200 | 80 | 150 | 291 | 205 | 200 | 390 | 390 | 405 | 83 | 98 |
| | 250 | 240 | 92 | 200 | 353 | 259 | 252 | 420 | 420 | 449 | 118 | 154 |

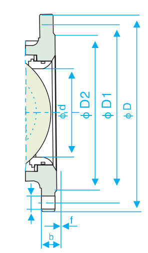
## 法兰连接V型球阀的主要尺寸及重量 Main sizes and weights of flanged V-type ball valve



蜗轮蜗杆传动
worm gear



气动
Pneumatic



PN40法兰
PN40 flanged

| 公称压力 Pressure Rating | 公称尺寸 Dimensions | | 尺寸Dimensions ( mm ) | | | | | | | | | | | | | | 重量 Weight ( Kg ) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | DN | NPS | L | L1 | d | D | D1 | D2 | DC | b | f | Z-ϕdo | H1 | F | H 蜗轮 Gear box | H 气动 Pneumatic actuator | 蜗轮 Gear box | 气动 Pneumatic actuator |
| Class150 PN20 | 25 | 1 | 102 | 51 | 19 | 108 | 79.5 | 51 | 38 | 11.5 | 1.6 | 4-15 | 57 | 400 | 200 | 222 | 11 | 21 |
| | 40 | $1\frac{1}{2}$ | 114 | 57 | 32 | 127 | 98.5 | 73 | 49 | 14.5 | 1.6 | 4-15 | 63 | 400 | 205 | 228 | 14 | 24 |
| | 50 | 2 | 124 | 62 | 38 | 152 | 120.5 | 92 | 60 | 16 | 1.6 | 4-19 | 92 | 400 | 225 | 248 | 20 | 29 |
| | 65 | $2\frac{1}{2}$ | 145 | 72.5 | 51 | 178 | 139.5 | 105 | 75 | 17.5 | 1.6 | 4-19 | 100 | 400 | 235 | 255 | 24 | 33 |
| | 80 | 3 | 165 | 82.8 | 64 | 190 | 152.5 | 127 | 89 | 19.5 | 1.6 | 4-19 | 108 | 400 | 260 | 270 | 33 | 41 |
| | 100 | 4 | 194 | 97 | 76 | 229 | 190.5 | 157 | 113 | 24 | 1.6 | 8-19 | 117 | 400 | 270 | 278 | 49 | 57 |
| | 125 | 5 | 210 | 105 | 102 | 254 | 216 | 186 | 140 | 24 | 1.6 | 8-22 | 140 | 455 | 320 | 335 | 59 | 66 |
| | 150 | 6 | 229 | 114.5 | 127 | 279 | 2471.5 | 216 | 164 | 25.5 | 1.6 | 8-22 | 177 | 455 | 340 | 358 | 80 | 87 |
| | 200 | 8 | 243 | 121.5 | 152 | 343 | 298.5 | 270 | 205 | 29 | 1.6 | 8-22 | 200 | 700 | 390 | 405 | 108 | 120 |
| | 250 | 10 | 297 | 148.5 | 203 | 406 | 362 | 324 | 259 | 31 | 1.6 | 12-25 | 252 | 700 | 420 | 449 | 145 | 170 |
| | 300 | 12 | 338 | 169 | 254 | 483 | 432 | 381 | +300 | 32 | 1.6 | 12-25 | 270 | 700 | 510 | 550 | 190 | 235 |
| Class300 PN50 | 25 | 1 | 102 | 51 | 19 | 124 | 89 | 51 | 38 | 17.5 | 1.6 | 4-19 | 57 | 400 | 200 | 222 | 13 | 23 |
| | 40 | $1\frac{1}{2}$ | 114 | 57 | 32 | 156 | 114.5 | 73 | 49 | 21 | 1.6 | 4-22 | 63 | 400 | 205 | 228 | 16 | 26 |
| | 50 | 2 | 124 | 62 | 38 | 165 | 127 | 92 | 60 | 22.5 | 1.6 | 8-19 | 92 | 400 | 225 | 248 | 22 | 31 |
| | 65 | $2\frac{1}{2}$ | 145 | 72.5 | 51 | 190 | 149 | 105 | 75 | 25.5 | 1.6 | 8-22 | 100 | 400 | 235 | 255 | 26 | 35 |
| | 80 | 3 | 165 | 82.8 | 64 | 210 | 168.5 | 127 | 89 | 29 | 1.6 | 8-22 | 108 | 400 | 260 | 270 | 37 | 45 |
| | 100 | 4 | 194 | 97 | 76 | 254 | 200 | 157 | 113 | 32 | 1.6 | 8-22 | 117 | 400 | 270 | 278 | 55 | 63 |
| | 125 | 5 | 210 | 105 | 102 | 279 | 235 | 186 | 140 | 35 | 1.6 | 8-22 | 140 | 455 | 320 | 335 | 65 | 72 |
| | 150 | 6 | 229 | 114.5 | 127 | 318 | 270 | 216 | 164 | 37 | 1.6 | 12-22 | 177 | 455 | 340 | 358 | 95 | 102 |
| | 200 | 8 | 243 | 121.5 | 152 | 381 | 330 | 270 | 205 | 41.5 | 1.6 | 12-25 | 200 | 700 | 390 | 405 | 138 | 150 |
| | 250 | 10 | 297 | 148.5 | 203 | 445 | 387.5 | 324 | 259 | 48 | 1.6 | 16-29 | 252 | 700 | 420 | 449 | 185 | 210 |
| | 300 | 12 | 338 | 169 | 254 | 521 | 451 | 381 | 300 | 51 | 1.6 | 16-32 | 270 | 700 | 510 | 550 | 240 | 285 |

注：本表法兰尺寸ASME B16.5标准。根据用户要求，法兰尺寸也可按GB/T 9112~9124、HG/T 20615、SH 3406设计制造
This table of flange size is as per standard ASME B16.5,it also can be designed and produced as per customer's requirement or GB/G9112-9124,HG/T20615,SH3406.



| 公称压力 Pressure Rating | 公称尺寸 Dimensions DN | 尺寸Dimensions ( mm ) | | | | | | | | | | | | | | | 重量 ( Kg ) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | L1 | d | D | D1 | D2 | D3 | DC | b | f | Z-ϕdo | H1 | F | H 蜗轮 | H 气动 | 蜗轮 | 气动 |
| PN16 | 25 | 102 | 51 | 19 | 115 | 85 | 65 | – | 38 | 18 | 2 | 4-14 | 57 | 400 | 200 | 222 | 12 | 22 |
| | 40 | 114 | 57 | 32 | 150 | 110 | 85 | – | 49 | 18 | 3 | 4-18 | 63 | 400 | 205 | 228 | 15 | 25 |
| | 50 | 124 | 62 | 38 | 165 | 125 | 100 | – | 60 | 18 | 3 | 4-18 | 92 | 400 | 225 | 248 | 21 | 30 |
| | 65 | 145 | 72.5 | 51 | 185 | 145 | 120 | – | 75 | 18 | 3 | 8-18 | 100 | 400 | 235 | 255 | 24 | 33 |
| | 80 | 165 | 82.8 | 64 | 200 | 160 | 135 | – | 89 | 20 | 3 | 8-18 | 108 | 400 | 260 | 270 | 34 | 42 |
| | 100 | 194 | 97 | 76 | 220 | 180 | 155 | – | 113 | 20 | 3 | 8-18 | 117 | 400 | 270 | 278 | 47 | 55 |
| | 125 | 210 | 105 | 102 | 250 | 210 | 185 | – | 140 | 22 | 3 | 8-18 | 140 | 455 | 320 | 335 | 57 | 64 |
| | 150 | 229 | 114.5 | 127 | 285 | 240 | 210 | – | 164 | 22 | 3 | 8-22 | 177 | 455 | 340 | 358 | 79 | 86 |
| | 200 | 243 | 121.5 | 152 | 340 | 295 | 265 | – | 205 | 24 | 3 | 12-22 | 200 | 700 | 390 | 405 | 105 | 117 |
| | 250 | 297 | 148.5 | 203 | 405 | 355 | 320 | – | 259 | 26 | 3 | 12-26 | 252 | 700 | 420 | 449 | 144 | 169 |
| | 300 | 338 | 169 | 254 | 460 | 410 | 375 | – | 300 | 28 | 4 | 12-26 | 270 | 700 | 510 | 550 | 186 | 231 |
| PN25 | 25 | 102 | 51 | 19 | 115 | 85 | 68 | – | 38 | 18 | 2 | 4-14 | 57 | 400 | 200 | 222 | 12 | 22 |
| | 40 | 114 | 57 | 32 | 150 | 110 | 88 | – | 49 | 18 | 3 | 4-18 | 63 | 400 | 205 | 228 | 15 | 25 |
| | 50 | 124 | 62 | 38 | 165 | 125 | 102 | – | 60 | 20 | 3 | 4-18 | 92 | 400 | 225 | 248 | 21 | 30 |
| | 65 | 145 | 72.5 | 51 | 185 | 145 | 122 | – | 75 | 22 | 3 | 8-18 | 100 | 400 | 235 | 255 | 24 | 33 |
| | 80 | 165 | 82.5 | 64 | 200 | 160 | 138 | – | 89 | 24 | 3 | 8-18 | 108 | 400 | 260 | 270 | 36 | 44 |
| | 100 | 194 | 97 | 76 | 235 | 190 | 162 | – | 113 | 24 | 3 | 8-22 | 117 | 400 | 270 | 278 | 50 | 58 |
| | 125 | 210 | 105 | 102 | 270 | 220 | 188 | – | 140 | 26 | 3 | 8-26 | 140 | 455 | 320 | 335 | 61 | 68 |
| | 150 | 229 | 114.5 | 127 | 300 | 250 | 218 | – | 164 | 28 | 3 | 8-26 | 177 | 455 | 340 | 358 | 85 | 92 |
| | 200 | 243 | 121.5 | 152 | 360 | 310 | 278 | – | 205 | 30 | 3 | 12-26 | 200 | 700 | 390 | 405 | 118 | 125 |
| | 250 | 297 | 148.5 | 203 | 425 | 370 | 335 | – | 259 | 32 | 3 | 12-30 | 252 | 700 | 420 | 449 | 154 | 179 |
| | 300 | 338 | 169 | 254 | 485 | 430 | 395 | – | 300 | 34 | 4 | 16-30 | 270 | 700 | 510 | 550 | 200 | 247 |
| PN40 | 25 | 102 | 51 | 19 | 115 | 85 | 68 | 58 | 38 | 18 | 2 | 4-14 | 57 | 400 | 200 | 222 | 12 | 22 |
| | 40 | 114 | 57 | 32 | 150 | 110 | 88 | 76 | 49 | 18 | 3 | 4-18 | 63 | 400 | 205 | 228 | 15 | 25 |
| | 50 | 124 | 62 | 38 | 165 | 125 | 102 | 88 | 60 | 20 | 3 | 4-18 | 92 | 400 | 225 | 248 | 21 | 30 |
| | 65 | 145 | 72.5 | 51 | 185 | 145 | 122 | 110 | 75 | 22 | 3 | 8-18 | 100 | 400 | 235 | 255 | 26 | 35 |
| | 80 | 165 | 82.8 | 64 | 200 | 160 | 138 | 121 | 89 | 24 | 3 | 8-18 | 108 | 400 | 260 | 270 | 38 | 46 |
| | 100 | 194 | 97 | 76 | 235 | 190 | 162 | 150 | 113 | 24 | 3 | 8-22 | 117 | 400 | 270 | 278 | 54 | 62 |
| | 125 | 210 | 105 | 102 | 270 | 220 | 188 | 176 | 140 | 26 | 3 | 8-26 | 140 | 455 | 320 | 335 | 65 | 73 |
| | 150 | 229 | 114.5 | 127 | 300 | 250 | 218 | 204 | 164 | 28 | 3 | 8-26 | 177 | 455 | 340 | 358 | 89 | 96 |
| | 200 | 243 | 121.5 | 152 | 375 | 320 | 285 | 260 | 205 | 34 | 3 | 12-30 | 200 | 700 | 390 | 405 | 130 | 137 |
| | 250 | 297 | 148.5 | 203 | 450 | 385 | 345 | 313 | 259 | 38 | 3 | 12-33 | 252 | 700 | 420 | 449 | 170 | 184 |
| | 300 | 338 | 169 | 254 | 515 | 450 | 410 | 364 | 300 | 42 | 4 | 16-33 | 270 | 700 | 510 | 550 | 220 | 267 |

注：本表法兰尺寸GB/T 9112~9124标准。根据用户要求，法兰尺寸也可按GB/T 9112~9124、HG/T 20592及JB/T74~90标准设计制造
This table of flange size is as per standard ASME B16.5,it also can be designed and produced as per customer's requirement or GB/G 9112-9124,HG/T 20592,JB/T74-90.

三通球阀 Three way Ball Valve
祺隆阀门 QILONG QILONG VALVE

## 用 途 Application

三通球阀适用于Class150~Class300、PN16~PN40的各种管路上，用于介质流向的切换、分流、合流等，选用不同的材质，可分别适用于水、蒸汽、油品、天然气、煤气、硝酸、氧化性介质、尿素等多种介质。三通球阀的驱动方式为手动、蜗轮蜗杆传动、气动或电动，连接方式一般为法兰连接，根据用户要求，也可采用其他连接方式

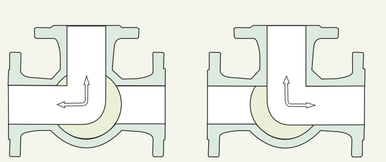
Three way ball valves are suitable for using on various kinds of pipelines of Class150 ~ Class300, PN16 ~ PN40for switching, dividing, and combining medium flow, of which the operation manners include manual, worm gear, pneumatic or electric actuators, connection manners are in general of flange s. As required by customers ,the other type of connection is available too.

## 结构与特点Structure and features

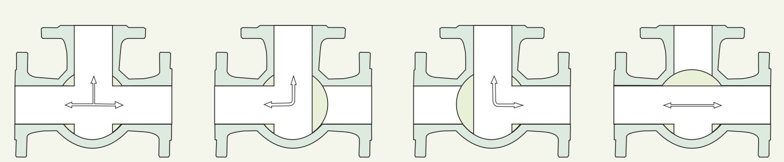
L型三通球阀（Q44型）用于管路中介质流向的切换，能使相互垂直的两个流道连通。T型三通球阀（Q45型）可用于介质的分流、合流及流向切换，T形球体通道可以使三个通道互相连通或使其中的两个通道连通，T型球阀可以实现其中的两种、三种或四种功能，但要实现的功能不同，阀门的设计有一定的差异，因此，对于T型三通球阀，用户在选用或订货时，需要对使用要求作详细的描述，以便祺隆公司正确设计与配置。对于普通的浮动球三通球阀，某些工况是不适合使用的，用户在选用时要特别注意。祺隆公司有许多独特结构设计的三通球阀可以满足用户的一些特别工况和特殊要求。对于普通的三通球阀，我公司一般采用两阀座结构设计。根据用户要求，祺隆公司也可设计制造四阀座三通球阀。

L type three way ball valve (type of Q44) is used for pipelines to switch the flow direction, being able to Switch on two flow lines perpendicular with each other. T type three way ball valve (type Q45).

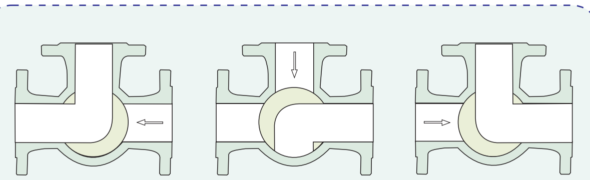
May be used to divide, combine or switch the flow direction. T type ball passage is able to switch on three flowlines or switch on two of t he three flow lines. T type ball valve may realize two, three or four seats of the functions, however, the specific valve design must draw a distinction between them to realize different Application requirement so as for QILONG company to make correct design and fitting. Regarding the general Application requirement so as for QILONG company to make correct design and fitting. Regarding the general clear to the customers for making right selection. There are many kinds of three way ball valves with unique Designs made by QILONG company to meet customers' special working conditions and requirement. For the common three way ball valves, QILONG company adopts in general the design of two seats. As required by customers, QILONG company can also design and manufacture the three way ball valves with four seats.



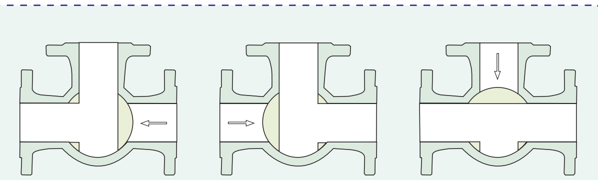
L型三通球阀的两种使用状态
Two usages of L type three way ball valve



T型三通球阀的四种使用状态
Four usages of T type three way ball valve



普通L型三通球阀浮动球阀不适用的几种工况
Several unsuited conditions of common L type three way floating ball valve



普通T型三通球阀浮动球阀不适用的几种工况
Several unsuited conditions of common T type three way floating ball valve





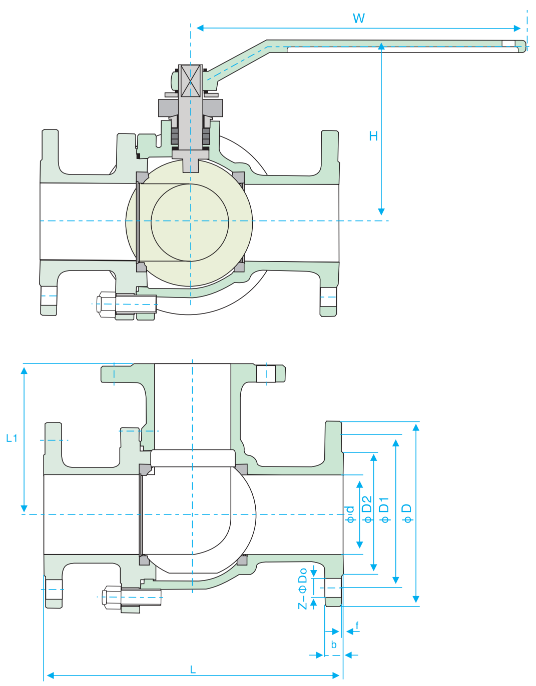
## 型号、材料及主要参数 Material and Main Valve Data

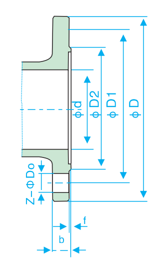
| | 配管法兰 Pipe flange | 公称压力 Pressure Rating | 法兰密封面 Flange face | 常规产品型号 Type | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| L形三通球阀 L Type three way ball valve | ASME B16.5 GB/T9112–9124 HG/T 20615 | Class150 | 凸面 RF | Q44F–A1C | Q44F–A1P | Q44F–A1P8 | Q44F–A1P3 | Q44F–A1R | Q44F–A1R8 | Q44F–A1R3 |
| | | Class300 | | Q44F–A3 | Q44F–AP | Q44F–AP8 | Q44F–AP3 | Q44F–A3R | Q44F–A3R8 | Q44F–A3R3 |
| | GB/T9112–9124 HG/T 20592 JB/T 74~90 | PN16 | | Q44F–16C | Q44F–16P | Q44F–16P8 | Q44F–16P3 | Q44F–16R | Q44F–16R8 | Q44F–16R3 |
| | | PN25 | | Q44F–25 | Q44F–25P | Q44F–25P8 | Q44F–25P3 | Q44F–25R | Q44F–25R8 | Q44F–25R3 |
| | | PN40 | 凹凸面 MF | Q44F–40 | Q44F–40P | Q44F–40P8 | Q44F–40P3 | Q44F–40R | Q44F–40R8 | Q44F–40R3 |
| T形三通球阀 T Type three way ball valve | ASME B16.5 GB/T9112–9124 HG/T 20615 | Class150 | 凸面 RF | Q45F–A1C | Q45F–A1P | Q45F–A1P8 | Q45F–A1P3 | Q45F–A1R | Q45F–A1R8 | Q45F–A1R3 |
| | | Class300 | | Q45F–A3 | Q45F–A3P | Q45F–A3P8 | Q45F–A3P3 | Q45F–A3R | Q45F–A3R8 | Q45F–A3R3 |
| | GB/T9112~9124 HG/T 20592 JB/T 74~90 | PN16 | | Q45F–16C | Q45F–16P | Q45F–16P8 | Q45F–16P3 | Q45F–16R | Q45F–16R8 | Q45F–16R3 |
| | | PN25 | | Q45F–25 | Q45F–25P | Q45F–25P8 | Q45F–25P3 | Q45F–25R | Q45F–25R8 | Q45F–25R3 |
| | | PN40 | 凹凸面 MF | Q45F–40 | Q45F–40P | Q45F–40P8 | Q45F–40P3 | Q45F–40R | Q45F–40R8 | Q45F–40R3 |
| 主要零件材料 Main parts material | | 阀体Body | | WCB A105 | ZG1Cr18Ni9Ti 1Cr18Ni9Ti | CF8 304 | CF3 304L | ZG1Cr18Ni12Mo2Ti 1Cr18Ni12Mo2Ti | CF8M 316 | CF3M 316L |
| | | 球体、阀杆 Ball、Stem | | 2Cr13 | 1Cr18Ni19Ti | 0Cr18Ni9 (304) | 00Cr19Ni10 (304L) | 1Cr18Ni12Mo2Ti | 0Cr17Ni12Mo2 (316) | 00Cr17Ni14Mo2 (316L) |
| | | 密封面 sealing surface | | 增强聚四氟乙烯 RPTFE | | | | | | |
| 适用工况 Applicable condition | | 适用介质 Applicable medium | | 水、蒸汽、油品、煤气、液化气、天然气等 Water、Steam Oils、Coal gas、Liquefied gas、gas | | 硝酸类腐蚀性介质 Nitric acid corrosion medium | 强氧化性介质 Strong oxidizing medium | 醋酸类腐蚀性介质 Acetic acid corrosive medium | | 尿素类腐蚀性介质 Urea corrosive medium |
| | | 适用温度 Applicable temperature | | ≤180℃（增强聚四氟乙烯）、≤300℃（对位苯） ≤180℃（RPTFE）、≤300℃（PPL） | | | | | | |
| 涡轮蜗杆传动球阀 worm gear ball valve | | | | 在相应的手动型号的Q后插入“3”表示，示例：Q344F–16、Q345F–16C | | | | | | |
| 气动球阀 pneumatic ball valve | | | | 在相应的手动型号的Q后插入“6”表示，示例：Q644F–16、Q645F–16C | | | | | | |
| 电动球阀 electric ball valve | | | | 在相应的手动型号的Q后插入“9”表示，示例：Q944F–16、Q945F–16C | | | | | | |

注：本表为常规法兰连接三通球阀的型号编制、主要零件材料及适用工况，其他要求及其型号见球阀型号编制方法

Note: This table is about the model preparation,main parts material and applicable condition of flange ends matal to metal sealed ball valve.

## 主要尺寸及重量 Main size and weight



PN40法兰
PN40 flanged

| 公称压力 Pressure Rating | 公称尺寸 Dimensions DN | | 尺寸Dimensions ( mm ) | | | | | | | | | | | 重量 Weight ( Kg ) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | L | L1 | d | D | D1 | D2 | b | f | Z–ϕdo | W | H | |
| PN16 | 15 | $\frac{1}{2}$ | 120 | 65 | 14 | 89 | 60.5 | 35 | 11.5 | 1.6 | 4–15 | 140 | 85 | 4 |
| | 20 | $\frac{3}{4}$ | 140 | 70 | 19 | 98 | 70 | 43 | 11.5 | 1.6 | 4–15 | 140 | 90 | 5 |
| | 25 | 1 | 150 | 75 | 25 | 108 | 79.5 | 51 | 11.5 | 1.6 | 4–15 | 150 | 99 | 7 |
| | 32 | $1\frac{1}{4}$ | 170 | 85 | 32 | 117 | 89 | 64 | 13 | 1.6 | 4–15 | 180 | 105 | 9 |
| | 40 | $1\frac{1}{2}$ | 180 | 90 | 38 | 127 | 98.5 | 73 | 14.5 | 1.6 | 4–15 | 200 | 126 | 10 |
| | 50 | 2 | 200 | 100 | 51 | 152 | 120.5 | 92 | 16 | 1.6 | 4–19 | 250 | 140 | 15 |
| | 65 | $2\frac{1}{2}$ | 220 | 110 | 64 | 178 | 139.5 | 105 | 17.5 | 1.6 | 4–19 | 300 | 165 | 22 |
| | 80 | 3 | 250 | 125 | 76 | 190 | 152.5 | 127 | 19.5 | 1.6 | 4–19 | 350 | 178 | 29 |
| | 100 | 4 | 280 | 140 | 102 | 229 | 190.5 | 157 | 24 | 1.6 | 8–19 | 500 | 230 | 46 |
| | 125 | 5 | 320 | 160 | 127 | 254 | 216 | 186 | 24 | 1.6 | 8–22 | 800 | 280 | 72 |
| | 150 | 6 | 360 | 180 | 152 | 279 | 241.5 | 216 | 25.5 | 1.6 | 8–22 | 800 | 310 | .98 |
| PN25 | 15 | $\frac{1}{2}$ | 130 | 65 | 14 | 95 | 66.5 | 35 | 14.5 | 1.6 | 4–15 | 140 | 85 | 4 |
| | 20 | $\frac{3}{4}$ | 140 | 70 | 19 | 117 | 82.5 | 43 | 16 | 1.6 | 4–19 | 140 | 90 | 5 |
| | 25 | 1 | 150 | 75 | 25 | 124 | 89 | 51 | 17.5 | 1.6 | 4–19 | 150 | 99 | 7 |
| | 32 | $1\frac{1}{4}$ | 180 | 90 | 32 | 133 | 98.5 | 64 | 19.5 | 1.6 | 4–19 | 180 | 105 | 10 |
| | 40 | $1\frac{1}{2}$ | 200 | 100 | 38 | 156 | 114.5 | 73 | 21 | 1.6 | 4–22 | 200 | 126 | 13 |
| | 50 | 2 | 220 | 110 | 51 | 165 | 127 | 92 | 22.5 | 1.6 | 8–19 | 250 | 140 | 19 |
| | 65 | $2\frac{1}{2}$ | 250 | 125 | 64 | 190 | 149 | 105 | 25.5 | 1.6 | 8–22 | 300 | 165 | 29 |
| | 80 | 3 | 280 | 140 | 76 | 210 | 168.5 | 127 | 29 | 1.6 | 8–22 | 350 | 178 | 41 |
| | 100 | 4 | 320 | 160 | 102 | 254 | 200 | 157 | 32 | 1.6 | 8–22 | 500 | 230 | 67 |
| | 125 | 5 | 360 | 180 | 127 | 279 | 235 | 186 | 35 | 1.6 | 8–22 | 800 | 280 | 103 |
| | 150 | 6 | 450 | 225 | 152 | 318 | 270 | 216 | 37 | 1.6 | 12–22 | 800 | 310 | 150 |

注：1、本表法兰尺寸按ASME16.5标准。根据用户要求，法兰尺寸也可按GB/T 9112~9124、HG/T 20615、是3406设计制造。
2、本表为两阀座L型和T型三通球阀的数据。

note：1、This table of flange size is as per standard GB/9112–9124,it also can be designed and produced as per customer's requirement or HG/T20592,JB/T74–90.
2、This table is the data of L type and T type three way ball valve







| 公称压力 Pressure Rating | 公称尺寸 Dimensions DN | 尺寸Dimensions ( mm ) | | | | | | | | | | | | 重量 Weight ( Kg ) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | L1 | d | D | D1 | D2 | D3 | b | f | Z–ϕdo | W | H | |
| PN16 | 15 | 130 | 65 | 14 | 95 | 65 | 45 | – | 16 | 2 | 4–14 | 140 | 85 | 4 |
| | 20 | 140 | 70 | 19 | 105 | 75 | 58 | – | 18 | 2 | 4–14 | 140 | 90 | 5 |
| | 25 | 150 | 75 | 25 | 115 | 85 | 68 | – | 18 | 2 | 4–14 | 150 | 99 | 6 |
| | 32 | 170 | 85 | 32 | 140 | 100 | 78 | – | 18 | 2 | 4–18 | 180 | 105 | 9 |
| | 40 | 180 | 90 | 38 | 150 | 110 | 88 | – | 18 | 3 | 4–18 | 200 | 126 | 10 |
| | 50 | 200 | 100 | 51 | 165 | 125 | 102 | – | 18 | 3 | 4–18 | 250 | 140 | 14 |
| | 65 | 220 | 110 | 64 | 185 | 145 | 122 | – | 18 | 3 | 8–18 | 300 | 165 | 20 |
| | 80 | 250 | 125 | 76 | 200 | 160 | 138 | – | 20 | 3 | 8–18 | 350 | 178 | 27 |
| | 100 | 280 | 140 | 102 | 220 | 180 | 158 | – | 20 | 3 | 8–18 | 500 | 230 | 42 |
| | 125 | 320 | 160 | 127 | 250 | 210 | 188 | – | 22 | 3 | 8–18 | 800 | 280 | 62 |
| | 150 | 360 | 180 | 152 | 285 | 240 | 212 | – | 22 | 3 | 8–22 | 800 | 310 | 91 |
| PN25 | 15 | 130 | 65 | 14 | 95 | 65 | 45 | – | 16 | 2 | 4–14 | 140 | 85 | 4 |
| | 20 | 140 | 70 | 19 | 105 | 75 | 58 | – | 18 | 2 | 4–14 | 140 | 90 | 5 |
| | 25 | 150 | 75 | 25 | 115 | 85 | 68 | – | 18 | 2 | 4–14 | 150 | 99 | 6 |
| | 32 | 180 | 90 | 32 | 140 | 100 | 78 | – | 18 | 2 | 4–18 | 180 | 105 | 9 |
| | 40 | 200 | 100 | 38 | 150 | 110 | 88 | – | 18 | 3 | 4–18 | 200 | 126 | 11 |
| | 50 | 220 | 110 | 51 | 165 | 125 | 102 | – | 20 | 3 | 4–18 | 250 | 140 | 15 |
| | 65 | 250 | 125 | 64 | 185 | 145 | 122 | – | 22 | 3 | 8–18 | 300 | 165 | 23 |
| | 80 | 280 | 140 | 76 | 200 | 160 | 138 | – | 22 | 3 | 8–18 | 350 | 178 | 28 |
| | 100 | 320 | 160 | 102 | 235 | 190 | 162 | – | 24 | 3 | 8–22 | 500 | 230 | 54 |
| | 125 | 360 | 180 | 127 | 270 | 220 | 188 | – | 26 | 3 | 8–26 | 800 | 280 | 80 |
| | 150 | 450 | 225 | 152 | 300 | 250 | 218 | – | 28 | 3 | 8–26 | 800 | 310 | 114 |
| PN40 | 15 | 130 | 65 | 14 | 95 | 65 | 45 | 40 | 16 | 2 | 4–14 | 140 | 85 | 4 |
| | 20 | 140 | 70 | 19 | 105 | 75 | 58 | 51 | 18 | 2 | 4–14 | 140 | 90 | 5 |
| | 25 | 150 | 75 | 25 | 115 | 85 | 68 | 58 | 18 | 2 | 4–14 | 150 | 99 | 6 |
| | 32 | 180 | 90 | 32 | 140 | 100 | 78 | 66 | 18 | 2 | 4–18 | 180 | 105 | 10 |
| | 40 | 200 | 100 | 38 | 150 | 110 | 88 | 76 | 18 | 3 | 4–18 | 200 | 126 | 13 |
| | 50 | 220 | 110 | 51 | 165 | 125 | 102 | 88 | 20 | 3 | 4–18 | 250 | 140 | 18 |
| | 65 | 250 | 125 | 64 | 185 | 145 | 122 | 110 | 22 | 3 | 8–18 | 300 | 165 | 24 |
| | 80 | 280 | 140 | 76 | 200 | 160 | 138 | 121 | 24 | 3 | 8–18 | 350 | 178 | 35 |
| | 100 | 320 | 160 | 102 | 235 | 190 | 162 | 150 | 24 | 3 | 8–22 | 500 | 230 | 58 |
| | 125 | 360 | 180 | 127 | 270 | 220 | 188 | 176 | 26 | 3 | 8–26 | 800 | 280 | 82 |
| | 150 | 450 | 225 | 152 | 300 | 250 | 218 | 204 | 28 | 3 | 8–26 | 800 | 310 | 118 |

注：1、本表法兰尺寸GB/T 9112~9124标准。根据用户要求，法兰尺寸也可按HG/T 20592及JB/T74~90标准设计制造。
2、本表为两阀座L形和T形三通球阀的数据。

note：1、This table of flange size is as per standard GB/9112–9124,it also can be designed and produced as per customer's requirement or HG/T20592,JB/T74–90.
2、This table is the data of L type and T type three way ball valve

三通球阀 Three way Ball Valve
祺隆阀门 QILONG QILONG VALVE

## 其它结构的三通球阀及特点 Other structure of three way ball valve and features

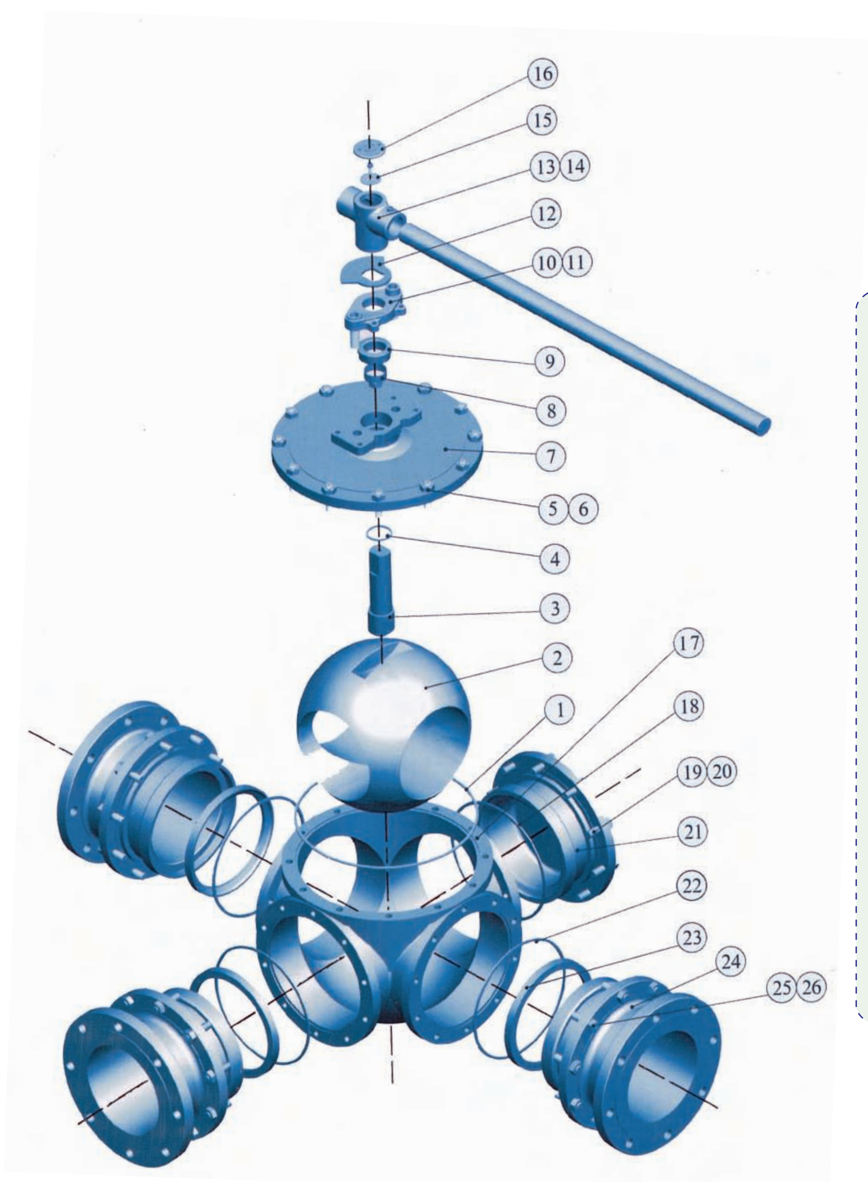
我公司除了生产常规两阀座L形和T型三通球阀外，还开发了多种结构的三通球阀，能够满足用户的多种需求。

Except for manufacture of general L type and T type three way ball valves, QILONG company has developed a couple of designs of three way ball valve, which is able to satisfy customers' different requirement.

## 四阀座L型和T型三通球阀 Three way Ball Valve with four seats

四阀座三通球阀采用顶装式球体，由于采用四阀座结构，具有更好的密封性能，但包括球体在内的阀门尺寸也相应的增大，结构也相对比较复杂。

Three way ball valve with four seats features the top entry ball design with four seats, which posses more reliable tightness functions. However, valve size gets bigger, including the ball, and the design sounds a bit complicated.




| | |
|---|---|
| 1–垫片； | 1–Gasket |
| 2–球体； | 2–Ball |
| 3–阀杆； | 3–Stem |
| 4–上密封垫； | 4–Thrust washer |
| 5–螺柱； | 5–Stud |
| 6–螺母； | 6–Nut |
| 7–阀盖； | 7–Cover |
| 8–填料； | 8–Packing |
| 9–填料； | 9–Gland |
| 10–填料压板； | 10–Gland flange |
| 11–螺钉； | 11–Bol t |
| 12–定位片； | 12–Stop collar |
| 13–扳杆接头； | 13–Lever connector |
| 14–扳杆； | 14–Lever |
| 15–垫圈； | 15–Washer |
| 16–顶盖； | 16–Top cap |
| 17–阀体； | 17–Body |
| 18–垫片； | 18–Gasket |
| 19–螺柱； | 19–Stud |
| 20–螺母； | 20–Nut |
| 21–盲板； | 21–Blank plate |
| 22–垫片； | 22–Gasket |
| 23–密封圈； | 23–Seat |
| 24–端盖； | 24–End bonnet |
| 25–螺柱； | 25–Stud |
| 26–螺母； | 26–Nut |

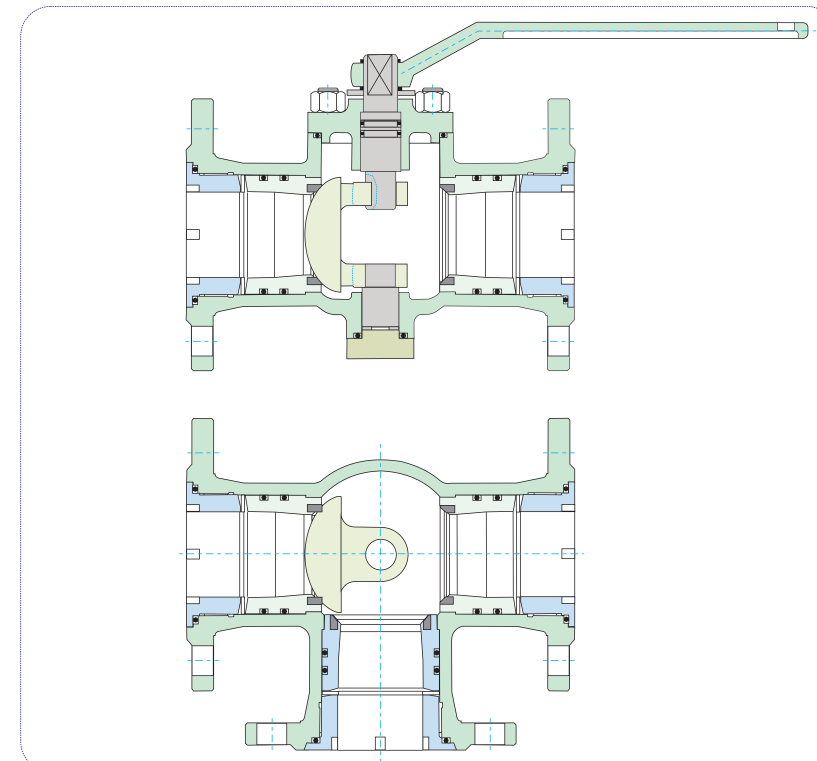
四阀座三通球阀的典型结构
Typical drawing of three way ball valve with four seats



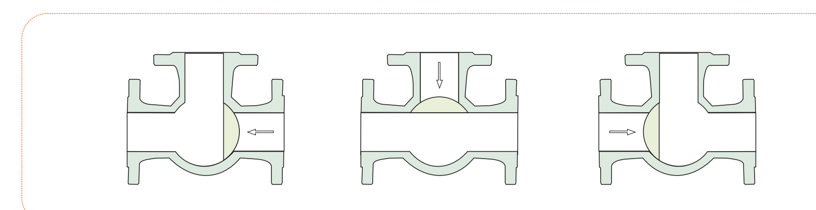
## 半球三通球阀 Three way ball valve with half–ball

半球三通球阀采用固定球结构，结构紧凑，中腔不会沉积介质及污物，根据用户使用要求的不同，可以设计成球前密封或球后密封。半球三通球阀可以采用软密封结构（密封圈材料可以是增强聚四氟乙烯、对位苯、尼龙、碳纤维等），也可采用金属硬密封结构。

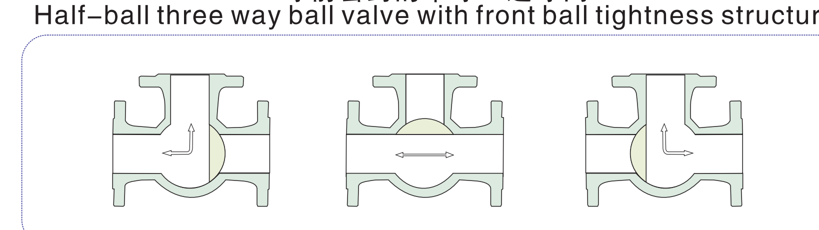
Half –ball seat three way ball valve is of the design of trunnion mounted ball valve, being impact in structure ,and unable to have medium deposition or dirtyin the body cavity. As per customers' different requirement , t he ball valve may be desigened as the front ball tightness or behind ball tightnes s. Half–ball three way ball valve may adopt soft seats sealing structure ( sealing material of PTFE, PPL, nylon and carbon fibre etc. ), and metal to metal sealed structure as well .



半球三通球阀的典型结构
Typical structure of half–ball three way ball valve



球前密封的半球三通球阀
Half–ball three way ball valve with front ball tightness structure

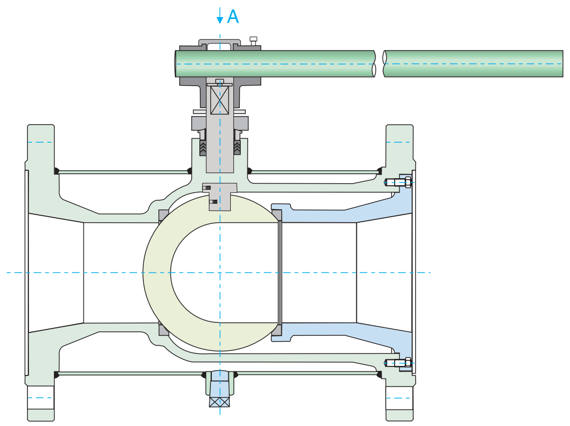


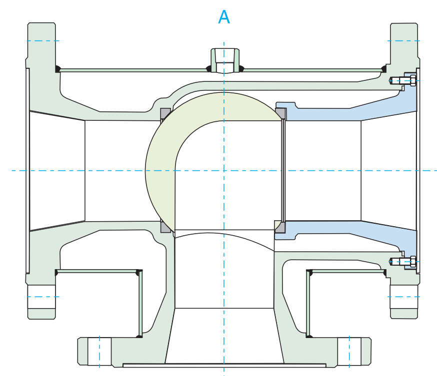
球后密封的半球三通球阀
Half–ball three way ball valve with behind ball tightness structure

## 保温夹套三通球阀 Jacket three way ball valve

保温夹套三通球阀采用整体式结构设计，结构紧凑，保温效果好，密封可靠。根据用户要求，可以采用L形三通，也可采用T形三通。

Jacket three way ball valve employs the design of o ne piece body, being impact in structure and excellent in temperature protection effect .As per customers' requirement, the structure may be of L type three way and T type three way design.



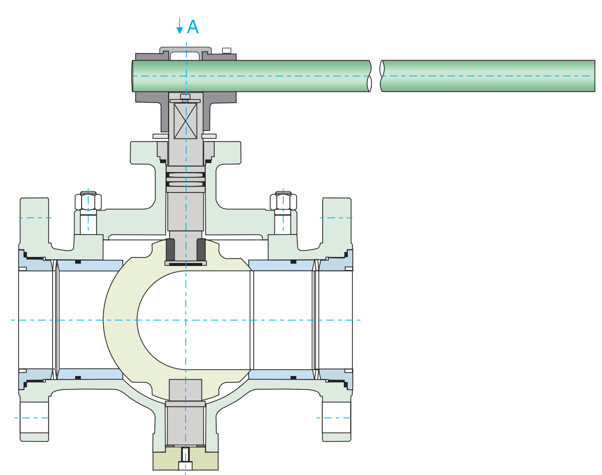



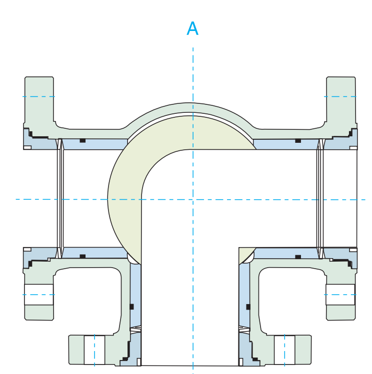

典型的保温夹套三通球阀
Jacketed Three way Ball Valve

## 金属硬密封三通球阀 Metal to metal sealed three way ball valve

金属硬密封三通球阀的球体及阀座采用喷焊镍基合金（硬度≥HRC60）、超音速涂碳化钨合金（最高硬度可达到HRC75)及特种硬化处理等先进工艺，具有密封可靠，使用寿命长等特点。特别适用于浆料、含固体颗粒的介质。常规产品的使用温度≤200℃，特殊订货，使用温度可达425℃（碳钢）或540℃（不锈钢、铬钼钢、铬钼钒钢）

The ball and seat of metal to metal sealed three way ball valve are employing advanced techniques of nickel base alloy spray welding ( of which hardness being ≥HRC6 0 ), ultra–sonic stellite spray coating (max. hardness ofHRC75 ), and specially hardening treatment etc., Featuring reliable tightness and longer service life, being particularly used for the medium with ash dregs and solid particles. Application temper ature of general products is≤ 200℃. As specially ordering, application temperature may reach 42 5℃ ( carbon Steel ) or 540℃ (S.S., CrMo steel, CrMoV steel).




典型的金属硬密封固定三通球阀
metal to metal sealed trunnion mounrted Three way Ball Valve





## 结构特点及用途 Structure features and application

对夹连接球阀具有结构紧凑、重量轻、安装方便、启闭轻松等特点。对夹球阀一般为手动，也可采用蜗轮传动、气动或电动。

对夹连接球阀适用于CLASS150、PN10~PN25、JIS 10K的各种管路上，用于截断或接通管路中的介质，选用不同的材质，可分别适用于水、蒸汽、油品、硝酸、醋酸、氧化性介质、尿素等多种介质。

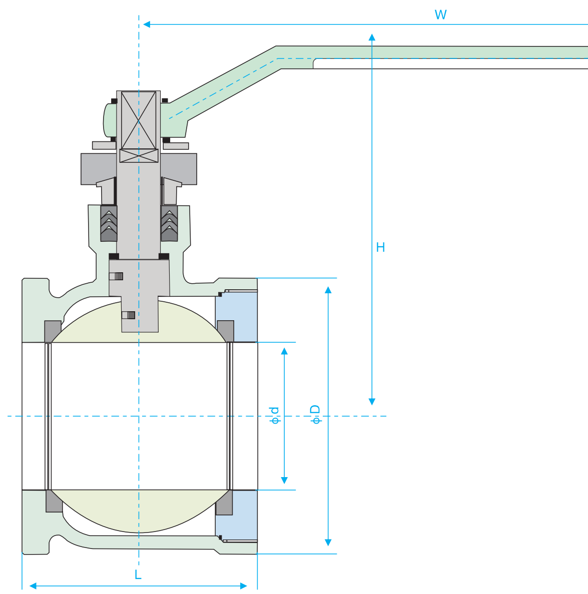
This design of wafer type ball valve is impact in structure, light in weight, convenient in assembly, and easy for open and close. Generally, operation manner of the valve is of manual and worm gear, and pneumatic or electric actuators as well. Wafer type ball valve is suitable for use on pipelines of Class 150, PN 25, JIS 10K to cut off or turn on the medium in pipelines.

## 型号、材料及主要参数 Material and Main Valve Data

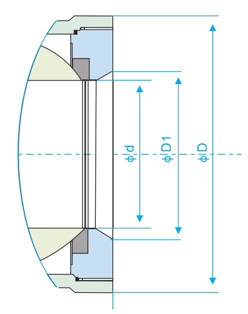
| 配管法兰 Pipe flange | 公称压力 Pressure Rating | 常规产品型号 Type | | | | | | |
|---|---|---|---|---|---|---|---|---|
| ASME B16.5 | Class150 | Q71F–A1C | Q71F–A1P | Q71F–A1P8 | Q71F–A1P3 | Q71F–A1R | Q71F–A1R8 | Q71F–A1R3 |
| GB/T9112~9124 | PN10 | Q71F–10C | Q71F–10P | Q71F–10P8 | Q71F–10P3 | Q71F–10R | Q71F–10R8 | Q71F–10R3 |
| HG/T 20615 | PN16 | Q71F–16C | Q71F–16P | Q71F–16P8 | Q71F–16P3 | Q71F–16R | Q71F–16R8 | Q71F–16R3 |
| JB/T 74~90 | PN25 | Q71F–25 | Q71F–25P | Q71F–25P8 | Q71F–25P3 | Q71F–25R | Q71F–25R8 | Q71F–25R3 |
| JIS B2238 | 10k | Q71F–K1C | Q71F–K1P | Q71F–K1P8 | Q71F–K1P3 | Q71F–K1R | Q71F–K1R8 | Q71F–K1R3 |
| 主要零件材料 Main parts material | 阀体Body | WCB | ZG1Cr18Ni9Ti 1Cr18Ni9Ti | CF8 | CF3 304L | ZG1Cr18Ni12Mo2Ti 1Cr18Ni12Mo2Ti | CF8M | CF3M |
| | 球体、阀杆 Ball、Stem | 2Cr13 | 1Cr18Ni19Ti | 0Cr18Ni19 | 00Cr19Ni10 (304L) | 1Cr18Ni12Mo2Ti | 0Cr17Ni12Mo2 (316) | 00Cr17Ni14Mo2 (316L) |
| | 密封面 sealing surface | 增强聚四氟乙烯、对位聚苯 RPTFE、PPL | | | | | | |
| 适用工况 Applicable condition | 适用介质 Applicable medium | 水、蒸汽、油品、煤气、液化气、天然气等 Water、Steam Oils、Coal gas、Liquefied gas、gas | | 硝酸类腐蚀性介质 Nitric acid corrosion medium | 强氧化性介质 Strong oxidizing medium | 醋酸类腐蚀性介质 Acetic acid corrosive medium | | 尿素类腐蚀性介质 Urea corrosive medium |
| | 适用温度 Applicable temperature | ≤180℃（增强聚四氟乙烯）、≤300℃（对位聚苯） | | | | | | |
| 涡轮蜗杆传动球阀 worm gear ball valve | | 在相应的蜗轮蜗杆型号的Q后去掉“3”表示，示例：Q371F–A1C | | | | | | |
| 气动球阀 pneumatic ball valve | | 在相应的蜗轮蜗杆型号的Q后“3”改为“6”表示，示例：Q671F–A1C | | | | | | |
| 电动球阀 electric ball valve | | 在相应的蜗轮蜗杆型号的Q后“3”改为“9”表示，示例：Q971F–A1C | | | | | | |

注：本表我常规法兰连接蜗轮蜗杆传动固定球阀的型号编制、主要零件材料及适用工况，其他要求及其型号编制见球阀型号编制方法。
Note: This table is about the model preparation,main parts material and applicable condition of flange ends matal to metal worm gear valve.

## 主要尺寸及重量 Main sizes and weights




DN15~DN80




DN100~DN150

| 公称压力 Pressure Rating | 公称尺寸 Dimensions DN | NPS | 尺寸Dimensions ( mm ) L | d | D | D1 | W | H | 重量 Weight ( Kg ) |
|---|---|---|---|---|---|---|---|---|---|
| Class150 PN20 | 15 | $\frac{1}{2}$ | 40 | 13 | 47 | – | 140 | 96 | 0.9 |
| | 20 | $\frac{3}{4}$ | 45 | 20 | 56 | – | 140 | 96 | 1.3 |
| | 25 | 1 | 50 | 25 | 66 | – | 150 | 112 | 1.6 |
| | 32 | $1\frac{1}{4}$ | 60 | 32 | 75 | – | 150 | 112 | 2.6 |
| | 40 | $1\frac{1}{2}$ | 70 | 40 | 85 | – | 200 | 135 | 3.8 |
| | 50 | 2 | 80 | 51 | 103 | – | 250 | 156 | 5.0 |
| | 65 | $2\frac{1}{2}$ | 110 | 64 | 122 | – | 250 | 162 | 7.5 |
| | 80 | 3 | 120 | 76 | 135 | – | 350 | 188 | 11 |
| | 100 | 4 | 140 | 88 | 173 | 100 | 350 | 206 | 17 |
| | 125 | 5 | 170 | 102 | 195 | 127 | 500 | 250 | 24 |
| | 150 | 6 | 180 | 102 | 220 | 150 | 500 | 250 | 28 |
| JIK 10 | 15 | | 40 | 13 | 57 | – | 140 | 96 | 0.9 |
| | 20 | | 45 | 20 | 62 | – | 140 | 96 | 1.3 |
| | 25 | | 50 | 25 | 73 | – | 150 | 112 | 1.6 |
| | 32 | | 60 | 32 | 83 | – | 150 | 112 | 2.6 |
| | 40 | | 70 | 40 | 88 | – | 200 | 135 | 3.8 |
| | 50 | | 80 | 51 | 103 | – | 250 | 156 | 5.0 |
| | 65 | | 110 | 64 | 123 | – | 250 | 162 | 7.5 |
| | 80 | | 120 | 76 | 133 | – | 350 | 188 | 11 |
| | 100 | | 140 | 88 | 158 | 100 | 350 | 206 | 17 |
| | 125 | | 170 | 102 | 189 | 127 | 500 | 250 | 24 |
| | 150 | | 180 | 102 | 218 | 150 | 500 | 250 | 28 |





| 公称压力 Pressure Rating | 公称尺寸 Dimensions DN | 尺寸Dimensions ( mm ) L | d | D | D1 | W | H | 重量 Weight ( Kg ) |
|---|---|---|---|---|---|---|---|---|
| PN10 | 15 | 40 | 13 | 53 | – | 140 | 96 | 0.9 |
| | 20 | 45 | 20 | 63 | – | 140 | 96 | 1.3 |
| | 25 | 50 | 25 | 73 | – | 150 | 112 | 1.6 |
| | 32 | 60 | 32 | 84 | – | 150 | 112 | 2.6 |
| | 40 | 70 | 40 | 94 | – | 200 | 135 | 3.8 |
| | 50 | 80 | 51 | 109 | – | 250 | 156 | 5.0 |
| | 65 | 110 | 64 | 129 | – | 250 | 162 | 7.5 |
| | 80 | 120 | 76 | 144 | – | 350 | 188 | 11 |
| | 100 | 140 | 88 | 164 | 100 | 350 | 206 | 17 |
| | 125 | 170 | 102 | 193 | 127 | 500 | 250 | 24 |
| | 150 | 180 | 122 | 220 | 150 | 650 | 277 | 28 |
| PN16 | 15 | 40 | 13 | 53 | – | 140 | 96 | 0.9 |
| | 20 | 45 | 20 | 63 | – | 140 | 96 | 1.3 |
| | 25 | 50 | 25 | 73 | – | 150 | 112 | 1.6 |
| | 32 | 60 | 32 | 84 | – | 150 | 112 | 2.6 |
| | 40 | 70 | 40 | 94 | – | 200 | 135 | 3.8 |
| | 50 | 80 | 51 | 109 | – | 250 | 156 | 5.0 |
| | 65 | 110 | 64 | 129 | – | 250 | 162 | 7.5 |
| | 80 | 120 | 76 | 144 | – | 350 | 188 | 11 |
| | 100 | 140 | 88 | 164 | 100 | 350 | 206 | 17 |
| | 125 | 170 | 102 | 193 | 127 | 500 | 250 | 24 |
| | 150 | 180 | 102 | 218 | 150 | 500 | 250 | 28 |
| PN25 | 15 | 40 | 13 | 53 | – | 140 | 96 | 0.9 |
| | 20 | 45 | 20 | 63 | – | 140 | 96 | 1.3 |
| | 25 | 50 | 25 | 73 | – | 150 | 112 | 1.3 |
| | 32 | 60 | 32 | 84 | – | 150 | 112 | 2.6 |
| | 40 | 70 | 40 | 94 | – | 200 | 135 | 3.8 |
| | 50 | 80 | 51 | 109 | – | 250 | 156 | 5.0 |
| | 65 | 110 | 64 | 129 | – | 250 | 162 | 7.5 |
| | 80 | 120 | 76 | 144 | – | 350 | 188 | 11 |
| | 100 | 140 | 88 | 169 | 100 | 350 | 206 | 17 |
| | 125 | 170 | 102 | 197 | 127 | 500 | 250 | 24 |
| | 150 | 180 | 102 | 218 | 150 | 500 | 250 | 28 |

## 结构特点及用途 Structure features and application

保温夹套对夹连接球阀是我厂开发研制的专利产品，专利号为：ZL 93 2 01429.1，它具有结构紧凑、重量轻、保温性能好、安装方便、启闭轻松等特点。保温夹套球阀一般为手动，也可采用蜗轮蜗杆传动、气动或电动。

保温夹套对夹连接球阀适用于CLASS150、PN10~PN25、JIS 10K的各种管路上，用于截断或接通管路中的介质，选用不同的材质，可分别适用于水、蒸汽、油品、液化气、天然气、煤气、硝酸、醋酸、氧化性介质、尿素等多种介质。

According to working condition and customers' requirement, a couple of sealing materials for wafer type jacketed ball valves may be adopted, such as reinforced PTFE, PPL or other hardened metal. Operation manners are of manual, worm gear, and pneumatic or electric actuators. Design pressure of the jacket is generally 1.0 MPa. As per customer s' requirement, special design is available. In general, temperature protection jacketed ball valve Is employing big sized flanges for connection ends, to which attention should be drawn when ordering .

Temperature protection jacketed ball valves are suitable for use on various kinds of pipelines of Class150 ~ Class300, PN16 ~ PN40, JIS10K ~ JIS20K to cut off or turn on the medium in pipelines, being able to protect Medium from crystallization.

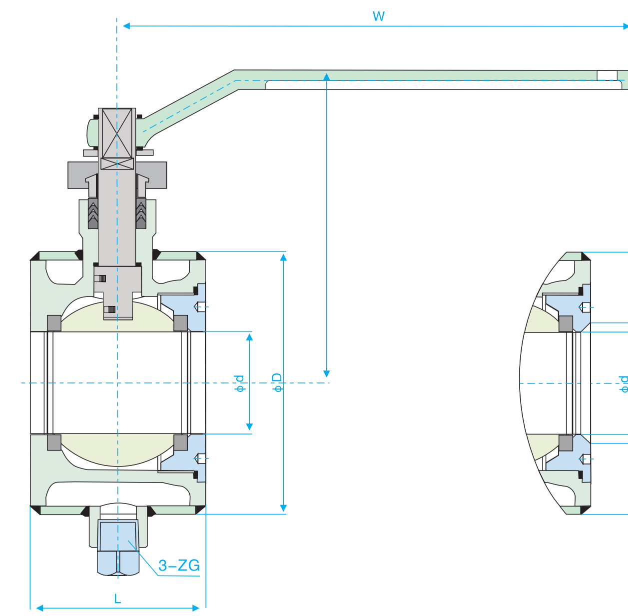
## 型号、材料及主要参数 Material and Main Valve Data

| 配管法兰 Pipe flange | 公称压力 Pressure Rating | 常规产品型号 Type | | | | | | |
|---|---|---|---|---|---|---|---|---|
| ASME B16.5 | Class150 | Q71F-A1C | Q71F-A1P | Q71F-A1P8 | Q71F-A1P3 | Q71F-A1R | Q71F-A1R8 | Q71F-A1R3 |
| GB/T9112~9124 | PN10 | Q71F-10C | Q71F-10P | Q71F-10P8 | Q71F-10P3 | Q71F-10R | Q71F-10R8 | Q71F-10R3 |
| HG/T 20615 | PN16 | Q71F-16C | Q71F-16P | Q71F-16P8 | Q71F-16P3 | Q71F-16R | Q71F-16R8 | Q71F-16R3 |
| JB/T 74~90 | PN25 | Q71F-25 | Q71F-25P | Q71F-25P8 | Q71F-25P3 | Q71F-25R | Q71F-25R8 | Q71F-25R3 |
| JIS B2238 | 10k | Q71F-K1C | Q71F-K1P | Q71F-K1P8 | Q71F-K1P3 | Q71F-K1R | Q71F-K1R8 | Q71F-K1R3 |
| 主要零件材料 Main parts material | 阀体Body | WCB | ZG1Cr18Ni9Ti 1Cr18Ni9Ti | CF8 | CF3 304L | ZG1Cr18Ni12Mo2Ti 1Cr18Ni12Mo2Ti | CF8M | CF3M |
| | 球体、阀杆 Ball、Stem | 2Cr13 | 1Cr18Ni19Ti | 0Cr18Ni19 | 00Cr19Ni10 (304L) | 1Cr18Ni12Mo2Ti | 0Cr17Ni12Mo2 (316) | 00Cr17Ni14Mo2 (316L) |
| | 密封面 sealing surface | 增强聚四氟乙烯、对位聚苯 RPTFE、PPL | | | | | | |
| 适用工况 Applicable condition | 适用介质 Applicable medium | 水、蒸汽、油品、煤气、液化气、天然气等 Water、Steam Oils、Coal gas、Liquefied gas、gas | | 硝酸类腐蚀性介质 Nitric acid corrosion medium | 强氧化性介质 Strong oxidizing medium | 醋酸类腐蚀性介质 Acetic acid corrosive medium | | 尿素类腐蚀性介质 Urea corrosive medium |
| | 适用温度 Applicable temperature | ≤180℃（增强聚四氟乙烯）、≤300℃（对位聚苯） ≤180℃（RPTFE）、≤300℃（PPL） | | | | | | |
| 涡轮蜗杆传动球阀 worm gear ball valve | | 在相应的蜗轮蜗杆型号的Q后去掉“3”表示，示例：Q371F-A1C | | | | | | |
| 气动球阀 pneumatic ball valve | | 在相应的蜗轮蜗杆型号的Q后“3”改为“6”表示，示例：Q671F-A1C | | | | | | |
| 电动球阀 electric ball valve | | 在相应的蜗轮蜗杆型号的Q后“3”改为“9”表示，示例：Q971F-A1C | | | | | | |

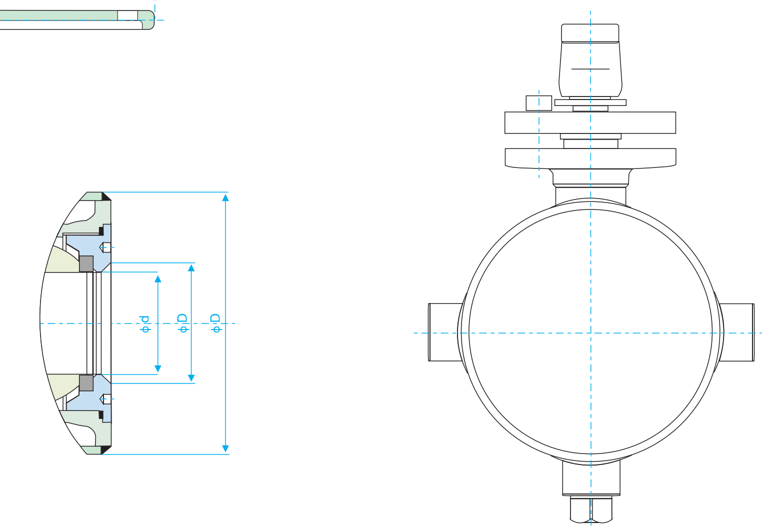
注：本表我常规法兰连接蜗轮蜗杆传动固定球阀的型号编制、主要零件材料及适用工况，其他要求及其型号编制见球阀型号编制方法。
Note: This table is about the model preparation,main parts material and applicable condition of flange ends matal to metal worm gear valve.



## 主要尺寸及重量 Main sizes and weights




DN15~DN80



DN100~DN200

| 公称压力 Pressure Rating | 公称尺寸 Dimensions DN | 公称尺寸 NPS | 法兰规格 Flange size DN | 法兰规格 NPS | 尺寸Dimensions (mm) L | d | D | D1 | W | H | ZG | 重量 Weight (Kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Class150 PN20 | 15 | $\frac{1}{2}$ | 15×32 | $\frac{1}{2}\times1\frac{1}{4}$ | 50 | 13 | 75 | – | 140 | 111 | ZG$\frac{3}{8}$ | 2 |
| | 20 | $\frac{3}{4}$ | 20×40 | $\frac{3}{4}\times1\frac{1}{2}$ | 55 | 20 | 85 | – | 140 | 112 | ZG$\frac{3}{8}$ | 2 |
| | 25 | 1 | 25×50 | 1 × 2 | 60 | 25 | 103 | – | 150 | 138 | ZG$\frac{3}{4}$ | 3 |
| | 32 | $1\frac{1}{4}$ | 32×50 | $1\frac{1}{4}\times2$ | 70 | 32 | 103 | – | 180 | 150 | ZG$\frac{3}{4}$ | 4 |
| | 40 | $1\frac{1}{2}$ | 40×65 | $1\frac{1}{2}\times2\frac{1}{2}$ | 80 | 40 | 122 | – | 200 | 170 | ZG$\frac{3}{4}$ | 6 |
| | 50 | 2 | 50×80 | 2 × 3 | 90 | 51 | 135 | – | 250 | 175 | ZG$\frac{3}{4}$ | 9 |
| | 65 | $2\frac{1}{2}$ | 65×100 | $2\frac{1}{2}\times4$ | 110 | 64 | 173 | – | 300 | 195 | ZG$\frac{3}{4}$ | 13 |
| | 80 | 3 | 80×125 | 3 × 5 | 120 | 76 | 195 | – | 350 | 216 | ZG$\frac{3}{4}$ | 18 |
| | 100 | 4 | 100×150 | 4 × 6 | 140 | 88 | 220 | 100 | 350 | 235 | ZG$\frac{3}{4}$ | 28 |
| | 125 | 5 | 125×200 | 5 × 6 | 170 | 102 | 220 | 127 | 500 | 270 | ZG$\frac{3}{4}$ | 40 |
| | 150 | 6 | 150×200 | 6 × 8 | 200 | 127 | 277 | 150 | 800 | 310 | ZG$\frac{3}{4}$ | 56 |
| | 200 | 8 | 200×250 | 8 × 10 | 240 | 152 | 337 | 203 | 800 | 380 | ZG$\frac{3}{4}$ | 75 |
| JIS 10K | 15 | | 15×32 | | 50 | 13 | 84 | – | 140 | 111 | ZG$\frac{3}{8}$ | 2 |
| | 20 | | 20×40 | | 55 | 20 | 89 | – | 140 | 112 | ZG$\frac{3}{8}$ | 2 |
| | 25 | | 25×50 | | 60 | 25 | 104 | – | 150 | 138 | ZG$\frac{3}{4}$ | 3 |
| | 32 | | 32×50 | | 70 | 32 | 104 | – | 180 | 150 | ZG$\frac{3}{4}$ | 4 |
| | 40 | | 40×65 | | 80 | 40 | 124 | – | 200 | 170 | ZG$\frac{3}{4}$ | 6 |
| | 50 | | 50×80 | | 90 | 51 | 134 | – | 250 | 175 | ZG$\frac{3}{4}$ | 9 |
| | 65 | | 65×100 | | 110 | 64 | 159 | – | 300 | 195 | ZG$\frac{3}{4}$ | 13 |
| | 80 | | 80×125 | | 120 | 76 | 190 | – | 350 | 216 | ZG$\frac{3}{4}$ | 18 |
| | 100 | | 100×150 | | 140 | 88 | 220 | 100 | 350 | 235 | ZG$\frac{3}{4}$ | 28 |
| | 125 | | 125×200 | | 170 | 102 | 268 | 127 | 500 | 270 | ZG$\frac{3}{4}$ | 40 |
| | 150 | | 150×200 | | 200 | 127 | 268 | 150 | 800 | 310 | ZG$\frac{3}{4}$ | 56 |
| | 200 | | 200×250 | | 240 | 152 | 330 | 203 | 800 | 380 | ZG$\frac{3}{4}$ | 75 |

# 保温夹套对夹连接球阀
Wafer type jacketed ball valve

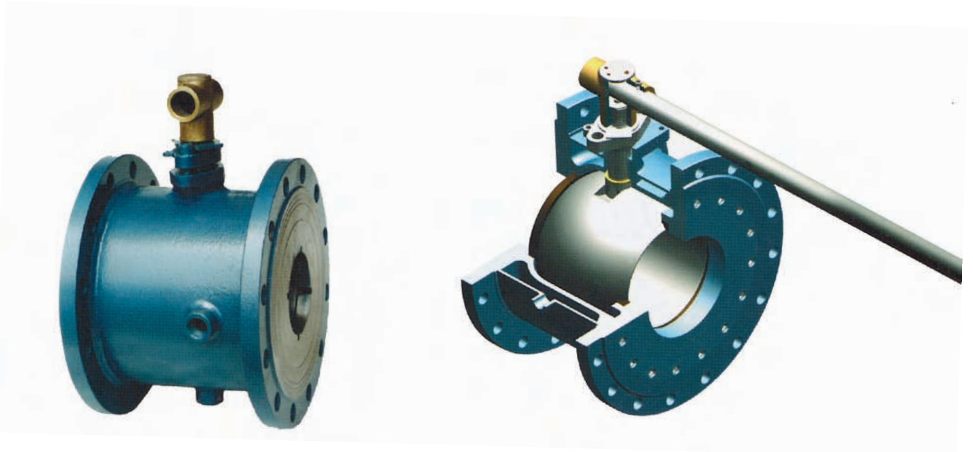
| 公称压力 Pressure Rating | 公称尺寸 Dimensions DN | 法兰规格 Flange size DN | 尺寸Dimensions ( mm ) | | | | | | | 重量 Weight ( Kg ) |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | L | d | D | D1 | W | H | ZG | |
| PN10 | 15 | 15×32 | 50 | 13 | 84 | – | 140 | 111 | ZG3/8 | 2 |
| | 20 | 20×40 | 55 | 20 | 94 | – | 140 | 112 | ZG3/8 | 2 |
| | 25 | 25×50 | 60 | 25 | 109 | – | 150 | 138 | ZG3/4 | 3 |
| | 32 | 32×50 | 70 | 32 | 109 | – | 180 | 150 | ZG3/4 | 4 |
| | 40 | 40×65 | 80 | 40 | 129 | – | 200 | 170 | ZG3/4 | 6 |
| | 50 | 50×80 | 90 | 51 | 144 | – | 250 | 175 | ZG3/4 | 9 |
| | 65 | 65×100 | 110 | 64 | 164 | – | 300 | 195 | ZG3/4 | 13 |
| | 80 | 80×125 | 120 | 76 | 194 | – | 350 | 216 | ZG3/4 | 18 |
| | 100 | 100×150 | 140 | 88 | 220 | 100 | 350 | 235 | ZG3/4 | 28 |
| | 125 | 125×200 | 170 | 102 | 273 | 127 | 500 | 270 | ZG3/4 | 40 |
| | 150 | 150×200 | 200 | 127 | 273 | 150 | 800 | 310 | ZG3/4 | 56 |
| | 200. | 200×250 | 240 | 152 | 327 | 203 | 800 | 380 | ZG3/4 | 75 |
| PN16 | 15 | 15×32 | 50 | 13 | 84 | – | 140 | 111 | ZG3/8 | 2 |
| | 20 | 20×40 | 55 | 20 | 94 | – | 140 | 112 | ZG3/8 | 2 |
| | 25 | 25×50 | 60 | 25 | 109 | – | 150 | 138 | ZG3/4 | 3 |
| | 32 | 32×50 | 70 | 32 | 109 | – | 180 | 150 | ZG3/4 | 4 |
| | 40 | 40×65 | 80 | 40 | 129 | – | 200 | 170 | ZG3/4 | 6 |
| | 50 | 50×80 | 90 | 51 | 144 | – | 250 | 175 | ZG3/4 | 9 |
| | 65 | 65×100 | 110 | 64 | 164 | – | 300 | 195 | ZG3/4 | 13 |
| | 80 | 80×125 | 120 | 76 | 194 | – | 350 | 216 | ZG3/4 | 18 |
| | 100 | 100×150 | 140 | 88 | 220 | 100 | 350 | 235 | ZG3/4 | 28 |
| | 125 | 125×200 | 170 | 102 | 273 | 127 | 500 | 270 | ZG3/4 | 40 |
| | 150 | 150×200 | 200 | 127 | 273 | 150 | 800 | 310 | ZG3/4 | 56 |
| | 200 | 200×250 | 240 | 152 | 330 | 203 | 800 | 380 | ZG3/4 | 75 |
| PN25 | 15 | 15×32 | 50 | 13 | 84 | – | 140 | 111 | ZG3/8 | 2 |
| | 20 | 20×40 | 55 | 20 | 94 | – | 140 | 112 | ZG3/8 | 2 |
| | 25 | 25×50 | 60 | 25 | 109 | – | 150 | 138 | ZG3/4 | 3 |
| | 32 | 32×50 | 70 | 32 | 109 | – | 180 | 150 | ZG3/4 | 4 |
| | 40 | 40×65 | 80 | 40 | 129 | – | 200 | 170 | ZG3/4 | 6 |
| | 50 | 50×80 | 90 | 51 | 144 | – | 250 | 175 | ZG3/4 | 9 |
| | 65 | 65×100 | 110 | 64 | 170 | – | 300 | 195 | ZG3/4 | 13 |
| | 80 | 80×125 | 120 | 76 | 198 | – | 350 | 216 | ZG3/4 | 18 |
| | 100 | 100×150 | 140 | 88 | 227 | 100 | 350 | 235 | ZG3/4 | 28 |
| | 125 | 125×200 | 170 | 102 | 286 | 127 | 500 | 270 | ZG3/4 | 40 |
| | 150 | 150×200 | 200 | 127 | 286 | 150 | 800 | 310 | ZG3/4 | 56 |
| | 200 | 200×250 | 240 | 152 | 340 | 203 | 800 | 380 | ZG3/4 | 75 |







# 保温夹套法兰连接球阀
Flange type jacketed ball valve



## 结构特点及用途 Structure features and application

保温夹套法兰连接球阀拥有ZL200920110598.4、ZL200920110599.9等专利技术，根据工况和用户要求，可采用增强聚四氟乙烯、对位苯或金属硬密封等多种密封材料。驱动方式可以是手动、蜗轮蜗杆传动、气动或电动。夹套设计压力一般为1.0MPa,也可根据用户要求进行特别设计，保温夹套球阀一般采用较大规格连接法兰，选用时要特别注意。

保温夹套法兰连接球阀适用于CLASS150~CLASS300、PN16~PN40、JIS 10K~JIS20K的各种管路上，用于截断或接通管路中的介质，选用不同的材质，可分别适用于水、蒸汽、油品、液化气、煤气、硝酸、醋酸、氧化性介质、尿素等多种介质,并能保温盒防止介质结晶。

According to working condition and customers' requirement, a couple of sealing materials for flangedends jacketed ball valves may be adopted, such as reinforced PTFE, PPL or other hardened metal. Operationmanners are of manual, worm gear, and pneumatic or electric actuators. Design pressure of the jacket isgenerally 1.0 MPa. As per customers' requirement, special design is available. In general, temperatureprotection jacketed ball valve is employing big sized

Temperature protection jacketed ball valves are suitable for use on various kinds of pipelines of Class150～Class300, PN16～PN40, JIS10K～JIS20K to cut off or turn on the medium in pipelines, being able to protectmedium from crystallization.flanges for connection ends, to which attention shouldbe drawn when ordering .

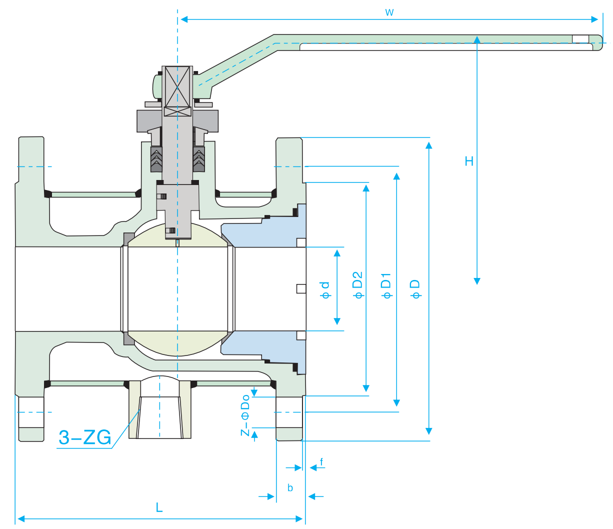
## 型号、材料及主要参数 Material and Main Valve Data

| 配管法兰 Pipe flange | 公称压力 Pressure Rating | 法兰密封面 Flange face | 常规产品型号 Type | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| ASME B16.5 GB/T9112–9124 HG/T 20615 | Class150 | 凸面 RF | BQ41F–A1C | BQ41F–A1P | BQ41F–A1P8 | BQ41F–A1P3 | BQ41F–A1R | BQ41F–A1R8 | BQ41F–A1R3 |
| | Class300 | | BQ41F–A3 | BQ41F–A3P | BQ41F–A3P8 | BQ41F–A3P3 | BQ41F–A3R | BQ41F–A3R8 | BQ41F–A3R3 |
| GB/T9112~9124 HG/T 20592 JB/T 74~90 | PN16 | 凸面 RF | BQ41F–16C | BQ41F–16P | BQ41F–16P8 | BQ41F–16P3 | BQ41F–16R | BQ41F–16R8 | BQ41F–16R3 |
| | PN25 | | BQ41F–25 | BQ41F–25P | BQ41F–25P8 | BQ41F–25P3 | BQ41F–25R | BQ41F–25R8 | BQ41F–25R3 |
| | PN40 | 凹凸面 MF | BQ41F–40C | BQ41F–40P | BQ41F–40P8 | BQ41F–40P3 | BQ41F–40R | BQ41F–40R8 | BQ41F–40R3 |
| JIS B2238 | 10K | 凸面 RF | BQ41F–K1C | BQ41F–K1P | BQ41F–K1P8 | BQ41F–K1P3 | BQ41F–K1R | BQ41F–K1R8 | BQ41F–K1R3 |
| | 20K | | BQ41F–K2 | BQ41F–K2P | BQ41F–K2P8 | BQ41F–K2P3 | BQ41F–K2R | BQ41F–K2R8 | BQ41F–K2R3 |
| 主要零件材料 Main parts material | 阀体Body | | WCB | ZG1Cr18Ni9Ti 1Cr18Ni9Ti | CF8 | CF3 | ZG1Cr18Ni12Mo2Ti 1Cr18Ni12Mo2Ti | CF8M | CF3M |
| | 球体、阀杆 Ball、Stem | | 2Cr13 | 1Cr18Ni19Ti | 0Cr18Ni9 (304) | 00Cr19Ni10 (304L) | 1Cr18Ni12Mo2Ti | 0Cr17Ni12Mo2 ( 316 ) | 00Cr17Ni14Mo2 ( 316L ) |
| | 阀座Seat | | 增强聚四氟乙烯、对位聚苯、钨钴合金、镍基合金及特种硬化材料 RPTFE、PPL、Stellite、Monel、Special Alloy | | | | | | |
| 适用工况 Applicable condition | 适用介质 Applicable medium | | 水、蒸汽、油品、煤气、液化气、天然气等 Water、Steam Oils、Coal gas、Liquefied gas、gas | | 硝酸类腐蚀性介质 Nitric acid corrosion medium | 强氧化性介质 Strong oxidizing medium | 醋酸类腐蚀性介质 Acetic acid corrosive medium | | 尿素类腐蚀性介质 Urea corrosive medium |
| | 适用温度 Applicable temperature | | ≤180℃(增强聚四氟乙烯)≤300℃(对位聚苯)≤500℃(钨钴合金及特种硬化材料) ≤180℃(RPTFE)≤300℃(PPL)≤500℃(Stellite、Special Alloy) | | | | | | |
| 涡轮蜗杆传动球阀 worm gear ball valve | | | 将相应的手动型号的BQ后插入“3”表示，示例：Q341F–A1C | | | | | | |
| 气动球阀 pneumatic ball valve | | | 将相应的手动型号的BQ后插入“6”表示，示例：Q641F–A1C | | | | | | |
| 电动球阀 electric ball valve | | | 将相应的手动型号的BQ后插入“9”表示，示例：Q941F–A1C | | | | | | |

注：本表我常规法兰连接保温夹套球阀的型号编制、主要零件材料及适用工况，其他要求及其型号编制见球阀型号编制方法。
note: this table is about the model preparation,main parts material and applicable condition of flange ends matal to wafer type jacketed ball valve.

保温夹套法兰连接球阀
Flangetype jacketed ball valve
祺隆阀门 QILONG QILONG VALVE

## 主要尺寸及重量



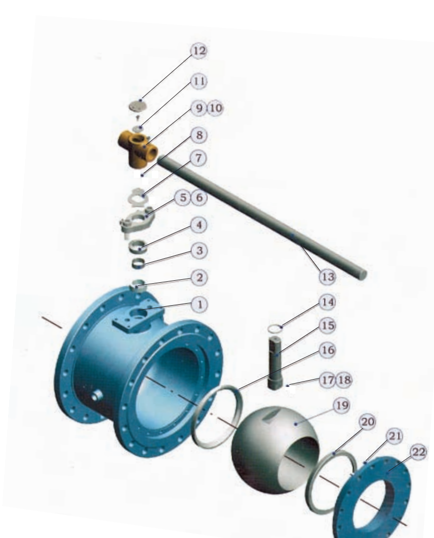

| 公称压力 Pressure Rating | 公称尺寸 Dimensions DN | 公称尺寸 Dimensions NPS | 法兰规格 Flange size DN | 法兰规格 Flange size NPS | 尺寸Dimensions ( mm ) L | D | D1 | D2 | b | f | Z–φdo | W | H | ZG | 重量 Weight ( Kg ) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Class150 PN20 | 15 | $\frac{1}{2}$ | 15×32 | $\frac{1}{2}\times1\frac{1}{4}$ | 108 | 117 | 89 | 64 | 13 | 1.6 | 4–15 | 140 | 140 | ZG$\frac{3}{8}$ | 3 |
| | 20 | $\frac{3}{4}$ | 20×40 | $\frac{3}{4}\times1\frac{1}{2}$ | 117 | 127 | 98.5 | 73 | 15 | 1.6 | 4–15 | 140 | 150 | ZG$\frac{3}{8}$ | 4 |
| | 25 | 1 | 25×50 | 1 × 2 | 127 | 152 | 120.5 | 92 | 16 | 1.6 | 4–19 | 150 | 160 | ZG$\frac{3}{4}$ | 6 |
| | 32 | $1\frac{1}{4}$ | 32×50 | $1\frac{1}{4}\times2$ | 140 | 152 | 120.5 | 92 | 16 | 1.6 | 4–19 | 180 | 180 | ZG$\frac{3}{4}$ | 8 |
| | 40 | $1\frac{1}{2}$ | 40×65 | $1\frac{1}{2}\times2\frac{1}{2}$ | 165 | 178 | 139.5 | 105 | 18 | 1.6 | 4–19 | 200 | 180 | ZG$\frac{3}{4}$ | 10 |
| | 50 | 2 | 50×80 | 2 × 3 | 178 | 190 | 152.5 | 127 | 19 | 1.6 | 4–19 | 250 | 200 | ZG$\frac{3}{4}$ | 14 |
| | 65 | $2\frac{1}{2}$ | 65×100 | $2\frac{1}{2}\times4$ | 190 | 229 | 190.5 | 157 | 24 | 1.6 | 8–19 | 300 | 210 | ZG$\frac{3}{4}$ | 18 |
| | 80 | 3 | 80×150 | 3 × 6 | 229 | 279 | 241.5 | 216 | 26 | 1.6 | 8–22 | 350 | 220 | ZG$\frac{3}{4}$ | 25 |
| | 100 | 4 | 100×200 | 4 × 8 | 254 | 343 | 298.5 | 270 | 29 | 1.6 | 8–22 | 500 | 250 | ZG$\frac{3}{4}$ | 36 |
| | 125 | 5 | 125×200 | 5 × 8 | 267 | 343 | 298.5 | 270 | 29 | 1.6 | 8–22 | 650 | 270 | ZG$\frac{3}{4}$ | 66 |
| | 150 | 6 | 150×250 | 6 × 10 | 292 | 406 | 362 | 324 | 31 | 1.6 | 12–25 | 800 | 290 | ZG$\frac{3}{4}$ | 98 |
| | 200 | 8 | 200×350 | 8 × 14 | 330 | 533 | 476 | 413 | 35 | 1.6 | 12–29 | 1000 | 330 | ZG$\frac{3}{4}$ | 160 |
| CLass300 PN50 | 15 | $\frac{1}{2}$ | 15×32 | $\frac{1}{2}\times1\frac{1}{4}$ | 108 | 133 | 98.5 | 64 | 19 | 1.6 | 4–19 | 140 | 150 | ZG$\frac{3}{8}$ | 4 |
| | 20 | $\frac{3}{4}$ | 20×40 | $\frac{3}{4}\times1\frac{1}{2}$ | 117 | 156 | 114.5 | 73 | 21 | 1.6 | 4–22 | 140 | 160 | ZG$\frac{3}{8}$ | 5 |
| | 25 | 1 | 25×50 | 1 × 2 | 127 | 165 | 127 | 92 | 23 | 1.6 | 8–19 | 150 | 180 | ZG$\frac{3}{4}$ | 8 |
| | 32 | $1\frac{1}{4}$ | 32×50 | $1\frac{1}{4}\times2$ | 140 | 165 | 127 | 92 | 23 | 1.6 | 8–19 | 180 | 200 | ZG$\frac{3}{4}$ | 10 |
| | 40 | $1\frac{1}{2}$ | 40×65 | $1\frac{1}{2}\times2\frac{1}{2}$ | 165 | 190 | 149 | 105 | 26 | 1.6 | 8–22 | 200 | 200 | ZG$\frac{3}{4}$ | 13 |
| | 50 | 2 | 50×80 | 2 × 3 | 178 | 210 | 168.5 | 127 | 29 | 1.6 | 8–22 | 250 | 220 | ZG$\frac{3}{4}$ | 18 |
| | 65 | $2\frac{1}{2}$ | 65×100 | $2\frac{1}{2}\times4$ | 190 | 254 | 200 | 157 | 32 | 1.6 | 8–22 | 300 | 230 | ZG$\frac{3}{4}$ | 23 |
| | 80 | 3 | 80×150 | 3 × 6 | 229 | 318 | 270 | 216 | 37 | 1.6 | 12–22 | 350 | 240 | ZG$\frac{3}{4}$ | 36 |
| | 100 | 4 | 100×200 | 4 × 8 | 254 | 381 | 330 | 270 | 42 | 1.6 | 12–25 | 500 | 270 | ZG$\frac{3}{4}$ | 58 |
| | 125 | 5 | 125×200 | 5 × 8 | 267 | 381 | 330 | 270 | 42 | 1.6 | 12–25 | 650 | 280 | ZG$\frac{3}{4}$ | 90 |
| | 150 | 6 | 150×250 | 6 × 10 | 292 | 445 | 387.5 | 324 | 48 | 1.6 | 16–29 | 800 | 320 | ZG$\frac{3}{4}$ | 120 |
| | 200 | 8 | 200×350 | 8 × 14 | 330 | 584 | 514.5 | 413 | 54 | 1.6 | 20–32 | 1000 | 350 | ZG$\frac{3}{4}$ | 210 |

| 公称压力 Pressure Rating | 公称尺寸 Dimensions DN | 法兰规格 Flange size DN | 尺寸Dimensions ( mm ) L | D | D1 | D2 | b | f | Z–φdo | W | H | ZG | 重量 Weight ( Kg ) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PN16 | 15 | 15×32 | 108 | 140 | 100 | 78 | 18 | 2 | 4–18 | 140 | 140 | ZG$\frac{3}{8}$ | 3 |
| | 20 | 20×40 | 117 | 150 | 110 | 88 | 18 | 3 | 4–18 | 140 | 150 | ZG$\frac{3}{8}$ | 4 |
| | 25 | 25×50 | 127 | 165 | 125 | 102 | 18 | 3 | 4–18 | 150 | 160 | ZG$\frac{1}{2}$ | 6 |
| | 32 | 32×50 | 140 | 165 | 125 | 102 | 18 | 3 | 4–18 | 180 | 180 | ZG$\frac{3}{4}$ | 8 |
| | 40 | 40×65 | 165 | 185 | 145 | 122 | 18 | 3 | 8–18 | 200 | 180 | ZG$\frac{3}{4}$ | 10 |
| | 50 | 50×80 | 178 | 200 | 160 | 138 | 20 | 3 | 8–18 | 250 | 200 | ZG$\frac{3}{4}$ | 14 |
| | 65 | 65×100 | 190 | 220 | 180 | 158 | 20 | 3 | 8–18 | 300 | 210 | ZG$\frac{3}{4}$ | 18 |
| | 80 | 80×150 | 229 | 285 | 240 | 212 | 22 | 3 | 8–22 | 350 | 220 | ZG$\frac{3}{4}$ | 25 |
| | 100 | 100×200 | 254 | 340 | 295 | 268 | 24 | 3 | 12–22 | 500 | 250 | ZG$\frac{3}{4}$ | 36 |
| | 125 | 125×200 | 267 | 340 | 295 | 268 | 24 | 3 | 12–22 | 650 | 270 | ZG$\frac{3}{4}$ | 66 |
| | 150 | 150×250 | 292 | 405 | 355 | 320 | 26 | 3 | 12–26 | 800 | 290 | ZG$\frac{3}{4}$ | 98 |
| | 200 | 200×350 | 330 | 520 | 470 | 438 | 30 | 3 | 16–26 | 1000 | 330 | ZG$\frac{3}{4}$ | 160 |
| PN25 | 15 | 15×32 | 108 | 140 | 100 | 78 | 18 | 2 | 4–18 | 140 | 140 | ZG$\frac{3}{8}$ | 4 |
| | 20 | 20×40 | 117 | 150 | 110 | 88 | 18 | 3 | 4–18 | 140 | 150 | ZG$\frac{3}{8}$ | 5 |
| | 25 | 25×50 | 127 | 165 | 125 | 102 | 20 | 3 | 4–18 | 150 | 160 | ZG$\frac{1}{2}$ | 7 |
| | 32 | 32×50 | 140 | 165 | 125 | 102 | 20 | 3 | 4–18 | 180 | 180 | ZG$\frac{3}{4}$ | 9 |
| | 40 | 40×65 | 165 | 185 | 145 | 122 | 22 | 3 | 8–18 | 200 | 180 | ZG$\frac{3}{4}$ | 11 |
| | 50 | 50×80 | 178 | 200 | 160 | 138 | 24 | 3 | 8–18 | 250 | 200 | ZG$\frac{3}{4}$ | 15 |
| | 65 | 65×100 | 190 | 235 | 190 | 162 | 24 | 3 | 8–22 | 300 | 210 | ZG$\frac{3}{4}$ | 20 |
| | 80 | 80×150 | 229 | 300 | 250 | 218 | 28 | 3 | 8–26 | 350 | 220 | ZG$\frac{3}{4}$ | 30 |
| | 100 | 100×200 | 254 | 360 | 310 | 278 | 30 | 3 | 12–26 | 500 | 250 | ZG$\frac{3}{4}$ | 40 |
| | 125 | 125×200 | 267 | 360 | 310 | 278 | 30 | 3 | 12–26 | 650 | 270 | ZG$\frac{3}{4}$ | 74 |
| | 150 | 150×250 | 292 | 425 | 370 | 355 | 32 | 3 | 12–30 | 800 | 290 | ZG$\frac{3}{4}$ | 105 |
| | 200 | 200×350 | 330 | 555 | 490 | 450 | 38 | 3 | 16–33 | 1000 | 330 | ZG$\frac{3}{4}$ | 175 |
| PN40 | 15 | 15×32 | 108 | 140 | 100 | 78 | 18 | 2 | 4–18 | 140 | 140 | ZG$\frac{3}{8}$ | 4 |
| | 20 | 20×40 | 117 | 150 | 110 | 88 | 18 | 3 | 4–18 | 140 | 150 | ZG$\frac{3}{8}$ | 5 |
| | 25 | 25×50 | 127 | 165 | 125 | 102 | 20 | 3 | 4–18 | 150 | 160 | ZG$\frac{1}{2}$ | 8 |
| | 32 | 32×50 | 140 | 165 | 125 | 102 | 20 | 3 | 4–18 | 180 | 180 | ZG$\frac{3}{4}$ | 10 |
| | 40 | 40×65 | 165 | 185 | 145 | 122 | 22 | 3 | 8–18 | 200 | 180 | ZG$\frac{3}{4}$ | 13 |
| | 50 | 50×80 | 178 | 200 | 160 | 138 | 24 | 3 | 8–18 | 250 | 200 | ZG$\frac{3}{4}$ | 18 |
| | 65 | 65×100 | 190 | 235 | 190 | 162 | 24 | 3 | 8–22 | 300 | 210 | ZG$\frac{3}{4}$ | 23 |
| | 80 | 80×150 | 229 | 300 | 250 | 218 | 28 | 3 | 8–26 | 350 | 220 | ZG$\frac{3}{4}$ | 36 |
| | 100 | 100×200 | 254 | 375 | 320 | 285 | 34 | 3 | 12–30 | 500 | 250 | ZG$\frac{3}{4}$ | 58 |
| | 125 | 125×200 | 267 | 375 | 320 | 285 | 34 | 3 | 12–30 | 650 | 270 | ZG$\frac{3}{4}$ | 90 |
| | 150 | 150×250 | 292 | 450 | 385 | 345 | 38 | 3 | 12–33 | 800 | 290 | ZG$\frac{3}{4}$ | 120 |
| | 200 | 200×350 | 330 | 580 | 510 | 465 | 46 | 3 | 16–33 | 1000 | 330 | ZG$\frac{3}{4}$ | 210 |

注：本表法兰尺寸按GB/9112~9124标准。根据用户要求，法兰尺寸也可按HG/T 20592及JB/T 74~90标准设计制造
Note:this table of flange size is as per standard ASME GB/9112~9124,it also can be designed and produced as per customer's requirement or HG/T 20592,JB/T 74~90.

# 保温夹套法兰连接球阀
## Flange type jacketed ball valve

| 公称压力 Pressure Rating | 公称尺寸 Dimensions DN | 法兰规格 Flange size DN | 尺寸Dimensions ( mm ) | | | | | | | | | | 重量 Weight ( Kg ) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | L | D | D1 | D2 | b | f | Z–ϕdo | W | H | ZG | |
| JIS 10K | 15 | 15×32 | 108 | 135 | 100 | 76 | 16 | 2 | 4–19 | 140 | 140 | ZG3/8 | 3 |
| | 20 | 20×40 | 117 | 140 | 105 | 81 | 16 | 2 | 4–19 | 140 | 150 | ZG3/8 | 4 |
| | 25 | 25×50 | 127 | 155 | 120 | 96 | 16 | 2 | 4–19 | 150 | 160 | ZG1/2 | 6 |
| | 32 | 32×50 | 140 | 155 | 120 | 96 | 16 | 2 | 4–19 | 180 | 180 | ZG3/4 | 8 |
| | 40 | 40×65 | 165 | 175 | 140 | 116 | 18 | 2 | 4–19 | 200 | 180 | ZG3/4 | 10 |
| | 50 | 50×80 | 178 | 185 | 150 | 126 | 18 | 2 | 8–19 | 250 | 200 | ZG3/4 | 14 |
| | 65 | 65×100 | 190 | 210 | 175 | 151 | 18 | 2 | 8–19 | 300 | 210 | ZG3/4 | 18 |
| | 80 | 80×150 | 229 | 280 | 240 | 212 | 22 | 2 | 8–23 | 350 | 220 | ZG3/4 | 25 |
| | 100 | 100×200 | 254 | 330 | 290 | 262 | 22 | 2 | 12–23 | 500 | 250 | ZG3/4 | 36 |
| | 125 | 125×200 | 267 | 330 | 290 | 262 | 22 | 2 | 12–23 | 650 | 270 | ZG3/4 | 66 |
| | 150 | 150×250 | 292 | 400 | 355 | 324 | 24 | 2 | 12–25 | 800 | 290 | ZG3/4 | 98 |
| | 200 | 200×350 | 330 | 490 | 445 | 413 | 26 | 2 | 16–25 | 1000 | 330 | ZG3/4 | 160 |
| JIS 20K | 15 | 15×32 | 108 | 135 | 100 | 76 | 18 | 2 | 4–19 | 140 | 140 | ZG3/8 | 4 |
| | 20 | 20×40 | 117 | 140 | 105 | 81 | 18 | 2 | 4–19 | 140 | 150 | ZG3/8 | 5 |
| | 25 | 25×50 | 127 | 155 | 120 | 96 | 18 | 2 | 8–19 | 150 | 160 | ZG1/2 | 8 |
| | 32 | 32×50 | 140 | 155 | 120 | 96 | 18 | 2 | 8–19 | 180 | 180 | ZG3/4 | 10 |
| | 40 | 40×65 | 165 | 175 | 140 | 116 | 20 | 2 | 8–19 | 200 | 180 | ZG3/4 | 13 |
| | 50 | 50×80 | 178 | 200 | 160 | 132 | 22 | 2 | 8–23 | 250 | 200 | ZG3/4 | 18 |
| | 65 | 65×100 | 190 | 225 | 185 | 160 | 24 | 2 | 8–23 | 300 | 210 | ZG3/4 | 23 |
| | 80 | 80×150 | 229 | 305 | 260 | 230 | 28 | 2 | 12–25 | 350 | 220 | ZG3/4 | 36 |
| | 100 | 100×200 | 254 | 350 | 305 | 275 | 30 | 2 | 12–25 | 500 | 250 | ZG3/4 | 58 |
| | 125 | 125×200 | 267 | 350 | 305 | 275 | 30 | 2 | 12–25 | 650 | 270 | ZG3/4 | 90 |
| | 150 | 150×250 | 292 | 430 | 380 | 345 | 34 | 2 | 12–27 | 800 | 290 | ZG3/4 | 120 |
| | 200 | 200×350 | 330 | 540 | 480 | 440 | 40 | 2 | 16–33 | 1000 | 330 | ZG3/4 | 210 |



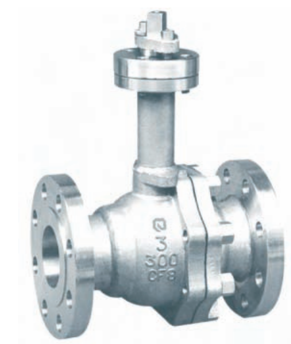
法兰连接保温夹套球阀典型结构及零部件组成
Typical drawing of flange type jacketed ball valve and parts composition

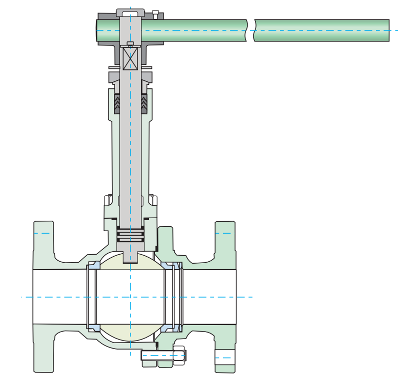
| | |
|---|---|
| 1–阀体； | 1–Body |
| 2–填料； | 2–Packing |
| 3–衬套； | 3–Bush |
| 4–填料压套； | 4–Gland |
| 5–填料压板； | 5–Gland flange |
| 6–螺钉； | 6–Bolt |
| 7–定位片； | 7–Stop collar |
| 8–挡圈； | 8–Circlip |
| 9–扳杆接头； | 9–Lever connector |
| 10–螺钉； | 10–Bolt |
| 11–垫圈； | 11–Washer |
| 12–顶盖； | 12–Top cap |
| 13–扳杆； | 13–Lever |
| 14–上密封垫； | 14–Thrust washer |
| 15–阀杆； | 15–Stem |
| 16–密封圈； | 16–Se at |
| 17–弹簧； | 17–Spring |
| 18–柱塞； | 18–Pillar |
| 19–球体； | 19–Ball |
| 20–密封圈； | 20–Seat |
| 21–螺钉； | 21–Bolt |
| 22–端盖； | 22–Body insert |



# 低温球阀
## Cryogenic ball valve







### 用途 Application

低温球阀适用于CLASS150~CLASS1500、PN16~PN100、JIS 10K~JIS20K的各种管路上，用于截断或接通管路中的介质，选用不同的材质，可分别适用于不同的温度介质，最低工作温度为-196℃低温球阀的驱动方式为手动、蜗轮蜗杆传动、气动或电动、低温球阀一般采用法兰连接，也可采用焊接连接。

The cryogenic ball valve is applicable to different pipeline of Class150 Class1500, PN16~PN100, JIS10K ~ JIS20K.different materials, the cryogenic ball valve is applicable to different working temperature and medium. The minimum temperature for the ball valve is –196℃. The operation of the ball valve can be manual operated, gear operated, pneumatic  Operated and motor operated.The end connection usually is flanged ends. However, the welded ends are also optional.

### 产品范围 Product range

低温球阀分为浮动球阀和低温固定球阀两类，其产品范围、结构长度、连接法兰尺寸等参见浮动球阀和固定球阀数据，对于温度高于–50℃的球阀，一般不采用长颈结构设计，对于温度低于–50℃的球阀，颈部长度一般为250mm,或根据我公司的设计与计算确定。

The cryogenic ball valve has two types: floating ball and trunnion mounted bal l. For the range, face to face dimension and flange dimension, please refer to the corresponding data of common floating ball valve and trunnion mounted ball valve. For valves with working temperature above –50℃ , long neck design is seldom adopted. For valves with working temperature below–50 , the neck length T shall be 250mm, or shall be decided as per our own design and calculation.

## 结构设计及加工制造的特点Structure features of cryogenic ball valve

低温球阀用于低温工况，特别是用于液化天然气等一些危险介质工况，祺隆公司对于低温球阀的设计、制造、试验积累了丰富的经验。

Cryogenic ball valve is used for low temperature working condition, especially for some hazard media, such as liquidized natural gas. Our company has been experienced in the design, manufacturing, inspection and test of cryogenic ball valve.

## 材料的用途 Choose for material

一般的钢材在低温下会出现低温脆性，因此根据低温球阀的最低工作温度选择适合的阀体材料是设计与制造的一个关键。阀体材料的最低工作温度见下表。低温材料需要根据标准要求进行低温冲击试验，以确保材料低温下的适用性。填料、垫片、螺栓、螺母也需要采用适合低温工况的材料。

Common steels are brittle in the cryogenic condition. So, the key point for the design and production of cryogenic ball is to select proper body material according to the minimum working temperature of the ball valve. To ensure the material suitability under the low temperature condition, t he material adopted shall be impact tested according to the standard requirement. The packing, gasket, bolt and nut shall also adopt the materials suitable for low temperature condition.

阀体材料的最低工作温度
Minimum working temperature for body material

| 锻件 | | 锻件 | |
|---|---|---|---|
| 材料 | 最低使用温度 | 材料 | 最低使用温度 |
| ASTM A350 LF2 | -46℃ | ASTM A350 LF2 LCB | -46℃ |
| | | ASTM A350 LF2 LCC | -46℃ |
| ASTM A350 LF2 | -59℃ | ASTM A350 LF2 LC1 | -59℃ |
| ASTM A350 LF2 | -73℃ | ASTM A350 LF2 LC2 | -73℃ |
| ASTM A350 LF2 | -101℃ | ASTM A350 LF2 LC3 | -101℃ |
| ASTM A182 LF2 | -254℃ | ASTM A182 LF2 cf8 | -254℃ |
| ASTM A182 LF2 | -254℃ | ASTM A182 LF2 CF8M | -254℃ |
| ASTM A182 LF2 | -254℃ | ASTM A182 LF2 CF3 | -254℃ |
| ASTM A182 LF2 | -254℃ | ASTM A182 LF2 CF3M | -254℃ |


低温试验区
Low temperature impact tested

## 结构设计及加工制造的特点 Design and manufacturing features

根据标准要求，温度低于-50℃的球阀，一般采用长颈结构设计，一提高填料处的温度，确保阀杆填料的可靠密封，颈部长度一般按标准要求设计，用户有特殊要求，也可按合同要求。

用于低温介质的阀门，当阀门处在关闭位置时，滞留在阀门中腔的低温液体介质在温度升高时因气化而使体积急剧膨胀，导致阀门中腔压力异常升高，严重的会造成阀门破裂等事故。祺隆球阀具有中腔自动泄压功能，当中腔异常升压时，中腔介质能够依靠其自身的作用力推动阀门而自动泄压，从而确保阀门的安全。

根据合同要求，可以进行低温试验，以检验阀门在低温下的操作扭矩、密封性能等指标。

阀门的零部件经过低温处理，以确保零部件在低温下形状和尺寸的稳定性。

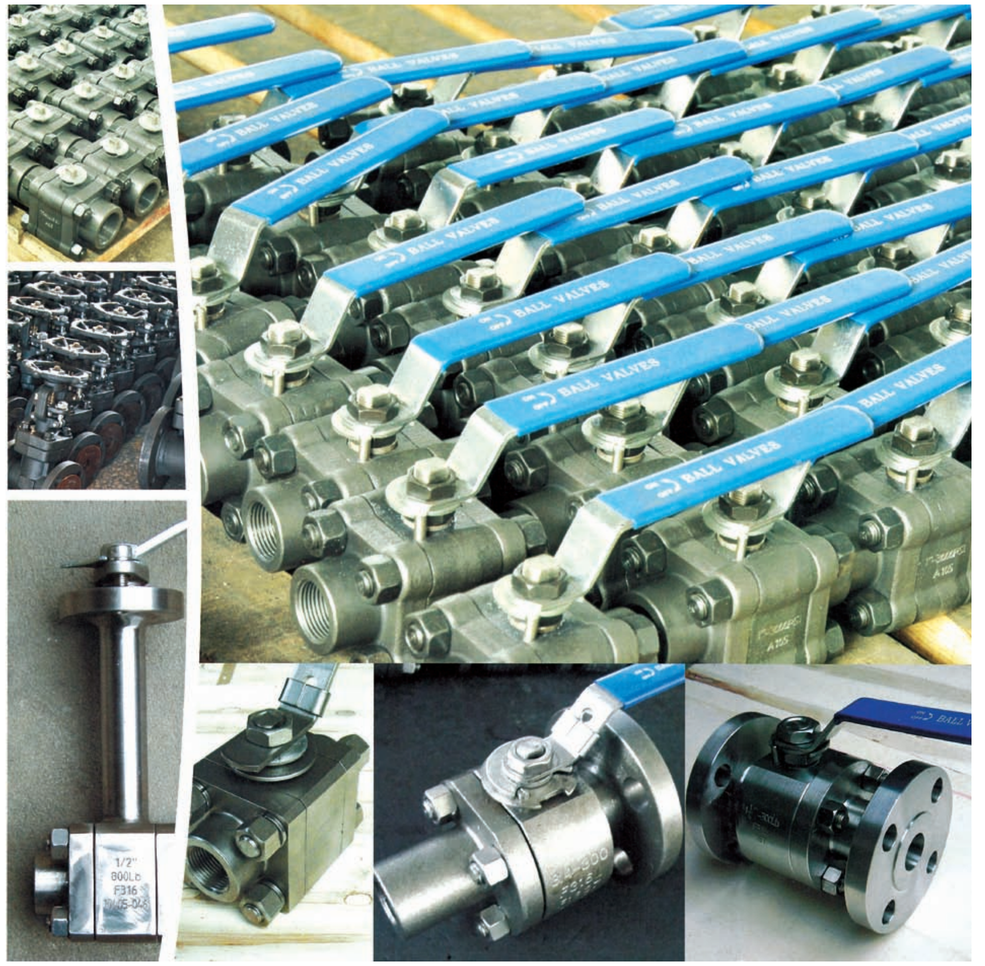
Being required by the standard, the long neck design is usually adopted for the ball valve below -5 0℃. The long neck design can keep the heat at the packing position and ensure the reliable sealing performance of the valve packing. The length of the neck complies to the standard, but, can be also changed as per the customer's requestin the contract .

For cryogenic ball valve, if the valve is at closed position, the cryogenic liquid stayed in the cavity of the valve will be gasified and expanded when the temperature gets rising. This will cause the unusual high pressure in the cavity, and maybe break the valve. To avoid such dangerous accident, our ball valve has self-relief function for the cavity pressure. When the pressure in the cavity unusually rises, the medium in the cavity will push the seat to relive the pressure by it' sown force.Such design will endure the safety of the valve.

The ball valve can be cryogenic tested if it is specified in the contract. The operating torque, sealing performance and other data can be obtained and checked by the test .The spare parts of the valve shall be cryogenically treated to ensure their dimensional stability under the cryogenic condition.







## 用 途 Application

内螺纹球阀适用于中低压管路，用于截断或接通管路中的介质，其驱动方式一般为手动，也可采用气动或电动。根据结构设计的不同，可分为三片式，两片式及一片式。

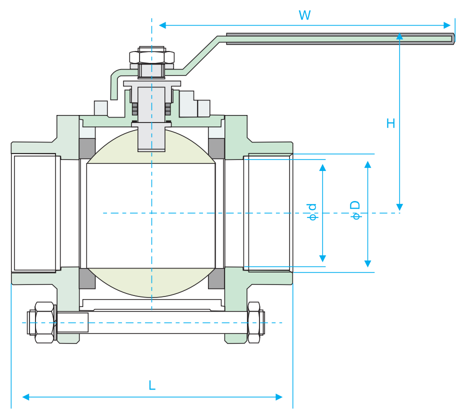
Female threaded ball valves are suitable for use on pipelines of medium or low pressure to turn off or swith on pipeline medium. Operation manners are in general of manual, and pneumatic or electric actuators are available Based on design structures, the valves get divided into three pieces, two pieces, and one piece types.

## 型号、材料及主要参数 Material and Main Valve Data

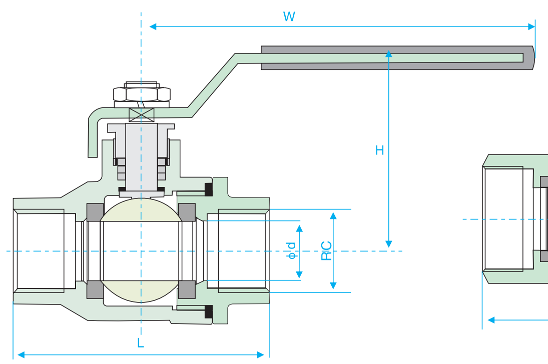
| 型号Type | | QS11F-WP8 | QS11F-WR8 | QL11F-WP8 | QL11F-WR8 | QZ11F-WP8 | QZ11F-WR8 |
|---|---|---|---|---|---|---|---|
| 结构特点Structure Feature | | 三片式，全通径通道，可以方便的在线更换阀门内件。Three pieces body,full bore,easy to replace the trims | | 两片式，全通径通道，结构较简单。Two pieces body,full bore,simple structure | | 一片式，缩径通道，结构简单。One piece body,reduced bore,simple structure | |
| 连接形式Conecttion | | 内螺纹连接（一般采用圆锥管螺纹，根据用户要求，也可采用NPT螺纹）Female thread ends(usually is NPT) | | | | | |
| 公称压力Pressure Rating | | 800WOG或1000WOG | | | | | |
| 主要零件材料 Main parts material | 阀体、阀盖 Body、Bonnet | CF8 | CF8M | CF8 | CF8M | CF8 | CF8M |
| | 球体、阀杆 Ball、Stem | 0Cr18Ni9 (304) | 0Cr17Ni12Mo2 (316) | 0Cr18Ni9 (304) | 0Cr17Ni12Mo2 (316) | 0Cr18Ni9 (304) | 0Cr17Ni12Mo2 (316) |
| | 密封面 sealing surface | 增强聚四氟乙烯 PTFE | | | | | |
| 适用工况 Applicable condition | 适用介质 Applicable medium | 硝酸类腐蚀性介质 Nitric acid corrosion medium | 醋酸类腐蚀性介质 Acetic acid corrosive medium | 硝酸类腐蚀性介质 Nitric acid corrosion medium | 醋酸类腐蚀性介质 Acetic acid corrosive medium | 硝酸类腐蚀性介质 Nitric acid corrosion medium | 醋酸类腐蚀性介质 Acetic acid corrosive medium |
| | 适用温度 Applicable temperature | ≤180℃ | | | | | |

祺隆阀门 QILONG QILONG VALVE

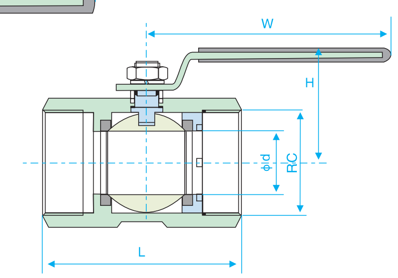
## 主要尺寸及重量 Main sizes and weights




QS11F内螺纹连接三片式球阀
QS11F female threaded three pieces ball valve




QL11F内螺纹连接二片式球阀
QL11F female threaded two pieces ball valve

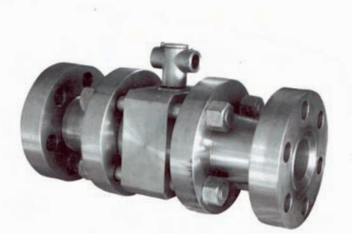



QZ11F内螺纹连接一片式球阀
QZ11F female threaded one piece ball valve

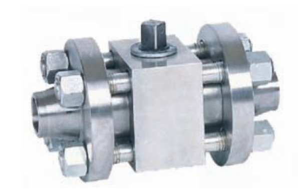
| 结构形式 Structures | 公称尺寸 Dimensions | | RC | 尺寸Dimensions（mm） | | | | 重量 Weight（Kg） |
|---|---|---|---|---|---|---|---|---|
| | DN | NPS | | L | d | W | H | |
| 三片式 Three pieces | 10 | 3/8 | 3/8 | 60 | 10 | 95 | 57 | 0.4 |
| | 15 | 1/2 | 1/2 | 75 | 14 | 110 | 68 | 0.5 |
| | 20 | 3/4 | 3/4 | 80 | 19 | 110 | 70 | 0.7 |
| | 25 | 1 | 1 | 90 | 25 | 140 | 80 | 1.2 |
| | 32 | 1 1/4 | 1 1/4 | 110 | 32 | 140 | 85 | 1.9 |
| | 40 | 1 1/2 | 1 1/2 | 120 | 38 | 180 | 100 | 2.7 |
| | 50 | 2 | 2 | 144 | 50 | 180 | 110 | 3.9 |
| | 65 | 2 1/2 | 2 1/2 | 186 | 64 | 200 | 130 | 7.1 |
| | 80 | 3 | 3 | 206 | 76 | 250 | 150 | 11.5 |
| | 100 | 4 | 4 | 240 | 100 | 250 | 170 | 20.5 |
| 两片式 Two pieces | 10 | 3/8 | 3/8 | 55 | 10 | 95 | 57 | 0.3 |
| | 15 | 1/2 | 1/2 | 65 | 14 | 110 | 68 | 0.4 |
| | 20 | 3/4 | 3/4 | 78 | 19 | 110 | 70 | 0.6 |
| | 25 | 1 | 1 | 88 | 25 | 140 | 80 | 1.0 |
| | 32 | 1 1/4 | 1 1/4 | 105 | 32 | 140 | 85 | 1.6 |
| | 40 | 1 1/2 | 1 1/2 | 112 | 38 | 180 | 100 | 2.3 |
| | 50 | 2 | 2 | 125 | 50 | 180 | 110 | 3.3 |
| | 65 | 2 1/2 | 2 1/2 | 165 | 64 | 200 | 130 | 6.0 |
| | 80 | 3 | 3 | 184 | 76 | 250 | 150 | 9.8 |
| 一片式 One piece | 10 | 3/8 | 3/8 | 39 | 6 | 70 | 35 | 0.2 |
| | 15 | 1/2 | 1/2 | 57 | 9 | 95 | 44 | 0.3 |
| | 20 | 3/4 | 3/4 | 59 | 12 | 95 | 47 | 0.4 |
| | 25 | 1 | 1 | 71 | 16 | 110 | 55 | 0.6 |
| | 32 | 1 1/4 | 1 1/4 | 80 | 20 | 110 | 60 | 1.1 |
| | 40 | 1 1/2 | 1 1/2 | 83 | 25 | 140 | 75 | 1.5 |
| | 50 | 2 | 2 | 100 | 32 | 140 | 80 | 2.8 |



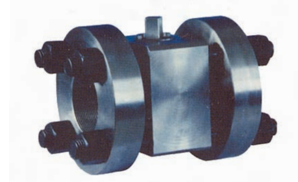
内螺纹连接承插焊连接高压锻造球阀
Female thread & SW ends high pressure forged ball valve



法兰连接高压锻造球阀
flanged ends high pressure forged ball valve



对焊连接高压锻造球阀
BW ends high pressure forged ball valve



对夹连接高压锻造球阀
Wafer type high pressure forged ball valve

## 用 途 Application

高压锻造球阀适用于CLass600~CLass1500、PN16~PN320的管路上，用于截断或接通管路中的介质。高压锻造球阀的驱动方式一般为手动，也可采用蜗轮蜗杆传动、气动及电动。连接形式有承插焊连接、内螺纹连接、法兰连接、对夹连接及对焊连接。

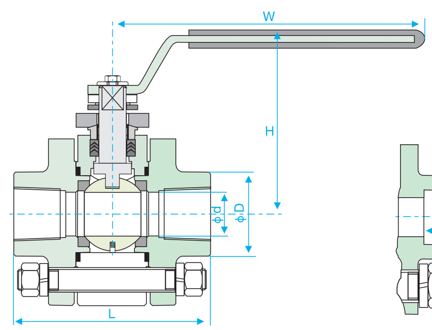
High pressure forged ball valves are suitable for use on pipe lines of Class600～Class1500，PN160～PN320，being used for cutting off or switching on pipelines medium, of wich operation manners are of manual in general, and worm gear and pneumatic or electric actuators are available, connections are of socket welding and female threaded ends .

## 型号、材料及主要参数 Material and Main Valve Data

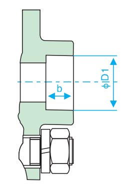
| 连接形式 | 公称压力 Pressure Rating | 常规产品型号 Type | | | | |
|---|---|---|---|---|---|---|
| 承插焊连接 SW | Class600 | Q6C1N-A6 | Q6C1N-A6P8 | Q6C1N-A6P3 | Q6C1N-A6R8 | Q6C1N-A6R3 |
| | Class800 | Q6C1N-A8 | Q6C1N-A8P8 | Q6C1N-A8P3 | Q6C1N-A8R8 | Q6C1N-A8R3 |
| | Class900 | Q6C1N-A9 | Q6C1N-A9P8 | Q6C1N-A9P3 | Q6C1N-A9R8 | Q6C1N-A9R3 |
| | Class1500 | Q6C1N-A15 | Q6C1N-A15P8 | Q6C1N-A15P3 | Q6C1N-A15R8 | Q6C1N-A15R3 |
| 内螺纹连接 Female thread | Class600 | Q11N-A6 | Q11N-A6P8 | Q11N-A6P3 | Q11N-A6R8 | Q11N-A6R3 |
| | Class800 | Q11N-A8 | Q11N-A8P8 | Q11N-A8P3 | Q11N-A8R8 | Q11N-A8R3 |
| | Class900 | Q11N-A9 | Q11N-A9P8 | Q11N-A9P3 | Q11N-A9R8 | Q11N-A9R3 |
| 主要零件材料 Main parts material | 阀体、阀盖 Body、Bonnet | A105 | 304 | 304L | 316 | 316L |
| | 球体、阀杆 Ball、Stem | 2Cr13 | 304 | 304L | 316 | 316L |
| | 密封面 sealing surface | 尼龙、增强聚四氟乙烯、对位聚苯、PEEK NYLO、RPTFE、PPL、PEEK | | | | |
| 适用工况 Applicable condition | 适用介质 Applicable medium | 水、蒸汽、油品、煤气、液化气、天然气等 Water、Steam Oils、Coal gas、Liquefied gas、gas | 硝酸类腐蚀性介质 Nitric acid corrosion medium | 强氧化性介质 Strong oxidizing medium | 醋酸类腐蚀性介质 Acetic acid corrosive medium | 尿素类腐蚀性介质 Urea corrosive medium |
| | 适用温度 Applicable temperature | ≤80℃（尼龙）、≤180℃（增强聚四氟乙烯）、≤300℃（对位聚苯）、≤250℃（PEEK） ≤80℃（尼龙）、≤180℃（RPTFE）、≤300℃（PPL）、≤250℃（PEEK） | | | | |

| 型号Type | | Q41N-160 | Q41N-320 | Q71N-160 | Q71N-320 | Q61N-160 | Q61N-320 |
|---|---|---|---|---|---|---|---|
| 连接形式Conecttion | | 法兰连接 | 法兰连接 | 对夹连接 | 对夹连接 | 对焊连接 | 对焊连接 |
| 公称压力Pressure Rating | | PN160 | PN320 | PN160 | PN320 | PN160 | PN320 |
| 主要零件材料 Main parts material | | 阀体：碳钢； 阀座、球体、阀杆：2Cr13； 密封圈：尼龙； 螺栓：35CrMo body:wcb; seat、ball、stem：2cr13 oring:nylo packing:35crmo | | | | | |
| 适用工况 Applicable condition | 适用介质 Applicable medium | 水、油品、氮、氢、氨等介质 Water、Coal gas、nitrogen、hydrogen、ammonia | | | | | |
| | 适用温度 Applicable temperature | ≤180℃ | | | | | |

高压锻造球阀 High Pressure Forged Ball Valve
祺隆阀门 QILONG QILONG VALVE



内螺纹连接
Female threaded connection



承插焊连接
Socket welded ends

## CLass600、CLass800内螺纹连接及承插焊连接锻造球阀
Class600, Class800 female threaded and socket welded forged ball valve

| 公称压力 Pressure Rating | 公称尺寸 Dimensions DN | 公称尺寸 Dimensions NPS | 法兰规格 Flange size L 内螺纹 Internal thread | 法兰规格 Flange size L 承插焊 Socket welding | 尺寸Dimensions ( mm ) d | D | H | W | NPT | d1 | b |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Class600 Class800 | 15 | ½ | 100 | 110 | 13 | 32 | 88 | 150 | ½ | 22 | 10 |
| | 20 | ¾ | 100 | 120 | 19 | 38 | 92 | 150 | ¾ | 27.3 | 13 |
| | 25 | 1 | 120 | 130 | 25 | 48 | 106 | 180 | 1 | 34 | 13 |
| | 32 | 1¼ | 140 | 160 | 32 | 58 | 124 | 200 | 1¼ | 42.6 | 13 |
| | 40 | 1½ | 150 | 180 | 38 | 66 | 125 | 250 | 1½ | 48.9 | 13 |
| | 50 | 2 | 190 | 200 | 51 | 86 | 162 | 350 | 2 | 61.4 | 16 |

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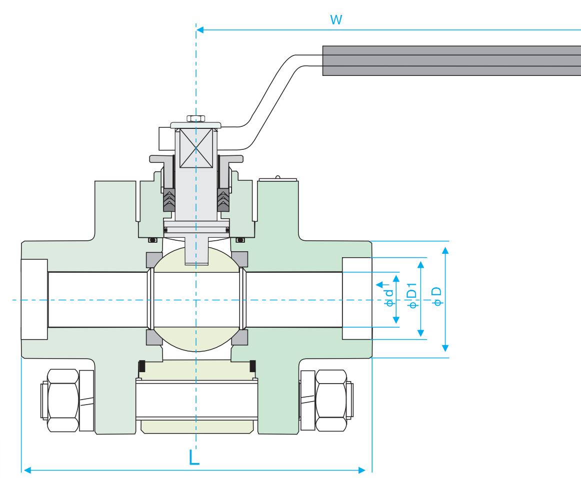
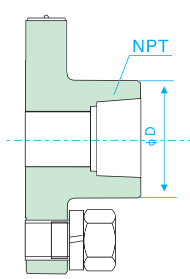


承插焊连接
Socket welded ends

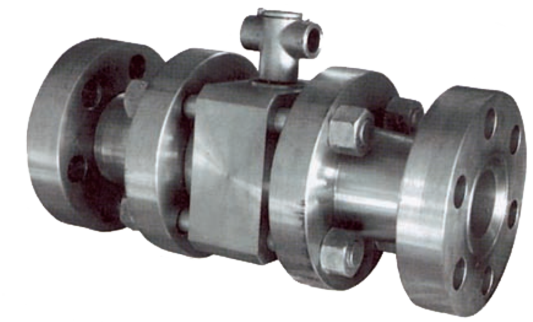


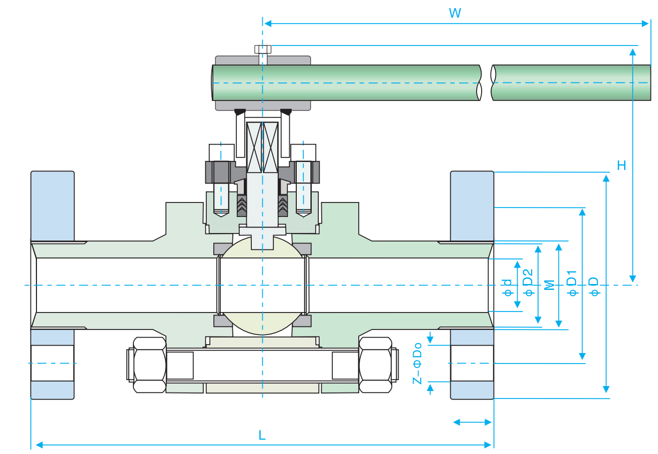

内螺纹连接
Female threaded connection

## CLass900、CLass1500内螺纹连接及承插焊连接锻造球阀
Class900, Class1500 female threaded and socket welded forged ball valve

| 公称压力 Pressure Rating | 公称尺寸 Dimensions DN | 公称尺寸 Dimensions NPS | 法兰规格 Flange size L 内螺纹 Internal thread | 法兰规格 Flange size L 承插焊 Socket welding | 尺寸Dimensions ( mm ) d | D | H | W | NPT | d1 | b |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Class900 Class1500 | 15 | ½ | 130 | 140 | 14 | 35 | 90 | 180 | ½ | 21.9 | 12 |
| | 20 | ¾ | 140 | 150 | 19 | 42 | 95 | 200 | ¾ | 27.3 | 13 |
| | 25 | 1 | 150 | 150 | 23 | 50 | 106 | 220 | 1 | 34 | 13 |
| | 32 | 1¼ | 180 | 180 | 32 | 58 | 116 | 250 | 1¼ | 42.8 | 13 |
| | 40 | 1½ | 200 | 200 | 38 | 72 | 150 | 300 | 1½ | 48.9 | 13 |
| | 50 | 2 | 250 | 250 | 51 | 86 | 150 | 350 | 2 | 61.4 | 16 |





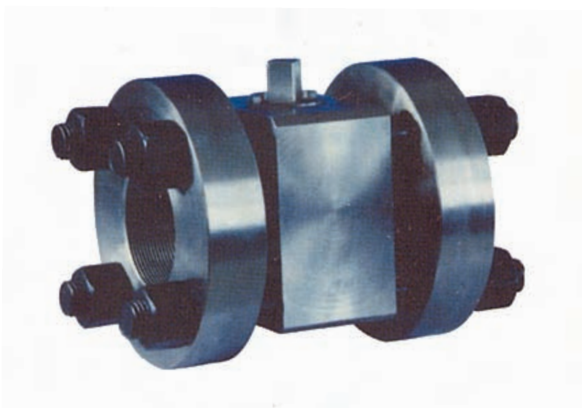


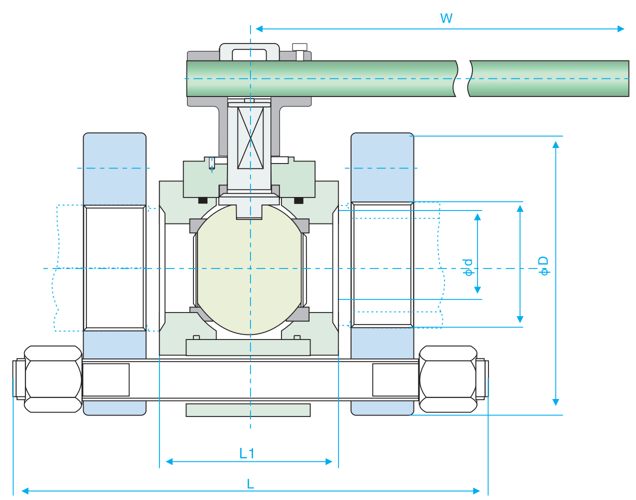
尺寸Dimensions ( mm )

## Q41N法兰连接高压锻造球阀
Q41N flanged forged ball valve

| 公称压力 Pressure Rating | 公称尺寸 Dimensions DN | L | d | D | D1 | D2 | M | b | Z−φdo | H | W | 重量 Weight ( Kg ) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PN160 | 10 | 210 | 10 | 95 | 60 | 18 | M24×2 | 20 | 3−18 | 70 | 200 | 5 |
| | 15 | 230 | 14 | 95 | 60 | 20 | M24×2 | 20 | 3−18 | 72 | 200 | 6 |
| | 20 | 240 | 19 | 105 | 68 | 28 | M33×2 | 20 | 3−18 | 94 | 250 | 8 |
| | 25 | 260 | 25 | 105 | 68 | 28 | M33×2 | 22 | 3−18 | 97 | 250 | 10 |
| | 32 | 300 | 32 | 115 | 80 | 37 | M42×2 | 22 | 4−18 | 120 | 300 | 19 |
| | 40 | 340 | 38 | 165 | 115 | 47 | M52×2 | 28 | 6−26 | 150 | 400 | 26 |
| | 50 | 400 | 50 | 165 | 115 | 59 | M64×3 | 32 | 6−26 | 160 | 400 | 39 |
| | 65 | 490 | 64 | 200 | 145 | 74 | M80×3 | 40 | 6−29 | 160 | 500 | 53 |
| | 80 | 580 | 76 | 225 | 1701 | 94 | M100×3 | 50 | 6−33 | 180 | 600 | 76 |
| | 100 | 620 | 100 | 260 | 195 | 115 | M125×4 | 60 | 6−36 | 215 | 800 | 130 |
| PN320 | 10 | 210 | 10 | 95 | 60 | 18 | M24×2 | 20 | 3−18 | 70 | 200 | 5 |
| | 15 | 230 | 14 | 105 | 68 | 27 | M33×2 | 20 | 3−18 | 72 | 200 | 7 |
| | 20 | 240 | 19 | 105 | 68 | 28 | M33×2 | 20 | 3−18 | 94 | 250 | 8 |
| | 25 | 260 | 25 | 115 | 80 | 35 | M42×2 | 22 | 4−18 | 97 | 250 | 11 |
| | 32 | 300 | 32 | 135 | 95 | 41 | M48×2 | 25 | 4−22 | 120 | 300 | 21 |
| | 40 | 340 | 38 | 165 | 115 | 58 | M64×3 | 32 | 6−26 | 150 | 400 | 28 |
| | 50 | 400 | 50 | 200 | 145 | 70 | M80×3 | 40 | 6−29 | 160 | 450 | 41 |
| | 65 | 490 | 64 | 225 | 170 | 90 | M100×3 | 50 | 6−33 | 160 | 500 | 56 |
| | 80 | 580 | 76 | 260 | 195 | 112 | M125×4 | 60 | 6−36 | 180 | 600 | 79 |
| | 100 | 620 | 100 | 300 | 235 | 130 | M155×4 | 75 | 6−39 | 215 | 800 | 134 |

61





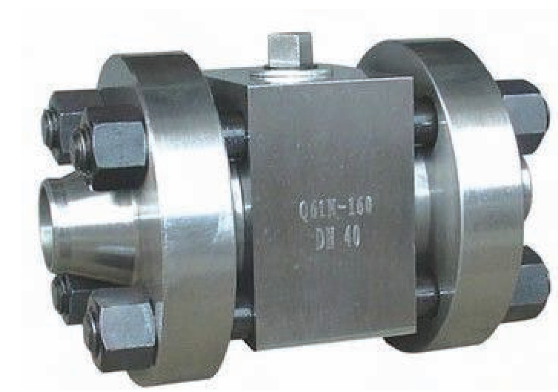

Q71N对夹连接高压锻造球阀
Q71N wafer type High Pressure forged ball valve

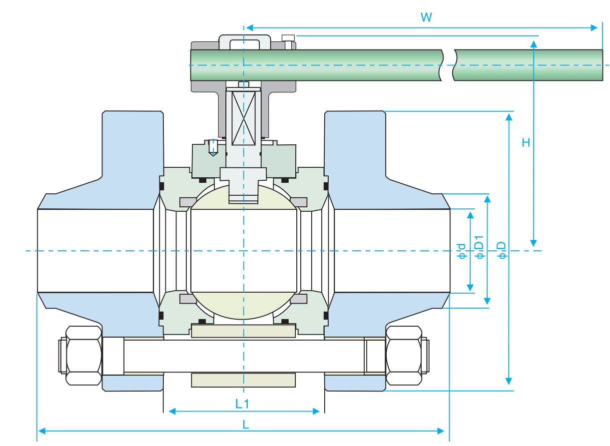


| 公称压力 Pressure Rating | 公称尺寸 Dimensions DN | 尺寸Dimensions ( mm ) | | | | | | | 重量 Weight ( Kg ) |
|---|---|---|---|---|---|---|---|---|---|
| | | L | L1 | d | D | M | H | W | |
| PN160 | 10 | 150 | 60 | 10 | 100 | M33×2 | 58 | 220 | 4 |
| | 15 | 160 | 70 | 14 | 100 | M33×2 | 62 | 220 | 5 |
| | 20 | 170 | 81 | 19 | 110 | M33×2 | 75 | 250 | 7 |
| | 25 | 195 | 95 | 25 | 115 | M42×2 | 80 | 250 | 8 |
| | 32 | 220 | 110 | 32 | 150 | M48×2 | 96 | 300 | 16 |
| | 40 | 260 | 120 | 38 | 170 | M64×2 | 111 | 400 | 22 |
| | 50 | 310 | 140 | 50 | 200 | M80×3 | 128 | 400 | 35 |
| | 65 | 325 | 150 | 64 | 225 | M80×3 | 160 | 500 | 48 |
| | 80 | 365 | 160 | 76 | 268 | M100×3 | 180 | 600 | 67 |
| | 100 | 430 | 186 | 100 | 320 | M125×4 | 215 | 800 | 116 |
| PN320 | 10 | 150 | 60 | 10 | 90 | M24×2 | 58 | 220 | 5 |
| | 15 | 160 | 70 | 14 | 100 | M33×2 | 62 | 220 | 6 |
| | 20 | 170 | 81 | 19 | 110 | M33×2 | 75 | 250 | 7 |
| | 25 | 195 | 95 | 25 | 115 | M42×2 | 80 | 250 | 9 |
| | 32 | 220 | 110 | 32 | 150 | M48×2 | 96 | 300 | 18 |
| | 40 | 260 | 120 | 38 | 170 | M64×2 | 111 | 400 | 24 |
| | 50 | 310 | 140 | 50 | 200 | M80×3 | 128 | 400 | 38 |
| | 65 | 345 | 150 | 64 | 225 | M100×3 | 160 | 500 | 52 |
| | 80 | 375 | 160 | 76 | 268 | M125×4 | 180 | 600 | 72 |
| | 100 | 440 | 186 | 100 | 320 | M155×4 | 215 | 800 | 124 |



高压锻造球阀
High Pressure Forged Ball Valve
祺隆阀门
QILONG QILONG VALVE






Q61N对焊连接高压锻造球阀
Q61N Butt welding forged ball valve



| 公称压力 Pressure Rating | 公称尺寸 Dimensions DN | 尺寸Dimensions ( mm ) | | | | | | 重量 Weight ( Kg ) |
|---|---|---|---|---|---|---|---|---|
| | | L | L1 | d | D | D1 | H | W | |
| PN160 | 10 | 150 | 60 | 10 | 90 | 18 | 58 | 220 | 4 |
| | 15 | 170 | 70 | 14 | 100 | 23 | 62 | 220 | 5 |
| | 20 | 190 | 81 | 19 | 110 | 29 | 75 | 250 | 7 |
| | 25 | 205 | 95 | 25 | 115 | 36 | 80 | 250 | 8 |
| | 32 | 230 | 110 | 32 | 150 | 43 | 96 | 300 | 16 |
| | 40 | 260 | 120 | 38 | 170 | 49 | 111 | 400 | 22 |
| | 50 | 330 | 140 | 50 | 200 | 61 | 128 | 400 | 35 |
| | 65 | 360 | 150 | 64 | 225 | 80 | 180 | 500 | 48 |
| | 80 | 375 | 160 | 76 | 268 | 105 | 200 | 600 | 67 |
| | 100 | 440 | 186 | 100 | 320 | 118 | 245 | 800 | 116 |
| PN320 | 10 | 150 | 60 | 10 | 90 | 18 | 58 | 220 | 5 |
| | 15 | 170 | 70 | 14 | 100 | 23 | 62 | 220 | 6 |
| | 20 | 190 | 81 | 19 | 110 | 29 | 75 | 250 | 7 |
| | 25 | 205 | 95 | 25 | 115 | 36 | 80 | 250 | 9 |
| | 32 | 230 | 110 | 32 | 150 | 43 | 96 | 300 | 18 |
| | 40 | 260 | 120 | 38 | 170 | 49 | 111 | 400 | 24 |
| | 50 | 330 | 140 | 50 | 200 | 61 | 128 | 400 | 38 |
| | 65 | 360 | 150 | 64 | 225 | 80 | 180 | 500 | 52 |
| | 80 | 375 | 160 | 76 | 268 | 105 | 200 | 600 | 72 |
| | 100 | 440 | 186 | 100 | 320 | 118 | 245 | 800 | 124 |

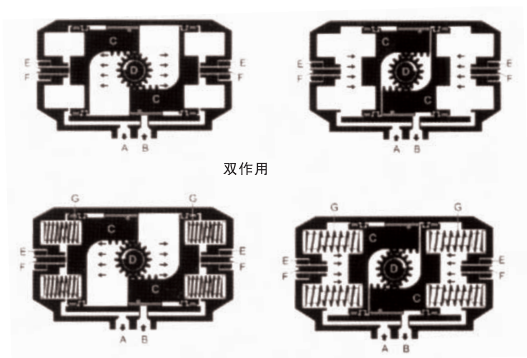
## 球阀气动装置的配置 Pneumatically operated equipment for ball valve

祺隆公司可以根据球阀的类型、压力、口径、温度、使用介质、使用要求合理配置球阀的气动装置，祺隆公司常用的气动装置类型、特点、输出扭矩等介绍下，也可以根据用户的要求和使用习惯配置球阀的气动装置。气动装置的配置还需要考虑附件的配置，气动装置的附件通常包括：气源处理三连接（减压阀、过滤器、油雾器）、电磁阀、空气换向阀、电气定位器、限位开关、速度调节器、均压阀、手动操作机构等。

QILONG company can provide ball valve with ideal pneumatic equipment according to applicable requirementsuch as the type, pressure rating, diameter, temperature, and medium of ball valve. The type, features, outputturque, etc.,are briefly introduced as follows, which can also be equipped with pneumatic actuators based oncustomers' requirement and usage. The accessories for the pneumatic actuators are also needed to be taken intoconsideration, which include 3 connectors for gas source treatment ( i.e. pressure reducing valve, filter, oil–fog generator ), solenoid valve, air switch, electric positioner, limit switch, speed regulator, pressure balance valve and manual operator ect..

## 齿轮齿条双活塞气动装置（GTD型、GTE型）

齿轮齿条双活塞气动装置分为双作用和单作用（弹簧复位），其工作原理见下图




齿轮齿条双活塞气动装置在不同气源压力下的扭矩见下表。

## 双作用式气动装置的输出扭矩 Torque for double acting pneumatic actuator

| 型号 Type | 气源压力(Pressure)，MPa | | | | | | |
|---|---|---|---|---|---|---|---|
| | 0.2 | 0.3 | 0.4 | 0.5 | 0.6 | 0.7 | 0.8 |
| | 输出扭矩(Torque)，N.M | | | | | | |
| GTD40 | 3.7 | 5.6 | 7.4 | 9.3 | 11.2 | 13.0 | 14.9 |
| GTD52 | 7.9 | 11.8 | 15.7 | 19.6 | 23.6 | 27.5 | 31.4 |
| GTD65 | 14.7 | 22.1 | 29.5 | 36.8 | 44.2 | 51.5 | 58.9 |
| GTD80 | 26.0 | 39.0 | 52 | 65.1 | 78.1 | 91.1 | 104 |
| GTD90 | 37.6 | 56.5 | 75.3 | 94.1 | 112 | 131 | 150 |
| GTD100 | 58.0 | 87 | 116 | 145 | 174 | 203 | 232 |
| GTD115 | 84.5 | 126 | 169 | 211 | 253 | 295 | 338 |
| GTD125 | 108 | 163 | 217 | 272 | 326 | 381 | 435 |
| GTD145 | 159 | 239 | 318 | 398 | 478 | 557 | 637 |
| GTD160 | 223 | 334 | 446 | 557 | 669 | 780 | 892 |
| GTD190 | 367 | 550 | 734 | 917 | 1101 | 1284 | 1467 |
| GTD210 | 538 | 807 | 1075 | 1344 | 1613 | 1882 | 2151 |
| GTD255 | 1057 | 1587 | 2115 | 2644 | 3172 | 3701 | 4230 |
| GTD300 | 1656 | 2470 | 3293 | 4117 | 4940 | 5764 | 6587 |
| GTD350 | 2490 | 3735 | 4981 | 6226 | 7471 | 8717 | 9962 |

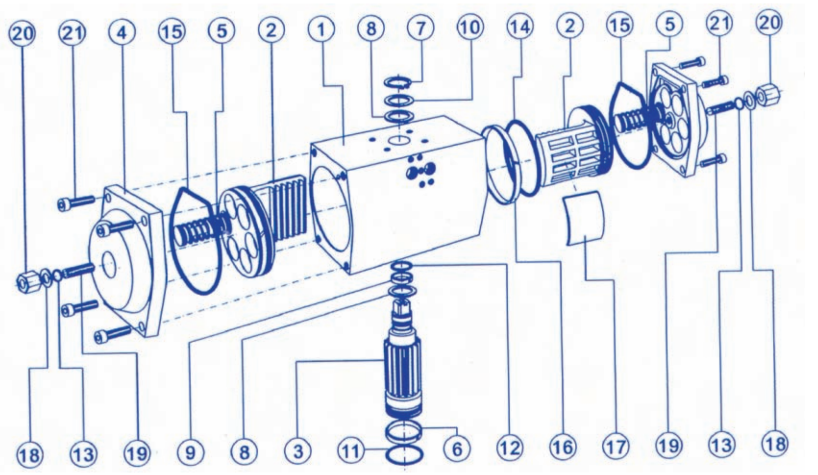


## 单作用式（弹簧复位）气动装置输出扭矩 Torque for single acting pneumatic actuator

| 型号 Type | 弹簧数量 No of spring | 气源压力(Perssure)，MPa | | | | | | 弹簧复位 Reset spring | |
|---|---|---|---|---|---|---|---|---|---|
| | | 0.3 | | 0.4 | | 0.5 | | | |
| | | 输出扭矩(Torque)，N.M | | | | | | | |
| | | 开始(open) | 终点(break) | 开始(open) | 终点(break) | 开始(open) | 终点(break) | 开始(open) | 终点(break) |
| GTD65 | 8 | 15.0 | 7.9 | 22.3 | 15.2 | 27.9 | 19.1 | 14.2 | 7.1 |
| | 10 | | | 20.6 | 11.7 | 26.2 | 15.5 | 17.8 | 8.9 |
| | 12 | | | 18.8 | 8.1 | | | 21.3 | 10.7 |
| GTD80 | 8 | 25.1 | 16.2 | 38.1 | 29.3 | 47.6 | 36.6 | 22.8 | 14.0 |
| | 10 | | | 34.6 | 23.6 | 44.1 | 30.9 | 28.5 | 17.5 |
| | 12 | | | 31.1 | 17.9 | | | 34.2 | 21.0 |
| GTD90 | 8 | 32.8 | 20.9 | 51.6 | 39.8 | 64.5 | 49.7 | 35.5 | 23.7 |
| | 10 | | | 45.7 | 30.9 | 58.6 | 40.8 | 44.4 | 29.6 |
| | 12 | | | 39.8 | 22.0 | | | 53.3 | 35.5 |
| GTD100 | 8 | 56.1 | 26.5 | 85.1 | 55.5 | 106 | 69.4 | 60.7 | 31.1 |
| | 10 | | | 77.3 | 40.3 | 98.6 | 54.2 | 75.9 | 38.9 |
| | 12 | | | 69.6 | 25.2 | | | 91.0 | 46.6 |
| GTD115 | 8 | 77.9 | 45.4 | 120 | 87.6 | 150 | 109 | 81.4 | 48.8 |
| | 10 | | | 108 | 67.3 | 138 | 89.2 | 101 | 61.1 |
| | 12 | | | 95.8 | 46.9 | | | 122 | 73.3 |
| GTD125 | 8 | 101 | 65.7 | 155 | 120 | 194 | 150 | 97.7 | 62.2 |
| | 10 | | | 140 | 95.7 | 179 | 125 | 122 | 77.7 |
| | 12 | | | 124 | 71.3 | | | 146 | 93.2 |
| GTD145 | 8 | 135 | 83.7 | 215 | 163 | 269 | 204 | 155 | 103 |
| | 10 | | | 189 | 124 | 243 | 165 | 194 | 129 |
| | 12 | | | 163 | 85.7 | | | 233 | 155 |
| GTD160 | 8 | 201 | 134 | 312 | 246 | 391 | 307 | 199 | 133 |
| | 10 | | | 279 | 196 | 357 | 258 | 249 | 166 |
| | 12 | | | 246 | 146 | | | 299 | 199 |
| GTD190 | 8 | 317 | 213 | 500 | 397 | 626 | 496 | 336 | 233 |
| | 10 | | | 442 | 313 | 567 | 412 | 420 | 291 |
| | 12 | | | 384 | 228 | | | 505 | 349 |
| GTD210 | 8 | 465 | 309 | 734 | 578 | 917 | 723 | 497 | 341 |
| | 10 | | | 648 | 454 | 832 | 599 | 621 | 427 |
| | 12 | | | 563 | 330 | | | 745 | 512 |
| GTD255 | 8 | 945 | 670 | 1474 | 1199 | 1843 | 1499 | 915 | 640 |
| | 10 | | | 1314 | 970 | 1683 | 1270 | 1144 | 800 |
| | 12 | | | 1154 | 741 | | | 1373 | 961 |
| GTD300 | 8 | 1491 | 838 | 2314 | 1662 | 2893 | 2077 | 1631 | 979 |
| | 10 | | | 2069 | 1254 | 2648 | 1699 | 2039 | 1223 |
| | 12 | | | 1825 | 846 | | | 2447 | 1468 |
| GTD350 | 8 | 2181 | 1404 | 3427 | 2650 | 4284 | 3312 | 2330 | 1554 |
| | 10 | | | 3038 | 2067 | 3895 | 2730 | 2913 | 1942 |
| | 12 | | | 2650 | 1484 | | | 3496 | 2331 |

球阀驱动装置的配置
Equip actuating device for ball valve

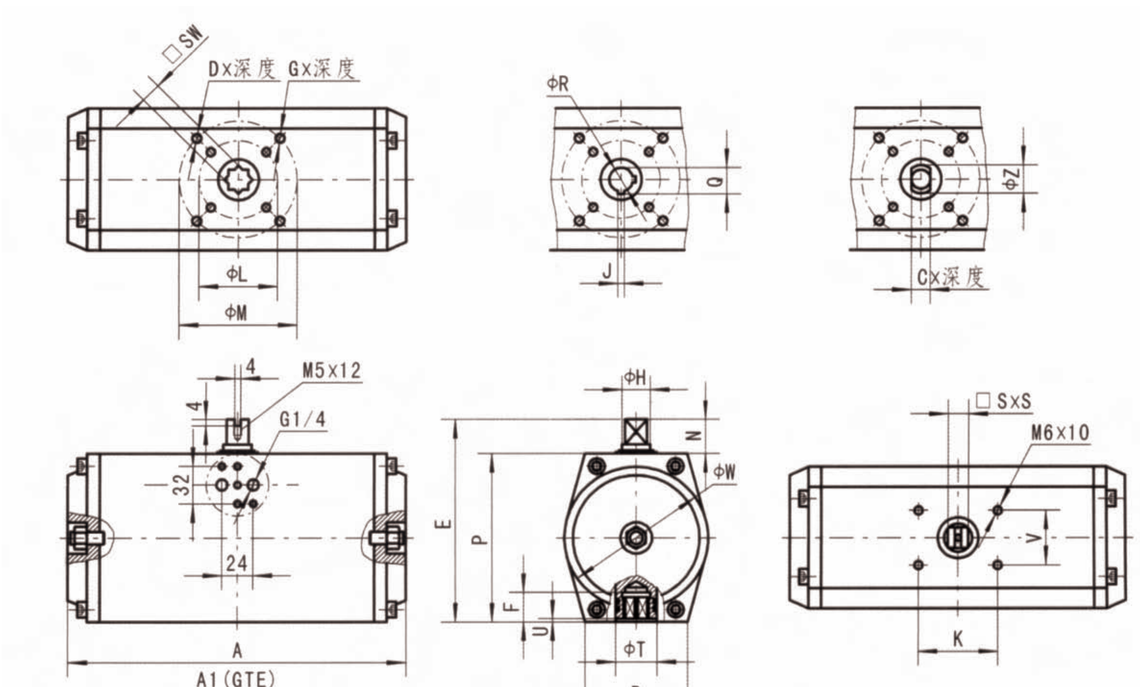
祺隆阀门 QILONG QILONG VALVE



齿轮齿条双活塞式气动装置典型结构及零部件组成
Typical drawing of double-piston type of pneumatic acturator with gear & rack and parts composition

| | |
|---|---|
| 1–壳体； | 1–Body |
| 2–活塞； | 2–Piston |
| 3–旋转轴； | 3–Drive shaft |
| 4–端盖； | 4–End cap |
| 5–弹簧/弹簧座； | 5–Spring/seat |
| 6–下轴承； | 6–Bot tom bearing |
| 7–弹性挡圈； | 7–Elestic washer |
| 8–轴中垫圈； | 8–Washer |
| 9–上轴承； | 9–Up bearing |
| 10–轴上平垫圈； | 10–Washer |
| 11–轴下O型圈； | 11–Shaft o ring bottom |
| 12–轴上O型圈； | 12–Shaft o ring up |
| 13–螺栓密封O型圈； | 13–Bolt sealing ring |
| 14–活塞O型圈； | 14–Piston o ring |
| 15–端盖密封圈； | 15–End cap o ring |
| 16–活塞导向环； | 16–Piston guide ring |
| 17–活塞轴瓦； | 17–Piston shaft bush |
| 18–端盖平垫圈； | 18–End cap washer |
| 19–调节螺栓； | 19–Adjusting bolt |
| 20–六角螺母； | 20–Hexagon nut |

## 外形及连接尺寸 Main sizes and weights



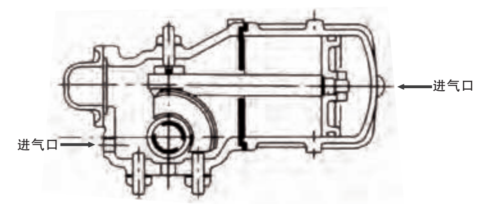
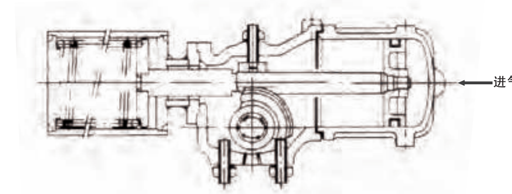
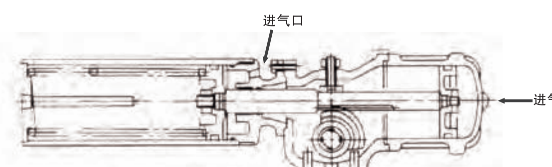
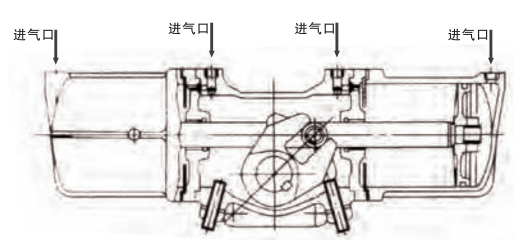
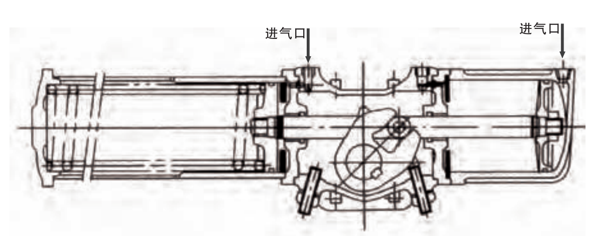

| 型号 | A | A1 | B | C×深度 | D×深度 | E | F | G×深度 | H | J | K | L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GTD/GTE040 | 104 | – | 45 | 8×12 | M6×10 | 82 | 14 | – | 12 | – | 50.8 | F04 ϕ42 |
| GTD/GTE052 | 140 | – | 50 | 8×12 | M6×10 | 96 | 14 | M5×8 | 16 | 3.0 | 50.8 | F03 ϕ36 |
| GTD/GTE065 | 164 | 178 | 62 | 10×13 | M8×13 | 102 | 16 | M6×10 | 18 | 3.0 | 50.8 | F05 ϕ50 |
| GTD/GTE080 | 190 | 214 | 65 | 10×15 | M8×13 | 130 | 18 | M6×10 | 18 | 5.0 | 50.8 | F05 ϕ50 |
| GTD/GTE090 | 210 | 246 | 74 | 10×15 | M8×13 | 140 | 18 | M6×10 | 18 | 5.0 | 50.8 | F05 ϕ50 |
| GTD/GTE100 | 247 | 295 | 90 | 14×22 | M10×16 | 156 | 25 | M8×13 | 24 | 5.0 | 50.8 | F07 ϕ70 |
| GTD/GTE115 | 276 | 340 | 94 | 14×22 | M10×16 | 177 | 25 | M8×13 | 24 | 5.0 | 50.8 | F07 ϕ70 |
| GTD/GTE125 | 308 | 398 | 103 | 20×24 | M10×16 | 182 | 25 | M8×13 | 30 | 5.0 | 50.8 | F07 ϕ70 |
| GTD/GTE140 | 348 | 438 | 110 | 20×24 | M12×16 | 216 | 29 | M10×16 | 38 | 8.0 | 70.8 | F10 ϕ102 |
| GTD/GTE160 | 378 | 478 | 110 | 28×30 | M12×16 | 233 | 29 | M10×16 | 38 | 8.0 | 70.8 | F10 ϕ102 |
| GTD/GTE190 | 432 | 562 | 128 | 28×30 | M12×16 | 282 | 29 | M10×16 | 50 | 8.0 | 70.8 | F10 ϕ102 |
| GTD/GTE210 | 524 | 724 | 135 | 32×34 | M16×24 | 305 | 40 | M16×24 | 50 | 8.0 | 150 | F14 ϕ140 |
| GTD/GTE255 | 648 | 928 | 159 | 40×40 | M20×24 | 352 | 50 | M20×24 | 75 | 10 | 150 | F16 ϕ165 |
| GTD/GTE300 | 715 | 1033 | 196 | 40×40 | M20×24 | 400 | 50 | M20×24 | 85 | 12 | 150 | F16 ϕ165 |
| GTD/GTE350 | 795 | 1129 | 220 | 50×50 | M20×24 | 458 | 70 | M16×24 | 105 | 12 | 150 | ϕ200 |

| 型号 | M | N | P | Q | R | □S×S | □SW | T | U | V | W | Y深 | Z |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GTD/GTE040 | - | 22 | 60 | – | – | 9×9 | 11×11 | 20 | 2.0 | 35 | 50 | – | 12 |
| GTD/GTE052 | F05 ϕ50 | 22 | 74 | 14.2 | 12.7 | 10×10 | 11×11 | 23 | 2.0 | 35 | 62 | 32 | 12 |
| GTD/GTE065 | F07 ϕ70 | 22 | 90 | 14.2 | 12.7 | 13×13 | 14×14 | 29 | 2.0 | 35 | 75 | 32 | 16 |
| GTD/GTE080 | F07 ϕ70 | 22 | 108 | 18.4 | 15.88 | 13×13 | 17×117 | 33 | 2.0 | 35 | 91 | 32 | 16 |
| GTD/GTE090 | F07 ϕ70 | 22 | 118 | 18.4 | 15.88 | 13×13 | 17×17 | 38 | 2.5 | 35 | 101 | 32 | 16 |
| GTD/GTE100 | F10 ϕ102 | 22 | 134 | 21.6 | 19.05 | 16×16 | 22×22 | 46 | 2.5 | 35 | 112 | 45 | 22 |
| GTD/GTE115 | F10 ϕ102 | 25 | 149 | 21.6 | 19.05 | 16×16 | 22×22 | 52 | 3.0 | 35 | 127 | 45 | 22 |
| GTD/GTE125 | F10 ϕ102 | 25 | 160 | 24.8 | 22.23 | 22.3×22.3 | 22×22 | 55 | 3.0 | 35 | 139 | 45 | 30 |
| GTD/GTE140 | F12 ϕ125 | 35 | 181 | 32.1 | 28.58 | 28.6×28.6 | 27×27 | 65 | 3.5 | 35 | 159 | 45 | 30 |
| GTD/GTE160 | F12 ϕ125 | 35 | 198 | 32.1 | 28.58 | 28.6×28.6 | 27×27 | 70 | 3.5 | 35 | 176 | 45 | 42 |
| GTD/GTE190 | F12 ϕ125 | 50 | 232 | 32.1 | 28.58 | 36×36 | 36×36 | 80 | 4.0 | 35 | 206 | 45 | 42 |
| GTD/GTE210 | 160×100 | 50 | 255 | 35.3 | 31.75 | 36×36 | 36×36 | 92 | 4.0 | 60 | 228 | 45 | 48 |
| GTD/GTE255 | 200×120 | 50 | 302 | 38.4 | 33.34 | 46×46 | 46×46 | 125 | 4.0 | 60 | 275 | 50 | 60 |
| GTD/GTE300 | 200×140 | 50 | 350 | 45.3 | 41.28 | 46×46 | 46×46 | 135 | 4.5 | 60 | 324 | 65 | 80 |
| GTD/GTE350 | 260×160 | 50 | 408 | 54.8 | 50.8 | 60×60 | 60×60 | 158 | 4.5 | 60 | 380 | 70 | 1000 |

球阀驱动装置的配置 Equip actuating device for ball valve
祺隆阀门 QILONG QILONG VALVE

## AG、AW、C型

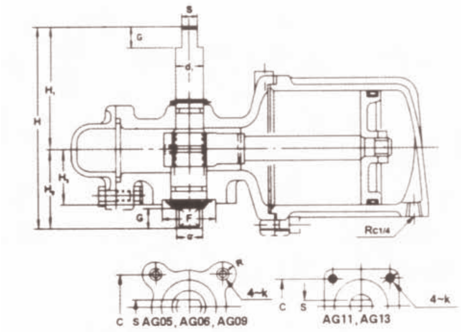
气动装置的规格及结构特点见下表

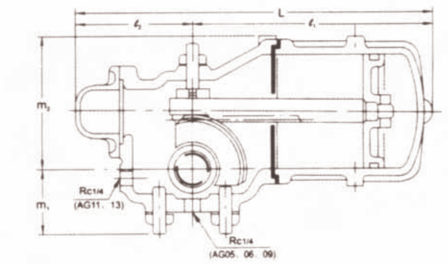
| | | |
|---|---|---|
| AG | 双动作、单缸、单活塞。<br>气源压力：0.3~0.7MPa<br>传动机构为齿轮齿条机构，用于小口径阀门。 |  |
| AG-S | 单动弹簧复位标准型。<br>气源压力：0.3~0.7MPa<br>传动机构为齿轮齿条机构，单缸、单活塞，完全封闭的独立弹簧缸，安全可靠。 |  |
| AG-D | 单动作弹簧复位标准型。<br>气源压力：0.3~0.7MPa<br>传动机构为齿轮齿条机构，双活塞，出力大 |  |
| AG-R | 单动作弹簧复位低压型。<br>气源压力：0.21~0.6MPa<br>传动机构为齿轮齿条机构，双活塞，出力大 | |
| AW | 双动作型、双缸。<br>气源压力：0.3~0.7MPa<br>传动机构为拔叉机构，出力大，用于中大口径阀门，输出扭矩与中大口径阀门的操作扭矩特性相似。 |  |
| C | | |
| AW-S | 单动作弹簧复位型，一方缸内设置弹簧。<br>S为标准型，气源压力：0.3~0.7MPa，<br>L为低压型，气源压力：0.28~0.46MPa。<br>传动机构为拔叉机构。 |  |
| AW-L | | |
| C-S | | |



## 主要尺寸及重量 Main sizes and weights

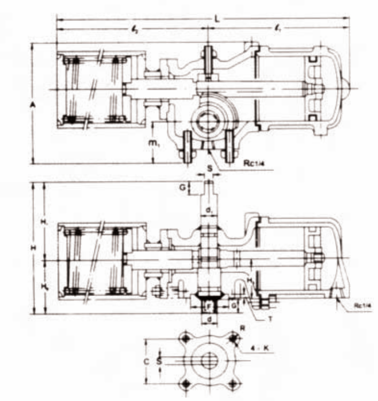
### 双动作（AG型）Double acting(AC type)



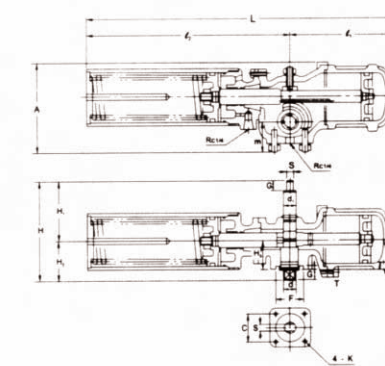



| 型号 | 结构特点 | | | | | | | | | | | | | | | | 重量 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | m1 | m2 | L | L1 | L2 | C | H | H1 | H2 | H3 | F | d | d1 | S | G | K | R | KG |
| AG05 | 27 | 58 | 108 | 95 | 51 | – | 174.5 | – | – | – | – | – | – | – | – | – | – | – |
| AG06 | 42 | 78 | 200 | 136 | 64 | 45 | 131 | 78 | 53 | 38 | 36 | 14 | 16 | 8 | 13 | M6 | 7.5 | 3.4 |
| AG09 | 47 | 105 | 270 | 181 | 89 | 50 | 156 | 95 | 61 | 43 | 40 | 20 | 20 | 12 | 16 | M8 | 10 | 6.4 |
| AG11 | 70 | 126 | 327 | 222 | 105 | 80 | 214 | 131 | 83 | 50 | 60 | 34 | 35 | 22 | 28 | M12 | 12 | 13.1 |
| AG13 | 70 | 155 | 450 | 257 | 148 | 80 | 224 | 131 | 93 | 60 | 60 | 34 | 35 | 22 | 28 | M12 | 12 | 18.9 |

### 单动作（AG-S、AG-D型）Single acting(AG-S,AG-D type)



AG06S AG09S



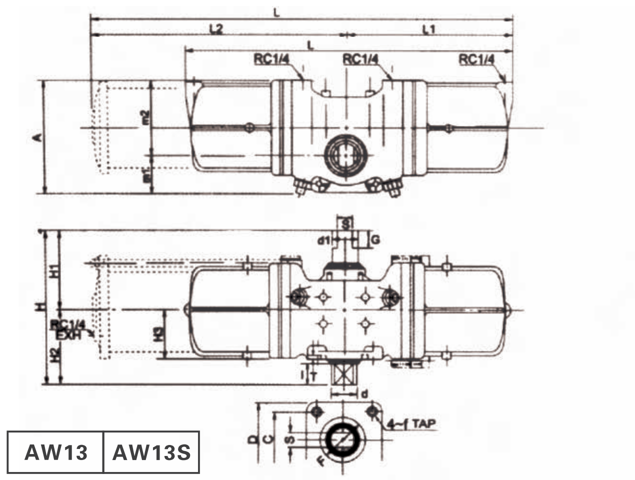
AG13S

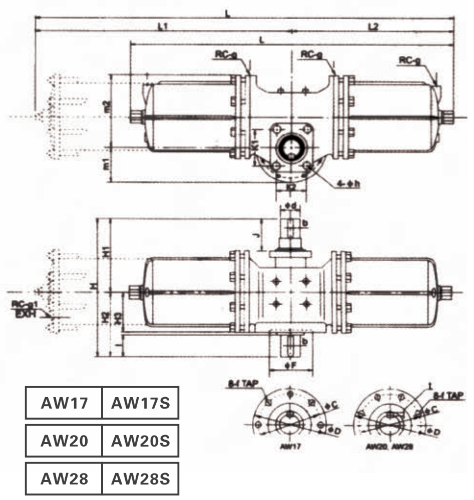
| 型号 | 尺寸（mm） | | | | | | | | | | | | | | | | | 重量 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | L | L1 | L2 | A | m1 | C | H | H1 | H2 | H3 | F | d | d1 | S | G | K | R | T | KG |
| AG06S | 329 | 136 | 193 | 120 | 42 | 45 | 131 | 78 | 53 | 38 | 36 | 14 | 16 | 8 | 13 | M6 | 7.5 | 3 | 5.9 |
| AG09S | 463 | 181 | 282 | 152 | 47 | 50 | 156 | 95 | 61 | 43 | 40 | 20 | 20 | 12 | 16 | M8 | 10 | 3 | 11.7 |
| AG13S | 683 | 257 | 426 | 225 | 70 | 80 | 224 | 131 | 93 | 60 | 60 | 34 | 35 | 22 | 28 | M12 | 12 | 8 | 31.9 |

| 型号 | 尺寸（mm） | | | | | | | | | | | | | | | | 重量 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | M | L | L1 | L2 | H | H1 | H2 | H3 | d | d1 | S | G | T | C | K | F | KG |
| AG06D | 120 | 42 | 419 | 136 | 283 | 131 | 78 | 53 | 38 | 14 | 16 | 8 | 13 | 5 | 45 | M6 | 36 | 7 |
| AG09D | 152 | 47 | 536 | 181 | 355 | 156 | 95 | 61 | 43 | 20 | 20 | 12 | 16 | 5 | 50 | M8 | 40 | 14 |
| AG13D | 225 | 70 | 847 | 257 | 590 | 224 | 131 | 93 | 60 | 34 | 35 | 22 | 28 | 8 | 80 | M12 | 60 | 43 |

球阀驱动装置的配置
Equip actuating device for ball valve
QILONG 祺隆阀门 QILONG VALVE

## AW、AW–S型




| 规格 | | AW13 | AW13S | AW17 | AW17S | AW20 | AW20S | AW28 | AW28S |
|---|---|---|---|---|---|---|---|---|---|
| 尺寸mm | A | 200 | 200 | – | – | – | – | – | – |
| | m1 | 68 | 68 | 95 | 95 | 115 | 115 | 158 | 158 |
| | m2 | 132 | 132 | 176 | 176 | 232 | 232 | 302 | 302 |
| | L | 574 | 810 | 988 | 755 | 1060 | 1415 | 1360 | 1840 |
| | L1 | – | 287 | 378 | – | – | 530 | – | 680 |
| | L2 | – | 523 | 610 | – | – | 885 | – | 1160 |
| | H | 285 | 285 | 381 | 381 | 457 | 457 | 578 | 578 |
| | H1 | 157 | 157 | 209 | 209 | 244 | 244 | 305 | 305 |
| | H2 | 128 | 128 | 172 | 172 | 213 | 213 | 273 | 273 |
| | H3 | 85 | 85 | 105 | 105 | 130 | 130 | 165 | 165 |
| | C | 100 | 100 | ϕ160 | ϕ160 | ϕ200 | ϕ200 | ϕ280 | ϕ280 |
| | D | 132 | 132 | ϕ190 | ϕ190 | ϕ230 | ϕ230 | ϕ316 | ϕ316 |
| | f | M16 | M16 | M16 | M16 | M16 | M16 | M20 | M20 |
| | g | – | – | 3/8 | 3/8 | 3/8 | 3/8 | 1/2 | 1/2 |
| | g1 | – | – | – | – | – | 3/8 | – | 1/2 |
| | ϕd | 44 | 44 | 50 | 50 | 64 | 64 | 85 | 85 |
| | ϕd1 | 45 | 45 | – | – | – | – | – | – |
| | s | 27 | 27 | – | – | – | – | – | – |
| | l | 38 | 38 | 60 | 60 | 75 | 75 | 100 | 100 |
| | ϕF | 80 | 80 | 120 | 120 | 140 | 140 | 220 | 220 |
| | T | 4 | 4 | – | – | – | – | – | – |
| | b | – | – | 12 | 12 | 18 | 18 | 24 | 24 |
| | t | – | – | 3.5 | 3.5 | 6 | 6 | 8 | 8 |
| | j | – | – | 99 | 99 | 109 | 109 | 137 | 137 |
| | K1 | – | – | 110 | 110 | 120 | 120 | 210 | 210 |
| | k2 | – | – | 80 | 80 | 100 | 100 | – | – |
| | ϕh | – | – | 19 | 19 | 23 | 23 | 27 | 27 |
| 重量KG | | 35.8 | 55.4 | 75 | 75 | 130 | 181 | 275 | 398 |

## 球阀电动装置的配置 Electric actuator equipment for ball valve

祺隆公司可以根据球阀的型号规格、实际工作压力、工作温度、介质确定球阀的操作扭矩，并考虑用户对球阀的转速、防爆性能、电压、电流、使用环境、远距离控制、智能控制的要求、外形尺寸、价格、售后服务等因素的综合考虑，选配合适型号和规格的电动装置，也可以根据用户的要求进行电动装置的配置。由于电动装置的配置考虑因素较多，因此希望用户订货时与祺隆公司进行及时充分的沟通，以保证球阀电动装置的正确、合理的配置。

QILONG company can determine the operation torque of the ball valve based on its type, specification, actual working pressure and working temperature, and medium, and can select suitable electric actuator with right type and specification by taking in to consideration of customers' comprehensive requirement of the ball valve, such as rotational speed, explosion–proof function, voltage, electric current, application environment, remote control, demand of intellectual control, overall sizes, pricing, and after sale service etc.. Electric actuator can also be equipped according to customers ' requirement. As there are quite a lot elements that need to be considered for t he electric actuator, it is hopeful that when placing order, customers are invited to communicate fully with QILONG company to ensure the correct and ideal equipment for the electric actuator of ball valve .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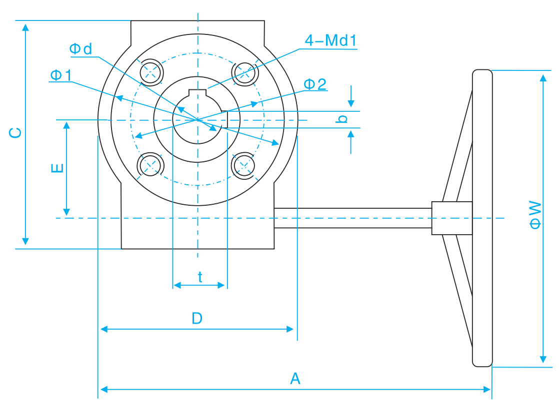
## 球阀蜗轮蜗杆传动装置的配置
Equipment of worm gear for ball valve




球阀蜗轮蜗杆传动装置的扭矩及主要尺寸 Size and Torque for worm gear

| 型号 | 输出扭矩 N.m | 速比 | 尺寸mm | | | | | | | | | | | 重量 (Kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | d | ϕ1 | ϕ2 | t | b | Z-d1 | W | A | E | C | D | |
| 24:1 | 300 | 24:1 | 19 | 92 | 70 | 21.1 | 5 | 4-M8 | 152 | 245 | 45 | 127 | 105 | 4.5 |
| 30:1 | 750 | 30:1 | 28.8 | 115 | 89 | 31.9 | 8 | 4-M12 | 305 | 400 | 66 | 176 | 153 | 12 |
| 50:1 | 1200 | 50:1 | 31.8 | 140 | 108 | 35.1 | 8 | 4-M12 | 305 | 400 | 78 | 197.5 | 170 | 14 |
| 80:1 | 2500 | 80:1 | 38 | 197 | 169 | 41.5 | 10 | 4-M18 | 305 | 411 | 120 | 290 | 260 | 30 |
| 120:1 | 2500 | 120:1 | 50.8 | 260 | 216 | 56.9 | 12.7 | 4-M18 | 406 | 405 | 120 | 270 | 260 | 35 |
| 290:1 | 3000 | 290:1 | 50.8 | 260 | 216 | 56.9 | 16 | 4-M20 | 305 | 488 | 120 | 313 | 276 | 50 |
| 320:1 | 7000 | 320:1 | 55.1 | 300 | 254 | 63.6 | 16 | 4-M16 | 500 | 544 | 154 | 432 | 300 | 65 |
| 350:1 | 9000 | 350:1 | 75 | 300 | 254 | 79.9 | 20 | 4-M16 | 600 | 544 | 180 | 445 | 374 | 150 |
| 450:1 | 15000 | 450:1 | 75 | 300 | 254 | 79.9 | 20 | 4-M16 | 750 | 658 | 225 | 597 | 454 | 206 |
| 618:1 | 21000 | 618:1 | 105 | 350 | 298 | 113.2 | 28 | 4-M20 | 750 | 690 | 250 | 730 | 500 | 280 |
| 910:1 | 29000 | 910:1 | 105 | 350 | 298 | 111.4 | 28 | 4-M20 | 750 | 817 | 315 | 860 | 615 | 420 |

注：同一型号的蜗轮蜗杆传动装置与不同的球阀配置，其连接尺寸可能有所不同。

## 球 阀 的 流 量 系 数
Flow coefficient Cv of ball valve

| 公称尺寸 Dimensions | | CLass150-CLass600 PN20-PN110 | | CLass150-CLass600 PN20-PN110 | | CLass150-CLass600 PN20-PN110 | | CLass150-CLass600 PN20-PN110 | |
|---|---|---|---|---|---|---|---|---|---|
| DN | NPS | 全通径 full bore | 缩径 reduced bore | 全通径 full bore | 缩径 reduced bore | 全通径 full bore | 缩径 reduced bore | 全通径 full bore | 缩径 reduced bore |
| | | 流量系数Cv | | | | | | | |
| 15 | $\frac{1}{2}$ | 24 | 14 | 24 | 14 | 24 | 14 | 24 | 14 |
| 20 | $\frac{3}{4}$ | 55 | 31 | 55 | 31 | 55 | 31 | 55 | 31 |
| 25 | 1 | 100 | 55 | 100 | 55 | 100 | 55 | 100 | 55 |
| 32 | $1\frac{1}{4}$ | 160 | 85 | 160 | 85 | 160 | 85 | 160 | 85 |
| 40 | 2 | 260 | 123 | 260 | 123 | 260 | 123 | 260 | 123 |
| 50 | $1\frac{1}{2}$ | 450 | 218 | 450 | 218 | 450 | 218 | 330 | 160 |
| 65 | $2\frac{1}{2}$ | 720 | 340 | 720 | 340 | 720 | 340 | 510 | 240 |
| 80 | 3 | 1100 | 490 | 1100 | 490 | 1100 | 490 | 770 | 350 |
| 100 | 4 | 2200 | 880 | 2200 | 880 | 2200 | 880 | 1700 | 680 |
| 125 | 5 | 3000 | 1380 | 3000 | 1380 | 3000 | 1380 | 2300 | 1060 |
| 150 | 6 | 5500 | 1980 | 5500 | 1980 | 5100 | 1840 | 4200 | 1500 |
| 200 | 8 | 10000 | 3500 | 1000 | 3500 | 9100 | 3200 | 7900 | 2800 |
| 250 | 10 | 17000 | 5460 | 17000 | 5460 | 15300 | 4900 | 13300 | 4300 |
| 300 | 12 | 24000 | 7900 | 24000 | 7900 | 21500 | 7100 | 18400 | 6100 |
| 350 | 14 | 28000 | 10700 | 26000 | 9940 | 24900 | 9500 | – | – |
| 400 | 16 | 36000 | 14000 | 33800 | 13100 | 31500 | 12300 | – | – |
| 450 | 18 | 46000 | 18000 | 43300 | 17000 | – | – | – | – |
| 500 | 20 | 57000 | 22000 | 53300 | 20600 | – | – | – | – |
| 600 | 24 | 75000 | 31500 | 70200 | 29500 | – | – | – | – |
| 650 | 26 | 84000 | 37000 | – | – | – | – | – | – |
| 700 | 28 | 93000 | 43000 | – | – | – | – | – | – |
| 750 | 30 | 102000 | 49000 | – | – | – | – | – | – |
| 800 | 32 | 110500 | 56000 | – | – | – | – | – | – |
| 900 | 36 | 133000 | 71000 | – | – | – | – | – | – |

## 球 阀 的 编 制 方 法

### Type Writen of Ball Valve

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | — | 8 | 9 | — | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|

| 单元号 Figure No | 含义 Mean | 各单元代号及说明 | |
|---|---|---|---|
| 1 | 专用功能 Function | D–低温；B–保温；S–缩径；T–调节型；N–有抗硫要求（NACE）的阀门；<br>没有专用功能省略代号 | |
| 2 | 阀门类型 Valve type | Q–球阀 | |
| 3 | 辅助分类 Assort | Z–整体式（一片式）;V–V型球体；S–三片式；L–气液联动；2–电液联动；6S–气动带手动 | |
| 4 | 传动方式 Operation | 省略–手动；3–蜗轮蜗杆传动；6–气动；9–电动；8–气液联动；2–电液联动；6S–气动带手动 | |
| 5 | 连接形式 Connection | 1–内螺纹连接；2–外螺纹连接；4–法兰连接；4J–法兰连接，环连接面；6–对焊连接；<br>6C–承插焊连接；7–对夹连接；7J–对夹连接，环连接面 | |
| 6 | 结构形式 Struction | 1–浮动球直通式；2–浮动球Y型三通式4–浮动球L形三通式；5–浮动球T型三通式；<br>6–固定球四通式；7–固定球直通式；8–固定球T形三通；9–固定球L形三通 | |
| 7 | 密封面材料 Sealing | F–聚四氟乙烯，增强聚四氟乙烯；FS–对位苯；PK–PEEK;N–尼龙；FC–碳纤维；<br>Y–钨钴合金，镍基合金；YS–特殊硬化；YP–陶瓷 | |
| 8 | 公称压力PN Pressure | 公称压力PN（欧洲体系） | 10–PN10;16–PN16;25–PN25;40–PN40;63–PN63;160–PN160;<br>250–PN250; |
| | | 公称压力PN（美洲体系） | 20–PN20;50–PN50;110–PN110;150–PN150;260–PN260;420–PN420; |
| | | 磅级 Class | A1–Class150;A1–Class150;A3–Class300;A6–Class600;A9–Class90;<br>A15–Class1500;A25–Class2500;A8–Class800; |
| | | JIS K | k1–JIS 10K;k2–JIS 20K;k3–JIS 30K;k4–JIS 40K; |
| 9 | 阀体材料 Valve material | C–WCB;A105;CC–WCC;C5–C5;C6–WC6;,F11;C9–WC9;F22;CL–LCB,LF2;<br>LC–LCC;L2–LC2;L3–LC3;P8–CF8;304;P3–CF3,304L;R8–CF8,316;R3–CF3M,316L;<br>P–ZG1Cr18Ni9Ti,1Cr18Ni9Ti;R–ZG1Cr18Ni12Mo2Ti,1Cr18Ni12Mo2Ti;<br>A–CN7M;20号合金；Ti–Ti或Ti合金；T–铜及铜合金；Q–球墨铸铁；Z–灰铸铁； | |
| 10 | 内件材料 Trim | 用户没有特殊要求，省略本代号（碳钢阀体一般配置13Cr内件，不锈钢阀体配置与阀体材料耐腐蚀性能一致的不锈钢内件）。<br>P8–304;P3–304L;R8–316;R3–316L;M–Monel;A–20号合金 | |





## 球阀数据表

### Ball valve data sheet

由于球阀的应用范围非常广泛，各种工况条件和使用条件通常会对球阀的设计与制造提出不同的要求，尽管祺隆的球阀型号编制已经比较详细，但对于一些更详细的要求，仍然无法表示出来。如果可能的话，建议用户能够提供球阀数据表中尽可能多的信息，以便祺隆公司能够设计与制造出完全符合用户要求的球阀产品。

As application scope for ball valves is very extensive, various working and usage conditions would raise for ball valves different requirement of design and manufacture .QILONG company has worked out the detailed types for ball valves, however, some more detailed requirements can still be expressed in no way. If possible, it is suggested that customers are invited to tell as much as possible the information as listed in the following table to enable QILONG company to design and manufacture the ball valve products fully meeting customers' requirements.

所要求的标准与规范：Standards and specifications required: ☐API 6D ☐API 608 ☐ASME B16.34 ☐BS 5351 ☐MSS SP-72 ☐GB/T 12237 ☐JB/T7745 ☐其他标准

球阀的功能 Funct ion of ball valve ____________。
球阀的公称尺寸 Normal diameter (bore) ____________。
最大操作压力 Max. oper ation pressure ____________。
最大现场试验压力 Max. testi ng pressure in field ____________。
阀门的公称压力 Normal pressure ( p. rating) ____________。
最高使用温度 Max. usage temperature ____________。
对低使用温度 Min. usage temperature ____________。
液体或气体的介质 Medium of l iquid or gas ____________。
介质的成分 Composition of medium ____________。
特殊的流通要求：排污，固体颗粒，扫线等 Special circulation requirement: excrets, solid article, pipeline clean etc. ____________。
球阀的结构形式 Structure type of ball Valve ____________。
需要全通径圆通道吗？ Full bore required ? ____________。
最小通道直径 Min. bore diameter ____________。

### 端部连接 End Connection

法兰端吗？ Flange–end ? ☐是 Yes ☐否 No

法兰标准按 Flange to st andard ☐ASME B16.5 ☐ASME B16.47系列A(API 605) ☐ASME B16.47系列B(MSS SP–44)
☐GB/T9112~9124 ☐HG/T20592 ☐HG/T20615 ☐SH 3406
☐JB/T74~90 ☐GB/T13402 ☐ISO 7005–1 ☐JIS B2238

法兰密封面形式: Flange s eal ing surface: ☐凸面（RF） ☐环连接面（RJ） ☐凹凸面（MF） ☐榫槽面（TG） ☐平面（FF）

对焊端吗？ Butt welding ends ? ☐是Yes ☐否 No ☐ASME B16.25
管道的： Pipel ine : 外径 OD ________ 内径 ID ________ 或管号 Pipeli ne no ________ 材料 Mat eria l ________。

承插焊端吗？ Socket welding ends ? ☐是Yes ☐否 No ☐ASME B16.11

内螺纹连接形吗？ Female thre aded ends ? ☐是Yes ☐否 No ☐ANSI B1.20.1 ☐GB 7306 ☐其他 ________。

其他连接形式 Other connection type: ____________。

结构长度：对于结构长度的特殊要求？ Face to Fac e: Any s peci al requirement ? ____________。

### 阀门的操作 Valve Operation

操作方式： Operation manner : ☐扳手（扳杆） Lever ☐蜗轮蜗杆装置（齿轮箱） Worm gear ☐气动装置 Pneumatic actuator ☐电动装置 Electric actuator ☐液动装置 Hydraulic actuator ☐气液联动装置 Pneumatic/Hydraulic actuator ☐电液联动装置 Electric/Hydraulic actuator

对驱动装置的特别要求：如指定的生产厂、型号、规格、附件（如：定位器、三联件、电磁阀回信器、位置指示器、行程开关等）
Special requirement for actuators: Manufacturer, Type, Specification, Accessories ( such as posi tione r, 3 connect ors, sol enoid valve, feedback device, position indicator, travel switch etc. ) ____________。
____________。
____________。

### 其他要求 Other Requirement

补充要求,如： Supplement requirement: such as ☐射线探伤检验、 Radiography test ☐超声波检验、 Ultrasonic test ☐磁粉检验、 Magnetic powder test ☐液体渗透检验、 l iquid penetration test ☐防静电试验、 Anti–static test ☐压力试验的特殊要求、 Special pressure test ☐扭矩试验、 Torque test ☐检验要求 Inspection requirement ____________

耐火试验设计吗？ Fire–safe test design? ☐是Yes ☐否 No 耐火试验标准及证书 Standard/c ertifi cate of the test ____________

有抗硫要求吗（NACE MR 0175）？ Sulphur re sistance r equir ed ? ☐是Yes ☐否No

要泄压机构？ Bleed design required ? ☐是Yes ☐否 No 对泄压机构有特殊要求吗？ Any special requirement ? ____________

要旁通连接吗？ By–pass connec tion required ? ☐是Yes ☐否 No 有何要求？ What requirement ? ____________

对提交文件的特殊要求？ Special requirement for documents del ivered ? ____________

生产制造及试验过程的第三方见证要求？ Third party wi tness for process of manufac ture & te st required ? ____________

对涂漆和涂层的特殊要求？ Any s pecial requirement for paint and coat ing ? ____________

球阀的选用及用户须知 Selection of ball valve
祺隆阀门 QILONG QILONG VALVE

## 结构特点阀Selection of ball valve

1、球阀主要分为浮动球和固定球两大类型，浮动球阀结构简单，价格相对较低，但与相同口径的固定球阀相比，操作扭矩较大，一般中小口径采用浮动球结构，相反，固定球阀价格相对较高，但操作扭矩较小，故一般大口径采用固定球结构。下表为祺隆公司对于各压力级推荐的球阀结构形式，仅供用户选用球阀时参考，硬密封球阀由于操作扭矩较大，浮动球结构适用的范围较小。

1. Ball Valves are mainly divided into two types, i.e. floating ball valve and trunnion ball valve. The former is simple in design structure and low in price, however, its operation torque is bigger comparing to that of the trunnion ball valve with same diameter. In general, floating ball valve is adopted for valves of small and medium diameter. On the contrary, trunnion ball valve is relatively higher in price, and smaller in operation torque. So valves with bigger diameters are employing generally the design structure of trunnion ball valve. The following table of ball valve structures relating to each pressure rating is recommended by QILONG company to customers for reference when selecting ball valves. The applicable scope of metal to metal sealed ball valve with floating ball is narrower due to its bigger operation torque.

| 公称尺寸 Size / 公称压力 Pressure Rating | 阀门类型Valve category | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 软密封、全通径 Soft sea led、F ull bore | | 硬密封、缩径 Soft seal ed、Reduced bore | | 硬密封、全通径 Metal to metal sealed、Full bore | | 软密封、缩径、Soft seated、Reduced bore | |
| | 推荐的球阀结构形式 Ball valve design structure recommended | | | | | | | |
| | 浮动球 Floating ball | 固定球 Trunnion ball | 浮动球 Floating ball | 固定球 Trunnion ball | 浮动球 Floating ball | 固定球 Trunnion ball | 浮动球 Floating ball | 固定球 Trunnion ball |
| Class150 PN20 | ≤DN150 ≤NPS6 | ≥DN200 ≥NPS8 | ≤DN200 ≤NPS8 | ≥DN250 ≥NPS10 | ≤DN100 ≤NPS4 | ≥DN125 ≥NPS5 | ≤DN125 ≤NPS5 | ≥DN150 ≥NPS6 |
| Class300 PN50 | ≤DN125 ≤NPS5 | ≥DN150 ≥NPS6 | ≤DN125 ≤NPS6 | ≥DN200 ≥NPS8 | ≤DN80 ≤NPS3 | ≥DN100 ≥NPS4 | ≤DN100 ≤NPS4 | ≥DN125 ≥NPS5 |
| Class600 PN110 | ≤DN180 ≤NPS3 | ≥DN100 ≥NPS4 | ≤DN100 ≤NPS4 | ≥DN125 ≥NPS5 | ≤DN50 ≤NPS2 | ≥DN65 ≥NPS2½ | ≤DN65 ≤NPS2½ | ≥DN80 ≥NPS3 |
| Class900 PN150 | ≤DN50 ≤NPS2 | ≥DN65 ≥NPS2½ | ≤DN65 ≤NPS2½ | ≥DN80 ≥NPS3 | ≤DN40 ≤NPS1½ | ≥DN50 ≥NPS2 | ≤DN50 ≤NPS2 | ≥DN65 ≥NPS2½ |
| Class15 0 PN260 | ≤DN40 ≤NPS1½ | ≥DN50 ≥NPS2 | ≤DN50 ≤NPS2 | ≥DN65 ≥NPS2½ | ≤DN40 ≤NPS1¼ | ≥DN50 ≥NPS2 | ≤DN50 ≤NPS2 | ≥DN65 ≥NPS2½ |
| Class250 PN420 | 不推荐使用 | ≤DN40 ≤NPS1½ | 不推荐使用 | ≥DN50 ≥NPS2 | ≤DN32 ≤NPS1¼ | ≤DN40 ≤NPS1½ | ≤DN40 ≤NPS1½ | ≤DN50 ≤NPS2 |
| PN16 | ≤DN150 | ≥DN200 | ≤DN200 | ≥DN250 | ≤DN125 | ≥DN125 | ≤DN125 | ≥DN150 |
| PN25 | ≤DN150 | ≥DN200 | ≤DN200 | ≥DN250 | ≤DN125 | ≥DN125 | ≤DN125 | ≥DN150 |
| PN40 | ≤DN125 | ≥DN150 | ≤DN150 | ≥DN200 | ≤DN100 | ≥DN100 | ≤DN100 | ≥DN125 |
| PN63 | ≤DN100 | ≥DN125 | ≤DN125 | ≥DN150 | ≤DN65 | ≥DN65 | ≤DN65 | ≥DN80 |
| PN100 | ≤DN100 | ≥DN125 | ≤DN125 | ≥DN150 | ≤DN65 | ≥DN65 | ≤DN65 | ≥DN80 |
| PN160 | ≤DN50 | ≥DN65 | ≤DN65 | ≥DN80 | ≤DN50 | ≥DN50 | ≤DN50 | ≥DN65 |

2、对于没有特殊要求的球阀，可以按照祺隆公司的球阀型号编制方法订货。尽管祺隆公司的球阀型号编制比较详细，但仍然无法对球阀的全部细节作出详尽的描述，故建议用户订货时最好能够按照阀门数据表提供有关的信息，以便祺隆公司能够设计与制造出完全符合用户要求的球阀产品。

3、对于固定球阀，如果用户没有特殊要求，建议由祺隆公司根据制造工艺来确定是采用两体式结构还是采用三体式结构。对于≤350（NPS14）的规格，祺隆公司一般采用两体式结构，而对于≥DN400(NPS16)的规格，一般采用三体式结构。

4、尽管祺隆公司球阀的设计与制造是非常成熟的，但技术总是不断进步的，因此，祺隆公司保留对本产品样本中球阀设计、制造进行更改且无需事先通知之权利。

5、祺隆公司的金属硬密封固定球阀有高温型和常温型两种结构，用户订货时需要特别注明使用温度。

2. Regarding the ball valve without any special requirement, ordering can be placed according to the type & number code System for Ball Valve made by QILONG company. It is suggested that customers be best to render relative information as per the valve data list when orderin g, because it sounds still difficult to describe the full details of the ball valve, though QILONG company's type & number code system is done relatively in detail, so as to enable QILONG company to design and manufacture the ball valve product fully meeting customers' requirement.

3. Regarding trunnion mounted ball valve, if customers have no special requirement, it is suggested that QILONG company make decision based on its own processing technique to employ the structure of either two piece or three piece body. Generally, QILONG company adopts two piece body design for ball valve ≤DN350 (NPS14), and three piece design for ball Valve≥DN400(NPS16).

4. Ball valves designed and manufactured by QILONG company are very mature, however, technology is always progressing continously. In this respect, QILONG company reserves the right to change and improve the design and manufacture of products in the catalogue without notice.

5. There are two types of design structure of metal to metal sealed ball valves, i.e.,high temperature and general temperature structure, which should be specified by customers when ordering.



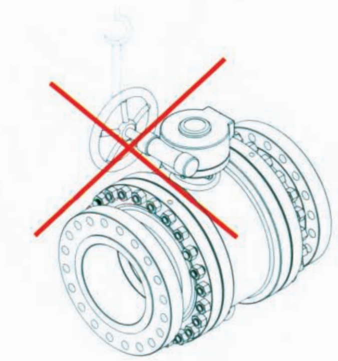
## 结构特点阀 Transportation, storage and installation of ball valve

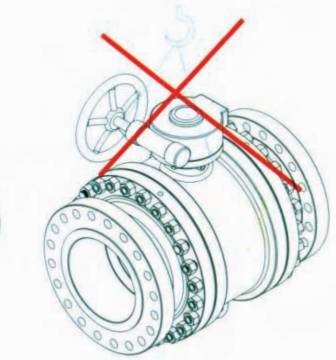
1、阀门在运输、贮存过程中不要拆除阀门两端的保护盖，以防止阀门连接端的损伤，并避免杂物等脏物进入阀腔。
2、阀门应该贮存在干燥的室内，一般不允许露天存放，以防止阀门的损坏和腐蚀。
3、阀门出厂时已按标准及订货合同要求进行了试验和调试，用户拆除包装后即可使用。对于气动球阀和电动球阀，阀门气源和电源的安装详见气动装置和电动装置的安装和使用说明书。如果用户要重新对阀门进行验收试验，应严格安照标准及订货合同进行试验，防止错误的试验方法给阀门性能带来不利影响。试压后库存的阀门，应清除阀腔内的积水。
4、阀门安装时应拆除阀门两端的保护盖，安装时应防止连接端的损伤，焊接连接的阀门在焊接时要采取适当的保护措施，以防止阀门在焊接时因高温产生变形而影响阀门的性能，尤其应该注意焊接时的高温对软密封球阀阀座的不利影响。
5、对于某些球阀，如金属硬密封球阀、V形球阀等有安装方向要求的球阀，在阀门的试验、安装时要特别注意阀体上的箭头标志，防止错误的试验与安装。

1. During transportation and storage, protection covers for both ends of ball valve should not be removed to provent the valve connection ends from damage, and to avoid dirty and foreign articles entering valve body cavity.
2. Valves should be kept in a dryroom, and it is to allowed to keep the valve in open–air in general in order to prevent valves f rom damage and deterieration.
3. Before delivery, valves have been tested and adjusted according to standards and requirement of ordering contract .Customers may use valves at once as received and after unpacking. As for pneumatically and electrical ly operated ball valves,the set–up of power and gas sources for valves should be done in detail according to the brief introduction of application and installation for pneumatic and electric actuators equipment. If customers need to re–test and re–accept valves, which should be strickly done according to standards and ordering contract , so as to avoid disadvantageous effect of valve function caused by mistake testing method. Valves stored after testing should be cleaned of water deposited in the valve body cavity.
4. The protection covers at valve ends should be removed when installation is carried on, and damage of connection ends should be avoided. As for valves with welding ends, proper protection procedures should be taken when welding to prevent Valve function from transfiguration caused by high temperature during welding. Particular attention should be drawn to the disadvantage effect against the seat of soft sealed ball valve during welding due to high temperature .
5. For certain types of ball valves such as metal to metal sealed floating ball valves and V type ball valves, which need direction requirement for installation, attention should be drawn to the direction marking of arrow–head of the valve body during testing and installation to avoid mistake testing and wrong installation .


正确吊装球阀方法
right hoisting method


正确吊装球阀方法
right hoisting method

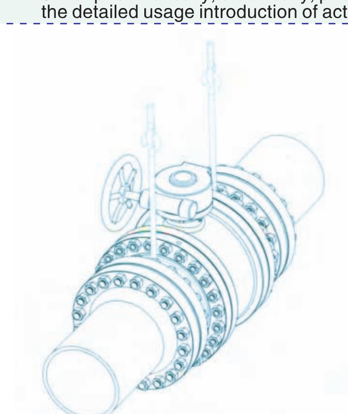

错误吊装球阀方法
wrong hoisting method

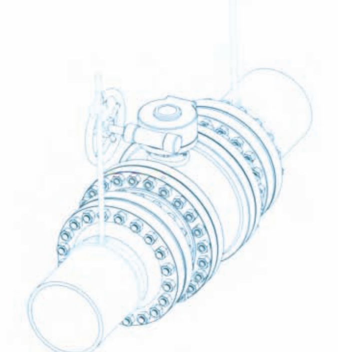

错误吊装球阀方法
wrong hoisting method

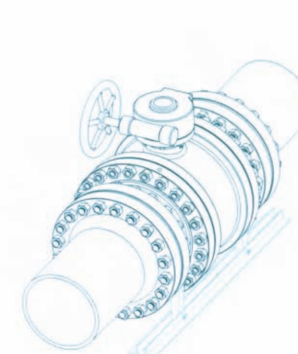
## 使用与操作Usage and operation

1、对于手动球阀，扳手与管路平行时为开启，扳手与管路垂直时为关闭，顺时针搬动扳手为关闭阀门，逆时针搬动扳手为开启阀门。
2、对于蜗轮蜗杆传动球阀，球阀的开度指示在蜗轮蜗杆传动装置的顶部，顺时针转动手轮为关闭阀门，逆时针转动手轮为开启阀门。
3、对于气动球阀、电动球阀、气液联动球阀、电液联动球阀，其使用详见驱动装置操作与使用说明书。

1. For manual ball valve: The valve is open with the lever in perallel to piping. With the lever right angled to piping, the valve is closed. It is closing the valve to turn the lever clockwise, and to turn the lever anticlockwise means to open the valve.
2. For worm gear operated ball valve: The indicator of valve opening degree is on the top of the actuator equipment. It isClosing the valve to turn the wheel clockwise, and to turn the wheel anticlockwise means to open the valve .
3. For pneumatically, electrically, pneumatically/hydraulically, and electrically/hydraulically operated ball valves :Please refer to the detailed usage introduction of actuators equipment.


支撑球阀方法一
the first method of supporting ball valve


支撑球阀方法二
the second method of supporting ball valve


支撑球阀方法三
the third method of supporting ball valve