



**DOCN**  
东辰智能

专业提供过程控制阀门解决方案

Professionally provide process control valve solutions



## 企业简介

Company profile

东辰智能科技有限公司（原浙江东辰阀门科技有限公司）成立于2006年，专业设计、制造特种阀门，各种高中压调节阀、减温减压器、汽机旁路阀、锅炉给水调节阀、最小流量阀、闸阀、球阀、蝶阀、截止阀、止回阀、排污阀、低温阀等阀门及相关的汽轮机辅机、锅炉辅机。产品广泛应用于各种参数的燃煤火电机组，燃机热电联产项目以及炼油、化工、冶金、集中供热等领域。

公司拥有一批专业从事阀门设计和开发的技术人员，掌握着国内外领先的阀门专业技术，有着丰富的设计、制造和现场调试经验。产品最高压力等级为PN76MPa，最高温度620°C，应用于最大单机容量为1030MW超超临界机组。

公司拥有50多项产品专利，其中发明专利有9项，参与修订行业标准7项，主导起草了浙江制造品字标《减温减压装置》标准1项。经过多年发展建立了一套完整的符合《特种设备生产和充装单位许可规则》的压力管道元件制造管理体系，并取得国家市场监管总局颁发的TS特种设备制造许可A1级和A2级证书，许可项目为电动调节阀、气动调节阀、闸阀、截止阀、止回阀、球阀、蝶阀、低温阀、减温减压装置。取得中国质量认证中心CQC颁发的ISO9001质量管理体系认证，ISO14001&45001环境与职业健康安全体系认证。同时产品通过了欧盟CE认证、美国石油协会API607、API6FA认证，通过了德国TUV ISO15848产品微泄漏认证、TA-LUFT空气洁净度认证、SIL3产品功能性安全认证和俄罗斯海关联盟CU-TR认证。

公司被评为国家级专精特新“小巨人”企业，国家高新技术企业，浙江省科技型企业，浙江省守合同重信用AAA单位，浙江省阀门研发中心，浙江省信用管理示范单位，安全生产标准化单位，同时也是中国阀门协会会员单位，中国石油化工热工协会理事单位；现已成为中石油、中石化、中海油、中国神华、中核集团、华能、华电、国电、大唐、中电投、浙能集团等合格供应商。

结合市场特点，公司在技术创新，产品选型、投标、合同签订、产品设计、工艺制造、检验试验，供货安装、运行调试、售后服务、以及用户回访等各个环节，都严格遵循质量管理体系程序。

Dongchen Intelligent Technology Co., Ltd. (formerly Zhejiang Dongchen Valve Technology Co., Ltd.) was established in 2006, specializing in the design and manufacturing of special valves, various high and medium pressure control valves, temperature and pressure reducers, steam turbine bypass valves, boiler feedwater control valves, minimum flow valves, gate valves, ball valves, butterfly valves, globe valves, check valves, blowdown valves, low-temperature valves, and related steam turbine and boiler auxiliary equipment. The product is widely used in various parameters of coal-fired thermal power units, gas turbine cogeneration projects, as well as in fields such as oil refining, chemical engineering, metallurgy, and centralized heating.

The company has a group of professional technical personnel engaged in valve design and development, possessing leading valve professional technology both domestically and internationally, and rich experience in design, manufacturing, and on-site debugging. The maximum pressure rating of the product is PN76MPa, and the maximum temperature is 620 °C. It is applied to ultra-supercritical units with a maximum single unit capacity of 1030MW.

The company has over 50 product patents, including 9 invention patents, participated in the revision of 7 industry standards, and led the drafting of 1 Zhejiang manufacturing product standard "Temperature and Pressure Reducing Device". After years of development, a complete pressure pipeline component manufacturing management system has been established that complies with the "License Rules for Special Equipment Production and Filling Units", and has obtained the TS Special Equipment Manufacturing License A1 and A2 certificates issued by the State Administration for Market Regulation. The licensed projects include electric regulating valves, pneumatic regulating valves, gate valves, globe valves, check valves, ball valves, butterfly valves, low-temperature valves, and temperature and pressure reducing devices. Obtained ISO9001 quality management system certification and ISO14001&45001 environmental and occupational health and safety system certification issued by China Quality Certification Center COC. At the same time, the product has passed EU CE certification, American Petroleum Institute API607, API6FA certification, German TUV ISO15848 product micro leakage certification, TA-LUFT air cleanliness certification, SIL3 product functional safety certification, and Russian Customs Union CU-TR certification.

The company has been rated as a national level specialized, refined, and innovative "Little Giant" enterprise, a national high-tech enterprise, a technology oriented enterprise in Zhejiang Province, an AAA unit in Zhejiang Province that abides by contracts and values credit, a valve research and development center in Zhejiang Province, a credit management demonstration unit in Zhejiang Province, a safety production standardization unit, and also a member unit of the China Valve Association and a director unit of the China Petrochemical Thermal Engineering Association; We have now become qualified suppliers for CNPC, Sinopec, CNOOC, China Shenhua, CNNC, Huaneng, Huadian, Guodian, Datang, China Power Investment Corporation, Zhejiang Energy Group, and other companies.

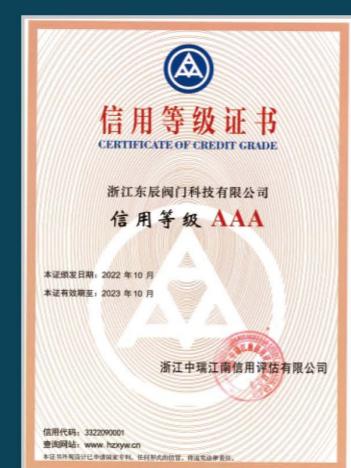
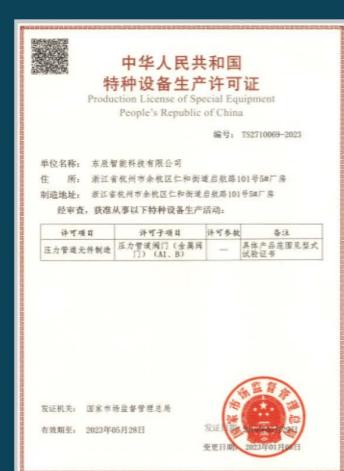
Based on market characteristics, the company strictly follows the quality management system procedures in various aspects such as technological innovation, product selection, bidding, contract signing, product design, process manufacturing, inspection and testing, supply and installation, operation and debugging, after-sales service, and user follow-up.

## 资质与荣誉

### Qualification and honor

公司取得中国质量认证中心CQC颁发的ISO9001质量管理体系认证, ISO14001&45001环境与职业健康安全管理体系认证, TS (A1、A2), 入网中石油、中石化、中海油、中国神华、中核集团、华能、华电、国电、大唐、中电投、浙能集团等合格供应商, 多项产品取得国家发明、软著和实用新型专利。

The company has obtained ISO9001 quality management system certification, ISO14001&45001 environmental and occupational health and safety system certification issued by the China Quality Certification Center CQC, TS (A1, A2), and has been connected to qualified suppliers such as PetroChina, Sinopec, CNOOC, China Shenhua, China Nuclear Power Group, Huaneng, Huadian, Guodian, Datang, China Power Investment, and Zhejiang Energy Group. Multiple products have obtained national invention, software, and utility model patents.



高新技术企业  
high and new tech enterprises

信用等级AAA证书  
AAA credit rating certificate



ISO9001  
质量管理体系认证  
ISO9001 Quality Management System Certification

ISO14001  
环境管理体系认证  
ISO14001 Environmental Management System Certification

ISO45001  
职业健康安全管理体系认证  
ISO45001 Occupational Health and Safety Management System Certification



安全生产标准化三级企业  
Third level enterprise of safety production standardization

CE-PED欧盟认证  
CE-PED EU certification

TUV SIL3  
球阀  
TUV SIL3 ball valve



TUV SIL3  
蝶阀  
TUV SIL3 butterfly valve



ISO15848-1  
调节阀微泄漏认证  
ISO15848-1 Control Valve Micro Leakage Certification

# 资质与荣誉

## Qualification and honor



TA-LUFT VDI2440  
调节阀微泄露认证  
TA-LUFT VDI2440 Control Valve  
Micro Leakage Certification



TUV API607  
球阀防火认证  
TUV API607 Ball Valve  
Fire Certification



TUV API607  
蝶阀防火认证  
TUV API607 Butterfly Valve  
Fire Certification



### 特种设备型式试验证书

#### Special Equipment Type Test Certificate

(压力管道元件)  
Pressure Piping Components  
证书编号 Certificate No.: TSX71002720190117

制造单位 Manufacturers: 浙江东辰阀门科技有限公司  
单位地址 Address: 浙江省杭州市余杭区瓶窑镇凤都村秀沿路7号

设备类别 Equipment Type: 金属阀门  
产品名称 (品种) Products: 闸 阀

产品型号 Model: Z540H-100 DN200; Z540H-25 DN300  
型式试验报告编号: YSY20190233; YSY20190234  
Type Test Report No

经型式试验, 确认符合《压力管道元件型式试验规则》TSG D7002-2006  
的要求。本证覆盖以下型号规格的产品:  
The products meet the TSG D7002-2006 PRESSURE PIPING  
COMPONENTS TYPE TEST REGULATION by passing the type test. This  
certificate covers these products as following:



### 特种设备型式试验证书

#### Special Equipment Type Test Certificate

(压力管道元件)  
Pressure Piping Components  
证书编号 Certificate No.: TSX71002720190118

制造单位 Manufacturers: 浙江东辰阀门科技有限公司  
单位地址 Address: 浙江省杭州市余杭区瓶窑镇凤都村秀沿路7号

设备类别 Equipment Type: 金属阀门  
产品名称 (品种) Products: 截止阀

产品型号 Model: J541H-100 DN200; J541H-25 DN300  
型式试验报告编号: YSY20190235; YSY20190236  
Type Test Report No

经型式试验, 确认符合《压力管道元件型式试验规则》TSG D7002-2006  
的要求。本证覆盖以下型号规格的产品:  
The products meet the TSG D7002-2006 PRESSURE PIPING  
COMPONENTS TYPE TEST REGULATION by passing the type test. This  
certificate covers these products as following:

PN≤10, OMPa, DN≤400mm, 适用温度: -29~425°C。

浙江省特种设备检验研究院  
Zhejiang Special Equipment Inspection and Research Institute  
二〇一九年三月十三日  
Date of Issued

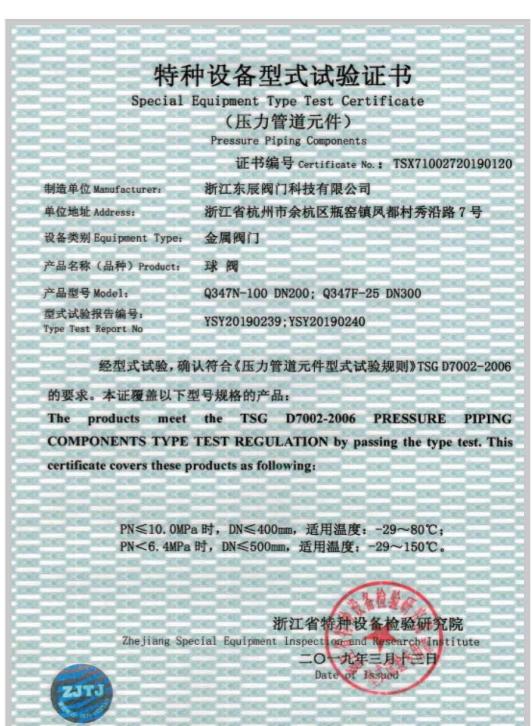


截止阀型式试验证书  
Globe valve type test  
certificate



### 闸阀型式试验证书

#### Gate valve type test certificate



### 特种设备型式试验证书

#### Special Equipment Type Test Certificate

(压力管道元件)  
Pressure Piping Components  
证书编号 Certificate No.: TSX71002720190120

制造单位 Manufacturers: 浙江东辰阀门科技有限公司  
单位地址 Address: 浙江省杭州市余杭区瓶窑镇凤都村秀沿路7号

设备类别 Equipment Type: 金属阀门  
产品名称 (品种) Products: 球 阀

产品型号 Model: Q347N-100 DN200; Q347F-25 DN300  
型式试验报告编号: YSY20190239; YSY20190240  
Type Test Report No

经型式试验, 确认符合《压力管道元件型式试验规则》TSG D7002-2006  
的要求。本证覆盖以下型号规格的产品:  
The products meet the TSG D7002-2006 PRESSURE PIPING  
COMPONENTS TYPE TEST REGULATION by passing the type test. This  
certificate covers these products as following:

PN≤10, OMPa, DN≤400mm, 适用温度: -29~80°C;  
PN≤6, 4MPa 时, DN≤500mm, 适用温度: -29~150°C。

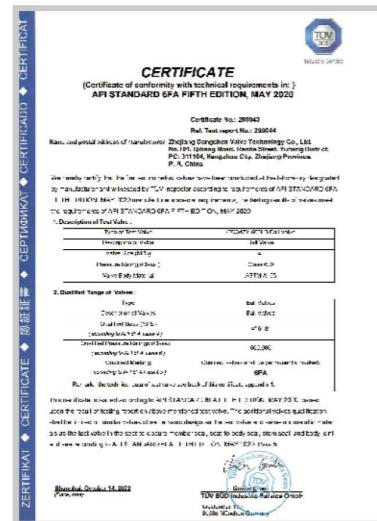
浙江省特种设备检验研究院  
Zhejiang Special Equipment Inspection and Research Institute  
二〇一九年三月十三日  
Date of Issued



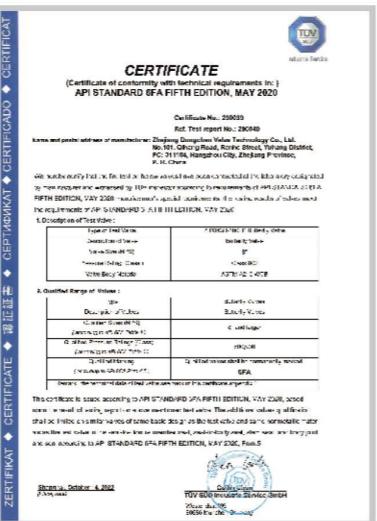
球阀型式试验证书  
Ball valve type test  
certificate



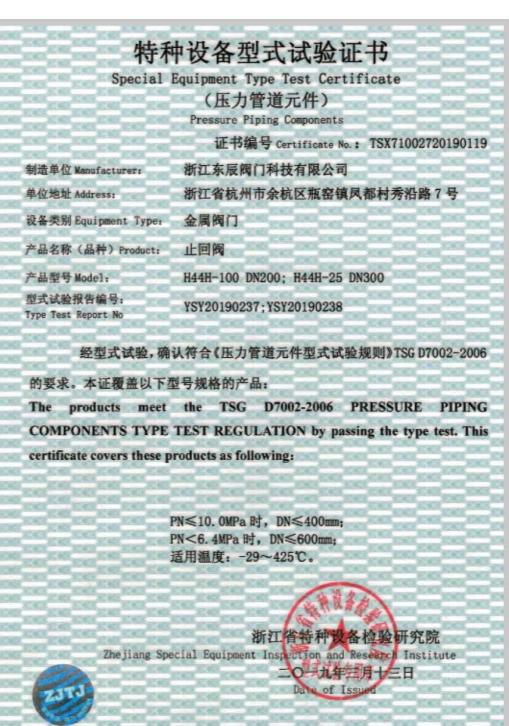
TUV 6FA  
闸阀防火认证  
TUV 6FA Gate Valve  
Fire Certification



TUV 6FA  
球阀防火认证  
TUV 6FA Ball Valve  
Fire Certification



TUV 6FA  
蝶阀防火认证  
TUV 6FA Butterfly Valve  
Fire Certification



### 特种设备型式试验证书

#### Special Equipment Type Test Certificate

(压力管道元件)  
Pressure Piping Components  
证书编号 Certificate No.: TSX71002720190119

制造单位 Manufacturers: 浙江东辰阀门科技有限公司  
单位地址 Address: 浙江省杭州市余杭区瓶窑镇凤都村秀沿路7号

设备类别 Equipment Type: 金属阀门  
产品名称 (品种) Products: 止回阀

产品型号 Model: H44H-100 DN200; H44H-25 DN300  
型式试验报告编号: YSY20190237; YSY20190238  
Type Test Report No

经型式试验, 确认符合《压力管道元件型式试验规则》TSG D7002-2006  
的要求。本证覆盖以下型号规格的产品:  
The products meet the TSG D7002-2006 PRESSURE PIPING  
COMPONENTS TYPE TEST REGULATION by passing the type test. This  
certificate covers these products as following:

PN≤10, OMPa, DN≤400mm;  
PN≤6, 4MPa 时, DN≤600mm;  
适用温度: -29~425°C。

浙江省特种设备检验研究院  
Zhejiang Special Equipment Inspection and Research Institute  
二〇一九年三月十三日  
Date of Issued

### 止回阀型式试验证书

#### Check valve type test certificate



国家级专精特新“小巨人”企业  
National level specialized, refined,  
and innovative small giant enterprise



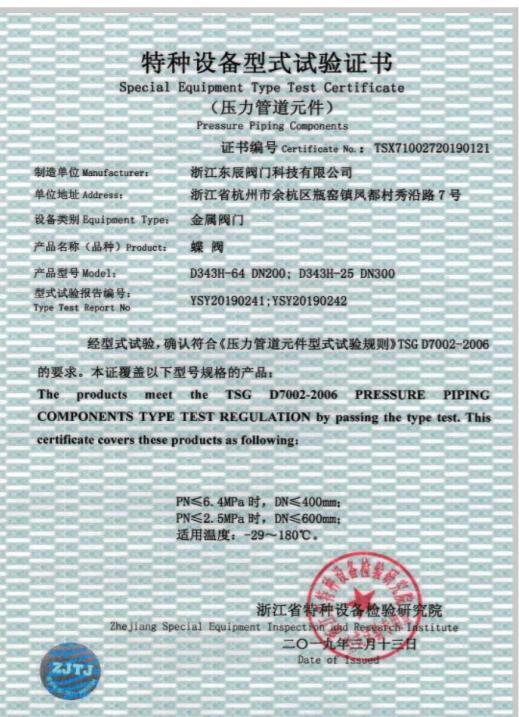
浙江制造标准《减温减压装置》起草单位  
Drafting unit of Zhejiang Manufacturing Standard  
Temperature and Pressure Reducing Devices"



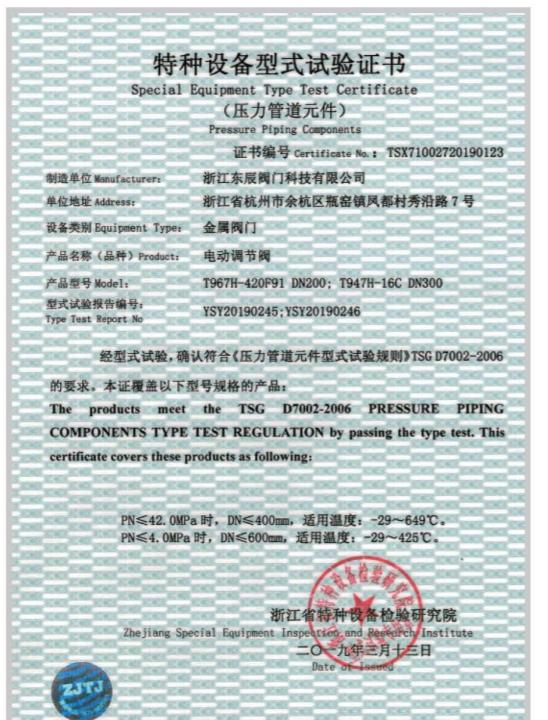
省级高新技术企业研究开发中心  
Provincial High tech Enterprise  
Research and Development Center

# 资质与荣誉

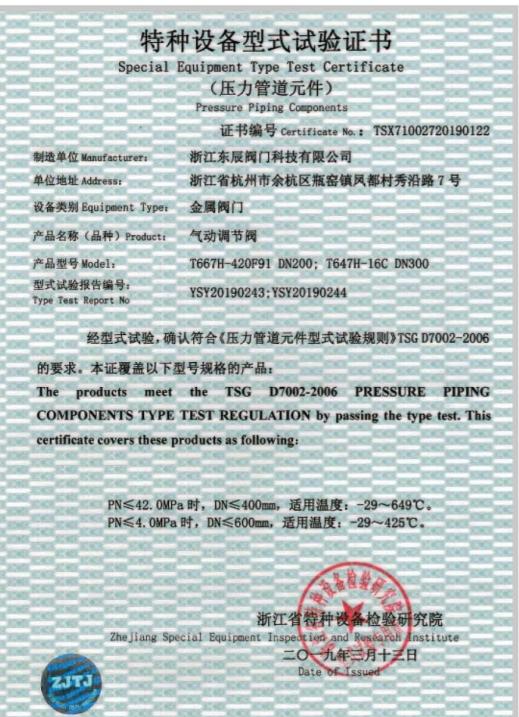
## Qualification and honor



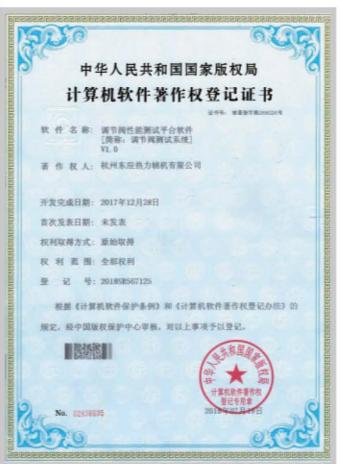
**蝶阀型式试验证书**  
Butterfly valve type test certificate



**电动调节阀型式试验证书**  
Type test certificate of electric control valve



**气动调节阀型式试验证书**  
Type test certificate of pneumatic control valve



**计算机软件著作权登记证书**  
Computer Software Copyright  
Registration Certificate



**计算机软件著作权登记证书**  
Computer Software Copyright  
Registration Certificate



**实用新型专利证书**  
Utility Model Patent Certificate



**发明专利证书**  
Patent for invention



**实用新型专利证书**  
Utility Model Patent Certificate



**实用新型专利证书**  
Utility Model Patent Certificate



**实用新型专利证书**  
Utility Model Patent Certificate



**实用新型专利证书**  
Utility Model Patent Certificate



**实用新型专利证书**  
Utility Model Patent Certificate



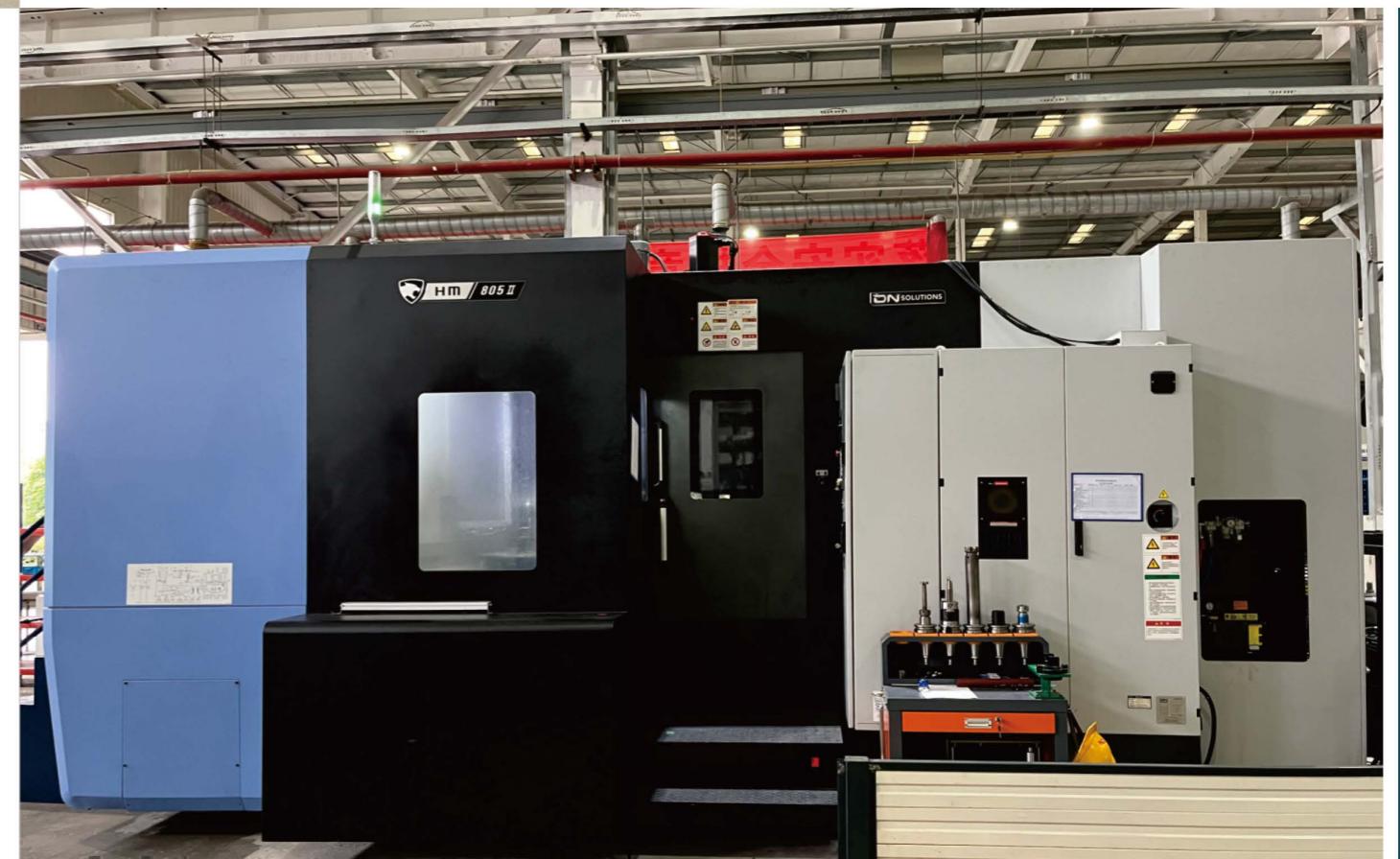
卧式加工中心  
Horizontal machining center



立式加工中心  
Vertical machining center



立式加工中心  
Vertical machining center



卧式加工中心  
Horizontal machining center

## 设备优势

### Equipment advantage

东辰公司拥有齐全的阀门、减温减压装置生产装备，完善的质量检测手段，具有较强的产品设计和制造检测能力。公司现有各类先进加工和试验设备，如加工中心，大型数控机床，卧式镗床，立式车床，内外圆磨床，等离子自动堆焊机，数控相贯线切割机，管道热处理炉，抛丸机，超声清洗机，纳米光整等设备，各类阀门试压机最大试压能力130MPa，调节阀精度和性能测试，漆膜厚度检测，表面粗糙度检测，噪声检测，红外温度检测，阀体壁厚检测，完整的理化实验室和无损检测等测试设备，满足大口径和高压力的阀门交货能力。使产品的试验，检测更加科学完善，这些检测手段为阀门的性能和产品质量起到了保证作用。

Dongchen Company has complete production equipment for valves, temperature and pressure reducing devices, perfect quality inspection methods, and strong product design and manufacturing inspection capabilities. The company has all kinds of advanced processing and testing equipment, such as machining centers, large CNC machines, horizontal boring machines, vertical lathes, internal and external circular grinders, automatic plasma welding machines, CNC intersecting line cutting machines, pipeline heat treatment furnaces, shot blasting Machine, ultrasonic cleaning machine, nanometer finishing and other equipment, various valve pressure testing machines with maximum pressure testing capacity of 130MPa, control valve accuracy and performance testing, paint film thickness detection, surface roughness detection, noise detection, infrared temperature detection, valve body Wall thickness testing, complete physical and chemical laboratory and non-destructive testing and other testing equipment to meet the delivery capacity of large diameter and high pressure valves. To make the product testing and testing more scientific and perfect, these testing methods have guaranteed the performance of the valve and product quality.



数控卧式铣镗床  
CNC horizontal milling and boring machine



等离子堆焊机  
Plasma welding machine



内外圆磨床  
internal and external grinding machine



立式车床  
Vertical lathe

## 设备优势

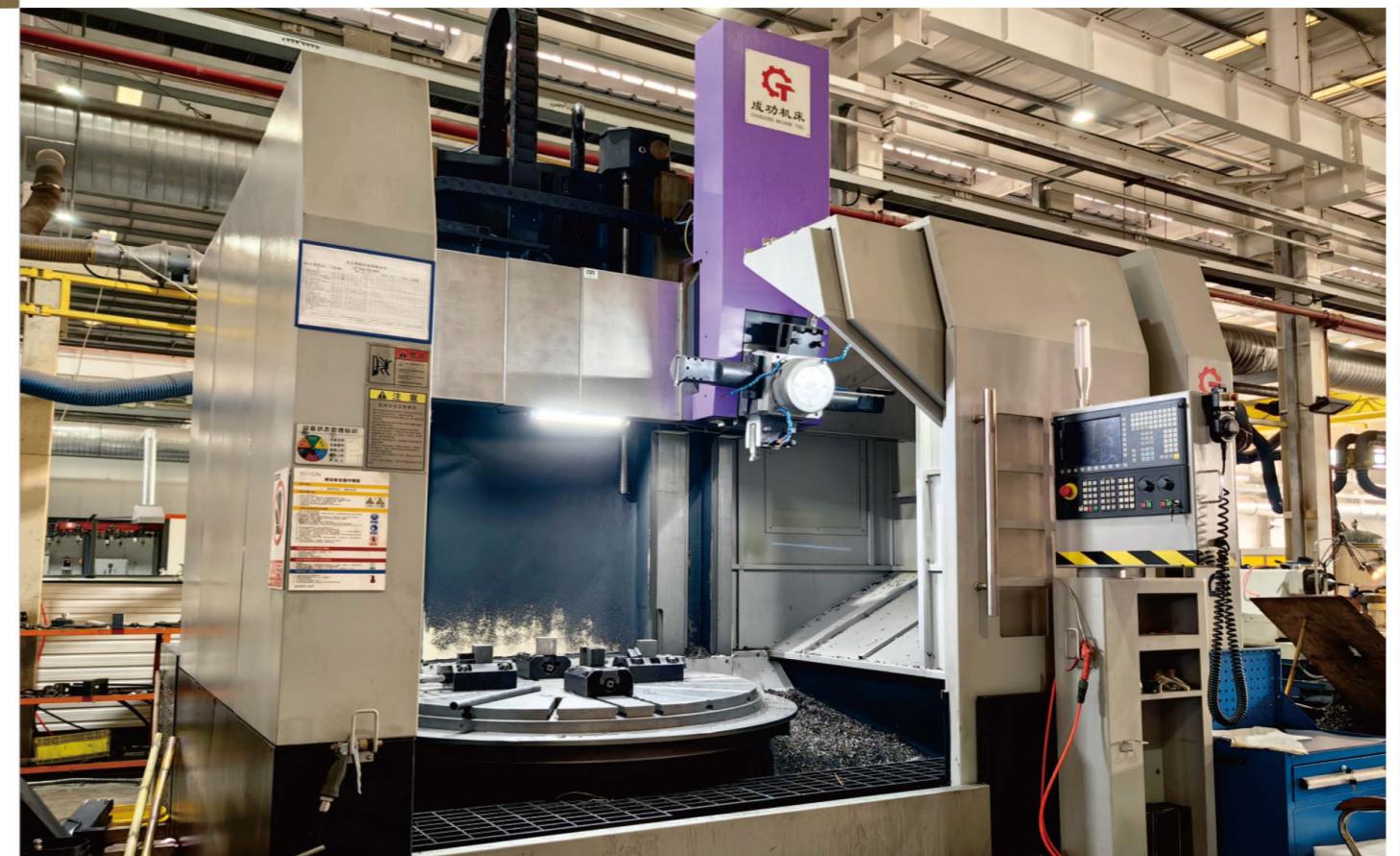
Equipment advantage



自动焊机  
Automatic welding machine



龙门加工中心  
Gantry machining center



数控立车  
CNC vertical lathe

## 技术研发(浙江省阀门研发中心)

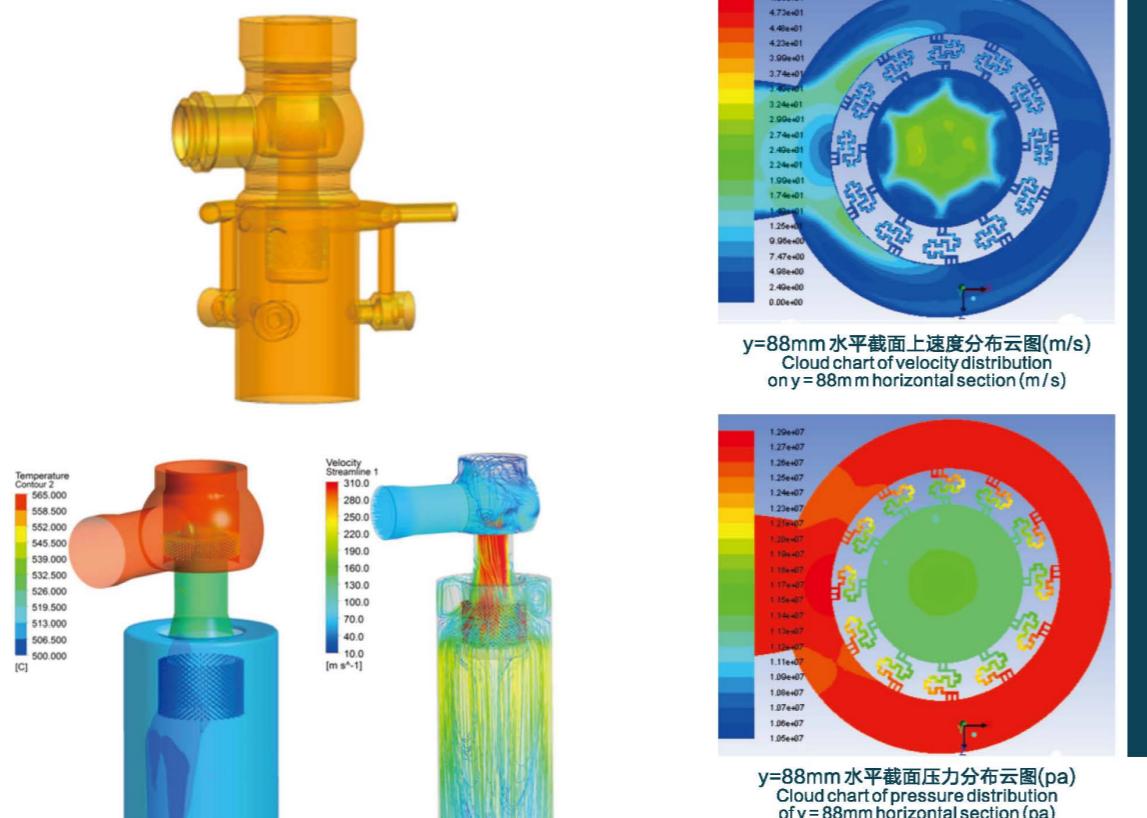
Technical R&D (Zhejiang valve R&D Center)

为提高新产品研发能力，公司与浙江省特种设备检验研究院和高校合作，组建了东辰智能技术研发中心，并取得省级研发中心证书。拥有一线技术人员30多人，其中高级工程师4人，高级技师5人，并配以国内外先进科研设施，在现有产品的基础上不断研发出适合市场需求的新产品。目前已取得40多项发明专利、软著和实用新型专利。

采用GB、DL、JB、SH、ASME、API等规范进行设计，应用CAD/CAM/ANSYS/CFD设计，计算分析软件通过有限元分析，掌握每一个承压元件受力、应力集中、承压变形等情况，从而提高了产品的安全可靠性。

In order to improve the research and development capabilities of new products, the company has collaborated with Zhejiang Special Equipment Inspection and Research Institute and universities to establish the Dongchen Intelligent Technology R&D Center, which has obtained a provincial-level R&D center certificate. We have over 30 frontline technical personnel, including 4 senior engineers and 5 senior technicians, and are equipped with advanced research facilities at home and abroad to continuously develop new products suitable for market demand based on existing products. Currently, we have obtained over 40 invention patents, software patents, and utility model patents.

Designed according to GB, DL, JB, SH, ASME, API and other specifications, CAD/CAM/ANSYS/CFD design is applied. The calculation and analysis software grasps the stress, stress concentration and pressure deformation of each pressure component through finite element analysis. And so on, thus improving the safety and reliability of the product.



## 工艺工装

Craft tooling

东辰公司在阀门、减温减压装置的制造，生产过程中，从原材料进厂到成品合格出厂，建立了一整套质量管理体系控制下的制造工艺流程。在加工工艺流程方面，公司有着多年丰富的经验，通过每个产品的不同结构，每个零件的不同要求，并结合先进的加工工艺设备，制定了一套非常完善的零件加工、清洗、装配工艺，并专门配备了相应的工装、模具，通过这种一件一工艺卡的形式，来保证产品的加工精度，确保所有的产品合格出厂。

Dongchen Company has established a complete set of manufacturing process under the control of quality management system in the manufacture and production process of valves, temperature and pressure reducing devices, from raw materials to finished products. In terms of processing technology, the company has many years of rich experience, through the different structures of each product, the different requirements of each part, combined with advanced processing equipment, has developed a very complete set of parts processing, cleaning, assembly process And specially equipped with the corresponding tooling and mold, through the form of this one-piece process card, to ensure the processing precision of the product, so as to ensure that all products are qualified for delivery.



DONGCHEN  
INTELLIGENT  
TECHNOLOGY CO., LTD.

## 主要检测设备

Main testing equipment



法兰接口阀门试压机  
Flange interface valve test press



焊接接口阀门试压机  
Welding interface valve test press



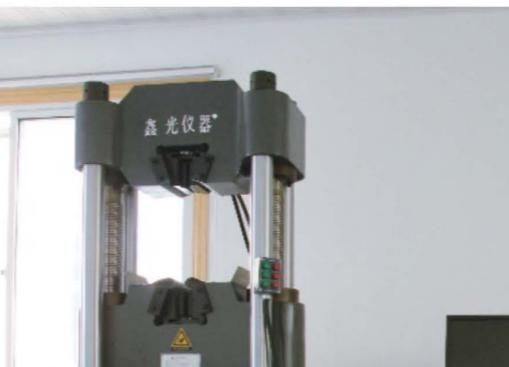
冲击试验机  
Impact tester



台式硬度计  
Bench hardness tester



直读光谱仪  
Direct reading spectrometer



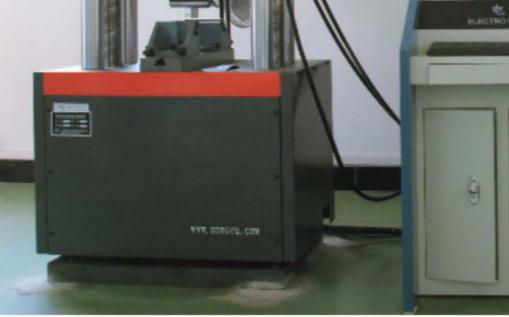
拉伸试验机  
Tensile testing machine



金相显微镜  
Metallurgical microscope



磁粉探伤仪  
Magnetic particle detector



射线探伤仪  
X-ray detector



超声检测仪  
Ultrasonic detector



渗透剂  
Penetrant



东辰公司根据TS、ISO要求，确定和配备必要的控制手段，过程、设备（包括检验和试验设备）工艺装备，从而确保从设计、制造、检验、试验、安装、服务整个体系的相容性和完整性。

公司具有材料化学成分分析用的直读光谱仪，硬度，拉伸，冲击，金相，测厚仪等理化设备。同时具备RT，UT，PT，MT等无损检测设备，并有多名无损检测资格证书的检测人员。

According to the requirements of TS and ISO, Dongchen Company determines and equips the necessary control means, process and equipment (including inspection and test equipment) process equipment to ensure the compatibility of the whole system from design, manufacture, inspection, test, installation and service. And integrity.

The company has direct reading spectrometers for chemical composition analysis of materials, hardness, tensile, impact, metallography, thickness gauges and other physical and chemical equipment. At the same time, it has non-destructive testing equipment such as RT, UT, PT, MT, etc., and has many non-destructive testing qualification testers.



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## 产品应用

### Applications

专业的精神、创新的理念、务实的作风、科研的实力、精良的装备，缔造了东辰的全新形象。

在电力、石油化工、工程公司、设计院、煤化工、冶金、医药、造纸、印染、轻工等领域，东辰的产品都展示着它恒久的魅力，无论是产品的外形设计，还是内在功能，都体现着科技与人文的理念。

Professional spirit, innovative concept, practical style, scientific research strength and excellent equipment have created a new image of Dongchen.

In the fields of electric power, Petrochemical, Engineering company, design institute, Coal chemical industry, metallurgy, medicine, papermaking, printing and dyeing, Light industry, etc., Dongchen products show its permanent charm. No matter the shape design or internal function of the products, they all embody the science and technology and human-oriented philosophy.





## 现场使用

Field use



经过多年的发展，东辰智能以其卓越的产品质量和完善的服务体系，获得了广大用户的一致好评，在行业内树立了良好的企业开端，品牌知名度连年攀升，产品广泛应用于大型重点项目。

After years of development, Dongchen Intelligent has received unanimous praise from a large number of users for its excellent product quality and comprehensive service system. It has established a good start as a company in the industry, and its brand awareness has been increasing year by year. Its products are widely used in large-scale key projects.



# 三干控制阀网

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**DOCN** 东辰智能

# 典型业绩

Typical performance

## 电力

power

华能南京金陵发电有限责任公司2×1030MW  
 华能武汉发电有限责任公司2X300MW、2×600MW  
 华能沁北电厂2×1000MW  
 华能临沂电厂2X350MW  
 华电能源股份有限公司佳木斯热电厂2X300MW  
 华电内蒙古包头东华热电有限公司2X300MW  
 华电内蒙古能源有限公司包头发电分公司2X600MW  
 大唐国际连城发电有限责任公司2×300MW  
 大唐黑龙江发电有限公司哈尔滨第一热电厂2×300MW  
 中电投安徽淮南平圩电力实业有限责任公司  
 国电吉林江南热电厂2X300MW  
 浙江浙能温州发电有限公司2X660MW  
 江苏射阳港电厂2X660MW  
 江苏南热发电有限责任公司2×600MW  
 华阳洛阳电厂2X600MW  
 甘肃电投金昌发电公司2×330MW  
 中山火力发电有限公司2X300MW  
 埃塞俄比亚BELES-1×B20+1×C25自备电厂  
 埃塞俄比亚Omo Kuraz-1×B20+1×C25自备电厂  
 广西来宾市B电厂2×360MW  
 国电常州发电有限公司2×600MW  
 洛阳孟津电厂2×600MW  
 华电昆山热电有限公司燃机2×400MW  
 国电安顺发电有限公司2X330MW  
 甘肃金昌热电有限公司2X330MW  
 江苏南通电厂2×1050MW  
 国网焦作电厂2×660MW  
 淮北平山电厂2×660MW  
 青海西宁电厂2×660MW  
 湖南华电常德电厂2×660MW  
 内蒙古京能集宁热电2X350MW  
 陕西华电杨凌一期电厂2X350MW  
 国电太原第一热电厂2X300MW  
 华电忻州广宇二期2X350MW  
 湖北能源集团鄂州电厂三期2X1050MW  
 深能保定西北郊热电厂一期2X350MW  
 中电普安电厂2×660MW  
 天津大唐国际盘山发电有限责任公司2×600MW  
 中煤大屯热电“上大压小”2X350MW  
 大唐吉木萨尔热电联产一期2×350MW

Huaneng Nanjing Jinling Power Generation Co., Ltd. 2 × 1030mw  
 Huaneng Wuhan Power Generation Co., Ltd. 2X300MW, 2X600MW  
 Huaneng Qinbei Power Plant 2 × 1000MW  
 Huaneng Linyi power plant 2X350MW  
 Jiamusi thermal power plant 2X300MW of Huadian Energy Co., Ltd  
 Huadian Inner Mongolia Baotou Donghua Thermal Power Co., Ltd. 2X300MW  
 Baotou Power Generation Branch of Huadian Inner Mongolia Energy Co., Ltd. 2X600MW  
 Datang International Liancheng Power Generation Co., Ltd. 2 × 300MW  
 Datang Heilongjiang Power Generation Co., Ltd. Harbin No.1 Thermal Power Plant 2 × 300MW  
 China Power Investment Anhui Huainan Pingwei Power Industry Co., Ltd  
 Guodian Jilin Jiangnan thermal power plant 2X300MW  
 Zhejiang zheneng Wenzhou Power Generation Co., Ltd. 2x660mw  
 Jiangsu Sheyanggang power plant 2x660mw  
 Jiangsu nanre Power Generation Co., Ltd. 2 × 600MW  
 Huayang Luoyang Power Plant 2X600MW  
 Gansu Power Investment Jinchang power generation company 2 × 330MW  
 Zhongshan Thermal Power Co., Ltd. 2X300MW  
 Ethiopian beles-1 × B20+1 × C25 self provided power plant  
 Ethiopian Omo kuraz-1 × B20+1 × C25 self provided power plant  
 Guangxi Laibin B power plant 2 × 360MW  
 Guodian Changzhou Power Generation Co., Ltd. 2 × 600MW  
 Luoyang Mengjin power plant 2 × 600MW  
 Huadian Kunshan Thermal Power Co., Ltd. gas turbine 2 × 400MW  
 Guodian Anshun Power Generation Co., Ltd. 2x330mw  
 Gansu Jinchang Thermal Power Co., Ltd. 2x330mw  
 Jiangsu Nantong Power Plant 2 × 1050mw  
 State Grid Jiaozuo power plant 2 × 660MW  
 Huabei Pingshan power plant 2 × 660MW  
 Qinghai Xining Power Plant 2 × 660MW  
 Hunan Huadian Changde power plant 2 × 660MW  
 Inner Mongolia Jingneng Jining thermal power 2X350MW  
 Shaanxi Huadian Yangling phase I power plant 2X350MW  
 State power Taiyuan No.1 Thermal Power Plant 2X300MW  
 Huadian Xinzhous Guangyu phase II 2X350MW  
 Hubei energy group Ezhou Power Plant Phase III 2x105mw  
 Shenneng Baoding northwest suburb Thermal Power Plant Phase I 2X350MW  
 China Power Pu'an power plant 2 × 660MW  
 Tianjin Datang International Panshan Power Generation Co., Ltd. 2 × 600MW  
 Datun thermal power plant of China Coal Group Co., Ltd. 2X350MW  
 Datang Jimsar cogeneration phase I 2 × 350MW

## 石油与化工

Petroleum and chemical industry

中国石油抚顺石化分公司  
 中国石油宁夏石化分公司  
 中国石油锦西化工分公司  
 中国石油四川石化有限责任公司  
 大庆油田化工有限公司  
 中石化河南油田分公司  
 中国神华集团煤制油有限公司  
 神华宁煤集团  
 大连恒力集团PTA  
 中盐昆山有限公司  
 中国石油化工股份有限公司镇海炼化分公司  
 中安联合煤化有限责任公司  
 中海石油舟山石化有限公司  
 中海石油宁波大榭石化有限公司  
 吉化集团龙山化工厂  
 南京扬子精细化工有限公司  
 中国石油辽阳石化分公司  
 中国石油锦州石化公司  
 中国石油哈尔滨石化分公司  
 中化集团正和集团股份有限公司  
 浙江恒逸新材料有限公司  
 巴陵恒逸己内酰胺有限公司  
 青海宜化化工有限公司  
 浙江鸿盛化工有限公司  
 营口康辉石化有限公司  
 盘锦北方沥青燃料有限公司  
 腾龙芳烃（漳州）有限公司  
 珠海宝塔石化有限公司  
 东营市海科瑞林化工有限公司  
 重庆紫光化工有限公司  
 山东京博石油化工有限公司  
 山东海科化工集团有限公司  
 山东金诚石化集团有限公司  
 东营华联石油化工有限公司  
 宁波金海德旗化工有限公司  
 山东万达化工有限公司  
 江苏恒力化纤股份有限公司  
 滨化集团股份有限公司  
 山东银鹰化纤有限公司  
 云天化国际化工股份有限公司

Fushun Petrochemical Company of PetroChina  
 PetroChina Ningxia Petrochemical Company  
 PetroChina Jinxi Chemical Branch  
 PetroChina Sichuan Petrochemical Co., Ltd  
 Daqing Oilfield Chemical Co., Ltd  
 Sinopec Henan Oilfield Company  
 China Shenhua Group coal to Oil Co., Ltd  
 Shenhuaning Coal Group  
 Dalian Hengli Group PTA  
 China Salt Kunshan Co., Ltd  
 Zhenhai Refining & Chemical Company, Sinopec  
 Zhongan United Coal Chemical Co., Ltd  
 CNOOC Zhoushan Petrochemical Co., Ltd  
 CNOOC Ningbo Daxie Petrochemical Co., Ltd  
 Longshan Chemical Plant of Jihua Group  
 Nanjing Yangzi Fine Chemical Co., Ltd  
 PetroChina Liaoyang Petrochemical Company  
 PetroChina Jinzhou Petrochemical Company  
 PetroChina Harbin Petrochemical Company  
 Sinochem Zhenghe Group Co., Ltd  
 Zhejiang Hengyi high tech materials Co., Ltd  
 Baling Hengyi caprolactam Co., Ltd  
 Qinghai Yihua Chemical Co., Ltd  
 Zhejiang Hongsheng Chemical Co., Ltd  
 Yingkou Kanghui Petrochemical Co., Ltd  
 Panjin North asphalt fuel Co., Ltd  
 Tenglong aromatics (Zhangzhou) Co., Ltd  
 Zuhai Baota Petrochemical Co., Ltd  
 Dongying Haikai Rulin Chemical Co., Ltd  
 Chongqing Ziguang Chemical Co., Ltd  
 Shandong Jingbo Petrochemical Co., Ltd  
 Shandong Haike Chemical Group Co., Ltd  
 Shandong Jincheng Petrochemical Group Co., Ltd  
 Dongying Hualian Petrochemical Plant Co., Ltd  
 Ningbo jinheidqi Chemical Co., Ltd  
 Shandong Wanda Chemical Co., Ltd  
 Jiangsu Hengli Chemical Fiber Co., Ltd  
 Binhu Group Co., Ltd  
 Shandong Yinying Chemical Fiber Co., Ltd  
 Yuntianhua International Chemical Co., Ltd

## 典型业绩

Typical performance

### 工程公司与设计院

Engineering company and Design Institute

中冶南方都市环保工程技术股份有限公司  
成都锐思环保技术股份有限公司  
山东电力建设第三工程公司  
甘肃火电工程公司  
中环(中国)工程公司  
杭州华电能源工程有限公司  
广州广重企业集团有限公司  
杭州杭锅工业锅炉有限公司  
浙江省火电建设公司  
青岛捷能电力设计有限公司  
南京汽轮电力工程设计院有限公司  
杭州新世纪能源环保工程股份有限公司  
中国能源工程有限公司  
北京首同致远节能环保科技有限公司  
湖北合加环境设备有限公司  
福建龙净环保科技工厂有限公司  
济钢集团国际工程技术有限公司  
浙江省电力设计院有限公司  
西北电力工程承包有限公司  
浙江西子联合工程有限公司  
中石油华东设计分公司  
中石化宁波工程公司  
杰瑞石油天然气工程有限公司  
中国昆仑工程有限公司  
杭州杭氯化医工程有限公司  
中国恩菲工程技术有限公司  
中国瑞林工程技术有限公司  
东华工程科技股份有限公司  
杭州中能汽轮动力有限公司  
北京环境工程技术有限公司  
光大环保中国有限公司  
中国轻工业长沙工程有限公司  
北京中冶设备研究设计总院有限公司  
天津中材工程研究中心有限公司  
杭州锦江集团生态环保有限公司

MCC Southern Urban Environmental Protection Engineering Technology Co., Ltd  
Chengdu Ruisi Environmental Protection Technology Co., Ltd  
Shandong Electric Power Construction Third Engineering Company  
Gansu thermal power engineering company  
Zhonghuan (China) Engineering Company  
Hangzhou Huadian Energy Engineering Co., Ltd  
Guangzhou Guangzhong Enterprise Group Co., Ltd  
Hangzhou Hangguo Industrial Boiler Co., Ltd  
Zhejiang thermal power construction company  
Qingdao Jieneng Power Design Co., Ltd  
Nanjing Steam Turbine Electric Power Engineering Design Institute Co., Ltd  
Hangzhou New Century Energy Environmental Protection Engineering Co., Ltd  
China Energy Engineering Co., Ltd  
Beijing shoutong Zhiyuan energy conservation and Environmental Protection Technology Co., Ltd  
Hubei Hejia environmental equipment Co., Ltd  
Fujian Longjing Environmental Protection Technology Factory Co., Ltd  
Jigang Group International Engineering Technology Co., Ltd  
Zhejiang Electric Power Design Institute Co., Ltd  
Northwest Electric Power Engineering Contracting Co., Ltd  
Zhejiang Xizi United Engineering Co., Ltd  
East China design branch of CNPC  
Sinopec Ningbo Engineering Company  
Jerry oil & Gas Engineering Co., Ltd  
China Kunlun Engineering Co., Ltd  
Hangzhou Hangzhou oxidation Medical Engineering Co., Ltd  
China ENFI Engineering Technology Co., Ltd  
China Ruili Engineering Technology Co., Ltd  
Donghua Engineering Technology Co., Ltd  
Hangzhou Zhongneng steam turbine power Co., Ltd  
Beijing Environmental Engineering Technology Co., Ltd  
Everbright environmental protection China Co., Ltd  
China Light Industry Changsha Engineering Co., Ltd  
Beijing MCC equipment research and Design Institute Co., Ltd  
Tianjin Sinoma Engineering Research Center Co., Ltd  
Hangzhou Jinjiang Group ecological environmental protection Co., Ltd



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## 主要合作伙伴

Major partners



# 入网资质证明

Network qualification certificate



**中石化入网证明**  
Sinopec access certificate

**中核集团入网证明**  
CNNEC access certificate

**中海油入网证明**  
CNOOC access certificate

**中化入网证明**  
Sinochem Network Access Certificate

**中国电建入网证明**  
China Power Construction Network Access Certificate

**国家能源集团入网证明**  
National Energy Group Network Access Certificate

**中国大唐入网证明**  
China Datang Network Access Certificate

**中国华电入网证明**  
China Huadian Network Access Certificate

**浙能集团入网证明**  
Zhejiang Energy Group Network Access Certificate

**中国华能入网证明**  
China Huaneng Network Access Certificate

## 调节阀系列 Control valves series

### 高压差系列调节阀

High-pressure differential regulator

- 03 • DC1834 多层套筒调节阀  
DC1834 Multi-layer sleeve regulating valve
- 03 • DC1221 多级涡流调节阀  
DC1221 Multi-stage eddy current regulating valve
- 04 • DC1844 迷宫式调节阀  
DC1844 Labyrinth control valve
- 04 • DC1854 多孔迷宫式调节阀  
DC1854 Multi-hole labyrinth control valve

### 中低压差系列调节阀

Low and medium differential valve

- 05 • DC1611 顶部导向型单座调节阀  
DC1611 Top Guided Single Seated Globe Valve
- 05 • DC1621 套筒导向型单座调节阀  
DC1621 Gage guided single seated Globe valve
- 06 • DC1624 标准套筒调节阀  
DC1624 Standard cage control valve
- 06 • DC1624L 低噪音套筒调节阀  
DC1624L Low noise cage control valve
- 06 • DC1624X 特殊低噪音套筒调节阀  
DC1624X Special Low Noise cage Control Valve
- 07 • DC1624D 双层套筒调节阀  
DC1624D Double cage control valve
- 07 • DC1624E 双层套筒扩径型调节阀  
DC1624E Double cage expansion type control valve
- 08 • DC1920 三通合流型调节阀  
DC1920 Three-way diverting control valve
- 08 • DC1930 三通分流型调节阀  
DC1930 Three-way mixing control valve

### 特殊系列调节

Special series regulating valve

- 09 • DC1629L 先导式低噪音套筒调节阀(可用于蒸汽放空)  
DC1629L Pilot operated low noise control valve
- 09 • DC1629D 先导式双层套筒调节阀(可用于蒸汽放空)  
DC1629D Pilot Double cage Control Valve(Steam vent valve)
- 10 • DC1621M 微小流量调节阀  
DC1621M Micro-flow control valve
- 11 • DC1620J 保温夹套调节阀  
DC1620J JACKETED control valve
- 12 • DC1420 物料角阀  
DC1420 Bottom outlet angle valve
- 13 • DC1620W 波纹管密封调节阀  
DC1620W Bellows sealing control valve
- 14 • DC1521 自力式压力调节阀  
DC1521 Self-operated pressure regulating valve
- 15 • DC1521K 系列阀前稳压型  
DC1521K Series front valve regulator

- 16 • DC7000 排污阀  
DC7000 Blowdown valve

- 19 • 低温阀  
Cryogenic valve

### 旁路阀系列 Bypass valve series

- 20 • DC3700 旁路减温减压阀  
DC3700 Bypass desuperheater
- 23 • DC2620 喷水隔离阀  
DC2620 Shut-off valve

### 球阀系列 Ball valves series

#### 高性能直通切断球阀

High-performance full bore shutoff ball valve

- 26 • DC5621 浮动式软密封球阀  
DC5621 Floating soft seal ball valve
- 26 • DC5622 浮动式金属硬密封球阀  
DC5622 Floating metal hard seal ball valve
- 26 • DC5623 固定式软密封球阀  
DC5623 Fixed soft seal ball valve

- 26 • DC5624 固定式金属硬密封球阀  
DC5624 Fixed metal hard seal ball valve

- 27 • 高性能直通切断球阀  
High-performance full bore shutoff ball valve

- 28 • V型调节球阀 V-notch ball valve

### 蝶阀系列 Butterfly valves series

#### 高性能蝶阀

High-performance butterfly valve

- 31 • DC5811 双偏心高性能蝶阀  
Double eccentric high performance butterfly valve
- 31 • DC5812 三偏心硬密封蝶阀  
Triple eccentric hard seal butterfly valve

### 平板闸阀 Flat gate valves series

- 35 • DC6011 平行单闸板闸阀  
DC6011 Series parallel single gate valve

- 35 • DC6012 平行双闸板闸阀  
DC6012 Series parallel double-gate gate valve

- 38 • 截止阀 Shut-off valve

- 39 • 抽汽逆止阀 Extraction check valve

### 气动执行机构 Pneumatic actuators

#### 气动执行机构 Pneumatic actuators

- 41 • 1-X280 多弹簧式气动薄膜式执行机构  
Multi-spring pneumatic diaphragm actuators
- 41 • 1-X250 大行程气动薄膜式执行机构  
Long stroke pneumatic diaphragm actuators

- 42 • 气动薄膜执行机构 Pneumatic diaphragm actuator

- 43 • 气动活塞式执行机构 Effective thrust of valve rod

### 减温减压装置系列

Temperature and pressure reducing device series

- 45 • DC400 减温减压装置  
DC400 Desuperheating and pressure reducing device
- 45 • DC400-03 分体式减温减压装置  
DC400-03 Split type temperature and pressure reducing device
- 45 • DC401-03 一体式减温减压装置  
DC401-03 Integrated temperature and pressure reducing device
- 46 • DC410-03 减温装置  
DC410-03 Temperature reducing device
- 46 • DC420-01 减压装置  
DC420-01 pressure reducing device
- 47 • DCA 弹簧可调雾化喷嘴  
DCA Spring Adjustable Atomizing Nozzle
- 48 • DCF 固定喷嘴  
DCF Fixed nozzle
- 50 • DC2442 一体式多喷嘴调节阀  
DC2442 Integrated multi-nozzle regulating valve

- 51 • 阀门改造和检维修服务 Valve modification and maintenance services

- 55 • 售前服务/售后服务 Pre-sale service/ After-sale service

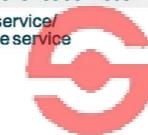
# 调节阀系列

## Control valves series



Professionally provide  
process control  
valve solutions

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## 调节阀 Control valves



东辰智能科技有限公司生产的调节阀系列产品已经过10多年的研究和制造，其产品控制精度高，性能稳定，质量可靠。该系列产品已成功应用于各种工况条件，根据不同介质的压力、温度、物理化学特性等要求，形成不同系列产品。各系列产品被广泛应用于石油、化工、轻工、制药、造纸、冶金、发电等各个行业，在自动化工业仪表生产系统过程中起到举足轻重的作用。近年来，东辰的调节阀系列产品已在部分关键工况中逐步替代国外进口产品。

The control valve series products produced by Dongchen Intelligent Technology Co., Ltd. have been developed and manufactured for over 10 years, with high control accuracy, stable performance, and reliable quality. This series of products has been successfully applied to various working conditions, forming different series of products based on the pressure, temperature, physical and chemical characteristics and other requirements of different media. Various series of products are widely used in various industries such as petroleum, chemical, light industry, pharmaceuticals, papermaking, metallurgy, and power generation, playing a crucial role in the process of automated industrial instrument production systems. In recent years, Dongchen's control valve series products have gradually replaced imported products in some key operating conditions.

### ◆控制精度高

阀内件设计采用CFD流体力学软件模拟，通过专业的软件分析及计算，并经过试验验证达到工艺要求。其流量特性满足国际标准IEC 60534和GB/T17213的要求。

### ◆High control accuracy

The design of valve trim is simulated by CFD fluid mechanics software. The software is analyzed and calculated by professional software and verified by tests to meet process requirements. Its flow characteristics meet the requirements of international standards IEC 60534 and GB/T17213.

### ◆产品规格全

产品涵盖范围广，覆盖高中低系列，还拥有专为特殊工况设计的系列产品。产品通用性强，可通过直接更换不同阀内件类型以满足不同工况及控制性能的要求。

### ◆Product specifications

The product covers a wide range, covering high, middle and low series, and also has a series of products designed for special working conditions. The product is highly versatile, and can be directly replaced with different valve trim types to meet different working conditions and control performance requirements.

### ◆自主核心控制技术

拥有多重高压差控制技术以满足不同工况的特殊要求。并掌握关键零部件的硬化工艺技术，以提高产品性能，增强产品可靠性。同时具有紧密可靠的内外部密封结构设计，满足TA-Luft/ISO 15848等国际标准低泄漏要求。

### ◆Autonomous core control technology

Has a variety of high-pressure differential control technology to meet the special requirements of different working conditions. And master the hardening process technology of key components to improve product performance and enhance product reliability. At the same time, it has a tight and reliable internal and external seal structure design to meet the low leakage requirements of international standards such as TA-Luft / ISO 15848.

## 高压差系列调节阀 High-pressure differential regulator

### DC1834 多层套筒调节阀

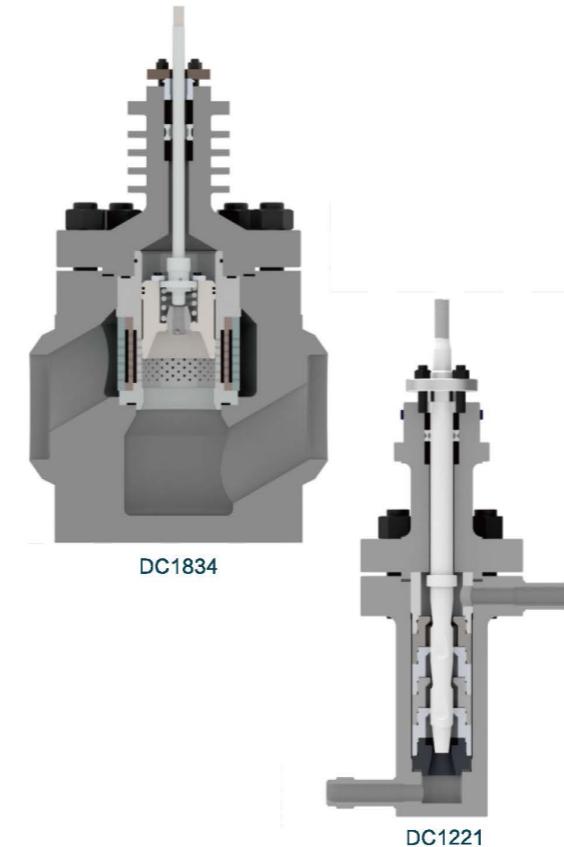
DC1834 Multi-layer sleeve regulating valve

### DC1221 多级涡流调节阀

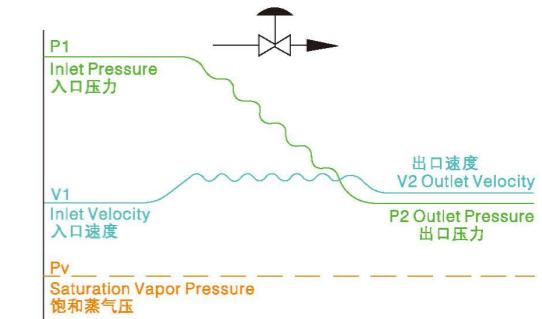
DC1221 Multi-stage eddy current regulating valve

DOCN高压差系列调节阀是专门适用于高温、高压差等苛刻条件下的控制阀。不论是可压缩性或不可压缩性流体，都可保证其控制精确及长寿命，能解决气蚀、噪音等问题。另外，由于该系列的高质量和高性能，使得维护费用降低，使系统简洁化。同时由于不需要节流孔板、管道式消音器而可以使得工艺管道设计的更紧凑。请根据流体条件，按照DC1834, DC1221, DC1844, DC1854选型。

DOCN high-pressure differential control valve is a control valve specially designed for severe conditions such as high temperature and high pressure difference. Regardless of whether it is a compressible or incompressible fluid, it can guarantee its precise control and long life, and can solve the problems of cavitation and noise. In addition, due to the high quality and high performance of this series, maintenance costs are reduced and the system is simplified. At the same time, the process pipe design can be made more compact because no orifice plate or pipe muffler is needed. Please select the model according to the fluid conditions according to DC1834, DC1221, DC1844, DC1854.



### ◆多级降压原理图 Schematic diagram of multistage Depressurization



### ◆技术参数 Technical data

本体形式 Body type	DC1834 球形阀 Globe	DC1221 球形阀 Globe
公称通径 Body size	DN50-DN400(2" - 16" )	DN20-DN100(3/4" - 4" )
公称压力 Body rating	PN16-PN420(ANSI class 150 - 2500)	PN16-PN420(ANSI class 150 - 2500)
流体温度 Fluid temperature	-196℃~620℃	
连接方式 Connections	法兰型(RF, FM, RTJ), 焊接型(SW, BW)	Flanged(RF, FM, RTJ), butt weld, socket weld
阀体材质 Body materials	锻20/15CrMo/12Cr1MoV, A105, A182 F11/F22/F91/F304/F316	
阀内件材质 Trim materials	GB1220 20Cr13/S30408/S31608/17-4PH, A182 F6NM, A479 XM-19, Inconel 718	
可调比 Range-ability	50:1-20:1	
流量特性 Flow characteristics	线性、等百分比 linear、EQ%	
阀座泄漏量 Metal seat Leakage	GB4213 IV级, V级 ANSI class IV , V	
软密封 Soft seat	微气泡级 GB4213 VI ANSI VI	
降压级数 Trim levels	3-7 UP to level 24	
执行机构 Actuator combination	电动执行机构 Electric actuator	
	气动薄膜式执行机构 Pneumatic diaphragm actuator	
	气动活塞式执行机构 Pneumatic cylinder actuator	

## 高压差系列调节阀

High-pressure differential regulator

DC1844 迷宫式调节阀

DC1844 Labyrinth control valve

DC1854 多孔迷宫式调节阀

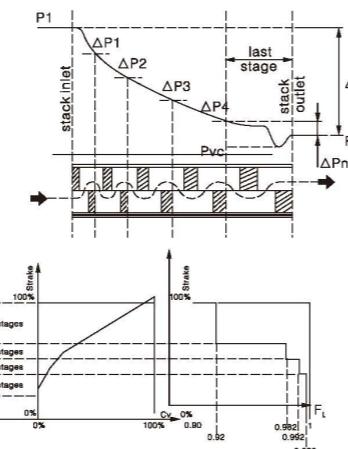
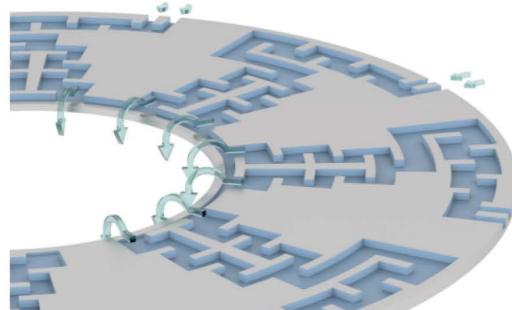
DC1854 Multi-hole labyrinth control valve



DOCN高压差系列调节阀是专门适用于高温、高压差等苛刻条件下的控制阀。不论是可压缩性或不可压缩性流体，都可保证其控制精确及长寿命，能解决气蚀、噪音等问题。另外，由于该系列的高质量和高性能，使得维护费用降低，使系统简洁化。同时由于不需要节流孔板、管道式消音器而可以使得工艺管道设计的更紧凑。请根据流体条件，按照DC1834, DC1221, DC1844, DC1854选型。

DOCN high-pressure differential control valve is a control valve specially designed for severe conditions such as high temperature and high pressure difference. Regardless of whether it is a compressible or incompressible fluid, it can guarantee its precise control and long life, and can solve the problems of cavitation and noise. In addition, due to the high quality and high performance of this series, maintenance costs are reduced and the system is simplified. At the same time, the process pipe design can be made more compact because no orifice plate or pipe muffler is needed. Please select the model according to the fluid conditions according to DC1834, DC1221, DC1844, DC1854.

◆多级降压原理图  
Schematic diagram of multistage Depressurization



### ◆技术参数 Technical data

本体形式 Body type	DC1844 球形阀 Globe	DC1854 球形阀 Globe
公称通径 Body size	DN20 - DN400(3/4" - 16" )	DN20 - DN400(3/4" - 16" )
公称压力 Body rating	PN16 - PN420(ANSI class 150 - 2500)	PN16 - PN420(ANSI class 150 - 2500)
流体温度 Fluid temperature	-196°C - 620°C	
连接方式 Connections	法兰型(RF, FM、RTJ), 焊接型(SW、BW) Flanged(RF, FM, RTJ), butt weld, socket weld	
阀体材质 Body materials	锻20/15CrMo/12Cr1MoV , A105, A182 F11/F22/F91/F304/F316	
阀内件材质 Trim materials	GB1220 20Cr13/S30408/S31608/17-4PH, A182 F6NM, A479 XM-19, Inconel 718	
可调比 Range-ability	50:1-20:1	
流量特性 Flow characteristics	线性、等百分比 linear 、EQ%	
阀座泄漏量 Leakage	硬密封 Metal seat GB4213 IV级, V级 ANSI class IV 、 V	软密封 Soft seat 微气泡级 GB4213 VI ANSI VI
降压级数 Trim levels	UP to level 40	
执行机构 Actuator combination	电动执行机构 Electric actuator 气动薄膜式执行机构 Pneumatic diaphragm actuator 气动活塞式执行机构 Pneumatic cylinder actuator	

## 中低压差系列调节阀

Low and medium differential valve

DC1611 顶部导向型单座调节阀

DC1611 Top Guided Single Seated Globe Valve

DC1621 套筒导向型单座调节阀

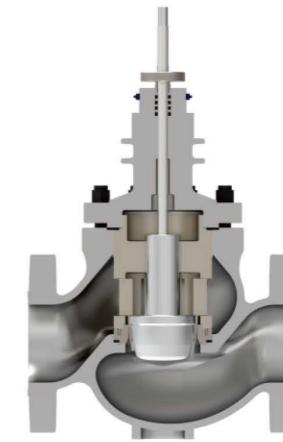
DC1621 Gage guided single seated Globe valve



导向套  
Guide sleeve



DC1611



DC1621

DC1611顶部导向型单座调节阀具有体积小、结构简单、应用广泛等特点。适用于非空化的液体以及噪音在规定范围内的蒸汽、气体等场合。

DC1621套筒导向型单座调节阀内件为快拆式结构，如将导向套筒换为多孔结构，能承受更高压差，现场维护非常方便。

The DC1611 top-guided single-seat control valve features small size, simple structure and wide application. It is suitable for non-cavitating liquids and for steam, gas and other noises within the specified range.

The DC1621 sleeve-guided single-seat control valve has a quick-disconnect structure. For example, the guide sleeve is replaced with a porous structure, which can withstand higher pressure difference and is convenient for on-site maintenance.

### ◆技术参数 Technical data

本体形式 Body type	DC1611 球形阀 Globe type	DC1621 球形阀 Globe type
公称通径 Body size	DC1511 角阀 Angle type	DC1521 角阀 Angle type
阀芯尺寸 Plug size	DN15-DN200(1/2" - 8" )	DN6-DN200(1/8" - 8" )
公称压力 Body rating	PN16-PN40(ANSI class 150 - 300)	PN16-PN420(ANSI class 150 - 2500)
流体温度 Fluid temperature	-196°C - 620°C	
连接方式 Connections	法兰型(RF, FM、RTJ), 焊接型(SW、BW) Flanged(RF, FM, RTJ), butt weld, socket weld	
阀体材质 Body materials	A216 WCB/WCC, A217 WC6/WC9/C12A, A352 LCB/LCC, A351 CF8/CF8M	
阀内件材质 Trim materials	GB1220 20Cr13/S30408/S31608/17-4PH, +STL, +PTFE	
可调比 Range-ability	50:1 - 30:1	
流量特性 Flow characteristics	线性、等百分比 linear 、EQ%	
阀座泄漏量 Leakage	硬密封 Metal seat GB4213 IV级, V级 ANSI class IV 、 V	软密封 Soft seat 微气泡级 GB4213 VI ANSI VI
执行机构 Actuator combination	电动执行机构 Electric actuator 气动薄膜式执行机构 Pneumatic diaphragm actuator 气动活塞式执行机构 Pneumatic cylinder actuator	

## 中低压差系列调节阀

Low and medium differential valve

DC1624 标准套筒调节阀

DC1624L 低噪音套筒调节阀

DC1624X 特殊低噪音套筒调节阀

DC1624 Standard cage control valve

DC1624L Low noise cage control valve

DC1624X Special Low Noise cage Control Valve



DC1624系列流体压力平衡阀芯，套筒导向型调节阀是一种大流量、动态稳定性优良、适合苛刻工况条件的高性能调节阀。具有使作用在阀芯上的流体压力平衡的结构，只须用较小的操作力便可达到稳定调节。

DC1624L系列调节阀为了达到低噪音和防空化的目的，采用多孔式套筒取代DC1624标准套筒。DC1624X的降噪效果更好。除了多孔式套筒外，其余的零件都能和DC1624系列调节阀互换。

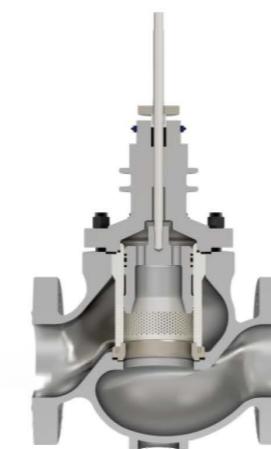
如该系列不能满足流体条件可选用DOCN迷宫式系列。

DC1624 series fluid pressure balanced valve core, sleeve-guided regulating valve is a high-performance regulating valve with high flow rate, dynamic stability and suitable for demanding working conditions. Since it has a structure for balancing the pressure of the fluid acting on the spool, it is only necessary to achieve stable adjustment with a small operating force.

In order to achieve low noise and anti-cavitation, DC1624L series regulating valve adopts porous sleeve instead of DC1624 standard sleeve. The DC1624X has better noise reduction. Therefore, in addition to the multi-hole sleeve, the remaining parts can be interchanged with the DC1624 series of regulating valves.

If the series can not meet the fluid conditions, you can use the DOCN labyrinth series.

**DC1624**  
阀体和阀盖共用-内件可以互换  
Body and bonnet common –  
Internals interchangeable



### ◆技术参数 Technical data

本体形式 Body type	DC1624 球形阀 Globe type DC1524 角阀 Angle type	DC1624L/X 球形阀 Globe type DC1524 L/X 角阀 Angle type
公称通径 Body size	DN20-DN600(3/4" – 24" )	
阀芯尺寸 Pluge size	DN9-DN600(3/8" – 24" )	
公称压力 Body rating	PN16 – PN420(ANSI class 150 – 2500)	
流体温度 Fluid temperature	-196°C – 620°C	
连接方式 Connections	法兰型(RF、FM、RTJ), 焊接型(SW、BW) Flanged(RF、FM、RTJ), butt weld, socket weld	
阀体材质 Body materials	A216 WCB/WCC, A217 WC6/WC9/C12A, A352 LCB/LCC, A351 CF8/CF8M	
阀内件材质 Trim materials	GB1220 20Cr13/S30408/S31608/17-4PH, A479 XM-19, Inconel 718, A182 F6NM, +STL, +PTFE	
可调比 Range-ability	50:1 – 30:1	
流量特性 Flow characteristics	线性、等百分比 linear、EQ%	
阀座泄漏量 Leakage	硬密封 Metal seat GB4213 IV级, V级 ANSI class IV、V 微气泡级 GB4213 VI ANSI VI 电动执行机构 Electric actuator	软密封 Soft seat 气动薄膜式执行机构 Pneumatic diaphragm actuator 气动活塞式执行机构 Pneumatic cylinder actuator
执行机构 Actuator combination		

## 中低压差系列调节阀

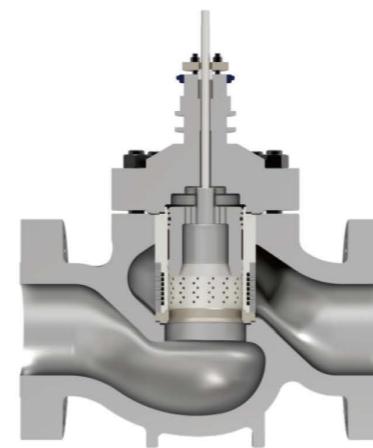
Low and medium differential valve

DC1624D 双层套筒调节阀

DC1624E 双层套筒扩径型调节阀

DC1624D Double cage control valve

DC1624E Double cage expansion type control valve

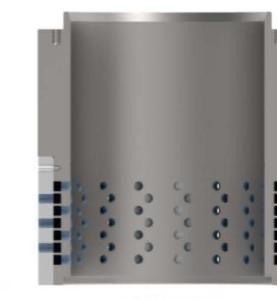


DC1624D/E双层套筒调节阀的基本型为直通式阀体、平衡阀芯、套筒导向调节阀，广泛用于非常严酷的工况。流体主要由特殊钻孔的套筒调节，套筒为阀芯提供全行程连续导向。双层套筒独特的小孔设计成一个级降压通道，有效控制了流体通道内的流速及压力分布，特别对于不可压缩流体能有效解决高压差引起的汽蚀，噪音大的问题。

除了双层套筒外，其余的零件都能和DC1624系列调节阀互换。

The basic type of DC1624D / E double sleeve control valve is straight-through valve body, balanced spool, sleeve-oriented control valve, which is widely used in very severe working conditions. The fluid is mainly regulated by a specially drilled sleeve, which provides full-stroke continuous guidance for the spool. The unique small hole of the double sleeve is designed as a multi-stage pressure reducing channel, which effectively controls the flow velocity and pressure distribution in the fluid channel, especially for incompressible fluids, it can effectively solve the problem of cavitation and noise caused by high pressure difference.

Except for the double sleeve, all other parts can be interchanged with the DC1624 series control valve



### ◆技术参数 Technical data

本体形式 Body type	DC1624D 球形阀 Globe type DC1524D 角阀 Angle type	DC1624E 球形阀 Globe type DC1524E 角阀 Angle type
公称通径 Body size	DN20-DN600(3/4" – 24" )	
阀芯尺寸 Pluge size	DN9-DN600(3/8" – 24" )	
公称压力 Body rating	PN16 – PN420(ANSI class 150 – 2500)	
流体温度 Fluid temperature	-196°C – 620°C	
连接方式 Connections	法兰型(RF、FM、RTJ), 焊接型(SW、BW) Flanged(RF、FM、RTJ), butt weld, socket weld	
阀体材质 Body materials	A216 WCB/WCC, A217 WC6/WC9/C12A, A352 LCB/LCC, A351 CF8/CF8M	
阀内件材质 Trim materials	GB1220 20Cr13/S30408/S31608/17-4PH, A479 XM-19, Inconel 718, A182 F6NM, +STL, +PTFE	
可调比 Range-ability	50:1 – 30:1	
流量特性 Flow characteristics	线性、等百分比 linear、EQ%	
阀座泄漏量 Leakage	硬密封 Metal seat GB4213 IV级 ANSI class IV 微气泡级 GB4213 VI ANSI VI 电动执行机构 Electric actuator	软密封 Soft seat 气动薄膜式执行机构 Pneumatic diaphragm actuator 气动活塞式执行机构 Pneumatic cylinder actuator
执行机构 Actuator combination		

## 中低压差系列调节阀

Low and medium differential valve

DC1920 三通合流型调节阀

DC1920 Three-way diverting control valve

DC1930 三通分流型调节阀

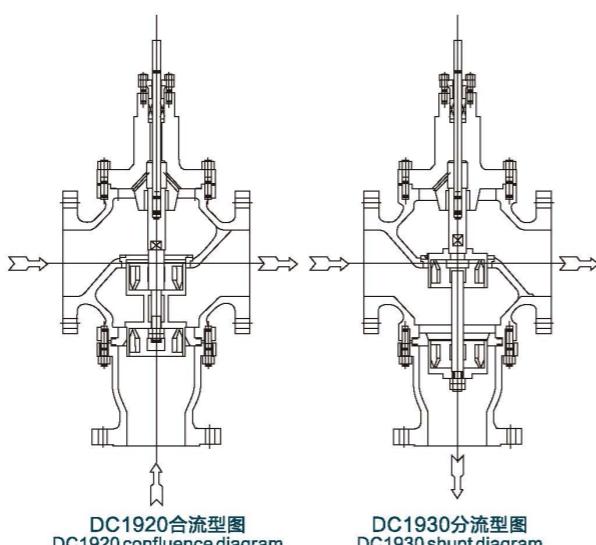
DC1930 Three-way mixing control valve



DC1920, DC1930 series three-way control valve is a three-way control valve with top guide structure, simple structure and can be used in high temperature and high pressure occasions.

The split type three-way valve divides one fluid into two fluids; the merge type three-way valve mixes two fluids into one fluid.

Nominal diameter DN65 (2.5" ), DC1920 (combined type) can be used in the case of shunt type.



### ◆技术参数 Technical data

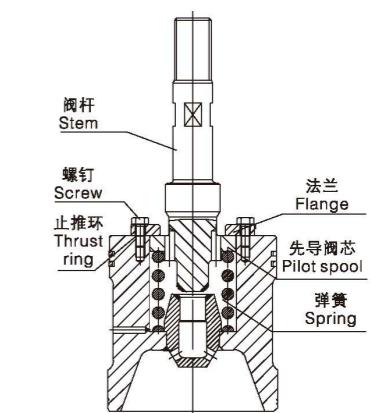
本体形式 Body type	DC1920 三通合流型 DC1920 three-way diverting	DC1930 三通分流型 DC1930 three-way mixing
公称通径 Body size	DN20-DN400(3/4" - 16" )	
阀芯尺寸 Pluge size	DN9-DN400(3/8" - 16" )	
公称压力 Body rating	PN16-PN100(ANSI class 150 - 600)	
流体温度 Fluid temperature	-45°C - 300°C	
连接方式 Connections	法兰型(RF、FM、RTJ), 焊接型(SW、BW)Flanged(RF、FM、RTJ), butt weld, socket weld	
阀体材质 Body materials	A216 WCB/WCC, A351 CF8/CF8M/CF3M, monel, hastelloy etc...	
阀内件材质 Trim materials	GB1220 S30403/S30408/S31603/S31608, monel, hastelloy etc...	
可调比 Range-ability	30:1	
流量特性 Flow characteristics	线性、开关 linear、ON-OFF	
阀座泄漏量 Hard seal Metal seat Leakage	GB4213 IV 级 ANSI class IV	
	微气泡级 GB4213 VI ANSI VI	
执行机构 Actuator combination	电动执行机构 Electric actuator	
	气动薄膜式执行机构 Pneumatic diaphragm actuator	
	气动活塞式执行机构 Pneumatic cylinder actuator	

## 特殊系列调节阀

Special series regulating valve

DC1629L 先导式低噪音套筒调节阀(可用于蒸汽放空) DC1629L Pilot operated low noise control valve

DC1629D 先导式双层套筒调节阀(可用于蒸汽放空) DC1629D Pilot Double cage Control Valve(Steam vent valve)



### ◆技术参数 Technical data

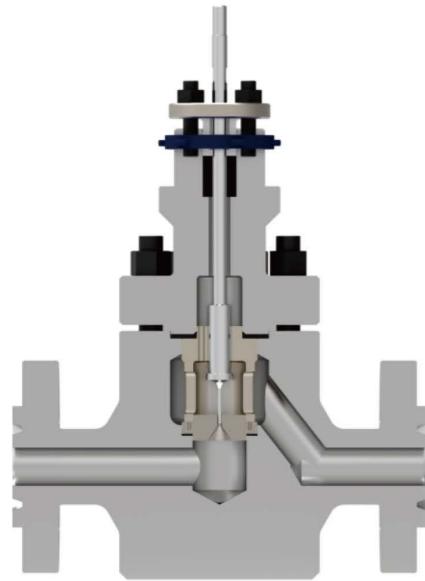
本体形式 Body type	DC1629L 球形阀 Globe type DC1529L 角阀 Angle type	DC1629D 球形阀 Globe type DC1529D 角阀 Angle type
公称通径 Body size	DN50-DN600(2" - 24" )	
阀芯尺寸 Pluge size	DN50-DN600(2" - 24" )	
公称压力 Body rating	PN16-PN420(ANSI class 150 - 2500)	
流体温度 Fluid temperature	-29°C-620°C	
连接方式 Connections	法兰型(RF、FM、RTJ), 焊接型(SW、BW)Flanged(RF、FM、RTJ), butt weld, socket weld	
阀体材质 Body materials	A216 WCB/WCC, A217 WC6/WC9/C12A, A352 LCB/LCC, A351 CF8/CF8M	
阀内件材质 Trim materials	GB1220 20Cr13/S30408/S31608/17-4PH, A479 XM-19, Inconel 718, A182 F6NM, +STL	
可调比 Range-ability	50:1-30:1	
流量特性 Flow characteristics	线性、等百分比 linear、EQ%	
阀座泄漏量 Hard seal Metal seat Leakage	GB4213 V 级 ANSI class V	
	无 Nothing	
执行机构 Actuator combination	电动执行机构 Electric actuator	
	气动薄膜式执行机构 Pneumatic diaphragm actuator	
	气动活塞式执行机构 Pneumatic cylinder actuator	

## 特殊系列调节阀

Special series regulating valve

DC1621M 微小流量调节阀

DC1621M Micro-flow control valve



DC1621M系列微小流量调节阀阀芯部分采用针型或扁平式阀芯结构，最小可控Cv可达0.001，阀座直径最小可达2mm确保精确控制。微小流量调节阀采用单座结构，高压差时采用多级降压结构，有效防止气蚀；阀芯整体采用硬质合金，表面硬度可达HRC44~60，特殊密封副结构，泄漏等级可达零泄漏。

The DC1621M series micro flow control valve spool part adopts needle type or flat valve core structure, the minimum controllable Cv can reach 0.001, and the seat diameter can be as small as 2mm to ensure precise control. The micro flow regulating valve adopts single-seat structure. When the high pressure difference is used, the multi-stage pressure reducing structure is adopted to effectively prevent cavitation; the valve core adopts solid carbide, the surface hardness can reach HRC44~60, special sealing substructure, and the leakage level can reach zero leakage.

流量特性 Flow characteristics	DN	公称通径 Nominal diameter	阀座直径 (mm) Seat diameter	行程(mm) Trip	阀芯形式 Spool form	CV05	CV100
LIN	1/2"-1"	2	2	8	F	0.0003	0.0050
LIN	1/2"-1"	2	2	8	F	0.0005	0.0100
LIN	1/2"-1"	3	3	8	F	0.0010	0.0200
LIN	1/2"-1"	3	3	8	F	0.0020	0.0400
LIN	1/2"-1"	3	3	8	F	0.0040	0.0800
LIN	1/2"-1"	4	4	8	F	0.0080	0.1600
LIN	1/2"-1"	4	4	8	F	0.0120	0.2400
LIN	1/2"-1"	6	6	8	F	0.0150	0.3000
LIN	1/2"-1"	4	4	8	F	0.0250	0.4500

### ◆技术参数 Technical data

本体形式 Body type	DC1621M 球形阀 Globe type DC1521M 角阀 Angle type
公称通径 Body size	DN15-DN25(3/4" ~ 1" ) DN2-DN6
阀芯尺寸 Plug size	PN16-PN420(ANSI class 150 ~ 2500)
公称压力 Body rating	-29°C~566°C
流体温度 Fluid temperature	法兰型(RF、FM、RTJ), 焊接型(SW、BW) Flanged(RF、FM、RTJ), butt weld, socket weld
连接方式 Connections	A216 WCB/WCC, A217 WC6/WC9, A351 CF8/CF8M
阀体材质 Body materials	STL GR.6/monel/哈氏合金等
阀内件材质 Trim materials	30:1
可调比 Range-ability	线性 linear
流量特性 Flow characteristics	GB4213 V 级, VI ANSI class V , VI
阀座泄漏量 Leakage	硬密封 Metal seat 无 Nothing 软密封 Soft seat
执行机构 Actuator combination	电动执行机构 Electric actuator 气动薄膜式执行机构 Pneumatic diaphragm actuator 气动活塞式执行机构 Pneumatic cylinder actuator

## 特殊系列调节阀

Special series regulating valve

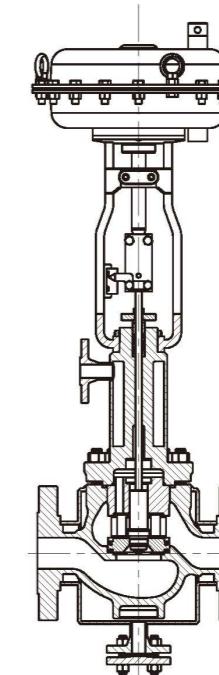
DC1620J 保温夹套调节阀

DC1620J JACKETED control valve



DC1620J系列保温夹套调节阀主要用于石油、化工、冶金等各类系统中，以输送常温下易结晶凝固的重油、胶类等高粘度介质，采用全夹套式和半夹套式结构设计，能均匀有效的保温、保冷，并同时顺畅的进行调节流通介质。

DC1620J series thermal insulation jacket regulating valve is mainly used in petroleum, chemical, metallurgical and other systems to transport high-viscosity medium such as heavy oil and glue which are easy to crystallize and solidify at normal temperature. It adopts full jacketed and semi-jacketed structure design. It can evenly and effectively keep warm and keep cold, and at the same time smoothly adjust the circulation medium.



### ◆技术参数 Technical data

公称通径 Body size	DN20~DN200(3/4" ~8" )
压力等级 Pressure grade	PN16~PN250(ANSI 150~1500)
工作温度范围 Operating temperature range	-20°C~566°C
阀座泄漏等级 Valve seat leakage class	快换式阀内件, 维修维护方便 Quick change valve trim, easy to maintain
嵌入式软密封阀座的泄漏等级 Leakage class of embedded soft seal valve seat	GB4213 IV级/V级 GB4213 VI级
	蒸汽保温防止流体结晶, 底部疏水口可选 Steam insulation to prevent fluid crystallization, bottom drain optional
	可选择全蒸汽保温夹套或半蒸汽保温夹套 Full steam insulation jacket or half steam insulation jacket can be selected

## 特殊系列调节阀

Special series regulating valve

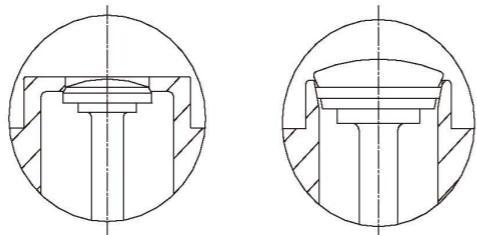
DC1420 物料角阀

DC1420 Bottom outlet angle valve



DC1420物料角阀一般安装在容器或者反应釜的底部，对该类型阀门的工作稳定性、可靠性及寿命有较高的要求。其光滑流线型的阀体流道设计，球形单座的阀芯形式，易于介质的流动。广泛应用于聚合反应、化纤、食品、发酵等行业，对于浆料、高密度流体场合，亦是理想的选择。在选用该型号阀门时，必须认真考虑介质的物理性质，化学物性，温度，压力等因素对阀门的影响，确保阀门能正常工作，避免因此产生安全事故。根据作用形式的不同可分为上展式物料角阀和下展式物料角阀。根据安装位置的不同可分为45° 和60° 以及90° 三种形式。

The DC1420 material angle valve is generally installed at the bottom of the vessel or reactor, which has high requirements for the stability, reliability and life of the valve. Its smooth and streamlined valve body runner design, spherical single-seat spool form, easy to flow media. Widely used in polymerization, chemical fiber, food, fermentation and other industries, it is also an ideal choice for slurry and high density fluids. When selecting this type of valve, we must carefully consider the physical properties of the medium, chemical properties, temperature, pressure and other factors on the valve to ensure that the valve can work properly, to avoid the occurrence of safety accidents. According to the different forms of action, it can be divided into an upper material angle valve and a lower material angle valve. It can be divided into three types according to the installation position: 45° and 60° and 90° .



### ◆技术参数 Technical data

公称通径 Body size	DN25~DN400(1" ~16" )
压力等级 Pressure grade	PN16~PN250(ANSI 150~1500)
阀座直径 Seat diameter	1"~16"
阀体材质 Body material	根据介质选择 Select by media
结构形式 Structural style	上展式, 下展式, 柱塞式 Up, down, plunger
阀座泄漏等级 Valve seat leakage class	GB4213 V 级/VI级
工作温度范围 Operating temperature range	-55℃~566℃
连接方式 Connection mode	法兰连接、对焊连接 Flange connection, butt welding connection
阀盖形式 Bonnet form	标准型、散热型 Standard type, heat dissipation type
填料材质 Filler material	柔性石墨、PTFE Flexible graphite, PTFE

## 特殊系列调节阀

Special series regulating valve

DC1620W 波纹管密封调节阀

DC1620W Bellows sealing control valve



DC1620W系列波纹管密封调节阀是在现有中低压系列调节阀的基础上，增加波纹管密封结构，在保证中低压系列调节阀原有的结构特点，阀盖采用波纹管密封结构，可彻底清除介质在阀杆运动间隙向外泄漏的可能性，因此，该系列产品在剧毒，强腐蚀性，易挥发，强渗透性介质及稀有贵重介质的控制系统中得到广泛的应用。

DC1620W series bellows seal regulating valve is based on the existing medium and low pressure series regulating valve, adding bellows sealing structure, ensuring the original structural characteristics of medium and low pressure series regulating valve. The valve cover adopts bellows sealing structure, which can be completely removed. The possibility of the medium leaking outward in the gap of the valve stem movement, therefore, the series of products are widely used in control systems of highly toxic, highly corrosive, volatile, strong permeable medium and rare precious medium.



### ◆技术参数 Technical data

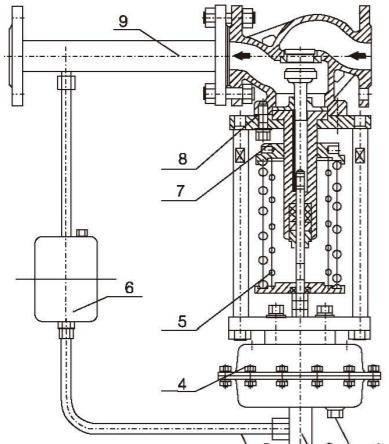
公称通径 Body size	DN15~DN600(1/2" ~24" )
压力等级 Pressure grade	PN16~PN250(ANSI 150~1500)
阀体材质 Body material	A351 CF8/CF8M/CF3/CF3M,A216WCB, A217WC6/WC9
内件材质 Internal material	S31608/S31603(可选堆焊STL) S31608 / S31603 (optional overlay STL)
阀座泄漏等级 Valve seat leakage class	GB4213 IV 级/V 级/VI 级
工作温度范围 Operating temperature range	-20℃~350℃
连接方式 Connection mode	法兰连接、对焊连接 Flange connection, butt welding connection
阀盖形式 Bonnet form	波纹管密封型 Bellows seal type
填料材质 Filler material	柔性石墨、PTFE Flexible graphite, PTFE

## 特殊系列调节阀

Special series regulating valve

DC1521 自力式压力调节阀

DC1521 Self-operated pressure regulating valve



单座自力式压力调节阀(控制阀后)  
Single seat self operated pressure regulating valve  
(behind the control valve)

- |                   |                  |                                  |
|-------------------|------------------|----------------------------------|
| 1、排放塞             | 2、进口塞子           | 3、取压管                            |
| 4、执行机构            | 5、弹簧             | 6、冷凝器                            |
| 7、调节盘             | 8、阀芯部件           | 9、阀后接管                           |
| 1, Drain plug     | 2, Inlet plug    | 3, pressure pipe                 |
| 4, Actuator       | 5, spring        | 6, condenser                     |
| 7,Regulating disc | 8, valve element | 9, rear connecting pipe of valve |

DC1521系列自力式压力调节阀是不需要任何外加能源，利用被调介质自身能量而自动调节阀的执行产品，该产品的最大特点就是能在无电、无气的场所使用，同时又节约了能源。压力设定值在一定范围内随意可调，根据调压方式不同可分为DC1521B系列阀后稳压型和DC1521K阀前稳压型，详情介绍如下：

DC1521 series self-operated pressure regulating valve is an execution product that does not require any external energy and automatically adjusts the valve by using the energy of the medium to be adjusted. The biggest feature of this product is that it can be used in places without electricity and gas, and save energy. The pressure setting value can be adjusted freely within a certain range. According to different voltage regulation methods, it can be divided into DC1521B series valve regulator type and DC1521K valve front regulator type. The details are as follows:

### ◆DC1521B系列阀后稳压型

用于控制阀后压力的调节阀，阀作用方式为压闭型。其工作原理如下：

介质由箭头方向流入阀体，经阀座、阀芯节流后输出。另一路经取压管(介质为蒸汽时加冷凝器)被引入执行机构作用于膜片上，使阀芯随之发生相应的位移，达到减压、稳压的目的。如阀后压力增加，作用于膜片上的力增加，压缩弹簧，带动阀芯，使阀门的开度增大，直到阀后压力下降至设定值为止。同理，如阀后压力降低，作用在膜片上的力减小，由于弹簧的反作用力，带动阀芯，使阀门的开度减小，直到阀后压力上升至设定值为止。

### ◆DC1521B Series post-valve regulator

Regulating valve for controlling the pressure behind the valve. The valve action mode is pressure-closing type. It works as follows:

The medium flows into the valve body from the direction of the arrow, and is output after being throttled by the valve seat and the valve core. The other way is through the pressure taking pipe (the condenser is added when the medium is steam) to the actuator to act on the diaphragm, so that the valve core will be correspondingly displaced to achieve the purpose of decompression and voltage stabilization. If the pressure behind the valve increases, the force acting on the diaphragm increases, the spring is compressed, and the valve core is driven to reduce the opening of the valve until the pressure behind the valve drops to the set value. Similarly, if the pressure behind the valve decreases, the force on the diaphragm decreases. Due to the reaction force of the spring, the valve core is driven to increase the valve opening degree until the pressure behind the valve rises to the set value.

### ◆技术参数 Technical data

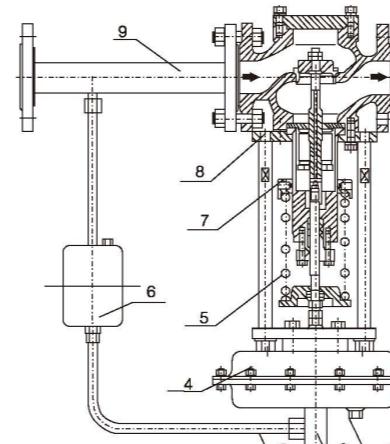
公称通径 Nominal diameter	DN20~DN300(3/4" ~12" )
压力等级 Pressure rating	PN16~PN100(ANSI 150~600)
连接方式 Connection method	法兰连接、对焊连接 Flange connection, butt welding connection
阀盖形式 Valve cover form	标准型、散热型 Standard type, heat dissipation type
泄漏等级 Leakage level	IV 级(硬密封), VI 级(软密封) level IV (hard seal), level VI (soft seal)

## 特殊系列调节阀

Special series regulating valve

DC1521K系列阀前稳压型

DC1521K Series front valve regulator



单座自力式压力调节阀(控制阀前)  
Single seat self operated pressure regulating valve  
(in front of control valve)

- |                   |                  |                       |
|-------------------|------------------|-----------------------|
| 1、排放塞             | 2、进口塞子           | 3、取压管                 |
| 4、执行机构            | 5、弹簧             | 6、冷凝器                 |
| 7、调节盘             | 8、阀芯部件           | 9、阀前接管                |
| 1, Drain plug     | 2, Inlet plug    | 3, pressure pipe      |
| 4,Actuator        | 5, spring        | 6, condenser          |
| 7,Regulating disc | 8, valve element | 9, Valve front nozzle |

用于控制阀前压力的调节阀，阀作用方式为压开型。其工作原理如下：介质由箭头方向流入阀体，经阀座、阀芯节流后输出。另一路经取压管(介质为蒸汽时加冷凝器)被引入执行机构作用于膜片上，使阀芯随之发生相应的位移，达到减压、稳压的目的。如阀前压力增加，作用于膜片上的力增加，压缩弹簧，带动阀芯，使阀门的开度增大，直到阀前压力下降至设定值为止。同理，如阀后压力降低，作用在膜片上的力减小，由于弹簧的反作用力，带动阀芯，使阀门的开度减小，直到阀前压力上升至设定值为止。若阀前压力小于设定值则该阀一直处于关闭状态。

Regulating valve used to control the pressure in front of the valve. It works as follows:

The medium flows into the valve body from the direction of the arrow, and is output after being throttled by the valve seat and the valve core. The other way is through the pressure taking pipe (the condenser is added when the medium is steam) to the actuator to act on the diaphragm, so that the valve core will be correspondingly displaced to achieve the purpose of decompression and voltage stabilization. If the pressure before the valve increases, the force acting on the diaphragm increases, and the spring is compressed to drive the valve core to increase the opening of the valve until the pressure behind the valve drops to the set value. Similarly, if the pressure before the valve decreases, the force on the diaphragm decreases. Due to the reaction force of the spring, the valve core is driven to reduce the opening degree of the valve until the pressure before the valve rises to the set value. If the pressure before the valve is less than the set value, the valve is always closed.



### ◆技术参数 Technical data

公称通径 Nominal diameter	DN20~DN300(3/4" ~12" )
压力等级 Pressure rating	PN16~PN100(ANSI 150~600)
连接方式 Connection method	法兰连接、对焊连接 Flange connection, butt welding connection
阀盖形式 Valve cover form	标准型、散热型 Standard type, heat dissipation type
泄漏等级 Leakage level	IV 级(硬密封), VI 级(软密封) level IV (hard seal), level VI (soft seal)

## DC7000排污阀 DC7000 blowdown valve



高温高压锅炉排污阀广泛用于连续节流控制或者锅炉水的间断排放，是专门针对锅炉水排放工况的高压差、高流速、冲刷严重等特点特殊设计的产品，分为直通式、角式、串联式和Y型4种结构。套筒导向多级降压结构以及阀座出口文丘里管的设计能够有效控制出口流速，表面硬化处理能有效延长使用寿命。

高温高压锅炉排污阀标准结构为手动控制，也可以根据要求选用气动和电动控制，气动控制配以电磁阀、气控阀、快速排放阀等附件可实现快速切断，切断时间为1S、2S、3S、4S等。

High temperature and high pressure boiler blowdown valve is widely used for continuous throttling control or intermittent discharge of boiler water. It is a product specially designed for the characteristics of high pressure difference, high flow rate and severe erosion of boiler water discharge conditions. It is divided into straight-through and angle-type, Tandem and Y-type 4 structures. The sleeve-oriented multi-stage pressure reducing structure and the design of the valve outlet venturi tube can effectively control the outlet flow rate, and the surface hardening treatment can effectively extend the service life.

The standard structure of the high-temperature and high-pressure boiler blowdown valve is manual control. Pneumatic and electric control can also be selected according to requirements. Pneumatic control is equipped with accessories such as solenoid valve, air control valve, quick discharge valve, etc. to achieve fast cut-off. The cut-off time is 1S, 2S, 3S., 4S, etc.



### ◆技术参数 Technical data

形式 Form	直通式、角式、串联式和Y型 Straight-through, angle, tandem, and Y
规格 Specification	DN20、DN25、DN40、DN50、DN65、DN80
公称压力 Nominal pressure	ANSI 150~ANSI 2500
额定行程 Rated stroke	25、40、50、60mm
流体温度 Fluid temperature	-20°C~566°C
连接形式 Connection form	承插焊、对焊、法兰式 SW,BW,Flanged
流量特性 Flow characteristics	线性LINEAR、ON/OFF
执行机构 Executive	手动、气动、电动 Manual, pneumatic, electric
泄漏等级 Leakage level	0泄漏 0 leaks

## 高压锅炉排污阀分类 Classification of high pressure boiler blowdown valve

### ◆连续排污阀 Continuous blowdown valve

主要用于锅炉水的连续排放，目的是为了控制高压锅炉水中的溶解化学物的含量，防止锅炉水饱和后产生溶解盐，为了再循环利用，排出的高压锅炉水通常会排放到闪蒸罐中用于其他低压蒸汽的利用，连续排出的锅炉水也可直接用于检测水中的化学成分含量。  
It is mainly used for the continuous discharge of boiler water. The purpose is to control the content of dissolved chemicals in high-pressure boiler water and prevent the generation of dissolved salts after the boiler water is saturated. For recycling, the discharged high-pressure boiler water is usually discharged into the flash tank. For the use of other low-pressure steam, the continuously discharged boiler water can also be directly used to detect the chemical content of the water.

### ◆间断排污阀 Intermittent blowdown valve

间断排污阀分为底部排污阀和吹扫排污阀，底部排污阀通常直接安装于锅炉的底部，主要利用锅炉自身的压力来定期排放锅炉底部的颗粒、污垢等沉积物，防止造成管道的堵塞等；吹扫排污阀主要用于锅炉管线上堆积固体颗粒等快速吹扫排放以及锅炉冷凝水的排放等。通常使用Y型结构，流通性好，不易堆积固体颗粒。

Intermittent blowdown valve is divided into bottom blowdown valve and purge blowdown valve. Bottom blowdown valve is usually installed directly on the bottom of the boiler. It mainly uses the pressure of the boiler to regularly discharge particles, dirt and other deposits on the bottom of the boiler to prevent blockage of pipes; Purge blowdown valve is mainly used for quick purge and discharge of solid particles accumulated on the boiler pipeline and discharge of boiler condensate. The Y-type structure is usually used, which has good fluidity and is not easy to accumulate solid particles.

### ◆高压锅炉排污阀优点 Advantages of high pressure boiler blowdown valve

在石油石化以及电力锅炉中水排污与排放的重要性往往被忽视了，而不正确的排放会造成能源的浪费、热量损失以及增加额外的化学处理费用等，另外排出去的锅炉水与锅炉内的水具有相同的温度和压力，可以再循环应用于其它锅炉的工况中。锅炉排污阀的优点如下：

- 大大缩小维修与维护的费用
  - 自动控制可以大大缩小人力成本
  - 可以得到更洁净和高效的蒸汽
  - 避免资源浪费，缩小操作成本
  - 能源损失最小化，每年可以节省至少2%的能量损耗
- The importance of water drainage and emissions in petroleum and petrochemical and power boilers is often overlooked. Incorrect emissions will cause waste of energy, heat loss, and increase in additional chemical treatment costs. In addition, the discharged boiler water and the water in the boiler have the same temperature and pressure and can be recycled and used in other boilers. The advantages of boiler blowdown valve are as follows:
- Significantly reduce repair and maintenance costs
  - Automatic control can greatly reduce labor costs
  - Get cleaner and more efficient steam
  - Avoid waste of resources and reduce operating costs
  - Minimized energy loss, saving at least 2% of energy loss per year



## 高压锅炉排污阀实例分析

Case analysis of blowdown valve of high pressure boiler

### ◆ 压力温度参数

压力等级在ANSI600以下 一般P1=47bar.g P2=4~5bar.g T=285°C  
压力等级在ANSI1500以下 一般P1=140bar.g P2=4~5bar.g T=285°C

### ◆ Pressure and temperature parameters

Generally, P1 = 47bar.g P2 = 4 ~ 5bar.g T = 285 °C when the pressure level is below ansi600  
Generally, P1 = 140bar.g P2 = 4 ~ 5bar.g T = 285 °C when the pressure level is below ansi1500



### ◆ 工况危害

- 由于高压降，产生闪蒸现象，流量会膨胀(出口流速增加)，流体冲刷十分严重。
- 由于可能产生的高流速震动，阀杆容易折断。
- 高压差情况下容易产生气蚀，造成内件冲刷十分严重。
- 高温情况下材料容易失效，使用寿命短。
- 采用传统截止阀内件现场维护不方便。
- 传统截止阀内件冲刷严重，使用寿命短。
- 阀门操作需要快速关闭。

### ◆ Working condition hazard

- Because of the high pressure drop, there is flash phenomenon, the flow will expand (the outlet velocity increases), and the fluid erosion is very serious.
- Due to the possible high flow rate vibration, the valve stem is easy to break.
- Under the condition of high pressure difference, it is easy to produce cavitation, which results in serious internal erosion.
- Under high temperature, the material is easy to fail and has short service life.
- It is not convenient to maintain the valve trim with traditional stop valve on site.
- The traditional stop valve has serious erosion and short service life.
- Valve operation requires quick closure.



阀芯采用cascade多级降压结构  
Cascade multi-stage depressurization structure is adopted for valve core

## 低温阀

Cryogenic valve



### ◆ 技术参数 technical data

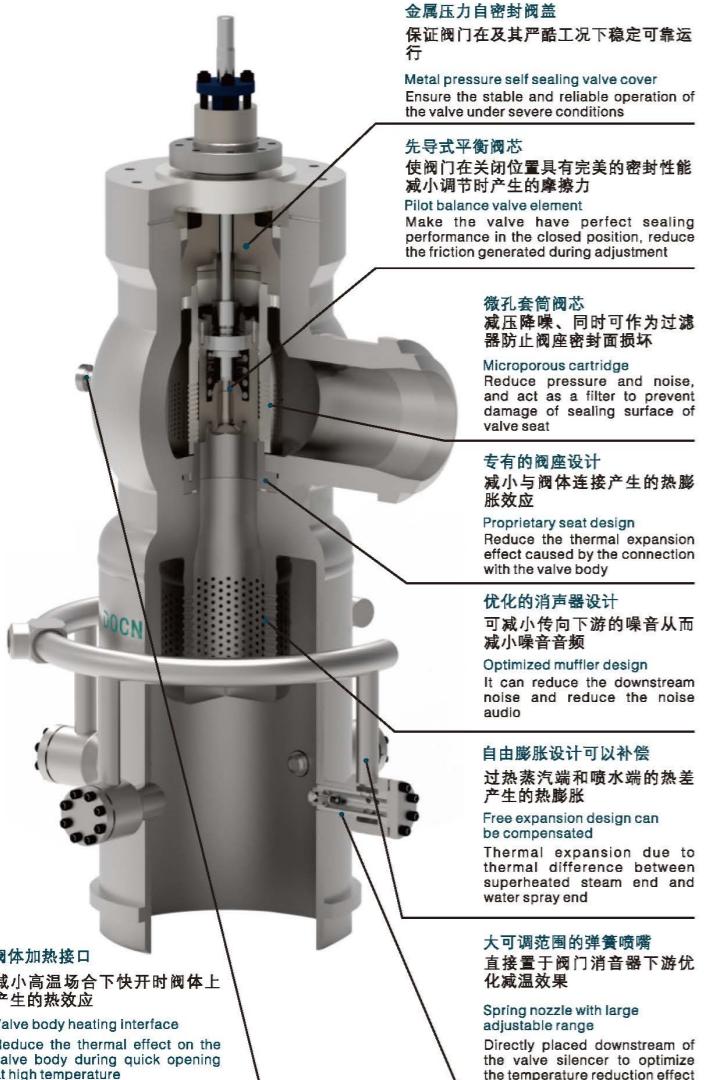
公称通径 Body size	NPS 1/2 – NPS 24" (DN15 – DN600)
公称压力 Body rating	ANSI150 – ANSI 1500
阀体材质 Body materials	A351 CF8/CF8M/CF3/CF3M
内件材质 Interior material	316SS/316LSS (堆焊STL可选Surfacing STL optional)
泄漏等级 Leakage level	ANSI B16. 104 IV/V
工作温度 Working temperature	-196°C ~ +200°C
连接方式 Connection method	法兰连接、对焊连接 Flange connection, butt welding connection
上盖形式 Upper cover form	深冷型 Cryogenic type
填料材质 Filler material	纯PTFE、GLE型低泄漏式 Pure PTFE, GLE type low leakage type
流体介质 Fluid medium	液氮、液氧、液氩等 Liquid nitrogen, liquid oxygen, liquid argon, etc



## 旁路阀系列 Bypass valve series

DC3700 旁路减温减压阀

DC3700 Bypass desuperheater



DC3700系列蒸汽减温减压站(PRDS)为汽轮机旁路系统最通用和最紧凑型的蒸汽减温减压方案，包括高压及低压旁路。

锻造球形阀体及高质量的构造材质，拥有比传统型更均匀的壁厚，高质量的阀体焊接，P/T疲劳效应小。

东辰所有减温减压站的检测符合TRD 301规范，并满足至少2000次冷启动和10000次热启动循环。

蒸汽减压主要由两级实现：第一级，钻孔套筒阀芯调节流量；第二级设计为固定的调节区域，有双重作用：一，降低流速及噪音声压等级，对第一级产生背压；二，控制混合腔内的蒸汽速度及分布，优化降温过程。

第二级可作为消音器具有吸收声能的功能，减小第一级产生的噪音。多级笼式消音器的间隙优化到可以将噪音频率降到1kHz - 4kHz，或使用特殊设计的盘片堆栈作为消音器时，可产生更显著的吸声性能。

减温段直接一体式布置于第二级的下游，由蒸汽混合腔装配喷嘴或东辰不同的喷水减温器构成。减温段的选择必须按照运行工况、工厂布局和过程控制需求来进行。消音器的设计可使其下游混合腔内的蒸汽产生一定的速度保证减温效率，下游一体式喷水减温可以防止由于热冲击对阀芯和主阀体的破坏。

The DC3700 Series Steam Desuperheating and Reducing Station (PRDS) is the most versatile and compact steam desuperheating solution for steam turbine bypass systems, including high pressure and low pressure bypass.

Forged spherical valve body and high-quality construction material, with a more uniform wall thickness than the traditional type, high-quality valve body welding, P/T fatigue effect is small.

All DOCN desuperheating and decompression stations are tested to TRD 301 and meet at least 2000 cold starts and 10,000 hot start cycles.

The steam decompression is mainly realized by two stages: the first stage, the drilling sleeve valve core regulates the flow rate; the second stage is designed as a fixed adjustment area, which has a dual function: one, reducing the flow rate and the noise sound pressure level, for the first stage Produce back pressure; Second, control the steam velocity and distribution in the composite cavity to optimize the cooling process.

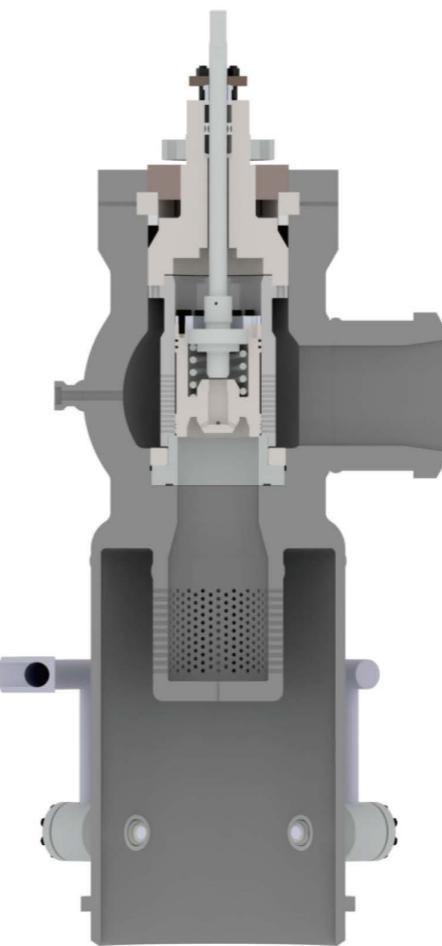
The second stage can function as a silencer to absorb sound energy, reducing the noise generated by the first stage. The gap of the multi-stage cage muffler is optimized to reduce the noise frequency to 1 kHz to 4 kHz, or to use the Limiphon disc stack as a silencer to produce more pronounced sound absorption.

The desuperheating section is directly arranged in the downstream of the second stage, and is composed of a steam compound chamber assembly nozzle or a DOCN different water spray desuperheater. The selection of the desuperheating section must be based on operating conditions, plant layout and process control requirements. The silencer is designed to produce a certain speed of steam in the downstream composite cavity to ensure the efficiency of temperature reduction. The downstream integrated water spray can prevent the damage of the valve core and the main valve body due to thermal shock.

## 旁路阀系列 Bypass valve series

DC3700 旁路减温减压阀

DC3700 Bypass desuperheater



HP高压至IP中压旁路阀DC3745  
HP High Pressure to IP Medium Pressure Bypass Valve DC3745

DC3700系列蒸汽减温减压站是蒸汽调节领域最佳的解决方案，它整合了高性能流量控制及高效一体式蒸汽减温性能。

DC3740系列最主要的应用场合是汽轮机旁路系统，其应用不受实际的压力、温度和流量限制。

大量的应用经验铸就了所采用的阀内件能够很好的减小磨损，更能够满足需要极少维护的连续运行场合。

东辰的各种减温喷水结构可以装配在合适的蒸汽调节场合，为不同的蒸汽流量工况提供足够的减温水，且拥有极高的可调比。

东辰拥有各种不同的降噪音解决方案(包括特殊设计迷宫式盘片堆栈)，因此可满足任何适当的噪音要求。

对于需要大量减温水的连续蒸汽降温场合，可以装配各种不同的喷水混合腔，且喷水混合腔内置保护衬管防止管路损坏。

DC3700系列最适合现场不能布置直通管路的场合。

标准配置的执行机构为电动执行机构或单作用、弹簧复位、气动薄膜执行机构，可配置气缸执行机构、定位器和其它用于快速动作或紧急动作的相关附件。液动执行机构或电液执行机构也可以按照要求配置。

The DC3700 Series Steam Desuperheater is the best solution for steam conditioning, combining high performance flow control with efficient integrated steam desuperheating.

The primary application for the DC3740 series is the turbine bypass system, whose application is not limited by actual pressure, temperature and flow.

A large number of application experience has resulted in the use of trims that reduce wear and tear, and to meet continuous operation where minimal maintenance is required.

DOCN's various desuperheating spray structures can be fitted in suitable steam conditioning applications to provide adequate desuperheating water for different steam flow conditions with an extremely high ratio of adjustment.

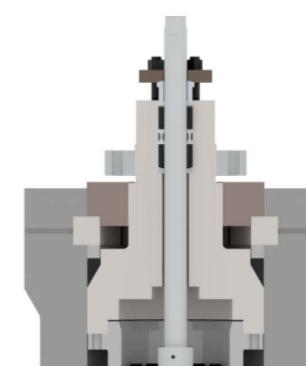
DOCN has a variety of noise reduction solutions (including the limphon labyrinth disc stack) to meet any appropriate noise requirements.

For continuous steam cooling where a large amount of desuperheating water is required, a variety of different injection composite chambers can be assembled, and a protective lining is built in the injection composite chamber to prevent damage to the pipeline.

The DOCN series is best suited for applications where straight-through piping cannot be placed on site.

The standard actuators are electric actuators or single-acting, spring-return, pneumatic diaphragm actuators with configurable cylinder actuators, positioners and other accessories for quick action or emergency action.

The hydraulic actuator or electro-hydraulic actuator can also be configured as required.



石墨压力自密封结构

压力越大，密封力越高

在高温或者频繁的温度变化情况下，我们建议使用自密封环来代替标准的金属缠绕垫圈，在高温和频率温度循环应用

Graphite pressure self-sealing structure

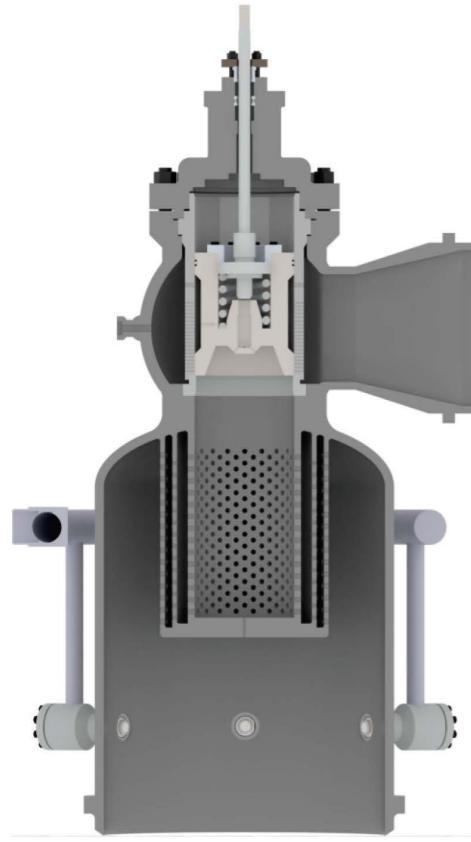
The higher the pressure, the higher the sealing force

In the case of high temperature or frequent temperature changes, we recommend using a self-sealing ring instead of the standard soft iron gasket, which is used in high temperature and frequency temperature cycling.

**旁路阀系列**  
Bypass valve series

DC3700 旁路减温减压阀

DC3700 Bypass desuperheater



IP中压至LP低压旁路阀DC3745  
IP Medium to LP Low Pressure Bypass Valve DC3745

◆产品特点

阀体：锻造阀体，阀体入口段及出口一体式喷水混合管采用焊接连接阀体尺寸根据实际工况计算选定  
压力等级：PN16~PN760(ANSI CLASS150~4500)。  
阀盖： $\leq$ PN100(ANSI CLASS600)：螺栓连接法兰阀盖  
 $>$ PN100(ANSI CLASS600)：压力自紧密封阀盖  
阀内件：  
套筒导向，先导平衡式阀芯  
第一级减压由特制钻孔套筒实现  
阀座由套筒压紧或者由带螺纹的压环压紧  
消音器：  
有三种不同的设计方案：  
1~3级低噪音笼式结构  
高效消音器结构  
特殊设计迷宫式盘片堆栈结构  
消音器通常与阀体焊接连接，当使用可拆式阀座时，消音器也可以设计在阀座上。

◆Actuators features

Valve body:  
Forged valve body, valve body welded connection inlet section and outlet integrated water jet composite cavity  
The valve body size is selected according to the actual working conditions.  
Pressure rating: PN16~PN760 (ANSI CLASS150~4500).  
cap:  
 $\leq$ PN100 (ANSI CLASS600): bolted flange bonnet  
 $>$ PN100 (ANSI CLASS600): Pressure self-tightening bonnet  
Valve trim:  
Sleeve-guided, pilot balanced spool  
The first stage of decompression is realized by a special drilling sleeve  
The seat is pressed by the sleeve or pressed by a threaded press ring  
silencer:  
There are three different design options:  
1~3 low noise cage structure (diffuser)  
Efficient sound-absorbing structure  
Special design labyrinth disc stack structure  
The silencer is usually welded to the valve body when using a detachable seat.  
The silencer can also be designed on the valve seat.

◆技术参数 Technical data

本体形式 Body type	DC3700 bypass desuperheater
入口公称通径 Body size	DN80-DN650(3" ~ 26" )
出口公称通径 Body size	DN150-DN1200(6" ~ 48" )
阀座尺寸 Seat size	DN50-DN400(2" ~ 16" )
公称压力 Body rating	PN16-PN760(ANSI class 150 ~ 4500)
流体温度 Fluid temperature	-29°C ~ 620°C
连接方式 Connections	焊接型(SW、BW) butt weld, socket weld
阀体材质 Body materials	NB/T47008 20/15CrMo/12Cr1MoV、A105、A182 F11/F22/F91/F92
阀内件材质 Trim materials	A182 F6NM/F11/F22/F91/F92/FXFM-19、A479 XM-19、Inconel 718
可调比 Range-ability	50:1-30:1
流量特性 Flow characteristics	线性 linear

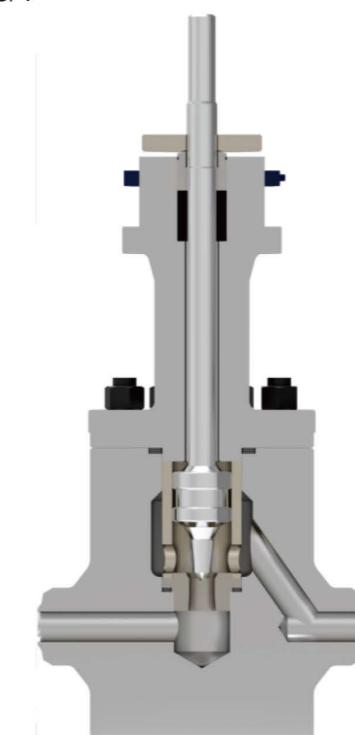
**旁路阀系列**  
Bypass valve series

DC2620 喷水隔离阀

DC2620 Shut-off valve

◆产品特点

- 用于蒸汽及给水的截断、隔离、定排切断；
- 给水隔离
- 抗冲刷设计，可长期关断
- 大通道，低流阻。快拆式内件，更换方便
- 节流级数：二级，非平衡阀芯
- 泄漏等级：ANSI V



◆Actuators features

- Used for cutting, isolating, and cutting off steam and feed water;
- Water supply isolation
- Anti-scour design for long-term shutdown
- Large channel, low flow resistance. Quick release inner part, easy to replace
- Throttle series: secondary, unbalanced spool
- Leakage rating: ANSI V



◆技术参数 Technical data

本体形式 Body type	DC2620 球形阀 globe type	DC2520 角阀 Angle type
公称通径 Body size	DN20-DN100(3/4" ~ 4" )	
公称压力 Body rating	PN40-PN420(ANSI class 300 ~ 2500)	
流体温度 Fluid temperature	-29°C ~ 425°C	
连接方式 Connections	法兰型(RF、FM、RTJ), 焊接型(SW、BW) Flanged(RF、FM、RTJ), butt weld, socket weld	
阀体材质 Body materials	A216 WCB/WCC, A217 WC6, A105, A182 F11, NB/T47008 20/15CrMo	
阀内件材质 Trim materials	GB1220 20Cr13/S30408/S31608/17-4PH, A479 XM-19, A182 F6NM, +STL	
流量特性 Flow characteristics	线性、等百分比 linear、EQ%	
阀座泄漏量 Leakage	硬密封 Metal seat 软密封 Soft seat	GB4213 V 级 ANSI class V 无 Nothing
执行机构 Actuator combination		电动执行机构 Electric actuator 气动薄膜式执行机构 Pneumatic diaphragm actuator 气动活塞式执行机构 Pneumatic cylinder actuator

# 球阀系列

## Ball valves series



Professionally provide  
process control  
valve solutions

专业提供过程控制阀门解决方案

### 球阀

#### Ball valves

东辰智能科技有限公司生产的球阀系列产品已经拥有超过10年的研发制造历史，该系列产品设计符合ASMEB16.34-2009、ASME B16.10-2000、GB/T12237及API598-2009等国际标准，满足各种工况的调节和切断要求，被广泛应用于石油、化工、轻工、制药、造纸、发电等行业。

The ball valve series products produced by Dongchen Intelligent Technology Co., Ltd. have a history of over 10 years of research and development and manufacturing. The design of this series of products complies with international standards such as ASMEB16.34-2009, ASME B16.10-2000, GB/T12237, and API598-2009, and meets the requirements for regulating and cutting off various working conditions. They are widely used in industries such as petroleum, chemical, light industry, pharmaceuticals, papermaking, and power generation.

#### ◆简单的结构可实现快速拆卸

任何阀门都必须做定期维修，本公司设计的球阀结构简单，阀体内件无紧配合结构，拆卸方便，易于维修，可为用户节约宝贵的维修时间。

#### ◆Simple structure enables quick disassembly

Any valve must be regularly repaired. The ball valve designed by our company has a simple structure and no tight fitting structure of the valve body. It is easy to disassemble and easy to maintain, which can save users valuable maintenance time.

#### ◆先进的密封结构，确保阀门的安全性

阀杆与阀体具有多层次组合密封，这种密封是通过O型圈、柔性石墨或四氟填料组合实现双重密封；该结构满足TA-LUFT/壳牌SPE77/312强制性标准。

#### ◆Advanced sealing structure to ensure the safety of the valve

The stem and valve body have a multi-layer combination seal. This seal is double-sealed by O-ring, flexible graphite or PTFE packing; the structure meets the mandatory standards of TA-LUFT / Shell SPE77 / 312.

#### ◆超长的使用寿命，让用户更经济实惠

球阀的硬密封球，球芯、阀座采用国际先进的喷焊、喷涂、熔焊等技术，可确保其合金硬度在HRC58-73，结合力在80-400MPa范围，同时采用国际先进的专业设备对其进行加工，使用寿命在10万次以上，泄漏等级达到VI级。

#### ◆Long life, make users more economical

Ball valve hard seal ball, ball core and valve seat adopt international advanced spray welding, spray coating, fusion welding and other technologies, which can ensure that its alloy hardness is HRC58-73, binding force is in the range of 80-400MPa, while using international advanced professional equipment its processing can ensure that the service life is more than 100,000 times, and the leakage level reaches level VI.

#### ◆模块化设计，用户使用更简单快捷

阀门内部密封结构采用模块化设计，可实现软硬密封阀座任意互换，确保阀门正常使用。

#### ◆Modular design makes it easier and faster for users

The internal sealing structure of the valve adopts a modular design, which can realize any interchange of soft and hard sealed valve seats to ensure the normal use of the valve.

#### ◆多元化的管道连接方式，让用户使用更舒心

球阀系列采用国际通用标准，根据用户要求可采用法兰式(RF,FF,FM,RJ,G)、螺纹式及对焊等国际通用的连接方式让用户使用更便捷。

#### ◆Diversified pipe connection methods make users more comfortable to use

The ball valve series adopts international universal standards. According to user requirements, flanges (RF, FF, FM, RJ, G), threaded and butt welding can be used to make the user more convenient.

#### ◆丰富的市场使用经验，让用户更安心

我公司球阀系列已投放市场10年，共生产阀门约10万台，被广泛使用在石油、化工、轻工、制药、造纸、冶金等行业，深受用户喜爱，同时也积累了丰富的市场经验，可根据用户现场工艺提供合理的解决方案。

#### ◆Rich market experience to make users more at ease

Our company's ball valve series has been on the market for 10 years, and has produced about 100,000 valves. It is widely used in petroleum, chemical, light industry, pharmaceutical, papermaking, metallurgy and other industries. Can provide reasonable solutions according to user site process.

## 高性能直通切断球阀

High-performance full bore shutoff ball valve

DC5621 浮动式软密封球阀  
DC5623 固定式软密封球阀

DC5621 Floating soft seal ball valve/DC5622 Floating metal hard seal ball valve  
DC5623 Fixed soft seal ball valve/DC5624 Fixed metal hard seal ball valve



该系列金属密封球阀适用于高温、高压等各种场合，并能达到阀座的零泄漏。利用HVOF设备，向球体与阀座表面喷涂硬度极高的碳化钨或碳化铬合金，具有高耐冲蚀性、高耐磨性、使用寿命长的特点，并利用东辰独特的研磨技术，使阀座和球阀完全密封。由于弹簧的作用，阀座始终与球体面接触，利用其自清洗的功能防止异物进入密封面。该系列球阀虽然结构简单，最适用于浆料、粉尘等苛刻条件的场合。填料部位采用动负载的结构，可以有效防止填料的泄漏。

This series of metal sealed ball valve is suitable for high temperature, high pressure and other occasions, and can achieve zero leakage of the valve seat. HVOF equipment is used to spray the surface of the ball and valve seat with extremely hard tungsten carbide or chromium carbide alloy, which has the characteristics of high erosion resistance, high wear resistance and long service life. Using Dongchen's unique grinding technology, the seat and ball valve are completely sealed. Due to the action of the spring, the valve seat is always in contact with the ball surface, and the self-cleaning function is used to prevent foreign matter from entering the sealing surface. Although this series of ball valve has a simple structure, it is most suitable for the harsh conditions such as slurry and dust. The packing part adopts the structure of dynamic load, which can effectively prevent the leakage of the packing.



软密封球阀  
Soft seal ball valve



硬密封球阀  
Hard seal ball valve

### ◆ 技术参数 Technical data

本体形式 Body type	DC5621	DC5622	DC5623	DC5624
公称通径 Body size	DN15-DN150(1/2" - 6" )		DN40-DN600(1 1/2" - 24" )	
公称压力 Body rating	PN16-PN100(ANSI class 150 - 600)		PN16-PN420(ANSI class 150 - 2500)	
流体温度 Fluid temperature	-45°C-200°C	-45°C - 538°C	-45°C - 200°C	-45°C - 538°C
连接方式 Connections	法兰型(RF、FM、RTJ), 焊接型(SW、BW) Flanged(RF、FM、RTJ), butt weld, socket weld			
阀体材质 Body materials	A216 WCB/WCC、A217 WC6/WC9、A351 CF8/CF8M			
阀内件材质 Trim materials	A182 F304/F316/F316L			
球体处理 Ball treatment	抛光、镀硬铬 Polished, hard chrome plated	镀硬铬、堆焊STL、 喷涂Ni60、喷涂碳化钨 Hard chromium plating, surfacing STL Spraying Ni60 and tungsten carbide	抛光、镀硬铬 Polished, hard chrome plated	镀硬铬、堆焊STL、 喷涂Ni60、喷涂碳化钨 Hard chromium plating, surfacing STL Spraying Ni60 and tungsten carbide
密封环处理 Sealing ring	PTFE/RTFE	堆焊STL、喷涂Ni55、 喷涂碳化钨 Surfacing STL, spraying ni55 Spraying tungsten carbide	PTFE/RTFE	堆焊STL、喷涂Ni55、 喷涂碳化钨 Surfacing STL, spraying ni55 Spraying tungsten carbide
阀座和泄漏量 Leakage	API 598零泄漏 API 598 zero leakage	ANSI B16.014 V	API 598零泄漏 API 598 zero leakage	ANSI B16.014 V
金属密封和软密封 Metal seat or soft seat		API 598零泄漏 API 598 zero leakage		API 598零泄漏 API 598 zero leakage

## 高性能直通切断球阀

High-performance full bore shutoff ball valve

DC5621 浮动式金属硬密封球阀  
DC5623 固定式金属硬密封球阀

DC5621 Floating metal hard seal ball valve/DC5622 Floating metal hard seal ball valve  
DC5623 Fixed metal hard seal ball valve/DC5624 Fixed metal hard seal ball valve



### ◆ 阀门的结构特点

采用特殊填料结构，能够满足泄漏等级低于100ppm的场合，同时又能对阀杆减少约20%的摩擦力。

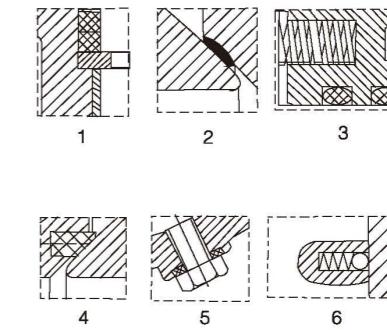
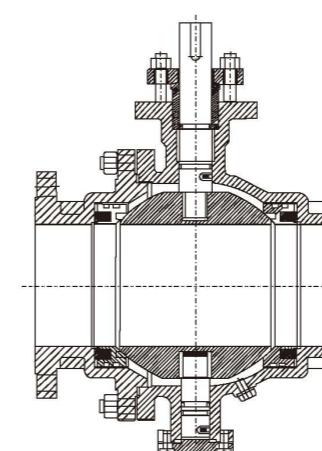
### ◆ Structural features

The special packing structure can meet the leakage level below 100ppm, while reducing the friction of the valve stem by about 20%.



- 采用阀杆防飞出结构，可确保阀杆不飞出造成意外伤害。  
The valve stem anti-flyout structure can ensure that the valve stem does not fly out and cause accidental injury.
- 阀座采用波形弹簧或圆柱弹簧及双刮刀结构，可以清洁球面，确保密封。  
The valve seat adopts wave spring or cylindrical spring and double scraper structure, which can clean the spherical surface and ensure the seal.
- 采用双密封结构，可确保介质不与弹簧接触，保证阀门密封。  
The double seal structure can ensure that the medium does not contact the spring and ensure the valve is sealed.
- 软密封阀座密封性能更稳定可靠。  
Soft-sealed valve seat sealing performance is more stable and reliable.

- 设计排污吹扫结构可清洁阀门，防止阀门卡死。  
The blowdown structure is designed to clean the valve and prevent the valve from being stuck.
- 符合API607标准的要求，具有防火、防静电功能。  
It meets the requirements of API607 standard and has the functions of fire prevention and antistatic.



## V型调节球阀

V-notch ball valve



V型DC5631系列调节球阀是我公司自主开发设计的具有切断功能的新一代调节球阀。其结构紧凑、重量轻、体积小、拆装维护方便。流路畅通、流阻小；密封性好，泄漏低；可调比大。用于控制高粘度、带有纤维性和含有颗粒的介质。与气动活塞执行机构、电动执行机构组合而成，广泛应用于电力、化工、造纸、轻工等行业。

V-shaped regulating ball valve is a new generation of regulating ball valve with cut-off function independently developed and designed by our company. Its compact structure, light weight, small size, convenient disassembly and maintenance. The flow path is unobstructed, the flow resistance is small, the sealing is good, the leakage is low, and the adjustable ratio is large. For controlling high viscosity, fibrous and particulate-containing media. Combined with pneumatic piston actuators and electric actuators, it is widely used in power, chemical, paper, light industry and other industries.

### ◆产品特点

- 单片式阀体坚固耐用，有效避免了两片式阀体发生泄漏等可能性；
- 经特殊表面硬化处理的密封球面和阀座具有较长使用寿命；
- 金属密封阀座可达IV级密封能力，采用软密封阀座可达VI级密封能力；
- 近似于直通的流道具有较大的流通能力和可调比(300: 1)；
- 在动作过程中，球体和阀座具有自动定心功能，确保密封可靠；
- 特别适用于带纤维状物质的浆料介质中；
- 流量特性为近似等百分比。

### ◆Actuators features

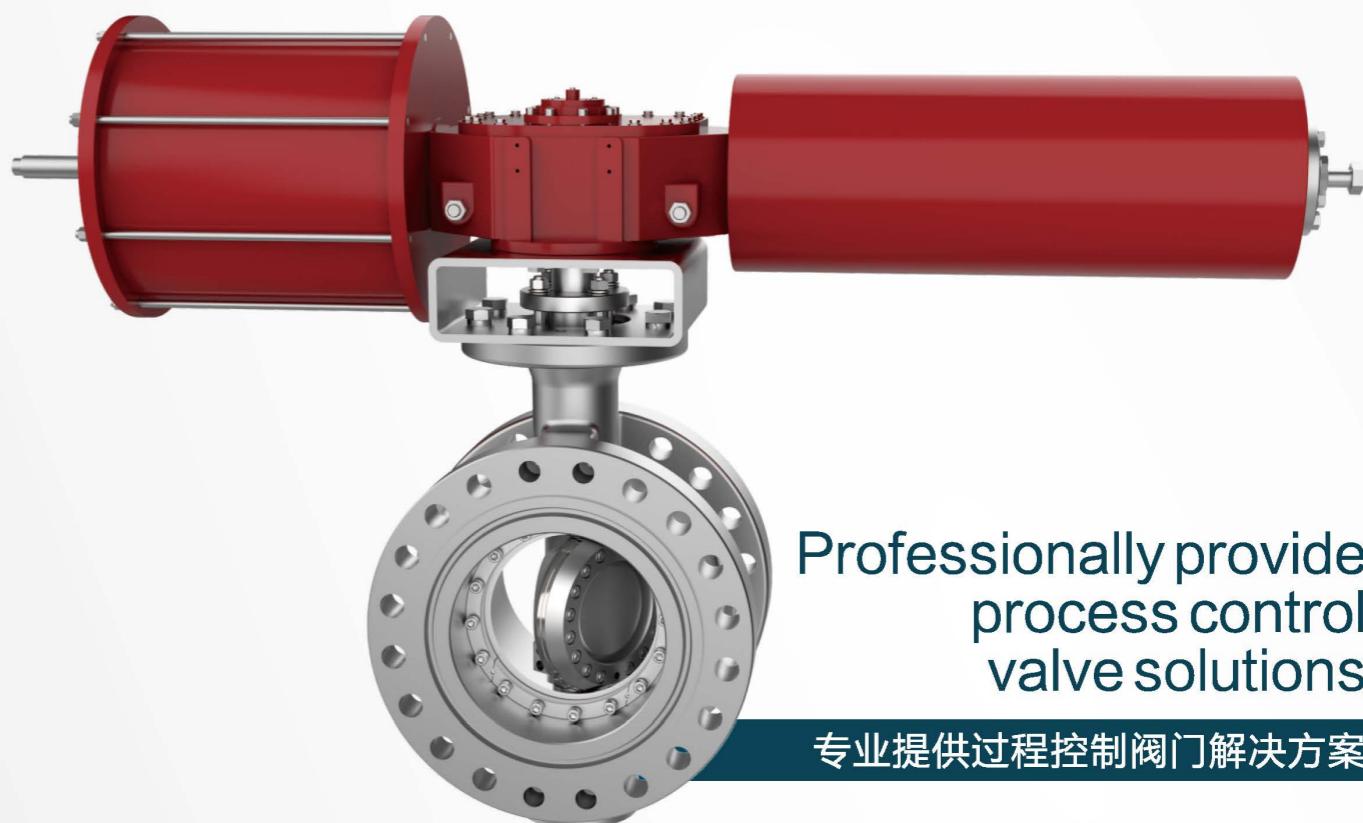
- The one-piece valve body is sturdy and durable, effectively avoiding the possibility of two-piece valve body leaking, etc.
- Sealed spheres and seats with special case hardening have a long service life
- Metal-sealed seat can reach level IV sealing ability, and soft-sealed seat can reach level VI sealing ability
- Approximately straight flow channel with large flow capacity and adjustable ratio (300: 1)
- During the operation, the ball and valve seat have an automatic centering function to ensure a reliable seal
- Particularly suitable for slurry media with fibrous substances
- Flow characteristics are approximately equal percentages

### ◆技术参数 Technical data

公称压力 Nominal pressure	ANSI 150~ANSI600(PN16 ~ PN100)
公称通径 Nominal diameter	1" ~ 16" (DN25~DN400)
温度范围 Temperature range	-45°C~+400°C
泄漏等级 Leakage level	ANSIV、V、VI
流量特性 Flow characteristics	近似等百分比 Approximate EQ%
额定行程 Rated stroke	90°

# 蝶阀系列

## Butterfly valves series



Professionally provide  
process control  
valve solutions

专业提供过程控制阀门解决方案

## 蝶阀 Butterfly valves

我公司生产的蝶阀系列产品拥有独特的设计，先进、科学的生产加工工艺及丰富的制造经验，已有10多年的研究历史。性价比高，而且能针对各种复杂、恶劣工况提供特殊的设计方案，在阀门领域具有较大的市场竞争力。我公司产品的设计规范符合ASME B16.34-2009、GB/T12221、GB/T12238、JB/T8527及API607-2009等标准，多年来被广泛用于电力、石油、化工、轻工、制药、造纸、冶金、橡胶等行业。

The butterfly valve series produced by our company has a unique design, advanced and scientific production and processing technology and rich manufacturing experience. It has more than 10 years of research and development history. It is cost-effective, and can provide special design solutions for various complicated and harsh working conditions. It has a large market competitiveness in the valve field. The design specifications of our products comply with ASME B16.34-2009, GB / T12221, GB / T12238, JB / T8527, and API607-2009 standards, and have been widely used in power, petroleum, chemical, light industry, pharmaceutical, and papermaking for many years., Metallurgy, rubber and other industries.

### ◆ 我公司的蝶阀结构独特，优先显著

结构设计合理、安全性能可靠、安装尺寸小、适用于大口径的阀门。

开关迅速、90°往返转动，驱动力矩小，适用于截断、接通、调节管路中的介质，具有良好的流体控制特性和关闭密封性能。

阀板的流线型设计，使流体阻力损失小，是一种节能型产品。

连接形式多种多样：法兰式，对夹式，焊接式和支耳式。

根据不同工况，密封结构和材料可以有多种选择组合形式，可以实现良好的密封。

操作灵活省力，驱动方式有电动、气动、气液联动等多种方式可选。

阀座和密封面的耐磨、耐冲刷强度高，阀门使用寿命长。

拆卸简单快速，密封圈具有互换性和可更换性，维修简单，方便。

我公司的蝶阀产品主要有：双偏心软密封蝶阀、双偏心硬密封蝶阀、高性能三偏心硬密封蝶阀等。

Our butterfly valve products mainly include: double eccentric soft seal butterfly valve, double eccentric hard seal butterfly valve, high performance triple eccentric hard seal butterfly valve and so on.

## 高性能蝶阀 High-performance butterfly valve

### DC5811 双偏心高性能蝶阀

### DC5812 三偏心硬密封蝶阀

Double eccentric high performance butterfly valve

Triple eccentric hard seal butterfly valve

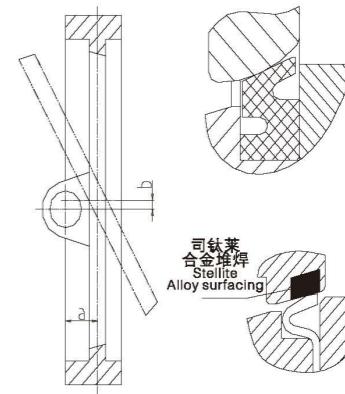


DC5811系列高性能蝶阀的阀板与阀座具有独特的结构设计，具有优良的切断性能和耐久性能，是一种用途广泛的调节阀。

DC5812系列三偏心蝶阀具有双向无气泡紧密关闭性能。这种几何形状保证阀板密封只是在关闭位置时才与阀体阀座接触，因此不会产生摩擦或磨损，并且产生一种扭矩使得弹性密封有足够的接触面积，类似于截止阀的锥面密封，确保密封接触的均匀一致性。

The DC5811 series high-performance butterfly valve has a unique structural design of the valve plate and valve seat, which has excellent shut-off performance and durability, and is a widely used regulating valve.

The DC5812 series triple eccentric butterfly valve has a two-way non-bubble tight closing performance. This geometry ensures that the valve plate seal is in contact with the valve body and valve seat only in the closed position, so there is no friction or wear, and a torque is generated so that the elastic seal has a sufficient contact area, similar to the cone surface of a globe Sealing to ensure uniform and consistent sealing contact.



### ◆ 技术参数 Technical data

本体形式Body type	DC5811双偏心高性能蝶阀 Double eccentric high performance butterfly valve	DC5812三偏心硬密封蝶阀 Triple eccentric hard seal butterfly valve
公称通径Body size	DN80-DN600(3" - 24" )	DN80-DN1500(3" - 60" )
公称压力Body rating	PN16-PN100(ANSI class 150 - 600)	
流体温度Fluid temperature	-196°C - 500°C	
连接方式Connections	对夹式/法兰型(RF)/支耳式 Wafer type/Flanged(RF)/Lug type	法兰型(RF) Flanged(RF)
阀体材质Body materials	A216 WCB/WCC, A351 CF8/CF8M	
阀板材质Disc materials	A216 WCB/WCC, A351 CF8/CF8M	
阀板处理Disc treatment	镀硬铬或堆焊司太立合金 Hard chromium plating or hardfacing stellite	
可调比Range- ability	60度开度 60° opening/25: 1, 90度开度 90° opening/50: 1	
流量特性Flow characteristics	近似等百分比(固有特性)approximate EQ%(inherent characteristic)	
密封环形式Seal ring type	FN/FV/CS	KS/复合硬密封FM/硬密封/M KS/composite hard seal FM/hard seal/M
密封环材质Seal ring materials	强化聚四氟乙烯 RTFE Reinforced polytetrafluoroethylene RTFE	Kel-F/316+graphite/316SS
垫环材质Back ring materials	NBR/VITON/316SS	316SS
阀座泄漏量Seat leakage	ANSI class IV/V/VI	微气泡ANSI class VI
执行机构Actuator combination	气动活塞式执行机构 pneumatic cylinder actuator 气动薄膜式执行机构 pneumatic diaphragm actuator	

## 高性能蝶阀

High-performance butterfly valve

### 三偏心蝶阀工作原理

Working principle of three eccentric butterfly valve

#### ◆ 工作原理 Working principle

DC5812三偏心蝶阀具有双向无气泡紧密关闭性能。这种几何形状保证阀板只是在关闭位置时才与阀体阀座接触，不会产生摩擦或磨损，并且产生一种扭矩使得弹性密封有足够的接触面积，类似于截止阀密封的一个锥面密封，确保密封接触的均匀一致性。

DC5812 triple eccentric butterfly valve has two-way tight closing performance without air bubbles. This geometry ensures that the valve plate is in contact with the valve body and valve seat only in the closed position without friction or wear, and generates a torque that allows the elastic seal to have a sufficient contact area, similar to a tapered surface of a globe valve seal Sealing to ensure uniform and consistent sealing contact.

#### ◆ 三偏心几何形状 the triple offset geometry

偏心1：阀轴位于阀座轴后面，使得密封能够完全紧密环绕接触整个阀座。

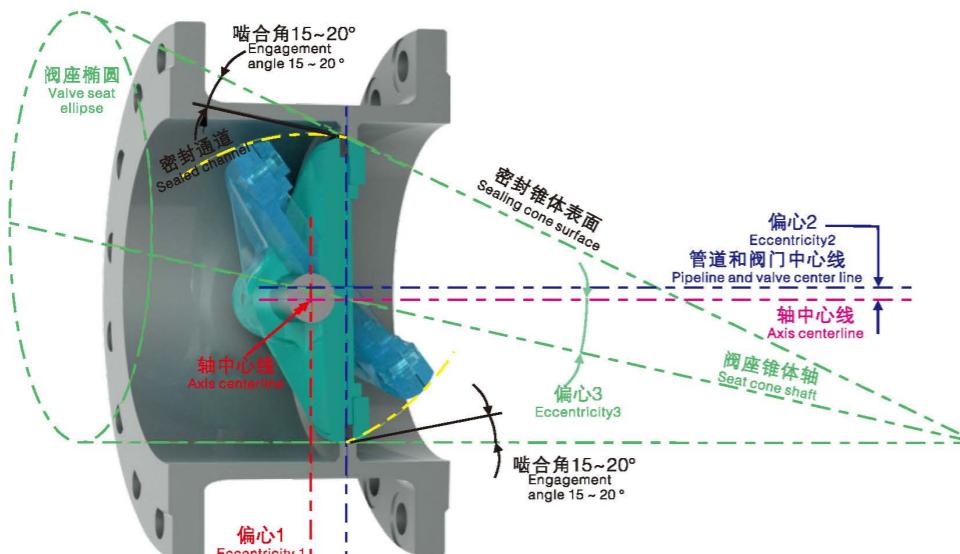
Offset1:The valve shaft is located behind the valve seat shaft, allowing the seal to fully and completely contact the entire valve seat.

偏心2：阀轴中心线偏离管道和阀门中心线，这就避免阀门开启和关闭的干扰。

Offset2:The centerline of the valve shaft is offset from the centerline of the pipeline and valve, which avoids the interference of valve opening and closing.

偏心3：阀座锥体轴偏离阀轴中心线，这样可以在开启和关闭过程中消除摩擦作用，并且实现环绕整个阀座的均匀一致的压缩密封效果。

Offset3:The valve seat cone axis is offset from the valve shaft centerline, which can eliminate friction during opening and closing, and achieve a uniform compression and sealing effect around the entire valve seat.



三偏心结构  
Three eccentric structure

## 高性能蝶阀

High-performance butterfly valve

### 三偏心蝶阀结构说明

Structure description of three eccentric butterfly valve

采用三偏心结构，适用于高温高压等复杂工况并要求严密切断的场合，阀门开闭过程无摩擦，开启力矩小，扭力密封，介质作用力越大密封性能越好。

Adopting triple eccentric structure, it is suitable for high temperature and high pressure and other complicated working conditions and requires strict close. The valve opens and closes without friction, the opening torque is small, the torque is sealed, and the greater the medium force, the better the sealing performance.

阀座和阀体采用一体式结构，阀座密封面堆焊高强度合金材料，保证密封面可靠性，产品使用寿命长，基本做到零维护。

The valve seat and valve body adopt an integrated structure, and the sealing surface of the valve seat is welded with high-strength alloy material to ensure the reliability of the sealing surface, the product has a long service life, and basically has zero maintenance.

台阶式结构设计能有效防止阀杆飞出，保证阀门安全性，整体式的阀杆，并采用高强度的不锈钢材料，阀门承受的允许压差大。

The stepped structure design can effectively prevent the valve stem from flying out, which greatly guarantees the safety of the valve. The integral valve stem is made of high-strength stainless steel.

多种密封结构选择：有多层次符合结构、多层次全金属结构及整体金属结构密封圈。可根据不同的工况进行选择。多层次密封结构使密封圈整体具有一定柔性，能使密封圈与阀座贴合更好，从而保证泄漏等级达到ANSI B16.104-2000 VI。

A variety of sealing structure options: there are multi-level conforming structures, multi-level all-metal structures and overall metal structure sealing rings. Can choose according to different working conditions. The multi-layered seal structure makes the seal ring as a whole have a certain flexibility, which can make the seal ring and the valve seat fit better, thereby ensuring that the leakage level reaches ANSI B16.104-2000 VI.

阀杆与阀板传动方式采用圆柱销偏置结构，防止阀杆由于钻孔导致强度降低的状况，从而间接提高了圆柱销的剪切强度，并提高了阀门安全可靠性。

The transmission method of the valve stem and the valve plate adopts a cylindrical pin offset structure, which prevents the decrease in strength of the valve stem due to drilling, thereby indirectly increasing the shear strength of the cylindrical pin and improving the safety and reliability of the valve.

轴封结构采用耐高温的非金属材料能有效防止介质中所含杂质颗粒进入轴承，从而杜绝了轴承因杂质颗粒结块将阀杆卡死或抱死的现象。

The shaft seal structure uses high temperature resistant non-metallic materials to effectively prevent foreign particles contained in the medium from entering the bearing, thereby preventing the bearing from being stuck or locked due to agglomeration of foreign particles.

阀杆保护止推环结构，防止了阀杆与阀体间的死角位置被颗粒介质或易结焦介质结垢、结块，从而将阀杆抱死。反向流向时，可有效防止阀杆因介质作用力使阀杆产生径向位移，导致反向泄漏量增大。

The valve stem protects the thrust ring structure, preventing the dead angle position between the valve stem and the valve body from being fouled or agglomerated by particulate or easily coking media, thereby holding the valve stem to death. In the reverse flow direction, it can effectively prevent the valve stem from causing radial displacement due to the force of the medium, resulting in an increase in reverse leakage.

填料系统采用碟簧动态加载补偿结构，阀体填料函采用滚挤压，阀杆采用纳米光整，能避免填料处绝对不外漏，达到TA-LUFT标准要求。

The packing system adopts a disc spring dynamic loading compensation structure, the valve body stuffing box adopts roll extrusion, and the valve stem adopts nanometer finishing, which can avoid absolutely no leakage at the packing place and meet the TA-LUFT standard requirements.

零件尺寸加工精度高，密封圈现场可以自由调整和更换。

The part size is processed with high precision, and the seal ring can be adjusted and replaced freely on site.

# 平板闸阀

## Flat gate valves series

Professionally provide  
process control  
valve solutions

专业提供过程控制阀门解决方案



### 闸阀

Gate valve

DC6011 平行单闸板闸阀

DC6011 Series parallel single gate valve

DC6012 平行双闸板闸阀

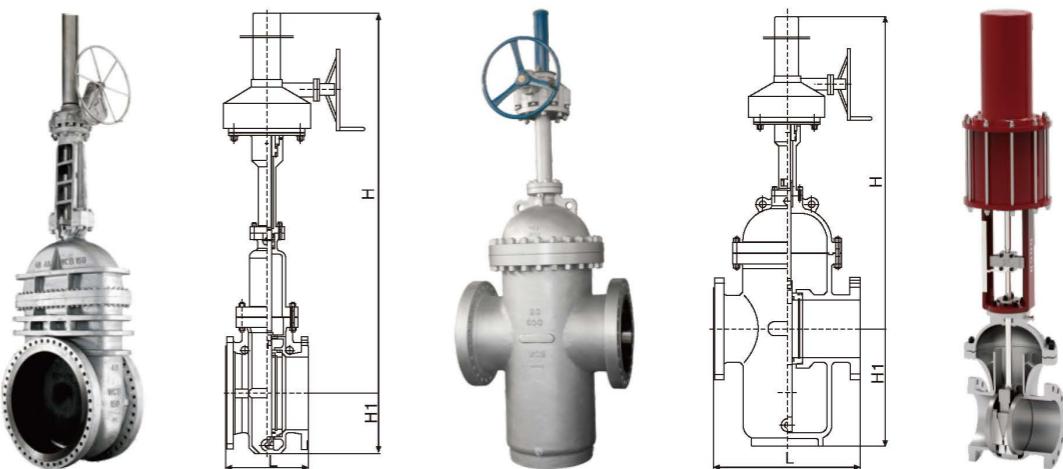
DC6012 Series parallel double-gate gate valve

DC6011系列平行单闸板闸阀(又称平板闸阀)是生产过程中控制阀门的重要品种之一。平板闸阀具有良好启闭特性。具有全通径、流阻小、密封性好、开关方便等特点。可适用于成品油的输送管线和贮存设备：石油，天然气和开采进口装置以及带有悬浮颗粒、纤维的介质管道。

DC6012系列平行双闸板闸阀采用撑开式结构，动作可靠，因其撑开密封的独特双闸板结构，在高压和低压下均可以实现优异的双向密封性能，扭矩越大，密封越严。在开关过程中，闸板密封面和座圈密封面脱离，减小密封面磨损，延长了阀门使用周期。具有极高的切断性能，广泛用于高温高压到极低条件下的紧急切断阀、放空阀或作为大口径调节阀。比如：成品油的输送管线和贮存设备，石油天然气的开采井口装置以及带有悬浮颗粒、纤维介质的管道，独立的蒸汽汽轮进给系统，带有颗粒的高温高压严酷工况等。

DC6011 series parallel single gate valve (also known as flat gate valve) is one of the important varieties of control valves in the production process. The flat gate valve has good opening and closing characteristics. It has the characteristics of full diameter, small flow resistance, good sealing and convenient switching. Applicable to pipelines and storage equipment for refined oil: petroleum, natural gas, and imported equipment for mining and media pipelines with suspended particles and fibers.

DC6012 series parallel double-gate valve adopts an open-type structure, with reliable operation and extremely high shut-off performance. It is widely used in emergency shut-off valves, vent valves or large-diameter regulating valves under high temperature and high pressure to extremely low conditions. For example: pipelines and storage equipment for refined oil products, wellhead equipment for oil and natural gas production, pipelines with suspended particles and fiber media, independent steam turbine feed systems, severe high temperature and pressure conditions with particles, etc.



#### ◆技术参数 Technical data

本体形式 Body type	DC6011平行单闸板闸阀	DC6012平行双闸板闸阀
公称通径 Body size	DN40-DN900(1 1/4" - 40" )	DN40-DN600(1 1/4" - 24" )
公称压力 Body rating	PN16-PN40(ANSI class 150 - 300)	PN16-PN250(ANSI class 150 - 1500)
流体温度 Fluid temperature	-20°C - 250°C	-20°C - 566°C
连接方式 Connections	法兰型(RF、FM、RTJ), 焊接型(SW、BW)Flanged(RF、FM、RTJ), butt weld, socket weld	A216 WCB/WCC, A217 WC6/WC9, A351 CF8/CF8M
阀体材质 Body materials	A105+ENP+PTFE, SUS316+STL	SUS316+STL
阀内件材质 Trim materials		
流量特性 Flow characteristics	ON-OFF	
阀座泄漏量 Leakage	硬密封 Metal seat 软密封 Soft seat	ANSI class V ANSI class V , VHS 微气泡级 ANSI class VI
执行机构 Actuator combination		气动活塞式执行机构 pneumatic cylinder actuator 电动执行机构 electronic actuator 气动薄膜式执行机构 pneumatic diaphragm actuator



三千控制阀网  
www.CV3000.com

## 平行单闸板闸阀 Single parallel sliding gate valves



带导流孔闸板结构图  
Structural drawing of RAM with diversion hole



普通型闸板  
Common RAM



调节型闸板  
Adjustable RAM

无导流孔闸板结构图  
Structural drawing of ram without diversion hole

### ◆ 带导流孔闸板结构特点

1. 闸板带一与阀体通道相同口径的通孔，阀门全开时，闸板导流孔与阀体通道形成直管段，可直接用毛球进行吹扫。
2. 闸板开启或关闭行程中阀座始终与闸板接触吻合，软阀座在闸板运行过程中能够自动刮除闸板上的杂质，因此平板闸阀也适用于带悬浮颗粒、纤维介质；且阀座密封面不会受到阀体热变形的损坏。
3. 两阀座为浮动式，具有软硬复合密封的特点，使用寿命长。当阀门内腔压力异常升高时，浮动阀座可自动将高压泄放排入管道。
4. 阀体外部两阀座处设有注脂阀，当阀门使用过程中由于密封副磨损发生泄漏时，可通过此处注入密封脂，防止阀门泄漏。
5. 阀体下部设有排污阀，可排放阀门内部积存的污物。

### ◆ Structural Features of Shutters with Diversion Holes

- 1.The gate plate has a through hole with the same diameter as the valve body channel. When the valve is fully opened, the gate guide hole and the valve body channel form a straight pipe section, which can be directly blown with wool balls.
- 2.The valve seat is always in contact with the gate during the opening or closing stroke of the gate. The soft valve seat can automatically scrape off the impurities on the gate during the operation of the gate. Therefore, the flat gate valve is also suitable for suspension particles and fiber media And the sealing surface of the valve seat will not be damaged by the thermal deformation of the valve body.
- 3.The two valve seats are floating, with the characteristics of soft and hard compound seal, and long service life. When the pressure inside the valve cavity rises abnormally, the floating valve seat can automatically discharge high pressure into the pipeline.
- 4.There are grease injection valves at the two valve seats outside the valve body. When the valve leaks due to wear of the sealing pair during use, the sealing grease can be injected here to prevent the valve from leaking.
- 5.There is a drain valve in the lower part of the valve body, which can discharge the dirt accumulated in the valve.

### ◆ 无导流孔闸板结构特点

1. 闸板不带导流孔，阀门结构紧凑、体积小、重量轻。
2. 闸板可设计制造成V型、半圆形、五角形通道，使阀门具有调节性能，可任意开度调节，以满足管道系统对流量的要求。
3. 两阀座为浮动式，具有软硬复合密封的特点，使用寿命长。当阀门内腔压力异常升高时，浮动阀座可自动将高压泄放排入管道。
4. 阀体外部两阀座处设有注脂阀，当阀门使用过程中由于密封副磨损发生泄漏时，可通过此处注入密封脂，防止阀门泄漏。
5. 阀体下部设有排污阀，可排放阀门内部积存的污物。

### ◆ Structural features of non-diversion gate

- 1.The gate valve does not have a diversion hole, and the valve has a compact structure, small size and light weight.
- 2.The gate valve can be designed and manufactured as a V-shaped, semi-circular, pentagonal channel, so that the valve has adjustable performance and can be adjusted at any opening to meet the flow requirements of the pipeline system.
- 3.The two valve seats are floating, with the characteristics of soft and hard compound seal, and long service life. When the pressure inside the valve cavity rises abnormally, the floating valve seat can automatically discharge high pressure into the pipeline.
- 4.There are grease injection valves at the two valve seats outside the valve body. When the valve leaks due to wear of the sealing pair during use, the sealing grease can be injected here to prevent the valve from leaking.
- 5.There is a drain valve in the lower part of the valve body, which can discharge the dirt accumulated in the valve.

## 平行双闸板闸阀 Parallel double gate valves



撑开式闸板组件  
Open-type valve plate assembly

### ◆ 平行双闸板闸阀结构原理

执行机构的输出力通过阀杆以垂直向下的力作用于楔形块时，被设计成一定角度的楔形块将垂直向下的力转换成水平方向的作用力，又通过压板作用，水平方向的力分别将二块闸板压住阀座，从而以金属紧密接触方式将流体完全阻断，闸板和阀座表面均硬化处理(堆焊硬质合金、表面喷涂Co-Cr-Ni合金，喷涂WC，硼等)，具有自清洁功能，特殊工艺表面硬度最高可达HRC90以上。

### ◆ Parallel double gate valve structure principle

When the output force of the actuator acts on the wedge block with a vertical downward force through the valve stem, a wedge block designed to a certain angle converts the vertical downward force into a horizontal force, and then acts through a pressure plate. The two gate plates are pressed against the valve seat respectively, so that the fluid is completely blocked by the close contact of the metal, and the surface of the gate plate and the valve seat are hardened (surfacing welding hard alloy, surface spraying Co-Cr-Ni alloy, spray WC, boron, etc.), with self-cleaning function, the surface hardness of special process can reach HRC90 or more.

### ◆ 产品特点

1. 压力自密封阀盖采用高密度纯石墨垫片；
2. 保护阀盖的过压力引入压力泄放装置；
3. 相对宽大的阀座和闸板；
4. 在支杆上有限位装置；
5. 阀杆上有防装装置；
6. 密封面两端硬度不同，没有较大磨损；
7. 闸板STL6，阀座STL12；
8. 可支持双向流动；
9. 两个推力轴承和铝青铜套管；
10. 为旁路管道的可用结构；
11. 石墨压力自密封结构；
12. 压力越大，密封力越高；
13. 在高温或者频繁的温度变化情况下，我们建议使用自密封环来代替标准的金属缠绕垫圈，在高温和频率温度循环应用。

### ◆ Actuators features

- 1.High-density pure graphite gasket for pressure self-sealing valve cover;
- 2.Guo Yali protecting the valve cover introduces a pressure relief device;
- 3.Relatively wide seat and disc;
- 4.Limiting device on the pole;
- 5.Anti-installation device on the valve stem;
- 6.The hardness of the two ends of the sealing surface is different, and there is no significant wear;
- 7.Valve plate STL6, valve seat STL12;
- 8.Can support two-way flow;
- 9.Two thrust bearings and aluminum bronze sleeves;
- 10.Available structure for bypass pipeline;
- 11.Graphite pressure self-sealing structure;
- 12.The higher the pressure, the higher the sealing force;
- 13.In the case of high temperature or frequent temperature changes, we recommend using a self-sealing ring instead of the standard soft iron gasket, which is used in high temperature and frequency temperature cycling.

## 截止阀 Shut-off valve



适用于公称压力PN16~420bar(class150~2500)，工作温度≤620℃的石油、化工、制药、化肥、电力行业等各种工况的管路上，切断或接通管路介质。

It is suitable to cut off or connect the pipeline medium in pipelines with various working conditions such as nominal pressure PN16 ~ 420bar (class 150 ~ 2500) and working temperature ≤ 620 °C.

### ◆产品特点

- 1、产品结构合理、密封可靠、性能优良、造型美观；
- 2、密封面堆焊Co基硬质合金，耐磨、耐蚀、抗擦伤性能好，使用寿命长；
- 3、阀杆经调质及表面氮化处理，有良好的抗腐蚀性及耐磨性能；
- 4、公称压力≥250bar(class1500)中腔采用自密封结构，密封性能随压力升高而增强，保证了密封性能；
- 5、阀门设有倒密封结构，密封可靠；
- 6、零件材质及法兰、对焊端尺寸可根据实际工况或用户要求合理选配，满足各种工程需要。

### ◆Actuators features

- 1.Reasonable product structure, reliable seal, excellent performance and beautiful appearance;
- 2.The sealing surface is welded with Co-based hard alloy, which has good wear resistance, corrosion resistance, abrasion resistance and long practical life;
- 3.The valve stem undergoes quenching and tempering and surface nitriding treatment, and has good corrosion resistance and wear resistance;
- 4.The self-sealing structure is adopted in the middle cavity with nominal pressure ≥250bar (class1500). The sealing performance is enhanced with the increase of pressure to ensure the sealing performance.
- 5.The valve is provided with an inverted seal structure, which is reliable in sealing.
- 6.Parts materials, flanges and butt-weld end dimensions can be reasonably selected according to actual working conditions or user requirements to meet various engineering needs.

### ◆技术参数 Technical data

公称压力 Nominal pressure	ANSI 150~ANSI2500
公称通径 Body size	DN15~DN400
温度范围 Temperature range	-196℃~+620℃
适用介质 Applicable medium	水、蒸汽、油品等 water, steam, oil, etc.

## 抽汽逆止阀 Extraction check valve



适用于公称压力PN16~420bar(class150~2500)，工作温度≤620℃的石油、化工、电力行业等各种工况的蒸汽管路上，防止介质倒流。

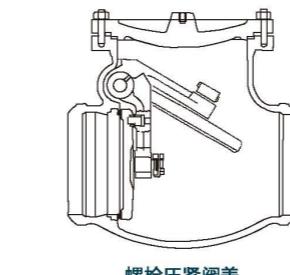
It is suitable for pipelines with various working conditions such as nominal pressure PN16 ~ 420bar (class 150 ~ 2500) and working temperature ≤ 620 °C, to prevent the medium from flowing backward.

### ◆产品特点

- 1、产品结构合理、密封可靠、性能优良、造型美观；
- 2、密封面堆焊Co基硬质合金，耐磨、耐蚀、抗擦伤性能好，实用寿命长；
- 3、开启压力小，阀瓣在很小的压差下就能完全打开；
- 4、内装式的销轴结构，减小外泄漏点，使用可靠；
- 5、公称压力≥250bar(class1500)中腔采用自密封结构，密封性能随压力升高而增强，保证了密封性能；
- 6、零件材质及法兰、对焊端尺寸可根据实际工况或用户要求合理选配，满足各种工程需要。

### ◆Actuators features

- 1.Reasonable product structure, reliable seal, excellent performance and beautiful appearance;
- 2.The sealing surface is welded with Co-based hard alloy, which has good wear resistance, corrosion resistance, abrasion resistance and long practical life;
- 3.The opening pressure is small, and the valve flap can be fully opened under a small pressure difference;
- 4.Built-in pin structure, reduce external leakage points, reliable use;
- 5.The self-sealing structure is adopted in the middle cavity with a nominal pressure ≥250bar (class1500), and the sealing performance is enhanced with the increase of pressure to ensure the sealing performance
- 6.Parts materials, flanges and butt-weld end dimensions can be reasonably selected according to actual working conditions or user requirements to meet various engineering needs.



### ◆技术参数 Technical data

公称压力 Nominal pressure	ANSI 150~ANSI2500
公称通径 Nominal diameter	DN15~DN600
温度范围 Temperature range	-196℃~+620℃
适用介质 Applicable medium	蒸汽 Steam

# 气动执行机构

## Pneumatic actuators

Professionally provide  
process control  
valve solutions

专业提供过程控制阀门解决方案



### 气动执行机构

#### Pneumatic actuators

1-X280 多弹簧式气动薄膜式执行机构 Multi-spring pneumatic diaphragm actuators

1-X250 大行程气动薄膜式执行机构 Long stroke pneumatic diaphragm actuators

1-X280系列直行程气动薄膜执行机构，采用多弹簧式结构，分为正作用和反作用两种形式，依靠弹簧复位可轻松实现阀门要求故障位置，其与直行程阀类组合，主要用于过程参数的控制与调节，最大行程可达76mm，具有重量轻，推力大，结构简单等特点，是一种高性能的气动执行机构。

1-X280 series straight-stroke pneumatic diaphragm actuator adopts multi-spring structure, which is divided into two types of positive action and reverse action. It can easily achieve the valve's required fault position by spring return. It is combined with straight-stroke valves and is mainly used in process Parameter control and adjustment, the maximum stroke can reach 76mm, with light weight, large thrust, simple structure and other characteristics, it is a high-performance pneumatic actuator.

1-X250系列大行程气动薄膜执行机构，采用单弹簧式结构，与1-X280系列相比，主要用于长行程控制，最大行程可达250mm，与气动活塞式执行机构相比，具有调节精度高、重量轻等优点，也可用于切断场合配以气控阀、增速器、快速排放阀等可以实现快速切断，快关时间最小可达1S。

The 1-X250 series large-stroke pneumatic film actuator adopts a single spring structure. Compared with the 1-X280 series, it is mainly used for long stroke control. The maximum stroke can reach 250mm. Compared with pneumatic piston actuators, it has adjustment accuracy. It has the advantages of high weight and light weight. It can also be used in shut-off occasions. It can achieve quick shut-off with air control valve, speed increaser, quick discharge valve, etc., and the quick-off time can reach 1S at least.



#### ◆技术参数 Technical data

形式 Type		1-X280 series						1-X250 series		
执行机构尺寸 Actuator size		D12	D25	D33	D39	D46	D63	D46	D63	D63M
最大输出能力 Maxoutput	N	218	262	333	395	465	640	465	640	640
	N.M	-	-	-	-	-	-	-	-	-
供气压力 Air supply(psi)		40、50、60								
弹簧范围 Spring range(psi)		请参见相应样本 See reference bulletin								
最大行程 Max stroke		17mm	25mm	34mm	60mm	76mm	100mm	120mm	200mm	200mm
动作 Action		正作用(DA), 反作用(RA)direct action or reverse action								
允许环境温度 Environment temp		标准型: -10~+70°C, 低温型: -40~+40°C, 高温型: 0~+100°C Standard type: -10~+70°C, low service: -40~+40°C, hing temp service: 0~+100°C								
选购附件 Optings		手动操作机构, 限位开关, 定位器, 过滤减压阀等 Manual handle, limit sw, positioner, air-set etc								

## 气动薄膜执行机构 Pneumatic diaphragm actuator

### ◆产品特点

- 使用寿命长
- 膜盖采用冲压钢，表面镀锌+喷漆防腐，油漆不易脱落；执行机构支架采用铸钢或者锻钢制作，结构牢固可靠；
- 膜片采用氟橡胶材质，具有良好的抵抗老化破坏、化学侵蚀以及在连续受力情况下保持不变形的特性；
- 推杆材质为AISI 420表面挤压镀镍处理，光洁度高，耐腐蚀；
- 导向衬套材质采用铝青铜，导向性好，低温下变形量小，保证良好的气室密封性；
- 推杆和支架连接处下方采用A型密封圈进行密封，以防止油污、沙子或污垢的渗透。

### ◆Actuators features

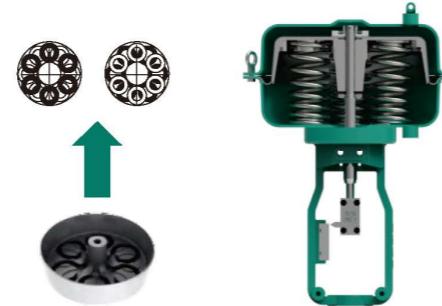
- Long service life
- The film cover is made of stamping steel, galvanized + spray painting for corrosion protection, and the paint is not easy to fall off; the actuator bracket is made of cast steel or forged steel, and the structure is firm and reliable;
- The diaphragm is made of fluorine rubber, which has good resistance to aging damage, chemical erosion and continuous deformation.
- The pusher is made of AISI 420, which has high surface finish and corrosion resistance;
- The guide bush is made of aluminum bronze, which has good guiding property and small deformation at low temperature, so as to ensure good air chamber tightness;
- The connection between push rod and support is sealed with A-ring to prevent oil, sand or dirt from penetrating.

### ◆应用灵活性

正作用和反作用零件全部通用实现互换性；  
弹簧安装位置可根据行程进行调整，整体铸造的铝托盘有高位和低位两种安装位置，方便安装；弹簧也可以选择安装3根、4根和6根来获得不同的弹簧推力范围；  
每种规格执行机构具有多种行程弹簧，可安装各种阀门口径；手轮机构有顶装手轮和侧装手轮两种，特别是侧装手轮，与执行机构可以完全脱离，安装十分方便；  
执行机构和阀门连接采用压板压套式结构，安装方便，现场更换填料比较方便。

### ◆Application flexibility

All positive and negative parts are interchangeable;  
The installation position of the spring can be adjusted according to the stroke. The whole cast aluminum tray has two installation positions, high position and low position, which is convenient for installation. The spring can also be installed with three, four and six to obtain different spring thrust range;  
Each specification of actuator has a variety of stroke springs, which can be installed with various valve diameters;  
There are two kinds of handwheel mechanisms: top mounted handwheel and side mounted handwheel, especially the side mounted handwheel, which can be completely separated from the actuator and is easy to install;  
The actuator and valve are connected by pressing plate and sleeve type structure, which is convenient for installation and convenient for field replacement of packing.



### ◆执行机构可选项

可调整的上行程限位：用于限制执行机构向上方向的行程；  
可调整的下行程限位：用于限制执行机构向下方向的行程；  
顶装手轮机构；  
侧装手轮机构；  
低温型和高温型执行机构：用于特定的环境温度；  
低温型执行机构使用温度：-60℃~70℃；  
高温型执行机构使用温度：-20℃~100℃；  
执行机构锁止装置：保证在维修时候执行机构保持在锁定位置（与执行机构故障位置相同）  
接管远程排放：天然气或者其它危险气体可以用作执行机构的气源，这种情况下，执行机构箱体应带有排放装置以避免气体集结；  
其它附件用于控制回路：定位器、空气过滤减压阀、电磁阀、限位开关、保位阀、增速器、放大器、气控阀等。

### ◆Actuator options

Adjusted up travel limit: used to limit the upward travel of the actuator;  
Adjustable down travel limit: used to limit the travel of the actuator in the down direction;  
Top mounted handwheel mechanism;  
Side mounted handwheel mechanism;  
Low temperature type and high temperature type actuators: for specific ambient temperature;  
Operating temperature of low temperature actuator: -60℃~70℃;  
Operating temperature of high temperature actuator: -20℃~100℃;  
Actuator locking device: ensure that the actuator remains in the locked position during maintenance (the same as the actuator failure position)  
Remote discharge of connecting pipe: natural gas or other dangerous gas can be used as the air source of the actuator. In this case, the actuator box shall be equipped with a discharge device to avoid gas accumulation;

Other accessories are used in the control circuit: positioner, air filter pressure reducing valve, solenoid valve, limit switch, holding valve, booster, amplifier, air control valve, etc.

阀杆有效推力(N/psi) Effective thrust of valve rod							
型号规格 Model specification	1-X280			1-X250			
作用形式 Function form	D12	D25	D33	D39	D46	D63	D63
正作用 Positive effect	200	222	409	580	828	1574	1569
反作用 Counteraction	180	192	370	519	748	1420	1295

(正作用1-X281、反作用1-X282)、(正作用1-X251、反作用1-X252)  
(positive action 1-x281, reaction 1-x282), (positive action 1-x251, reaction 1-x252)

## 气动活塞式执行机构 Effective thrust of valve rod



1-X400系列直行程活塞式气动执行机构，采用冷拔液压管作为气缸体，经过珩磨一挤压工艺，大大降低了动密封元件的磨损，提高了执行机构耐用度。与同规格的薄膜式直行程执行机构相比，推力更大。具有结构简单、重量轻、体积小的特点，是一种高性能气动直行程执行机构。

1-X400系列直行程活塞式气动执行机构，具有双作用和单作用两种形式，与直行程类阀门组合，可用于调节或开关控制。配以气控阀、快速排气阀、气动继电器等附件，可实现快速切断，快切时间为：1S、2S、3S、4S等多种级别。

1-x400 series direct stroke piston type pneumatic actuator adopts cold drawn hydraulic tube as cylinder block. Through honing extrusion process, it greatly reduces the wear of dynamic sealing elements and improves the durability of the actuator. Compared with the film type straight stroke actuator of the same specification, the thrust is larger. The utility model has the advantages of simple structure, light weight and small volume, and is a high-performance pneumatic straight stroke actuator.

1-x400 series direct stroke piston type pneumatic actuator has two forms of double action and single action. It is combined with direct stroke valve and can be used for adjustment or switch control. Equipped with air control valve, quick exhaust valve, pneumatic relay and other accessories, it can realize quick cut-off. The quick cut-off time can be divided into 1s, 2S, 3S, 4S and other levels.

### ◆执行标准Executive standard

形式 Form	气动活塞式直行程Pneumatic piston type straight stroke	
规格 Specifications	P200(S)、P250(S)、P300(S)、P400(S)、P500(S)	
作用方式 Mode of action	正作用：气压增加，输出轴向下移动 Positive action: the air pressure increases and the output axis moves downward	反作用：气压增加，输出轴向上移动 Reaction: the air pressure increases and the output axis moves upward
动作形式 Form of action	单作用(后缀加S表示) Single action (suffix plus s), double action	
额定行程 Rated stroke	17、25、34、45、60、76、100、120、150、200mm	
输出推力 Output thrust	见下表 See table below.	
气源压力 Gas pressure	0.3、0.36、0.45MPa	
弹簧范围 Spring range	0.10~0.20MPa、0.12~0.24MPa、0.15~0.30MPa	
手轮 Handwheel	规格P200(S)、P250(S)、P300(S)-顶装手轮 Specifications P200(s), P250(s), P300 (s) - top mounted handwheel 规格P300(S)、P400(S)、P500(S)-侧装手轮 Specifications P300(s), P400(s), P500 (s) - side mounted handwheel	

### ◆执行机构参数Actuator parameters

形式 TYPE		气动活塞式直行程执行机构 Pneumatic piston type direct stroke actuator									
规格型号 Specification type		1-X400 P200(S)	1-X400 P250(S)	1-X400 P300(S)	1-X400P400(S)	1-X400P500(S)	200	250	300	400	500
膜室直径 Membrane chamber diameter(mm)		200		250		300		400		500	
有效面积 Effective area(cm <sup>2</sup> )		230		420		600		920		2480	
供气压力 Gas supply pressure(MPa)		0.30(0.1~0.2) 0.36(0.12~0.24) 0.45(0.15~0.30)MPa									
额定行程 Rated stroke(mm)	17	25	34	34	45	60	76	100	120	150	200
输出推力 Output thrust (N)	单作用 Single action	0.30(0.1~0.2)MPa	2770	4032	6240	11090	17320				
	双作用 Double action	0.36(0.12~0.24)MPa	3320	4824	7480	13300	20780				
输出推力 Output thrust (N)	0.45(0.15~0.30)MPa	4160	6036	9350	16620	25970					
	0.30MPa	8320	12072	18700	33260	51960					
输出推力 Output thrust (N)	0.36MPa	9970	14484	22450	39900	62340					
	0.45MPa	12470	18096	28050	49880	77930					
滞后 lagging											
≤ 1%FS(带定位器) — 符合GB/T4213标准 ≤ 1% FS (with positioner) - in accordance with GB/T4213											
线性 linear											
≤ ± 2%FS(带定位器) — 符合GB/T4213标准 ≤ ± 2% FS (with positioner) - in accordance with GB/T4213											
气室密封 Gas chamber seal											
压力降低值 < 5.0KPa/5min — 符合GB/T4213标准 Pressure reduction value < 5.0kpa/5min - in accordance with GB/T4213											
使用寿命 Service life											
≥ 100000 — 符合GB/T4213标准 ≥ 100000 - in accordance with GB/T4213											
环境温度 Ambient temperature											
标准型 -10~+70℃ 高温型 -40~+100℃ Standard type - 10 ~ + 70 °C high temperature type - 40 ~ + 100 °C											
附件 Enclosure											
定位器、过滤减压阀、增速继电器、电磁阀、锁止阀(保位阀) Positioner, filter pressure reducing valve, booster relay, solenoid valve, pneumatic control valve, locking valve (holding valve)											
速度控制器、限位开关、位置变送器、手动机构、最大可调机械限位、最小可调机械限位 Speed controller, limit switch, position transmitter, manual mechanism, maximum adjustable mechanical limit, minimum adjustable mechanical limit											

# 减温减压装置系列

Temperature and pressure reducing device series



Professionally provide process control valve solutions

专业提供过程控制阀门解决方案

## 减温减压装置系列

Temperature and pressure reducing device series

DC400 减温减压装置

DC400 Desuperheating and pressure reducing device

DC400-03分体式减温减压装置

DC400-03 Split type temperature and pressure reducing device

DC401-03 一体式减温减压装置

DC401-03 Integrated temperature and pressure reducing device

### ◆ DC400 减温减压装置 DC400 Desuperheating and pressure reducing device

是将蒸汽压力和温度降低至规定数值的一种(压力管道元件组合)装置。

将高压蒸汽通过减压蒸汽调节阀进行节流调节，使蒸汽压力降至生产所需；将减温水雾化后喷入蒸汽中进行降温，使蒸汽温度降低至工艺要求。

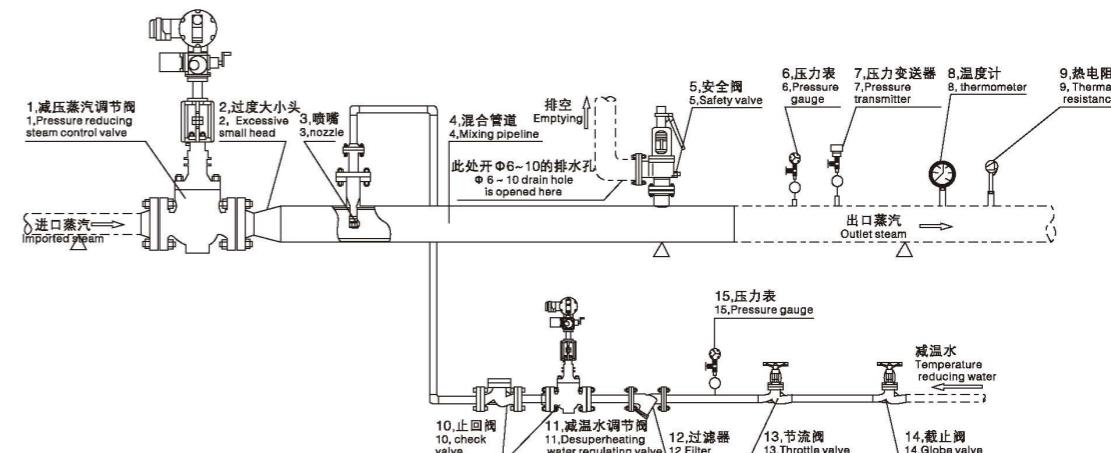
It is a type (pressure pipe component combination) device that reduces the steam pressure and temperature to a specified value.

The high pressure steam is throttled through a vacuum steam regulating valve to reduce the pressure to the production; the desuperheated water is atomized and sprayed into the steam to cool down, so that the temperature is lowered to the process requirements.

### ◆ DC400-03 分体式减温减压装置 DC400-03 Split type temperature and pressure reducing device

减压蒸汽调节阀先进行减压，减温水调节阀将减温水通过喷嘴喷入混合管道内进行减温。

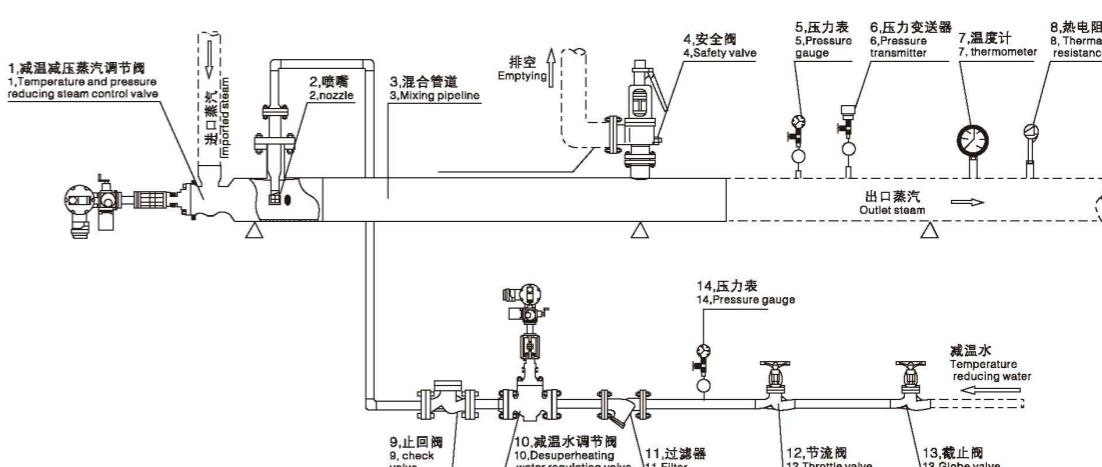
The decompression steam regulating valve is first decompressed, and the desuperheating water regulating valve sprays the desuperheated water through the nozzle into the mixing pipe to reduce the temperature.



### ◆ DC401-03 一体式减温减压装置 DC401-03 Integrated temperature and pressure reducing device

减压蒸汽调节阀减压蒸汽的同时，减温水调节阀将减温水通过喷嘴喷入阀内进行减温。

While the decompression steam regulating valve decompresses the steam, the desuperheating water regulating valve injects the desuperheated water into the valve through the nozzle to reduce the temperature.



## 减温减压装置系列

Temperature and pressure reducing device series

DC410-03减温装置

DC410-03 Temperature reducing device

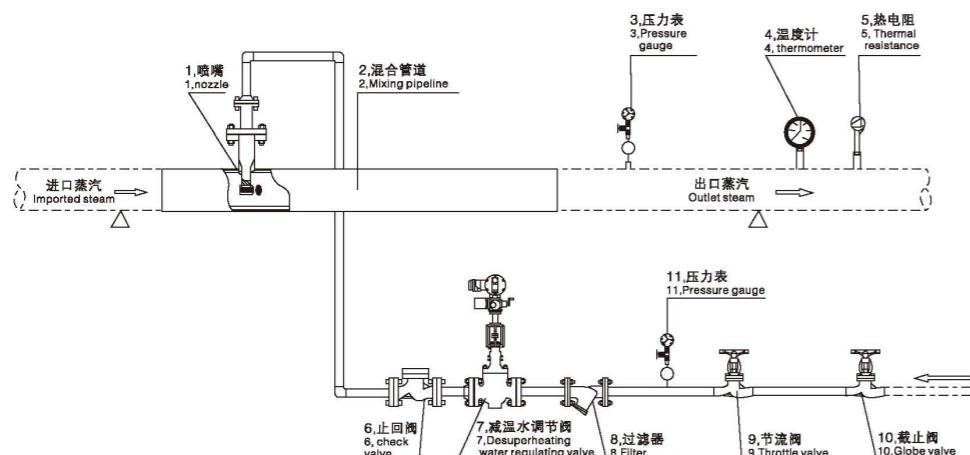
DC420-01减压装置

DC420-01 Pressure reducing device

### ◆ DC410-03减温装置 DC410-03 Temperature reducing device

减温水调节阀将减温水通过喷嘴喷入混合管道内进行减温。

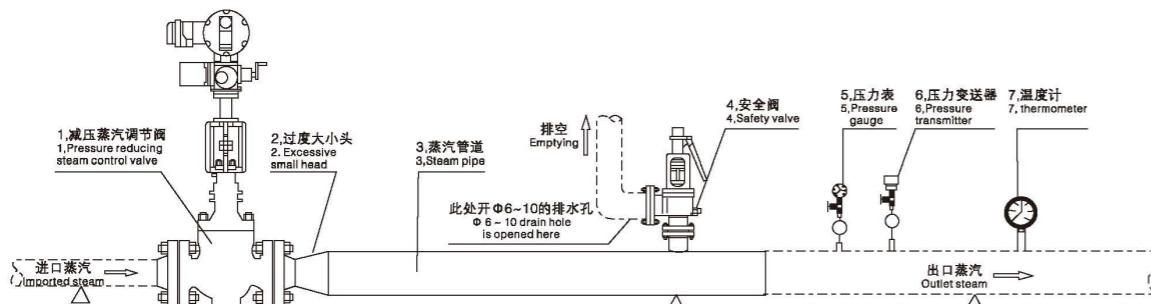
The desuperheating water regulating valve sprays the desuperheated water through the nozzle into the mixing duct to reduce the temperature.



### ◆ DC420-01减压装置 DC420-01 Pressure reducing device

减压蒸汽调节阀只进行减压。

The reduced pressure steam regulating valve is only depressurized.

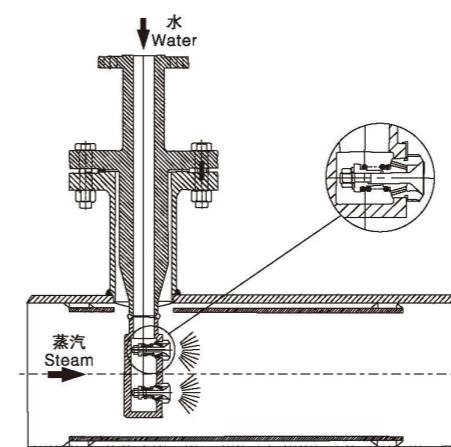
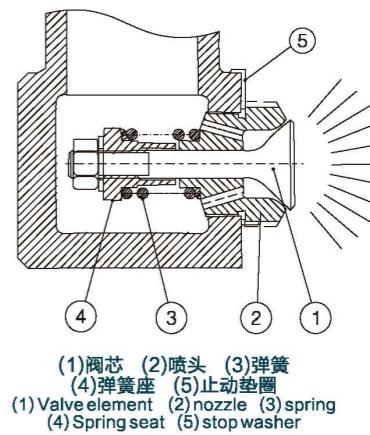
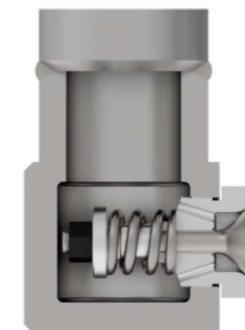


## 减温减压装置系列

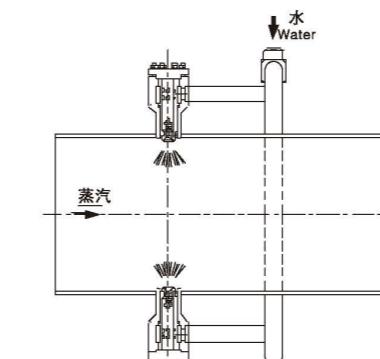
Temperature and pressure reducing device series

DCA弹簧可调雾化喷嘴

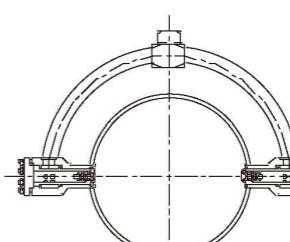
DCA Spring Adjustable Atomizing Nozzle



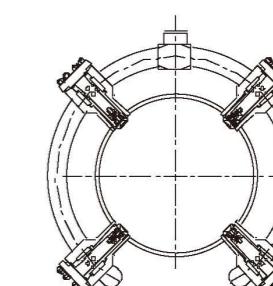
DCAP插入式喷水  
DCAP plug-in water spray



DCAM环形喷水  
DCAM annular spray



两个喷嘴  
Two nozzles



四个喷嘴  
Four nozzles

## 减温减压装置系列

Temperature and pressure reducing device series

DCF固定截面型喷嘴 DCF Fixed section nozzle



### ◆ DCF固定截面型喷嘴 DCF Fixed section nozzle

DCF型喷嘴能提供非常精良的雾化度，类似于发动机雾化喷嘴(见图3)。

喷嘴的截面积是固定的，当减温水流量变小时，水流速和喷射流也减小。在喷嘴(2)上游装有一个螺旋装置(1)(特殊设计的喷嘴孔板)，使水呈螺旋雾化状喷出，能部分补偿以上原因引起的雾化性能的降低，以保证某些场合可以接受的系统可调比。

DCF nozzles provide very fine atomization, similar to engine atomization nozzles (see Figure 3). The cross-sectional area of the nozzle is fixed.

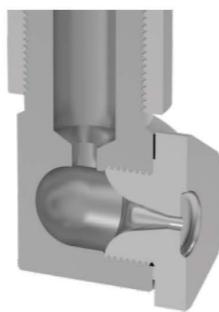
When the amount becomes smaller, the water flow velocity and the jet flow also decrease. A spiral device (1) (specially designed nozzle orifice plate) is installed upstream of the nozzle (2), so that the water is sprayed in a spiral atomization manner, which can partially compensate for the decrease in atomization performance caused by the above reasons, in order to ensure some occasionally acceptable system adjustable ratio.

DCF型喷嘴常用于减温水流量低于DCA型最小可调值(CV值大约低于0.7)的场合。

The DCF nozzle is often used in the occasion where the temperature of the cooling water is lower than the minimum adjustable value of the DCA type (the CV value is less than 0.7).

DCF型喷嘴结构简单、经济，当用在喷水流量与蒸汽减温调节范围要求不高(大约5: 1)的场合时，可以替代DCA型弹簧可调雾化喷嘴。

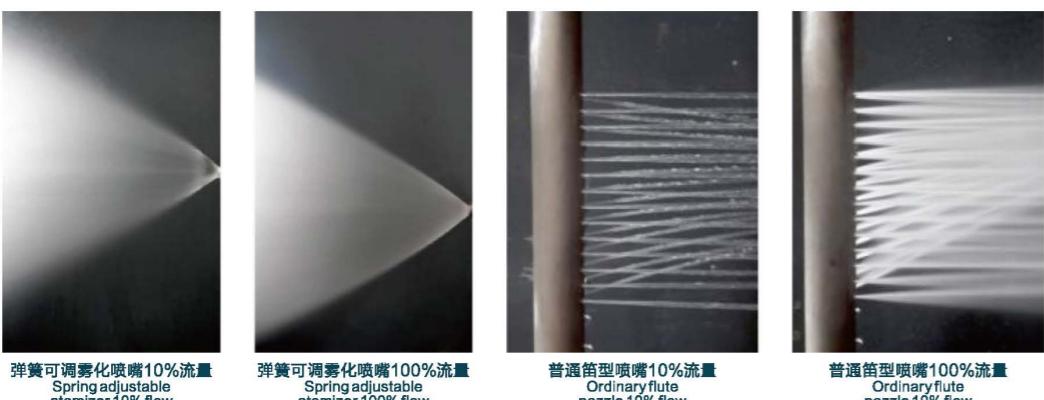
The DCF nozzle is often used in the occasion where the temperature of the cooling water is lower than the minimum adjustable value of the DCA type (the CV value is less than 0.7). The DCF nozzle has a simple structure and is economical. When it is used in situations where the spray flow rate and steam temperature adjustment range are not high (about 5: 1), it can replace the DCA spring adjustable nozzle.



## 减温设备 Temperature reducing equipment

弹簧可调雾化喷嘴与笛型喷嘴喷水效果对比

Comparison of spray effect between spring adjustable atomizing nozzle and flute nozzle



## 减温减压装置系列

Temperature and pressure reducing device series

DCF固定喷嘴 DCF Fixed nozzle



### ◆ 技术特点

#### 尺寸

DCFP型：减温水连接端: 1/2" – 1"(DN15 – DN25)

蒸汽连接端: 2" – 6"(DN50 – DN150)

DCFW型：减温水连接端: 1/2" – 1"(DN15 – DN25)

蒸汽连接端: 1.1/2" – 4"(DN40 – DN100)

#### 连接方式

DCFP & DCFW 型: GB, HG, JB, ANSI, UNI, DIN 法兰  
(DCFP型也可提供BW对焊式)

混合管道 - BW对焊, 同管道尺寸

#### 压力等级

减温水连接端: ANSI 150 – 1500, (PN16–250)

蒸汽连接端: ANSI 150 – 1500, (PN16–250)也可提供更高的压力等级。

#### 流量

可以利用DCF选型手册所列的Cv值按照通用公式计算。水的最大质量流量在任何情况下都不能超过蒸汽流量的25%

#### 设计型式

减温水入口端与管道垂直(标准): 锻造一体式, 由螺纹连接、止退垫片固定的DCF喷嘴。  
减温水入口端与管道平行(按需): 组焊结构, 由锻件或卷制管焊接构成。

#### 材质

本体: 碳钢或Cr-Mo钢

混合管道: 同管道材质

### ◆ Technical characteristics

#### Size

DCFP type: Cooling water connection end: 1/2" – 1" (DN15 – DN25)

Steam connection: 2" – 6" (DN50 – DN150)

DCFW type: Cooling water connection end: 1/2" – 1" (DN15 – DN25)

Steam connection: 1.1/2" – 4" (DN40 – DN100)

#### Connection method

DCFP & DCFW type: GB, HG, JB, ANSI, UNI, DIN flange

(DCFP type can also provide BW butt welding type)

Mixed pipe – BW butt welding, same pipe size

#### Pressure Level

Cooling water connection: ANSI 150 – 1500, (PN16 – 250)

Steam connection: ANSI 150 – 1500, (PN16 – 250) Higher pressure levels are also available.

#### Flow

The Cv value listed in the DCF selection manual can be calculated according to the general formula.  
The maximum mass flow of water must not exceed 25% of the steam flow under any circumstances.

#### Design type

The inlet end of the desuperheating water is vertical to the pipe (standard): a forged one-piece DCF nozzle that is fixed by a threaded connection and a backstop gasket.

The inlet end of the desuperheating water is parallel to the pipe (as required): a group welding structure, which is composed of forgings or rolled pipes.

#### Material

Body: Carbon steel or Cr-Mo steel

Mixed pipe: same pipe material

## 减温减压装置系列

Temperature and pressure reducing device series

DC2442一体式多喷嘴调节阀

DC2442 Integrated multi-nozzle regulating valve



### ◆ 阀体

#### 尺寸

水: 3/4" - 3"(DN20 - DN80)  
蒸汽: 3", 4"或6", (DN80,DN100或DN150)取决于所选CV。

连接: GB, HG, JB, ANSI, UNI, DIN法兰;  
ANSI B16.25对接焊端等要求

#### 压力等级

水侧: ANSI 150 - 1500(PN 16 - 250);  
蒸汽侧: ANSI 150 - 1500(PN 16 - 250);特殊要求时更高的压力等级设计。

#### 结构

锻造、铸造(上阀体)。

### ◆ Valve body

#### Size

Water: 3/4"-3" (DN20 - DN80)  
Steam: 3", 4" or 6", (DN80, DN100 or DN150) depending on the selected CV.  
Connection: GB, HG, JB, ANSI, UNI, DIN flange;  
ANSI B16.25 butt welding end requirements

#### Pressure Level

Water side: ANSI 150-1500 (PN 16-250);  
Steam side: ANSI 150-1500 (PN 16-250);Higher pressure level design for special requirements.

#### Structure

forging, welding (upper valve body).

#### Material

Carbon steel, CrMo steel.



## 阀门改造和检维修服务

Valve modification and maintenance services

我公司还成立有专门的阀门检维修部门，可以针对石油、化工、电力、冶金等行业使用的阀门提供调试、维修、改造、运行保障、技术咨询和人员培训等全方位服务。

检维修部门配备了数控加工中心、大型机床、专用研磨设备、专用堆焊设备、检测试验平台等先进设备，并拥有材料理化实验室，可以进行材质光谱分析、阀体壁厚检测、硬度、拉伸、冲击、金相等检测。可以进行射线、超声、渗透、磁粉等无损检测。能对国内外知名品牌的阀门检维修和改造。

依托东辰公司的阀门设计和研发能力，检维修部门拥有数十名专业阀门检维修人员，其中高级工程师2名，维修技师15名，同时在长期售后服务和检维修过程中对国内外阀门技术进行消化、吸收、创新，并结合石油、化工、电力、冶金等行业工况，为用户解决技术难题，帮助用户节约成本，保障设备正常运行。

Our company also has a special valve inspection and maintenance department, which can provide all-round services such as debugging, maintenance, transformation, operation guarantee, technical consultation and personnel training for the valves used in petroleum, chemical, electric power, metallurgy and other industries.

The inspection and maintenance department is equipped with advanced equipment such as CNC machining center, large-scale machine tools, special grinding equipment, special surfacing equipment, testing and testing platform, as well as material physical and chemical laboratory, which can carry out material spectrum analysis, valve body wall thickness testing, hardness, stretching, impact and metal equivalent testing. It can be used for non-destructive testing such as X-ray, ultrasonic, penetrant, magnetic particle, etc. Be able to check, repair and reform the famous brand valves at home and abroad.

Relying on the valve design and R & D ability of Dongchen company, the inspection and maintenance department has dozens of professional valve inspection and maintenance personnel, including 2 senior engineers and 15 maintenance technicians. Meanwhile, it digests, absorbs and innovates the valve technology at home and abroad in the long-term after-sales service and inspection and maintenance process. Combined with the working conditions of petroleum, chemical industry, electric power, metallurgy and other industries, it can solve technical problems for users, help users save costs, and ensure the normal operation of equipment.



## 阀门改造和检维修服务

Valve modification and maintenance services

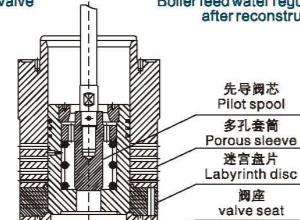
### 锅炉给水调节阀改造

Reconstruction of boiler feed water regulating valve



原锅炉给水调节阀  
Feed water regulating valve of original boiler

改造后锅炉给水调节阀  
Boiler feed water regulating valve after reconstruction



改造后锅炉给水调节阀内件结构示意图  
Structure diagram of boiler feed water regulating valve internals after reconstruction

#### ◆ 结构改造说明 Description of structural transformation

原锅炉给水调节阀采用单级多孔套筒结构，不适用锅炉启动时的小流量大压差工况，导致使用不久内漏严重，阀门无法正常调节，对锅炉正常运行造成隐患。

改造后的锅炉给水调节阀采用多孔套筒加迷宫盘片组合结构，锅炉启动时，小流量大压差锅炉给水通过迷宫盘片调节，锅炉正常运行时，大流量小压差锅炉给水通过多孔套筒调节，有效的改善了原阀门结构的使用不足情况。

改造后的阀门已运行3年以上，工作情况良好。

The original boiler feed water regulating valve adopts a single-stage porous sleeve structure, which is not suitable for the small flow and large pressure difference conditions when the boiler is started, resulting in serious leakage within a short period of use, and the valve can not be adjusted normally, causing a hidden danger to the normal operation of the boiler.

The modified boiler feed water regulating valve adopts the combination structure of porous sleeve and labyrinth disc. When the boiler is started, the feed water of the boiler with small flow and large pressure difference is regulated by labyrinth disc. When the boiler is in normal operation, the feed water of the boiler with large flow and small pressure difference is regulated by the porous sleeve, which effectively improves the insufficiency of the original valve structure.

The modified valve has been operated for more than 3 years and works well.

#### ◆ 技术参数 Technical data

锅炉主给水流量 Main feed water flow of boiler	50~300t/h
阀前压力 Valve front pressure	12.5~18.5MPa
阀后压力 Valve post pressure	0.5~11MPa
温度 Temperature	215°C
泄漏等级 Leakage level	V级
锅炉给水大旁路流量 Large bypass flow of boiler feed water	20~270t/h
阀前压力 Valve front pressure	12.5~18.5MPa
阀后压力 Valve post pressure	0.5~11MPa
温度 Temperature	215°C
泄漏等级 Leakage level	V级

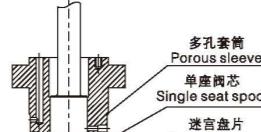
### 过热器减温水调节阀改造

Modification of desuperheating water control valve of superheater



原过热器减温水调节阀体冲刷凹坑  
The valve body of desuperheating water control valve of the original superheater scoured the pit

改造后过热器减温水调节阀  
Desuperheating water control valve of superheater after reconstruction



改造后过热器减温水调节阀内件结构示意图  
Structure diagram of desuperheating water regulating valve internals of superheater after reconstruction

#### ◆ 结构改造说明 Description of structural transformation

原过热器减温水调节阀采用单座结构，不适用锅炉启动时的过热器减温水小流量大压差工况，导致使用不久内漏严重，而且阀体内部出现几个很大的冲刷凹坑，阀门无法正常调节，对锅炉正常运行造成隐患。

改造后的锅炉给水调节阀采用多孔套筒加迷宫盘片组合结构，锅炉启动时，小流量大压差减温水通过迷宫盘片调节，锅炉正常运行时，大流量小压差减温水通过多孔套筒调节，有效的改善了原阀门结构的使用不足情况。

改造后的阀门已运行3年以上，工作情况良好。

The desuperheating water regulating valve of the original superheater adopts a single seat structure, which is not suitable for the working condition of small flow and large pressure difference of the desuperheating water of the superheater when the boiler is started, resulting in serious internal leakage within a short time of use, and there are several large scour pits inside the valve body, so the valve cannot be adjusted normally, which causes hidden danger to the normal operation of the boiler.

The modified boiler feed water regulating valve adopts the combination structure of porous sleeve and labyrinth disc. When the boiler is started, the desuperheating water with small flow and large pressure difference is regulated by labyrinth disc. When the boiler is in normal operation, the desuperheating water with large flow and small pressure difference is regulated by the porous sleeve, which effectively improves the inadequate use of the original valve structure.

The modified valve has been operated for more than 3 years and works well.

#### ◆ 技术参数 Technical data

过热器减温水流量 Desuperheating water flow of superheater	0~9t/h
阀前压力 Valve front pressure	16~18.5MPa
阀后压力 Valve post pressure	2~10MPa
温度 Temperature	215°C
泄漏等级 Leakage level	V级

## 阀门改造和检维修服务

Valve modification and maintenance services

### 闪蒸工况调节阀改造

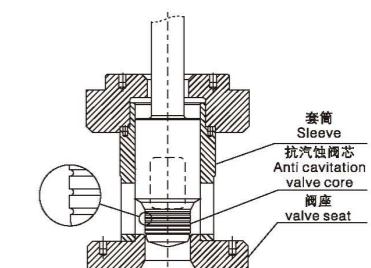
Improvement of regulating valve for flash condition



原调节阀  
Original regulating valve

原调节阀阀芯磨损,套筒堵塞  
The original regulating valve core is worn and the sleeve is blocked

改造后调节阀  
After adjustment valve



改造后调节阀内件示意图  
Schematic diagram of internal structure of valve after retrofit

#### ◆ 结构改造说明 Description of structural transformation

原调节阀采用多孔套筒结构，使用工况为闪蒸，高压高温水在闪蒸化过程中会产生铁离子，该调节阀使用一段时间后，多孔套筒会逐渐被铁离子堵住小孔，直至所有流道小孔全部被堵住，导致阀门无法工作，过一段时间就得停机清理套筒，严重影响用户设备的正常运行。

改造后的调节阀采用抗汽蚀单座阀芯结构，有效避免铁离子堵塞流道。

The original control valve is of porous sleeve structure, and its working condition is flash evaporation. Iron ions will be produced in the process of flash evaporation of high-pressure and high-temperature water. After the valve is used for a period of time, the porous sleeve will gradually be blocked by iron ions until all the small holes in the flow channel are blocked, resulting in the valve unable to work. After a period of time, the valve will be shut down to clean the sleeve, seriously affecting the positive of the user's equipment. Run frequently.

The modified control valve adopts the structure of anti cavitation single valve core to effectively avoid the iron ion blocking the flow channel.

### 阀门检维修服务

Valve inspection and maintenance service



#### 针对现场检维修需要的

- 应急维修
- 停车大修
- 运行保障
- 设计改造

东辰公司都可以在客户要求的时间内，保质保量完成检修任务。随时为客户解决技术问题。

#### For on-site inspection and maintenance

- Emergency maintenance
- Parking overhaul
- Operation guarantee
- Design transformation

Dongchen company can complete the maintenance task with quality and quantity within the time required by customers. Solve technical problems for customers at any time.