VATTEN
Valves & Controls

flumex



Valve solutions
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APAC Service Center

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VATTEN
Valves & Controls

VATTEN Product Catalog



VATTEN was founded in Saarland,Germany.

Vatten Valve Group, a globally renowned industrial automation valve enterprise originating from Saarland, Germany, specializes in the research, development, and manufacturing of core products such as automatic control ball valves, butterfly valves, and regulating valves. Leveraging our exceptional technological expertise, we deliver innovative valve solutions and professional technical support to critical industries including energy, chemical, water treatment, pharmaceutical, and food processing.

The Group operates four state-of-the-art manufacturing bases strategically located in Shanghai,Tianjin, Lishui, and Jiaxing, China. To better serve international markets, we have established branch offices in key strategic locations including the United Kingdom, Turkey, Belarus, Saudi Arabia, and Indonesia. Ensuring timely and efficient technical support and services for localpartners and clients.

Rooted in the German tradition of precision manufacturing, Vatten Valve maintains its focus on automatic control valves while strictly adhering to international quality standards. We are committed to continuous innovation, providing customers with superior performance products, professional technical support, and comprehensive fluid control solutions, empowering them to address complex industrial fluid control challenges.

应用领域
Application area



VATTEN Valves & Controls

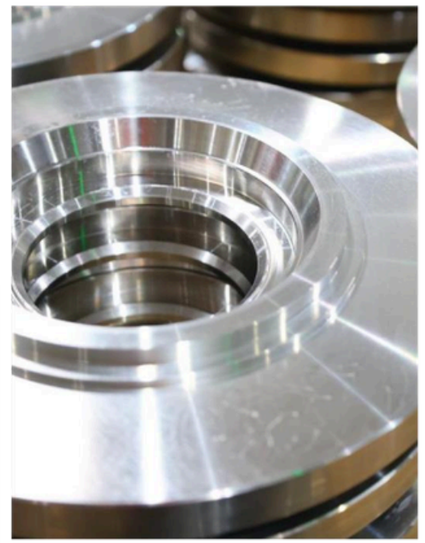
Our core competitiveness

- 20+ Global Distribution Offices
- 4 National Base
- 20+ Utility Model and Invention Patents
- 400+ people Service Team
- 12 months General Product
- 5000 more Clients Served

We can do it

CV0.003 PN420

425℃ DN1500







Shanghai VATTEN Valves are widely used in large-scale chemical industry, coal industry, fine chemical industry, water treatment and municipal water, chemical environmental protection, lithium battery & sodium battery, mineral affairs, smelting, green energy, life science, pharmaceutical intermediates, food and beverage, shipbuilding and marine engineering, nuclear power, military and aerospace, agriculture and aquaculture, power plants, electronic semiconductors, polysilicon, carbon neutrality, papermaking and printing and dyeing, resin coatings, etc.

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Butterfly Valve

Center Line Butterfly Valve

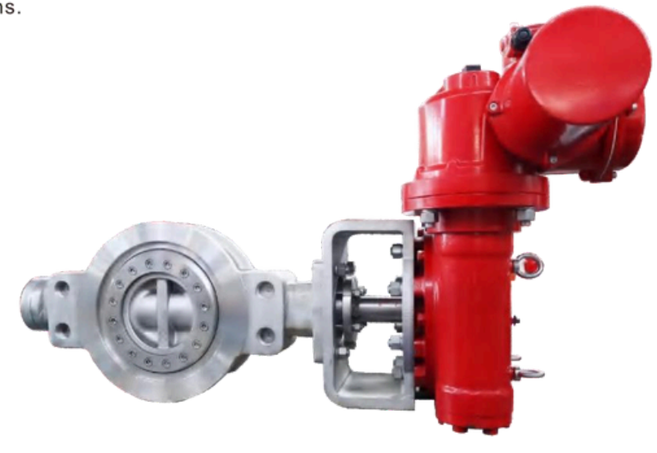
The centerline butterfly valve features a centrally aligned stem and disc structure, with the valve seat made of elastic sealing materials. It can effectively accommodate temperature and pressure fluctuations within a certain range. The valve has a simple and compact design, low flow resistance, large flow capacity, smooth and convenient operation, excellent sealing performance, and long service life. It combines both regulating and shut-off functions, is easy to maintain, and offers high cost-effectiveness.





Eccentric Butterfly Valve

The eccentric butterfly valve features a unique double-eccentric or triple-eccentric design, where the valve stem and disc are offset from the center. This reduces friction on the sealing surface and allows for smooth operation without sticking. The valve seat uses a metal seal, offering excellent compensation capabilities, making it suitable for a wide range of temperature and pressure variations. It ensures reliable sealing, wear resistance, and long service life. The valve maintains a smooth flow path with high flow capacity and low flow resistance, providing both regulating and shut-off functions. With a compact structure and easy maintenance, it is suitable for demanding operating conditions.

Pneumatic Butterfly Valve

Pneumatic butterfly valves have the core advantages of "fast, rapid, and fully certified": they respond quickly, with immediate action triggered by signals; they operate efficiently, taking only a few seconds to switch from 0° to 90°, significantly improving process efficiency; moreover, the products have obtained multiple internationally recognized certifications such as CE, ISO, and SIL, ensuring safety and reliability while meeting stringent global operating conditions and compliance requirements.



Electric Butterfly Valve

The electric butterfly valve is specifically designed for large-diameter piping systems, featuring a robust structure and powerful torque. Even under conditions with a nominal diameter above DN600, it can achieve smooth opening and closing as well as precise control. Equipped with a high-quality reduction motor and intelligent control system, it operates stably with low noise and long service life, effectively meeting the rigorous demands of high load and frequent operation, ensuring the reliability and safety of large-flow medium regulation.



Turbine Butterfly Valve

The butterfly valve with a turbine drive adopts a worm gear transmission, which makes operation effortless and ensures smooth opening and closing. It features a self-locking function, allowing reliable positioning at any degree of opening. The structure is compact, the sealing is reliable, supporting bidirectional sealing to prevent leakage. It is robust and durable, easy to maintain, and is suitable for applications requiring high stability, such as water treatment, power generation, and the chemical industry.



Manual Butterfly Valve

The manual butterfly valve has a simple structure and is easy to operate, allowing for quick opening and closing via a handle or gear mechanism. It is compact and lightweight, making installation and maintenance convenient. The valve provides reliable sealing performance with bidirectional sealing capability, suitable for mediums such as water, air, and oil under low-pressure and normal-temperature conditions. It is widely used in HVAC, water supply and drainage, and general industrial piping systems.



Center Line Butterfly Valve

Cross-Section Display

ISO 5211 Platform Design





Pinless structure, stable connection, low wear

The valve stem uses multiple bearing and seal ring designs, with high positioning accuracy.



Spherical edge treatment of the valve plate with mirror polishing ensures stable torque and extends the valve plate replacement life.

Simple in structure, economical and durable



The valve plate can be made from a variety of materials and coatings, with a structure adaptable to various operating conditions.



The valve seat features a tongue-and-groove design, made of imported rubber, offering wear resistance and durability.

Pneumatic Center-Line Butterfly Valve



Electric Center-Line Butterfly Valve



Specification

Size: DN32~DN1800

Operating Modes: Pneumatic Actuator, Electric Actuator, Gear, Manual Operation

Working Pressure: PN6、PN10、PN16、CLASS150

Working Temperature: -20℃~110℃、-15℃~150℃、-10℃~~93℃、-10℃~~160℃、-10℃~80℃、-30℃~180℃

Sealing Material: Rubber material, PTFE material

Valve plate materials: SS304, SS316, SS2205, SS2507, aluminum bronze, nylon plate , ductile cast iron plate, 1.4529

Main Materials: Ductile Cast Iron, SS304, SS316, WCB, SS2205, SS2507, Aluminum Alloy

Medium: water, oil, gas, powder particles, flue gas desulfurization

Connection Standards: Flange, Wafer, Lug

Manual Center-Line Butterfly Valve



Application industry



High performance butterfly valve

Cross-Section Display

The ISO 5221 platform design is suitable for a wide range of operations.



Insert: Prevents wear and corrosion of the valve seat; available in two clamping spring fastening methods and a hex bolt fastening method.

Stainless steel bushing, with upper and lower valve stems lined with PTFE.



The valve stem and butterfly valve are welded and fixed together to prevent blockage and turbulence, while the horizontal pin structure has no impact on the valve stem.



Design of Offset Rod and Eccentric Plate



Upper valve stem retaining ring with leak-proof design.

The valve stem is made of 17-4PH precipitation-hardening stainless steel, which offers high strength and corrosion resistance.



Bidirectional leak-free sealed lip seat design for reliable shut-off and automatic compensation for wear.



Special Structure:

Double Eccentric Butterfly Valve for Oxygen

(1)Oil-free degreasing treatment

(2)Double-layer packaging design

(3)Restrict External Design

High-performance Double Eccentric Butterfly Valve

(1) The upper and lower sections ofthe valve stem are respectively equipped with 316 PTFE bushings.

(2) The upper part of the stem is designed with a support ring and a detection ring to prevent wear on the stem side and detect leakage.

(3) The bottom of the valve stem is designed with a sliding bearing (to prevent lateral wear of the valve stem), a thrust bearing (to prevent the valve plate from sinking), and a disc spring (to maintain compressive deformation).

Pneumatic High performance butterfly valve



Specification

Size: DN50~DN1800

Operating Modes: Pneumatic actuators, electric actuators, turbines, and manual operation

Working Pressure: PN16、PN25、PN40、ANSI150LB、ANSI300LB

Working Temperature: -25℃~200℃

Sealing Material: RPTFE、PEEK

Disc Material: SS304、SS316、SS316LStainless Steel

Body Material: Carbon Steel、304、316、316L、SS2205、SS2507

Connection Standards: Flanged、Wafer、Lug

Electric High performance butterfly valve



Manual High performance butterfly valve

Application industry



Air Separation



Seawater Desalination



Mineral Processing



Chemical Industry



Oxygen Transportation



Steam Treatment



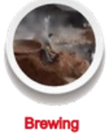
Heating, Ventilation, and Air Conditioning (HVAC)



Steel smelting



Vacuum Conditions



Brewing



Seawater Desalination

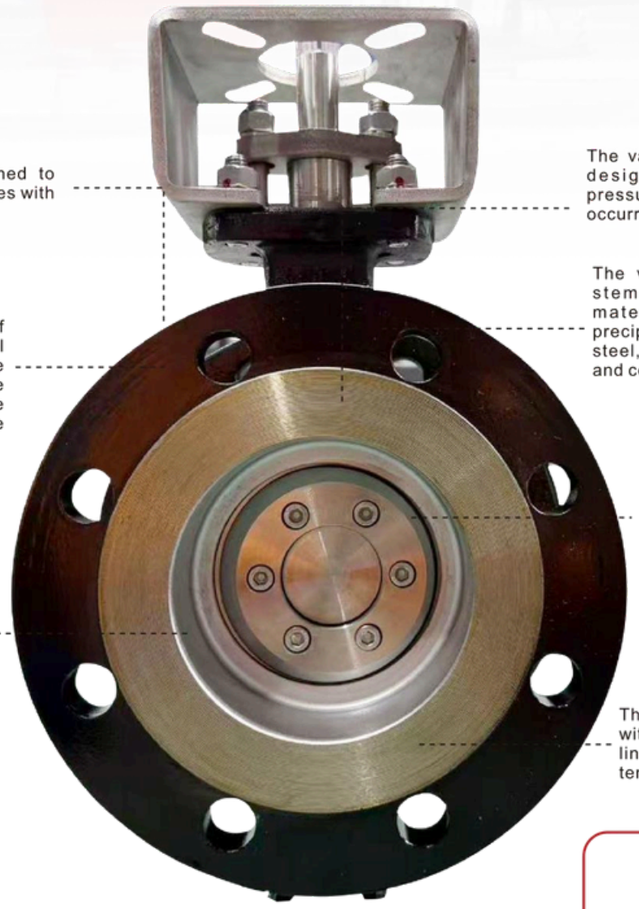


Water Treatment

Triple Eccentric Butterfly Valve

VATTEN Valves & Controls

Cross-Section Display



The valve stem is designed to prevent rupture and complies with the AP1609 standard.

The valve stem thrust bearing is designed to withstand high-pressure loads and reduce the occurrence of locking.

There are two types of valve seat seals: integral valve seats and split valve seats. Raised conical valve seats can prevent the impact of solid particle deposition on the seal.

The valve features a dual-axis stem design, and the valve material is made of 17-4PH precipitation-hardened stainless steel, reducing flow resistance and corrosion.

There are two types of butterfly valve sealing rings: multilayer and all-metal. The all-metal butterfly valve sealing ring undergoes nitriding treatment, with a surface plated with hard chrome or coated with STL alloy.

Due to the eccentric seal design, mechanical wear and friction are reduced, enabling lower closing torque and improved sealing performance.

The valve stem is designed with a stainless steel bushing lined with PTFE or a high-temperature metal bushing.

Special Structure:

Ultra-Low Temperature Triple-Eccentric Butterfly Valve:

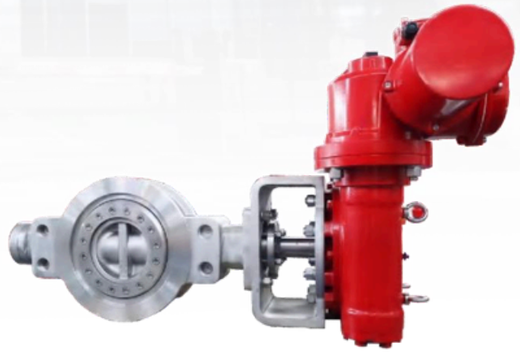
(1) Low-Temperature Extended Valve Stem Design

(2)All components in contact with the medium have undergone secondary low-temperature treatment.

(3)Restrict External Design



Electric Triple Eccentric Butterfly Valve



PneumaticTriple Eccentric Butterfly Valve



Manual Triple Eccentric Butterfly Valve



Specification

Size: DN150~DN1800

Operating Modes: Pneumatic actuators, electric actuators, gearboxes

Working Pressure: PN10、PN25、PN40

Working Temperature: Carbon steel-29°C to 425°C, Stainless steel-196°C to 600°C

Sealing Material: SS、DSS、SDSS

Valve plate materials: SS、DSS、SDSS

Main Materials: Carbon steel、SS304、SS316

Connection Standards: Wafer、Lug、Flanged

Application industry


Chemical Industry


Power Station


Seawater Desalination


Air Separation


Liquefied Natural Gas (LNG)


Steam Processing


Iron and Steel Smelting


Thermal Network


Electronics & Semiconductors


Irrigation


Powder Transportation


Solar Energy

PTFE Lined Butterfly Valve

Cross-Section Display

ISO 5211 platform design is suitable for a variety of operations.



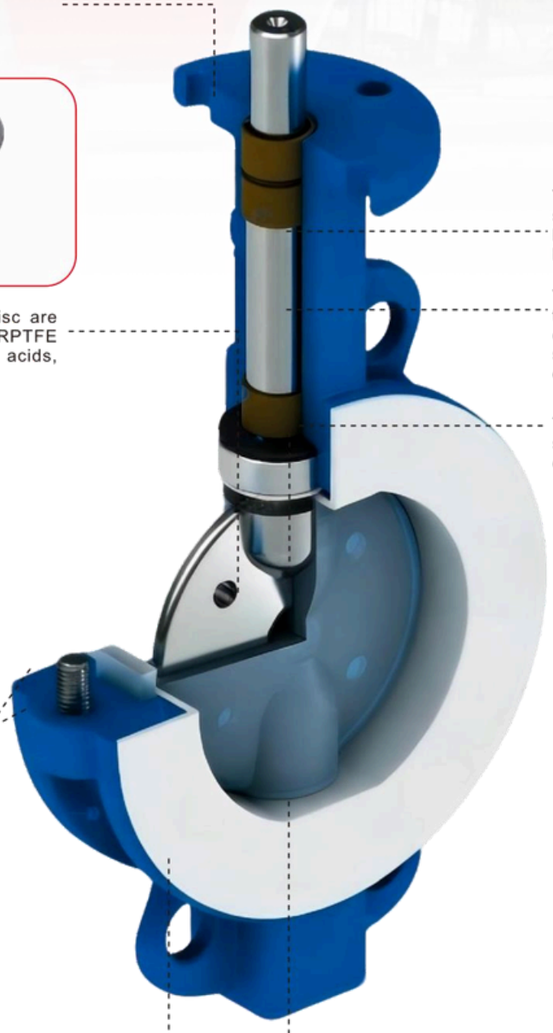
The valve body cavity and disc are lined with standard thickness RPTFE or PFA, which is resistant to acids, alkalis, and strong corrosion.



The butterfly valve features a simple structure, requiring low torque for opening and closing, making operation easy and suitable for frequent on/off applications.



The valve body is precision cast for durability; it has a compact size and low actuation torque.



The upper and lower parts of the stem are equipped with self-lubricating bushings and anti-blowout design.

The three-stage sealing design of the stem and the elastic compensation design of the disc spring compensate for the impact of temperature changes on sealing.

The stem and disc are cast as a single unit, with the disc lining extending to the stem.



This disc is designed with a hollow bore, and its inner lip fits tightly against the metal surface, making it suitable for vacuum conditions.

VATTEN Valves & Controls

Manual PTFE Lined Butterfly Valve



Pneumatic PTFE Lined Butterfly Valve



Specification

Size: DN50~DN700

Operating Modes: Pneumatic actuator, electric actuator, worm gear, lever operation

Working Pressure: PN10

Working Temperature: -20℃~120℃、-20℃~150℃

Lining Material: F46、PFA、F4

Body Material: Carbon steel、SS304、SS316L

Connection Standard: Wafer、Flange

Electric Triple Eccentric Butterfly Valve



Application industry



Chemical Industry



Petroleum Refining



Pharmaceutical Industry



Food and Beverage



Textile Industry



Shipbuilding Industry



Hydropower Station



Construction Engineering



Metallurgy



Energy Industry



Municipal Water Supply and Drainage



Paper Making Industry



Sugar Industry



Irrigation

Plastic Butterfly Valve

VATTEN Valves & Controls

Cross-Section Display

The valve body is entirely made of high-strength UPVC, offering excellent resistance to acids, alkalis, salt spray, and chemical corrosion.



The joint between the stem and disc adopts a self-lubricating structural design, which reduces motion friction, minimizes wear, and extends service life.

The valve body is entirely made of high-strength UPVC, offering excellent resistance to acids, alkalis, salt spray, and chemical corrosion.





Quick installation and easy maintenance, especially suitable for pipeline systems with limited space.

Adopting a standard wafer-type design, it is directly clamped between pipeline flanges by bolts without additional welding or flange connections.



The sealing ring has excellent aging and wear resistance, ensuring a reliable sealing effect during long-term use and effectively preventing medium leakage.

Built-in high-elasticity EPDM or NBR rubber sealing ring fits tightly against the valve seat to achieve bidirectional sealing.

Manual Plastic Butterfly Valve



Pneumatic Plastic Butterfly Valve



Specification

Size: DN50~DN300

Operating Modes: Pneumatic Actuator, Electric Actuator, Turbine, Lever Operation

Working Pressure: PN6、PN10

Working Temperature: 0℃~60℃

Lining Material: EPDM、FPM

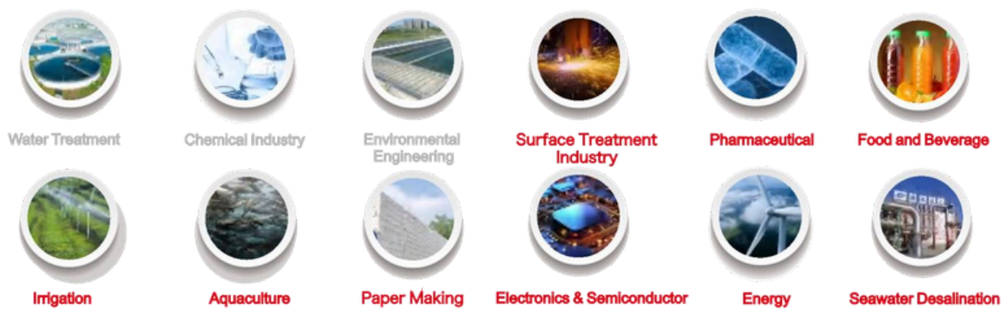
Body Material: UPVC、CPVC、PPH

Connection Standard: Wafer

Electric Plastic Butterfly Valve



Application industry



Eccentric butterfly valve

VATTEN Valves & Controls

Cross-Section Display

Featuring a butterfly plate design, the overall structure is compact and space-saving, making it ideal for installation in space-constrained environments.

Equipped with a handwheel drive mechanism, it offers simple and intuitive operation without the need for external power sources, making it suitable for manual control scenarios.

The main body is typically constructed from high-strength materials such as cast iron, cast steel, or stainless steel, providing excellent pressure resistance and durability for a wide range of operating conditions.



It uses elastic sealing rings (such as rubber or PTFE) to achieve bidirectional sealing, effectively preventing leaks and ensuring safe system operation.

Both ends are equipped with standard flanged connections, enabling quick connection to pipelines, easy disassembly and maintenance, and strong compatibility.

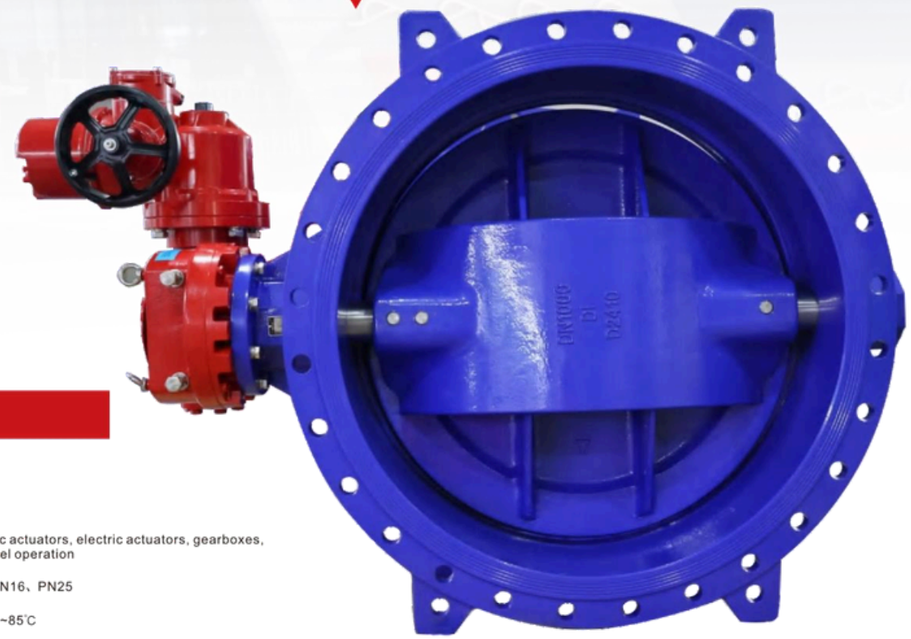
The surface is coated with an anti-corrosion layer (such as a blue paint finish), enhancing corrosion resistance and making it suitable for various media including water, sewage, and chemical liquids.







Electric horizontal double-eccentric



Specification

Size: DN300~DN2400

Operating Modes: Pneumatic actuators, electric actuators, gearboxes, handwheel operation

Working Pressure: PN10、PN16、PN25

Working Temperature: -15℃~85℃

Seal Material: EPDM、NBR、FKM

Disc Material: Nodular cast iron, nickel-chromium alloy (Ni-Cr Alloy)

Body Material: Ductile iron

Connection Standard: G/T20592、GB/T9124.1、SH/T3406、HG/T20615、ASME B16.50、JIS-B2220、BS EN 1092-1

Application industry



Water Treatment



Chemical Industry



Environmental Engineering



Surface Treatment Industry



Pharmaceuticals



Food & Beverage



Irrigation



Aquaculture



Paper Making



Electronics & Semiconductor



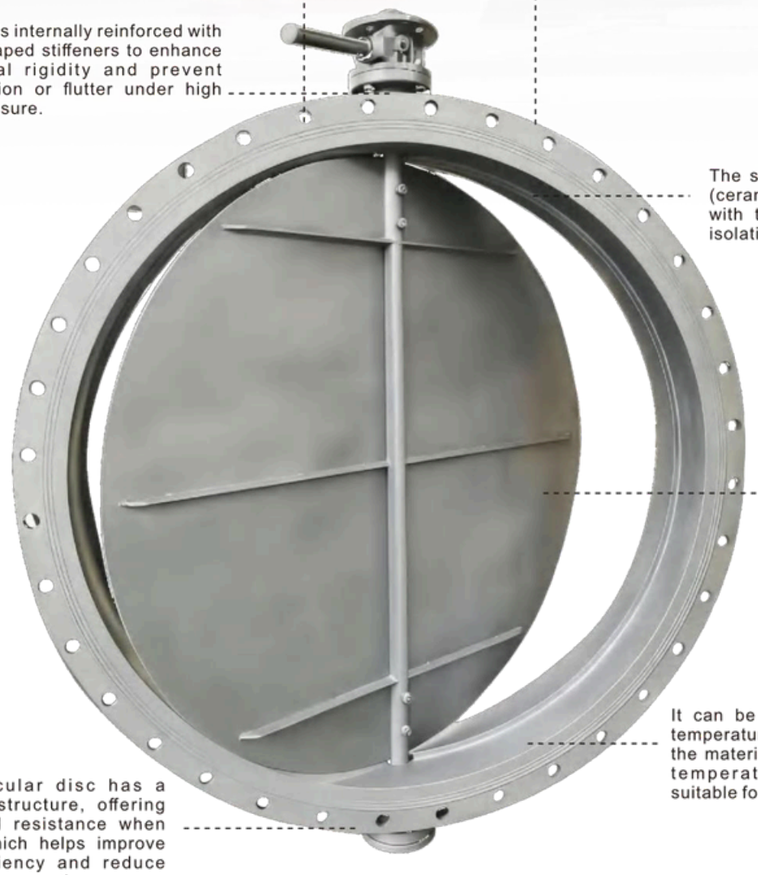
Energy



Seawater Desalination

Ventilation Butterfly Valve & Inflatable Butterfly Valve

Cross-Section Display



The valve body and disc are made of high-quality carbon steel or stainless steel, with surface anti-corrosion treatment (such as painting, galvanizing, or natural stainless steel finish). They are corrosion-resistant and wear-resistant, suitable for long-term operation.

The disc is internally reinforced with cross-shaped stiffeners to enhance structural rigidity and prevent deformation or flutter under high wind pressure.

It features standard flanged connections, allowing direct integration into circular duct systems without additional cutting or welding.

The seat uses an elastic rubber seal (ceramic fiber cotton) that fits tightly with the disc, ensuring effective air isolation when closed.

The seal ring offers excellent elasticity and weather resistance, adapting to temperature changes and maintaining effective sealing performance over long-term use.

It can be used in normal, low, or high-temperature environments (depending on the material). Some models can withstand temperatures ≥280°C, making them suitable for fire smoke exhaust systems.

The circular disc has a smooth structure, offering low wind resistance when open, which helps improve fan efficiency and reduce energy consumption.

Specification

Size: DN150~DN2000

Working Temperature: -15℃-425℃

Sealing Material: Default body seal、ceramic fiber cotton pressure plate

Body Material: Carbon steel、 SS304、 SS316、 stainless steel

Leakage Amount: 1%-3%

Application industry

Metallurgy、 electric power、 chemical industry、 mining、 environmental protection.

Manual Ventilation Butterfly Valve



Specification

Size: DN150~DN2000

Operation Mode: Pneumatic Actuator, Electric Actuator, Gear Operator, Hand Lever Operation

Working Pressure: PN6、PN10、PN16

Working Temperature: -15℃~425℃

Lining Material: Default Body Seal, Ceramic Fiber Cotton Press Plate

Body Material: Carbon Steel, 304, 316, Stainless Steel

Leakage Rate : 1%~3%

Connection Standards: HG/T20592,GB/T9124.1,SH/T3406,HG/T20615, ASME B16.5,JIS-B2220,BS EN 1092-1.

Pneumatic Ventilation Butterfly Valve



Electric Ventilation Butterfly Valve



Application industry

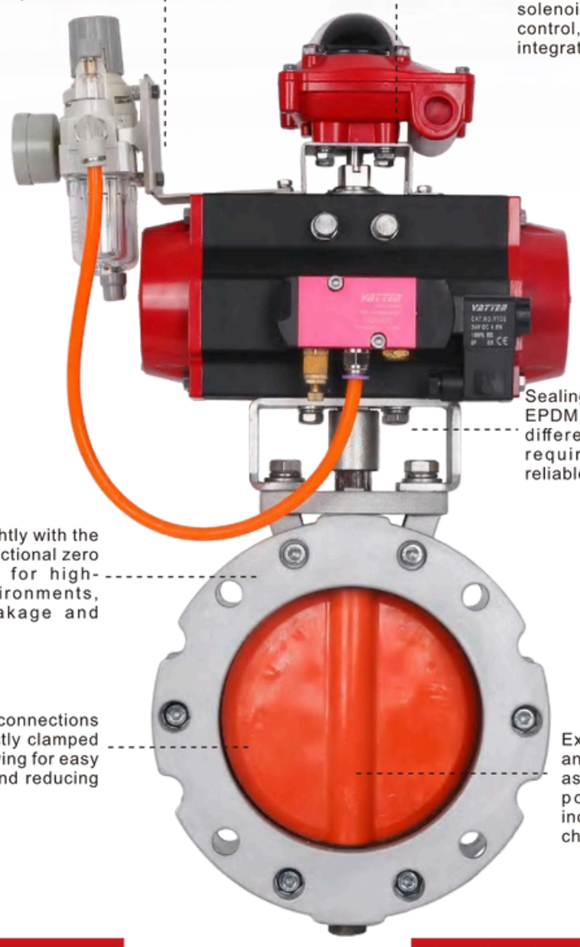


Powder Butterfly Valve & Rotary Butterfly Valve

The powder butterfly valve is specifically designed for pneumatic conveying systems handling dry powders, granules, and highly abrasive materials. It features wear-resistant rubber seals and a reinforced valve plate structure, effectively resisting erosion and deformation to ensure long-term reliable sealing. With a full-bore flow path that minimizes resistance, it allows smooth material flow and prevents accumulation or blockage. When paired with a pneumatic actuator, it enables rapid opening and closing as well as automated control. Widely used in industries such as cement, power, chemical, and mining, it is an ideal valve solution for efficient and durable powder transportation pipelines.

The valve body is designed without a reduced diameter, offering a large flow area, low airflow resistance, reducing pressure loss in the conveying system, and providing energy efficiency.

Equipped with pneumatic actuators (single/double-acting) and paired with accessories such as positioners and solenoid valves, it can achieve remote control, automatic adjustment, and PLC integration.



Sealing materials can be selected from EPDM, NBR, fluororubber, etc., to meet different medium and environmental requirements, ensuring stable and reliable long-term operation.

The soft sealing ring fits tightly with the valve seat, achieving bidirectional zero leakage. It is suitable for high-concentration dust environments, preventing material leakage and contamination.

No welding or threaded connections are needed; it can be directly clamped between pipe flanges, allowing for easy installation and removal, and reducing downtime for maintenance.

Extensively used for the conveying and cut-off control of materials such as fly ash, limestone powder, coal powder, and plastic pellets in industries including cement, power, chemical, mining, and food.

Specification

Size: DN100~DN400

Pressure: Factory Label

Connection Type: Flange、Double Flange

Body Material: Aluminum Alloy

Valve Plate Material: Polyurethane、SS304、Polished Plate

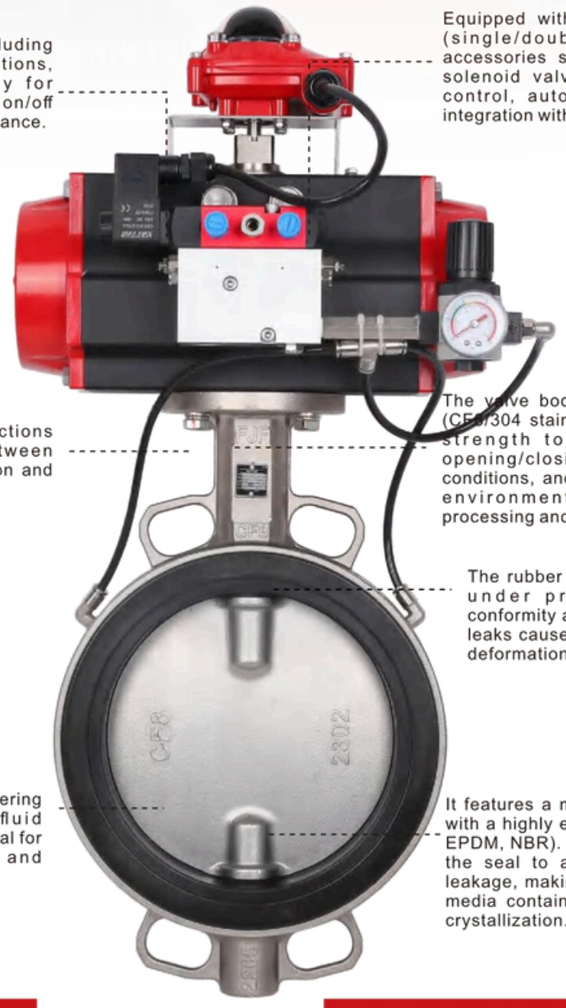
Application industry

Powder

Pneumatic expansion butterfly valve is a midline soft-seal butterfly valve designed for efficient handling of fine powders and granular materials. It features a wafer-type structure, with the seat seal made of highly elastic rubber (such as EPDM, NBR, or neoprene). When clamped by the flanged pipeline, the seat inflates (inflation pressure ≤ 3 bar) to create an "expansion effect", enabling bidirectional zero-leakage sealing at pipeline pressures ≤ 3 bar. Equipped with a pneumatic actuator, the valve offers rapid opening/closing and precise control. It is suitable for medium and low-pressure pipeline systems in industries such as chemical, paper, food, lithium battery, and new energy, especially for powder handling applications requiring frequent on/off operations. With a compact structure, easy installation, and simple maintenance, it provides excellent sealing performance, corrosion resistance, and long service life.

Suitable for various media including water, sewage, acid/alkali solutions, slurry, and steam, especially for applications requiring frequent on/off operations and high sealing performance.

Equipped with a pneumatic actuator (single/double acting), and with accessories such as positioners and solenoid valves, it enables remote control, automatic regulation, and integration with PLC systems.



No welding or threaded connections required; directly clamped between pipeline flanges for easy installation and disassembly, minimizing downtime.

The valve body is made of cast steel (CF8/304 stainless steel), offering high strength to withstand frequent opening/closing and high-pressure conditions, and is widely used in harsh environments such as chemical processing and water treatment.

The rubber seal can slightly expand under pressure, improving conformity and effectively preventing leaks caused by vibration or thermal deformation.

The valve disc is disc-shaped, offering unobstructed flow with low fluid resistance when open, making it ideal for high-flow conveying systems and ensuring energy-efficient operation.

It features a metal valve body combined with a highly elastic rubber seal (such as EPDM, NBR). The valve disc compresses the seal to achieve bidirectional zero leakage, making it especially suitable for media containing impurities or prone to crystallization.

Specification

Size: DN50~DN350

Pressure: PN6、PN10、PN16

Connection Type: Wafer

Body Material: Cast iron、 SS304 (actual working pressure ≤ 3 bar)

Fill Material: EPDM、PU、FKM

Application industry

Lithium battery, new energy, food, chemical industry.

Powder Butterfly Valve & Rotary Butterfly Valve

Multilayer valves adopt a multi-plate valve disc structure, offering uniform stress distribution and reliable sealing, making them particularly suitable for large-diameter, high-pressure, or high-wear conditions. The full-bore design ensures low flow resistance and high flow efficiency, effectively reducing system energy consumption. The valve body is typically made of carbon steel or stainless steel, providing corrosion resistance and high strength. When paired with pneumatic or electric actuators, it enables rapid opening and closing as well as automated control. These valves are widely used in ventilation, dust removal, and powder conveying pipeline systems across industries such as power generation, metallurgy, chemical, and environmental protection.

Compact structure and easy installation: wafer-type connection, no welding required, simple maintenance, suitable for scenarios involving frequent disassembly.



Excellent sealing performance: The soft sealing ring has good elasticity, adapts to temperature variations, and maintains long-term stable sealing.

High-strength valve body material: Made of carbon steel or stainless steel, with surface anti-corrosion treatment, resistant to corrosion and wear, and long-lasting.

Pneumatic drive with rapid response: Works in conjunction with actuators to achieve quick opening and closing, supporting automated control and remote operation.

Full-throughput structure: the flow passage is unobstructed, air resistance is low, reducing system energy consumption and improving conveying efficiency.

Multi-segment valve plate design: distributes pressure evenly and ensures uniform stress, effectively preventing deformation and leakage under large-diameter operating conditions.

Specification

Size: DN50~DN350

Pressure: PN6、PN10、PN16

Connection Type: Wafer

Body Material: Cast Iron, SS304 (for actual working pressure ≤ 3 bar)

Sealing Material: PTFE、 PEEK、 Polymer Materials

Application industry

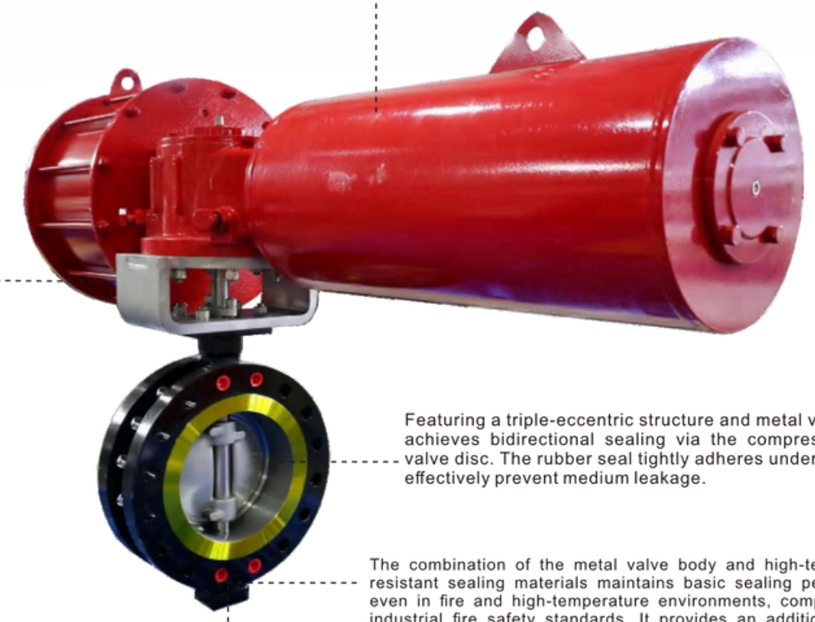
Paper production, power plants, mining, chemical plants, wastewater treatment, and environmental protection equipment

VATTEN Valves & Controls

This triple-eccentric pneumatic butterfly valve guarantees bidirectional zero leakage for tough jobs. The self-adjusting seal resists impurities and crystallization, while the high-torque actuator ensures smooth, fast action for large-scale, high-pressure systems. Built for chemical, metallurgical and power industries with smart automation integration.

The actuator is pre-configured with signal feedback, positioner, and solenoid valve interfaces, enabling rapid integration of position feedback, proportional regulation, or remote control modules. It can be seamlessly connected to DCS/PLC automation systems, realizing intelligent monitoring and precise flow control.

The high-torque cylinder-type pneumatic actuator stably drives large-diameter valves of DN300 and above. Even in scenarios such as long-distance transmission and main pipeline networks, it ensures fast and reliable opening and closing operations.



Featuring a triple-eccentric structure and metal valve body, it achieves bidirectional sealing via the compression of the valve disc. The rubber seal tightly adheres under pressure to effectively prevent medium leakage.

The combination of the metal valve body and high-temperature resistant sealing materials maintains basic sealing performance even in fire and high-temperature environments, complying with industrial fire safety standards. It provides an additional safety guarantee for flammable and explosive media conditions.

The triple-eccentric structure ensures frictionless operation between the disc and seat during opening and closing, significantly reducing wear on the sealing surface. Combined with the self-compensation capability of the high-elasticity rubber seal, it substantially extends the service life of the valve and reduces maintenance frequency and costs.

Specification

Size: DN150~DN1800

Pressure Rating: PN10、PN25、PN40

Connection Type: Wafer, Lug, Flanged

Seal Material: Stainless Steel, Duplex Stainless Steel, Super Duplex Stainless Steel

Disc Material: Stainless Steel, Duplex Stainless Steel, Super Duplex Stainless Steel

Application industry

Petrochemical, Power Industry, Metallurgy, Coal Chemical, Papermaking

Ball Valve

Flanged Ball Valve

The flanged ball valve features a full-bore design, resulting in low flow resistance and high flow capacity; it uses standard flange connections for convenient installation; the ball and valve seat are precisely matched, providing excellent sealing performance and the ability to adapt to temperature and pressure variations; it operates flexibly with only a 90° rotation required; with a compact structure, it is pressure-resistant, corrosion-resistant, and combines reliable shut-off with certain regulating functions. It is widely used in industries such as petroleum, chemical, and power.



Threaded Butt-Weld Clamp Ball Valve

Threaded, butt-welded, and clamp ball valves integrate multiple connection methods into one, featuring a compact structure and reliable sealing. They adopt a full-bore design, offering low flow resistance and strong flow capacity. The valves open and close quickly and are easy to operate. Suitable for various working conditions, they are flexible to install and convenient to maintain. They are widely used in industries such as food, pharmaceuticals, chemicals, and light industry, where high standards of cleanliness and sealing are required.



Metal-Seated Ball Valve

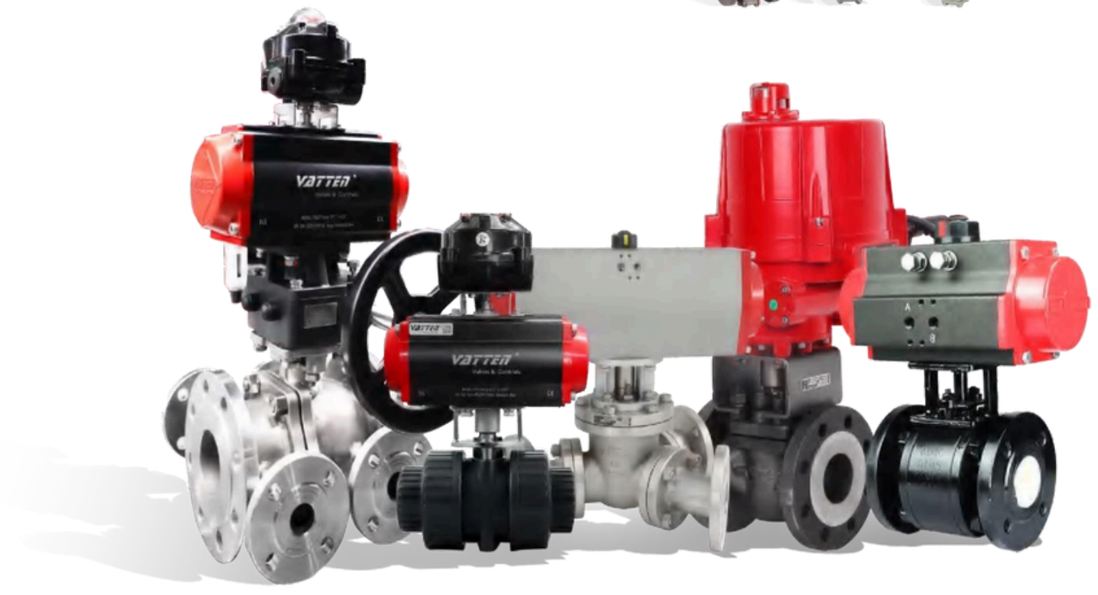
The hard-sealed ball valve features a metal-to-metal sealing structure, offering resistance to high temperatures, high pressure, and wear, with stable and reliable sealing performance. It is suitable for conditions involving particulate matter, dust, or corrosive media. The valve requires low operating torque, has a long service life, and combines excellent shut-off and regulating capabilities, making it widely used in demanding industrial fields such as petroleum, chemical, power, and metallurgy for fluid regulation and cut-off.



V-Port Ball Valve

The V-type ball valve features a V-shaped cut ball that works in conjunction with metal or elastic seats, providing excellent cutting capability and control performance. It can effectively shut off complex media containing fibers, particles, or slurry. The flow characteristics are approximately equal percentage, ensuring high regulation accuracy. It offers reliable sealing and smooth operation, making it suitable for regulation and shut-off requirements under demanding conditions in industries such as paper making, chemical, and power generation.



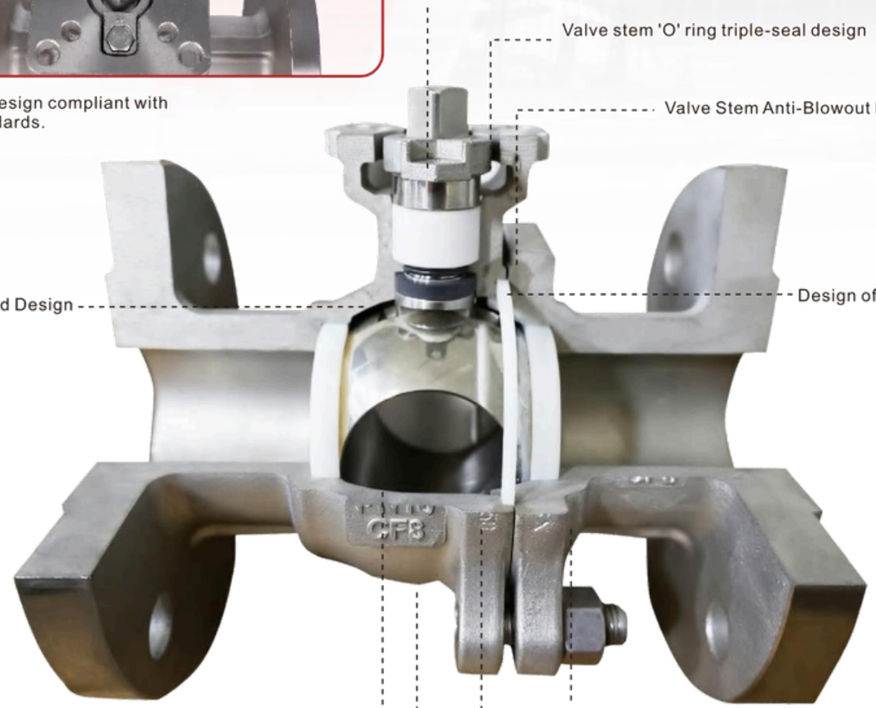


Flanged Ball Valve

Cross-Section Display



High platform design compliant with ISO 5211 standards.



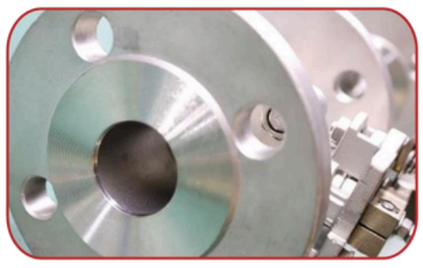
When a fire occurs on-site, if the valve seat is burned or vaporized due to high temperatures, the auxiliary metal valve seat machined from the valve body serves a sealing function.

Through the push of the spring behind the anti-static steel ball, it maintains close contact with the ball groove, transmitting the static electricity generated by the friction between the ball and the valve seat to the valve stem.

The two pre-compressed disc-shaped springs serve a compensatory function when there is a slight leakage at the valve stem, by reapplying pressure to the packing through the release of their pre-compressed deformation.

The valve body is manufactured using a medium-temperature wax mold casting process, featuring excellent surface quality, a compact structure, and an attractive appearance.





Pneumatic Flanged Ball Valve



Electric Flanged Ball Valve



Specification

Size: DN15~DN300

Operating Modes: Pneumatic actuator, electric actuator, lever operation

Working Pressure: PN10、PN16、PN40、PN63、PN100、PN160、Class 150/300/600/900

Working Temperature: -15°C ~ 150°C, -15°C ~ 200°C, -15°C ~ 425°C

Seal Material: metal seated、PTFE、RPTFE、PEEK、TFM4215、TFM1600、PCTFE

Body Material: Carbon steel, SS304, SS316, SS304L, SS316L, SS2205, SS2507

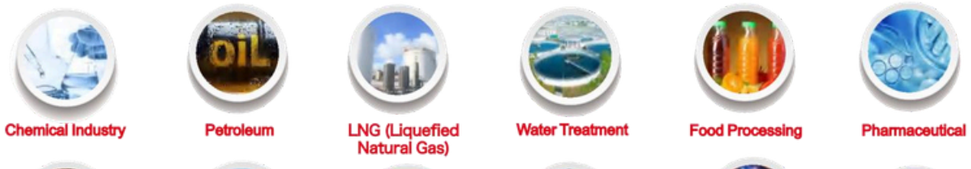
Media: Water, oil, gas, powder and granules

Connection Standard HG/T20592、GB/T 9124.1、SH/T3406、HG/T 20615、ASME B16.5、JIS-B2220、BS EN 1092-1.

Manual Flanged Ball Valve



Application industry



Threaded Ball Valve

Cross-Section Display



The top of the valve body is equipped with a high platform structure, facilitating the installation of various actuators (such as electric, pneumatic, or hydraulic actuators), and is suitable for automated control systems.

The valve stem adopts a settler-type packing structure, which can automatically compensate for packing wear, enhance sealing performance, reduce the risk of leakage, and extend service life.

Double-layer sealing design

Anti-static Design

The inner cavity features a full-bore design, ensuring an unobstructed flow channel, significantly enhancing flow capacity and reducing pressure loss during fluid passage, making it suitable for high-flow applications.

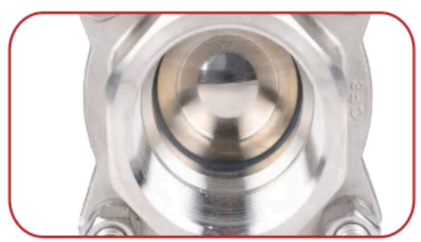


The valve stem is equipped with an anti-ejection structure and enhanced leakage prevention devices to prevent accidental ejection of the stem or leakage incidents caused by seal failure during operation.

Fire safety design compliant with API 607 standards

The valve body is manufactured using medium-temperature wax film technology, featuring excellent surface quality, a compact structure, an attractive appearance, and good pressure resistance and corrosion resistance.





Pneumatic Threaded Ball Valve



Electric Threaded Ball Valve



Specification

Size: DN15~DN100

Operating Modes: Pneumatic actuator、electric actuator、lever operation

Working Pressure: 1000WOG、2000WOG

Working Temperature: -15℃~150℃

Seal Material: POM、PTFE、RPTFE

Body Material: SS304、SS316、SS316L、SS2205、SS2507

Media: Water, oil, gas, powder and granules

Connection Standard: G; NPT; BSPT; RC

Manual Threaded Ball Valve



Application industry

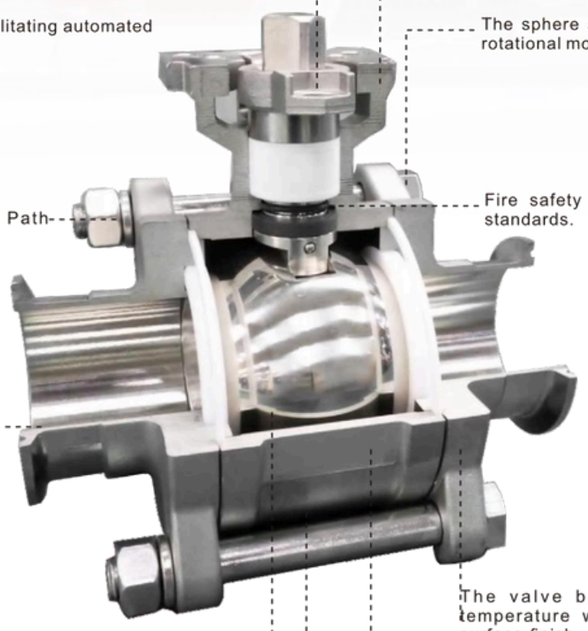


Clamp Ball Valve

Cross-Section Display



High-platform structure, facilitating automated integration.



The valve stem adopts a settler-type packing structure, which can automatically compensate for packing wear, enhance sealing performance, reduce the risk of leakage, and extend service life.

The sphere and the valve stem perform only rotational motion.

Fire safety design compliant with API 607 standards.

Full Cross-Section Flow Path-Design

Clamp connection design, convenient for installation

The valve body is cast using medium-temperature wax molding, featuring a high surface finish, compact structure, high strength, strong corrosion resistance, and an attractive appearance, making it suitable for long-term operation in harsh environments.

The material is of high quality and highly resistant to corrosion.

The internal flow channels are precisely machined, with smooth surfaces and no dead angles, meeting sanitary-grade standards. This facilitates CIP (cleaning in place) and SIP (sterilization in place) operations, making it suitable for fields with strict hygiene requirements, such as food and pharmaceuticals.

The internal flow channels are precisely machined, with smooth surfaces and no dead angles, meeting sanitary-grade standards. This facilitates CIP (cleaning in place) and SIP (sterilization in place) operations, making it suitable for fields with strict hygiene requirements, such as food and pharmaceuticals.



Fully Enclosed and Sealed



Semi-sealed



Pneumatic Threaded Ball Valve



Specification

Size: DN15~DN150

Operating Modes: Pneumatic actuator, electric actuator, lever operation

Working Pressure: PN10

Working Temperature: -15℃~150℃、-15℃~200℃、-15℃~300℃

Seal Material: PTFE、PPL/MOC

Body Material: SS304、SS316、SS304L、SS316L、SS2205、SS2507

Media: Water, oil, gas, powder and granules

Connection Standard: 3A;ISO 2852;DIN32676

Electric Threaded Ball Valve



Manual Threaded Ball Valve



Application industry



Butt-Weld Ball Valve

Detail Display

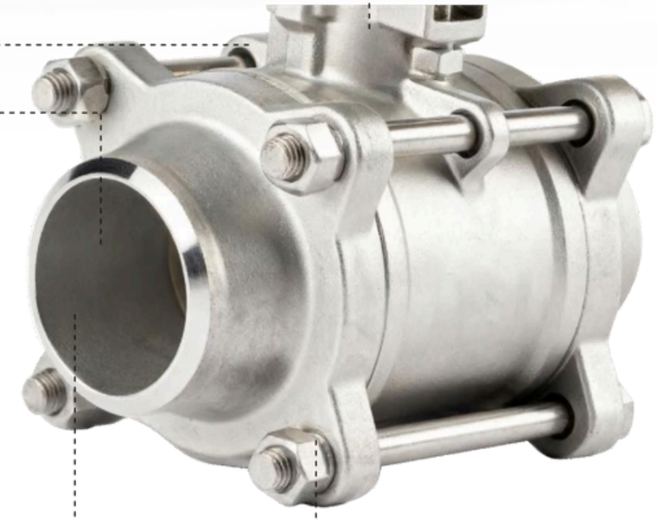
High platform design, capable of accommodating various actuators



Anti-static design

Full-path design, high flow capacity, low fluid pressure loss

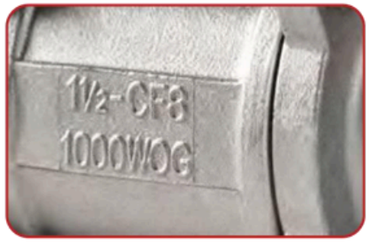




Bidirectional sealing function, fluid flow direction, valve seat as the primary sealing seat

Welded connections can achieve complete sealing, eliminating the risk of leaks caused by loosening threads or gasket aging.





Pneumatic Butt-Weld Ball Valve



Electric Butt-Weld Ball Valve



Manual Butt-Weld Ball Valve



Technical Specifications

Size: DN15~DN100

Operation Mode: Pneumatic actuator, Electric actuator , Lever operation

Working Pressure: 1000WOG、2000WOG

Working Temperature: 1000WOG、2000WOG

Sealing material: PTFE

Body Material: SS304、SS316、SS304L、SS316L、SS2205、SS2507

Medium: Water, oils, gases, powder particles

Connection Standars: ASME B36.10M 、GB/T 17395

Application industry



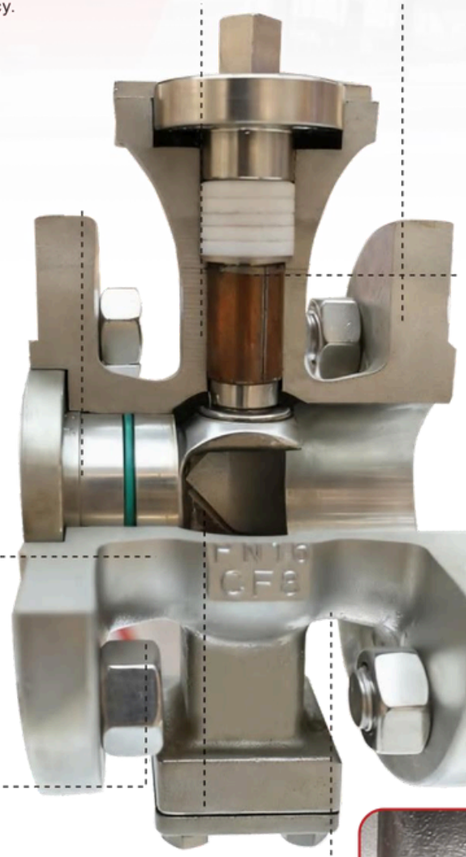
V-Port Ball Valve

Detail Display

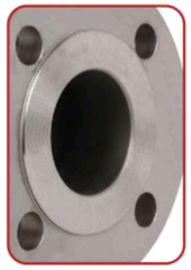
The outer surface of the valve stem is processed using precision grinding, resulting in a low coefficient of friction between the packing and the valve stem. The valve stem and valve core are connected via splines, providing good coaxiality and a high torque-bearing capacity. This spline connection effectively eliminates the clearance between the valve stem and valve core, enhancing the valve's regulation accuracy.

The side-mounted sealing cover design facilitates easier valve maintenance.

The valve seat sealing is made of PTFE, RPTFE, or metal hard seal according to user requirements. The sealing surfaces of metal seals undergo hardening treatments such as hard chrome plating, STL spraying, and WC spraying.



Blowout Preventer Stem Design and Stem Anti-Leakage Reinforcement Device.



The upper and lower valve stems are fixe dwith self-lubricating bearings, providing high rotational accuracy and good rotational stability, ensuring smoother valve operation.

The valve core is designed with a specially shaped V-shaped notch, which gives the valve approximately equal percentage flow characteristics. The shear force between the notched ball and the valve seat can cut and scrape fluids containing fibrous media, high-viscosity media, and solid particles, allowing them to pass through the valve unobstructed.





The valve body adopts an integrated structural design, featuring strong structural rigidity, which makes it resistant to deformation and leakage.

Pneumatic V-Type Ball Valve



Electric V-Type Ball Valve



Technical Specifications

Size: DN25~DN300

Operation Mode: Pneumatic actuator, Electric actuator , Lever operation

Working Pressure: PN10、PN16

Working Temperature: -15℃~450℃

Sealing material: hard seal

Body Material: WCB、SS304、SS316、SS2205、SS2507

Medium: Steam、air、gas、ammonia、carbon dioxide gas、petroleum products、alkali solution

Connection Standars: HG/T20592、GB/T9124.1、SH/T3406、HG/T 20615、ASME B16.5、JIS B2220、BS EN 1092-1.

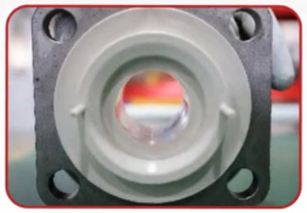
Application industry



PFA Lined Ball Valve

Detail Highlights

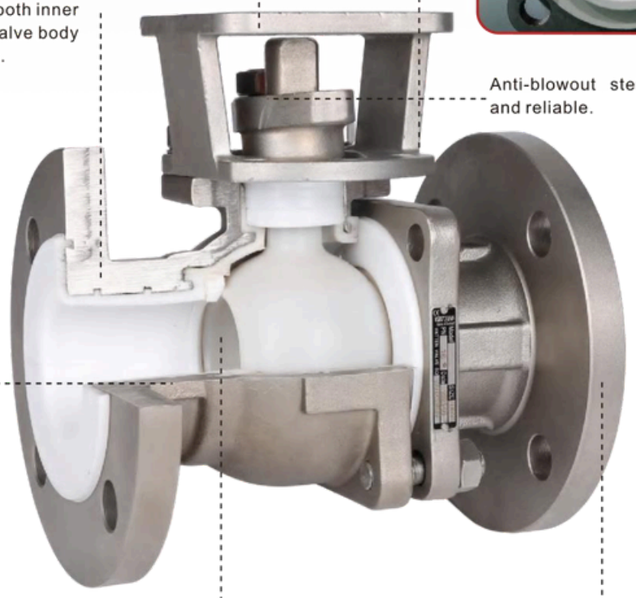
Innovative structure with a compact valve body cavity, reducing the possibility of media retention.



Excellent corrosion resistance, stable performance, resistant to aging, and low friction coefficient.

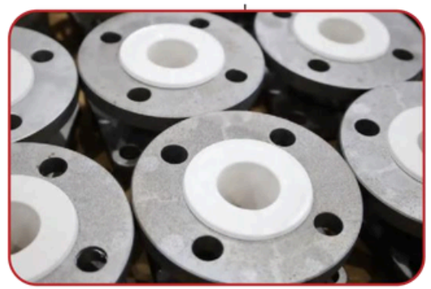
Seamless valve body design with a smooth inner wall ensures a tight seal between the valve body and seat, with evenly distributed stress.

Anti-blowout stem design, safe and reliable.



Full-bore floating ball structure enables leak-free closure under all pressure conditions and facilitates pipeline system maintenance and ball cleaning.





Flange connection for easy installation and maintenance.

VATTEN Valves & Controls

Pneumatic fluoropolymer-lined ball valve



Electric Fluoropolymer-Lined Ball Valve



Manual fluoropolymer-lined ball valve



Technical Parameters

Size: DN15~DN300

Operation Mode: Pneumatic actuator, Electric actuator , Lever operation

Working Pressure: PN10

Working Temperature: -15℃~170℃

Sealing Material: PFA、FEP

Body Material: WCB、SS304、SS316、SS304L、SS316L、SS2205、SS2507

Medium: Oil、water、gas、corrosive medium

Connection Standars: HG/T20592、GB/T9124.1、SH/T3406、HG/T20615; ASME B16.5、JIS B2220、BSEN1092-1.

Application industry



Plastic Ball Valve

Detail Highlights

Materials are free ofheavy metals and do not release harmful substances, making them suitable for high-hygiene fields such as drinking water and food processing.



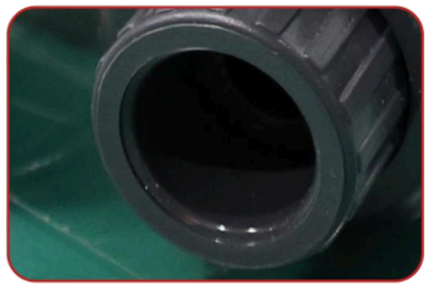
Fully plastic, integrally molded, compact structure.

PVC-U material offers excellent corrosion resistance to acids, alkalis, salts, and awide range of chemical media. It is widely used in corrosive environments such as chemical processing, wastewater treatment, water supply and drainage,and agricultural irrigation.



The internal flow path matches the pipeline diameter, achieving a full-bore structure. This ffectively reduces fluid resistance, improves flow efficiency, reduces energy consumption, and is suitable for high-flow conditions.





Compared to metal valves, UPVC ball valves have lower costs and simpler maintenance, making them an ideal alternative to traditional metal valves, especially for smallto medium-sized projects and civil systems.

Pneumatic Plastic Ball Valve



Electric Plastic Ball Valve



Manual Plastic Ball Valve



Technical Parameters

Size: DN15~DN100

Operation Mode: Pneumatic actuator、 Electric actuator 、Lever operation

Working Pressure: PN6、PN10

Working Temperature: 0℃~60℃

Sealing Material: PTFE、FKM

Body Material: UPVC、CPVC、PVDF、PP

Connection Standards: GB/T 4219-2008、Schedule80、 D1785.

Application industry



Ceramic Lined Ball Valve

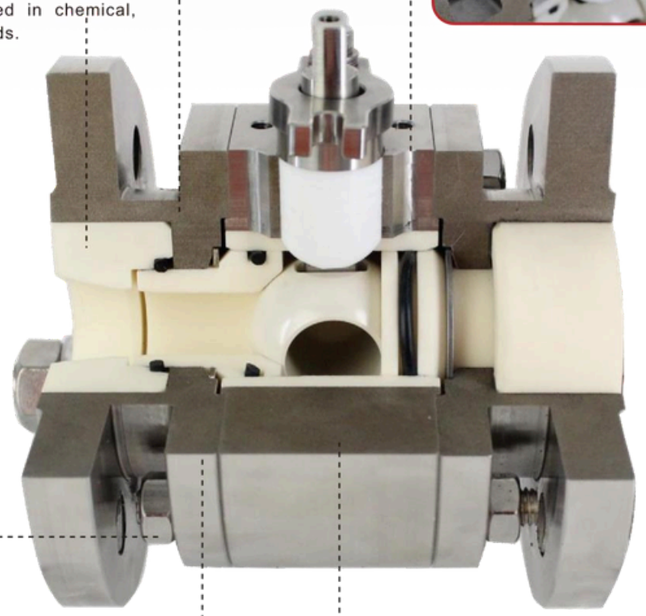
Detail Highlights

Features a multi-layer sealing structure, includingvalve seat seal rings and stem packing seals, complemented by elastic O-rings or V-seals. This ensures no internal or external leakage during opening and closing operations, meeting safety requirements for demanding service conditions.

Metal shell + wear-resistant lining, strong- and durable.



The valve body cavity adopts a full-bore structure with a smooth flow path and no diameter reduction, effectively reducing fluid resistance and improving conveying efficiency. Especially suitable for high-flow, low-pressure drop conditions, widely used in chemical, environmental protection, and other fields.



The lining material exhibits exceptional chemical stability , capable of withstanding various corrosive media such as sulfuric acid, hydrochloric acid, sodium hydroxide, and chlorides. It is suitable for harsh corrosive environments like chemical processing, wastewater treatment, electroplating, and pharmaceuticals.





The lining material offers high wear resistance,is not easily scratched by particulate impurities, and maintains excellent sealing performance over long-term use. It also possesses good anti-aging properties, enablings table operation for many years in complex environments.

VATTEN Valves & Controls

Pneumatic Ceramic Ball Valve



Electric Ceramic Ball Valve



Manual Ceramic Ball Valve



Technical Parameters

Size: DN15~DN250

Operation Mode: Pneumatic actuator、Electric actuator、Lever operation

Working Pressure: PN6、PN10、PN16

Working Temperature: -25℃~200℃

Sealing Material: Alumina、Zirconia

Body Material: A105、Stainless Steel

Connection Standards: HG/T20592、GB/T9124.1、SH/T3406、HG/T20615; ASME B16.5、JIS-B2220、BS EN 1092-1.

Application industry



Control Valve

Product Overview

Control valves are characterizedby high control accuracy, fast response, adjustable flow capacity, andreliable sealing performance. They dynamically regulate fluid flow, pressure, or temperature according to control system commands, ensuring stable process parameters.Flow characteristics such as linear, equal percentage, or quick opening can be selected to match specific system requirements. These valves are suitable for a wide range of media including water, steam, oil, and corrosive fluids.When equippedwith pneumatic, electric actuators, or intelligent positioners, control valves enable remote monitoring, fault diagnosis, andhigh-safety operation. They are widely used in industrial automation fields such as petrochemical,power generation, pharmaceutical, andwater treatment industries.



Detail Highlights



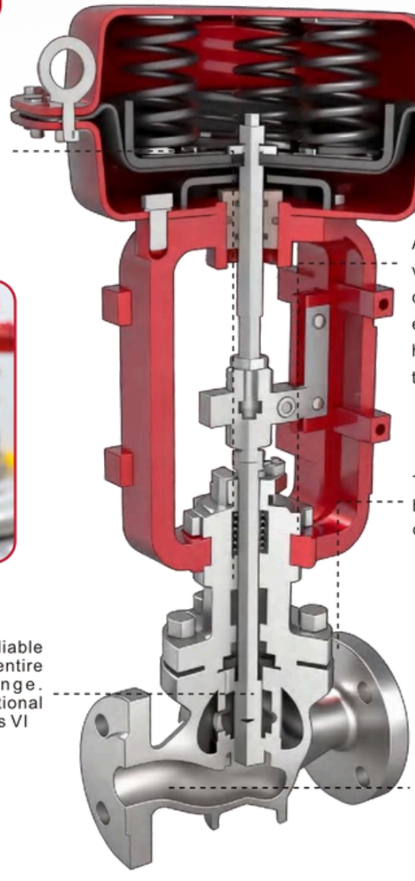


Equippedwith multi-spring pneumatic actuators. The spring range can adjusted without adding extra components.Direct-acting actuators provide air-to-close operation. Reverse-acting actuators provide air-to-open operation.



Excellent control performance and reliable sealing are maintained throughout the entire operating and characteristic range. Hard seal: Standard leakage class IV,optional class V Soft seal: Standard leakage class VI





According to different medium temperatures, valve bonnets are available in multiple configurations, including standard type, extended high-temperature type, finned heat-dissipation type, and bellows-sealed type.

The valve body and bonnet are connected by double-stud bolting, with the design complying with ASME standards.

The valve features a compact structure with a stream linedS-shaped flow path. Guide vanes are incorporated to improve fluid flow around the valve cage. Advantages include low pressure drop, large flow capacity, wide control range, and high flow characteristic accuracy.

Pneumatic Diaphragm Control Valve (Low Temperature)



Technical Parameters

Size: DN15~DN300

Pressure Rating: PN16、PN25、PN40、PN64、PN100

Connection Type: Flanged

Operating Temperature: -15℃~425℃

Leakage Class: V

Pneumatic Diaphragm Control Valve





Pneumatic Fluoropolymer -Lined Control



Technical Parameters

Size: DN15~DN200

Pressure Rating: PN16、PN25

Connection Type: Flanged

Operating Temperature: -196℃ - 220℃

Leakage Class: V

Pneumatic Diaphragm Control





Control Valve

Electric Fluoropolymer-Lined Control Valve



Technical Parameters

Size: DN15~DN200

Pressure Rating: PN16

Connection Type: Flanged

operating temperature: -196℃ - 220℃

Leakage Class: A (Zero Leakage)

Electric FlangedControl Valve



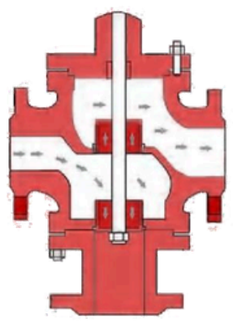


Three-Way Mixing / DivertingControl Valve

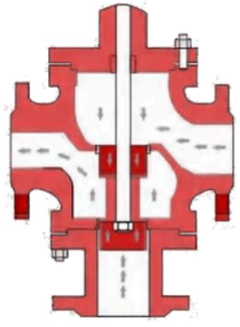
Description

- The three-way control valve consists of an electric or pneumatic actuator combined with a three-way valve body. It offers two functions: mixing and diverting. In some applications, it can replace two two-way valves and one three-way valve, simplifying system design. It regulates parameters such as pressure, flow, temperature, and liquid level. The valve plug features a cylindrical thin-wall window structure with side guiding, offering excellent stability, low vibration, low noise, and high differential pressure tolerance.
- The three-way control valve consists of an electric or pneumatic actuator combined with a three-way valve body. It offers two functions: mixing and diverting. In some applications, it can replace two two-way valves and one three-way valve, simplifying system design. It regulates parameters such as pressure, flow, temperature, and liquid level. The valve plug features a cylindrical thin-wall window structure with side guiding, offering excellent stability, low vibration, low noise, and high differential pressure tolerance.
- Fluid forces act in the opening direction, ensuring stable valve operation.The valve plug and valve seat feature side-guiding for reliable operation and increased guide surface area.The multi-spring actuator design reduces the height and weight of the valve by approximately 30%.





Three-Way Diverting Control Valve



Three-Way Mixing Control Valve

- Note:
  (add space to every word) when ordering a three-way valve, it is necessary to specify wheter a mixing or diverting function is required. for pneumatic actuators, the relationship between actuator air pressure and main flow direction (increase or decrease) must be clearly stated.

Technical Parameters

Size: DN15~DN300

Pressure Rating: PN16、PN25、PN40、PN64、PN100

Connection Type: Flanged

Operating Temperature: -15℃ ~ 220℃

Leakage Class: IV



Self-operated Control Valve

Self-Operated Pressure Control Valve



Description

- The self-operated pressure control valve, also known as the self-regulating valve, operates using the pressure and temperature of the medium flowing through the valve as the driving energy. No external power or secondary instruments are required.
- It utilizes feedback signals from the valve's output (such as pressure,differential pressure, or temperature) transmitted via signal tubing to drive the actuator, adjusting the valve plug opening to regulate pressure, flow, or temperature.

Features:

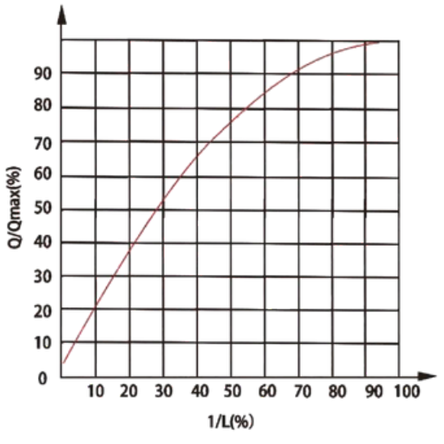
- The self-operated control valve represents a new type of regulation valve. Compared to manual valves, it offers the advantage of automatic adjustment. Compared to electric control valves, it does not require external power.
- In practical applications, it is commonly used in closed-loop water circulation systems (such as hot water heating or HVAC chilled water systems). The valve can easily manage flow distribution, maintain dynamic system balance, significantly simplify system commissioning, and stabilize pump operation.
- The self-operated pressure control valve works without external energy, making it suitable for environments without electricity or compressed air. It is both convenient and energy-efficient.
- The valve offers fine and overlapping pressure control ranges withhigh regulation accuracy.
- The pressure set point can be continuously adjusted during operation.For downstream pressure control, the ratio of upstream pressure to downstream pressure can range from 10:1 to 10:8.
- A rubber diaphragm sensing element ensures high measurement accuracy and quick response. The valve also features a pressure-balanced mechanism, enabling fast and precise control.

Specifications

Valve Plug Type	Single Seat (ZP),
Function Type	Single Seat (ZP), Sleeve (ZM), Double Seat (ZN)
Nominal Diameter	DN15mm–300mm (1/2"–12")
Flow Characteristics	Quick Open
Adjustment Accuracy	±3%–10%
Operating Temperature	≤350°C
Pressure Reducing Rat	Imax 10, Min 1.25
Internal Material & Treatment	leakage class
Adjustment Accuracy	PN Series: PN1.6MPa, 2.5MPa, 4.0MPa, 6.3MPa, 10.0MPa
	Class Series: Class 150, 300, 600
Connection Type	Flanged, Welded, Threaded
Flange Distance	Complies with GB12221-2005
Valve Body & Bonnet Material	WCB、WC9、CF8、CF8M2
	See Appendix 1 for temperature & pressure limits
Actuator Type	PTFE, Flexible Graphite
Packing	Diaphragm, Piston, Bellows
SurfaceCoating	Silver-gray (Epoxy Resin); No coating on stainless steel body

①: Connection types, flange and flange face distance can be made according to customer specifications.
②: Valve body, bonnet, and internal component materials can be customized according to customer specifications.

Flow Characteristics



Nitrogen Blanketing Valve (Supply) & Nitrogen Vent Valve (Relief)

Description

- The Nitrogen Seal Valve is an automatic pressure control device used for closed containers such as dry storage tanks and reactors. It maintains a slightly positive internal pressure by injecting nitrogen gas, effectively preventing material oxidation, moisture absorption, volatilization, or explosion risks caused by contact with air.
- Widely used in industries such as petrochemicals, pharmaceuticals, food processing, and fine chemicals, the nitrogen seal valve is a key component in ensuring storage safety and product quality.The nitrogen seal system typically consists of a nitrogen supply valve (filling valve) and a nitrogen relief valve (exhaust valve), or can be integrated into a single unit for "filling and exhausting" with intelligent control.
- Key Features:
  The nitrogen release device consists of a micro-pressure regulating valve with internal feedback for precise pressure control.
- The pressure sensing diaphragm has a large effective area, small spring stiffness, and quick response, ensuring stable operation of the system.
- The nitrogen seal valve has a set nitrogen pressure range, and the pressure is precisely controlled by the nitrogen sealing valve device.
- The nitrogen supply system is controlled by pilot control, with a ressure drop ratio up to 100:1, offering excellent pressure reduction and high control accuracy.



Nitrogen Blanketing Valve



Technical Parameters

Size: DN15~DN200
Pressure Rating: PN25、PN16
Connection Type: Flanged
Operating Temperature: -15℃ ~ 220℃
Leakage Class: IV



Nitrogen Vent Valve

Gate Valve & Globe Valve & Check Valve

Gate Valve

Manufacturing & Inspection Standards

◆**Design Standard:** EN13709、GB/T213858

◆**Flange Standard:** EN1092-1、GB1T9113、JISB2220

◆**Testing Standard:** EN12266-1



Stainless Steel Gate Valve



Gate Valve



Gate Valve



Forged Steel Gate Valve

Technical Parameters

Size: DN15~DN200

Pressure Rating: PN16~PN100

Connection Type: Flanged

Applicable Temperature: -15℃ - 220℃

Body Material: CS、SS、DSS、SDSS

Globe Valve

Structure Features & Applications

◆The handwheel is rotated clockwise to fully close the valve.

◆The valve can be installed in any position on the pipeline, with the medium flowing from bottom to top.

◆Stainless steel globe valves are suitable for pipelines handling various corrosive media, offering excellent corrosion resistance and sufficient mechanical strength.

◆Alloy steel globe valves are suitable for high-temperature applications such as steam and oil pipelines, featuring superior high-temperature resistance.

Design & Manufacturing Standards

◆Design Standard: JB/T 12235-2007、API623、EN15015761

◆Flange Connection Dimensions: ASME B16.5

◆Inspection& Testing: API598



Globe Valve Cross-Section View



Stainless Steel Globe Valve



Carbon Steel Globe Valve

Technical Parameters

Size: DN15~DN400

Pressure Rating: PN16~PN320

Connection Type: welding、Thread

Applicable Temperature: -29℃~425℃

Body Material: CS、SS、DSS、SDSS



Stainless Steel Globe Valve

Slow Operation Butterfly Check Valve

Connection Type: Flanged
Pressure Rating: PN10~PN40
Body Material: CS、SS、DSS、SDSS
Nominal size: DN50~DN500



Lifting Check Valve

Connection Type: Flanged
Pressure Rating: PN10、PN16
Body Material: CS、SS
Internal Parts Material: CS、SS
Nominal size: DN50~DN100



Dual plate Check Valve

Connection Type: Wafer
Pressure Rating: PN10~PN40
Body Material: CS、SS、DSS、SDSS
Internal Parts Material: CS、SS、DSS、SDSS
Nominal size: DN40~DN600



Swing Check Valve

Connection Type: Threaded, Flanged
Pressure Rating: PN10~PN100
Body Material: CS、SS、DSS、SDSS
Nominal size: DN15~DN250



Rubber Flapper swing Check Valve

Working Pressure: PN10、PN16
Applicable Media: Water、steam、oil、mildly corrosive media
Body Material: CS、SS、DSS、SDSS
Nominal size: DN40~DN300



Silent Check Valve

Connection Type: Flanged
Pressure Rating: PN10、PN16
Body Material : CS、SS、DSS、SDSS
Nominal size: DN40~DN600



Knife Gate Valve

Equipped with pneumatic actuators for fast and responsive operation (typically < 5 seconds), suitable for automated control systems with remote operation and PLC integration.

Full-bore design ensures unobstructed flow when fully open, minimizing pressure loss and reducing system energy consumption.



Compact structure with easy installation, suitable for limited-space applications.



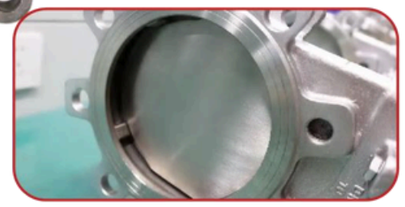
The knife-type gate automatically scrapes deposits from the pipeline during closing, preventing buildup and blockage, extending service life, and reducing maintenance frequency.

Optional accessories include limit switches, position transmitters, solenoid valves,and air filter regulators for condition monitoring and intelligent control, meeting Industry 4.0 requirements.

Valve bodies are commonly manufactured from cast steel (WCB), stainless steel (304/316), or ductile iron. The gate surface can be hard-chrome plated or coated with wear-resistant layers to handle corrosive, high-temperature, and abrasive media.

Customizable design available to meet specific application requirements.

Slim knife-edge gate effectively cuts through media containing fibers, particles, sludge, and solids, preventing clogging—ideal for wastewater, pulp & paper, and chemical dustries.



Pneumatic Knife Gate Valve



Electric Knife Gate Valve



Manual Knife Gate Valve



Technical Parameters

Size: DN15~DN600

Operation: Pneumatic actuator、Electric actuator、Manual handwheel

Working Pressure: PN10、PN16

Working Temperature: -25℃~350℃

Sealing Material: Soft seal、hard seal

Body Material: Carbon Steel、SS304、SS316、SS316L

Applicable Media: Water、slurry、granules、powder

Connection Standards: HG/T 20592GB/T 9124.1SH/T3406HG/T 20615; ASME B16.5JIS-B2220BS EN 1092-1

Application industry



Chemical



Petroleum



LNG



Water Treatment



Food Processing



Pharmaceutical



Metallurgy



Environmental Protection



Power Generation



Building Materials



Electronics & Semiconductor



Solar Energy

Knife Gate Valve

The Vatten through-conduit knife gate valve features precision manufacturing, compact design, and excellent flow performance.The gate plate incorporates a circular opening precisely matched to the wedge diameter. During opening and closing, the opening aligns or separates completely from the flow passage, ensuring smooth flow control.The valve body has a groove-free flow channel, allowing full-bore flow without obstruction.



Valve stem equipped with a position indicator for visual open/close status (optional).

Robust and lightweight support frame made of epoxy -coated steel or stainless steel, with reserved slots for switches, solenoid valves, and safety devices (customizable).

Two-piece valve body design with a narrow machined valve cavity, reducing residue accumulation.

Reinforced valve seat with compensation structure to scrape deposits and prevent jamming.

Through-type wedge with smooth surface and strong cutting capability.

Technical Parameters

Size: DN50~DN600

Pressure: PN6~PN16

Connection Type: Flanged

Body Material: GGG40、WCB、CF8、CF8M、CF3 Metc.

Packing Material: PTFE、Flexible Graphite

Application industry

Pulp & Paper Power Plants Mining Chemical Plants Wastewater reatment Environmental Equipment

The ceramic knife gate valve features precision engineering, compact layout, and superior durability.The gate plate is designed with a circular opening precisely matched to the wedge diameter. During operation, the opening fully aligns with or separates from the flow passage, ensuring smooth shutoff and flow control.The groove-free internal flow channel enables full-bore flow without obstruction, making it ideal for severe service conditions involving abrasive particles, high wear, and strong corrosion.It offers excellent sealing performance, outstanding wear resistance, and extended service life.



Precision construction with superior workmanship

The ceramic knife gate valve consists primarily of a valve body and gate plate, featuring a compact, space-saving design that effectively supports pipeline strength.

The gate plate features a single-side structural ceramic lining, providing excellent resistance to erosion and wear.

Widely applied in high-wear industrial services such as mining, metallurgy, chemical processing, and power generation.

Ceramic-lined inlet and sealing surfaces enhance wear resistance and significantly extend valve lifespan.

Technical Parameters

Size: DN50~DN600

Pressure: PN6-PN16

Connection Type: Flanged

Operating Temperature: -29℃~+200℃

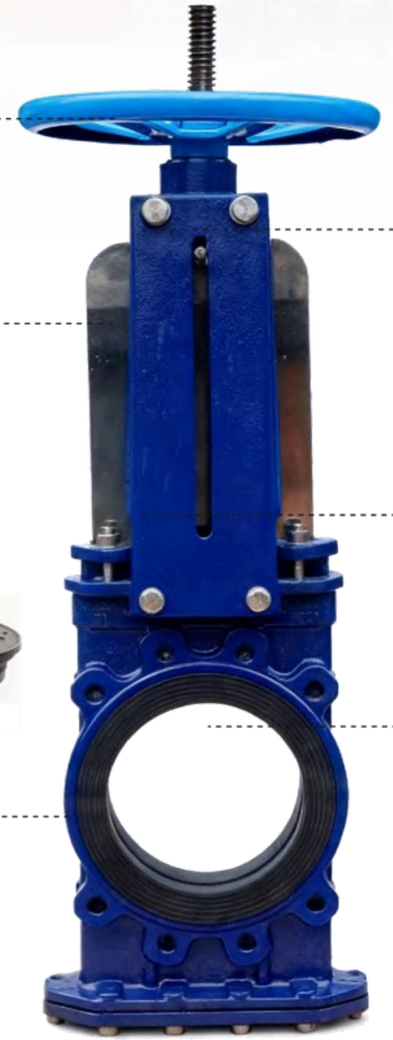
Leakage Class: IV

Application industry

Power Generation、 Metallurgy、 MiningPetrochemical、 Fine Chemical Pharmaceutical 、 Bioengineering Pulp 、 Paper IndustryWastewater Treatment 、 environmental Engineering New Energy、Electronic Materials

Knife Gate Valve

The self-sealing knife gate valve adopts a pressure-assisted self-sealing design, where sealing performance increases with rising medium pressure. The full-bore flow passage is free of dead zones, allowing smooth, unobstructed flow.The knife-type gate effectively cuts through fibers and solid particles, while the wear- and corrosion-resistant construction makes it suitable for slurry, wastewater, pulp, and other demanding media.The valve supports manual, pneumatic, and electric actuators, features a compact structure, and is easy to maintain. It is widely used in power generation, mining, chemical processing, and environmental protection industries.



Integral rubber seats at both ends clamp the gate plate to achieve reliable sealing.

Easy maintenance: the gate plate can be removed directly for servicing without dismantling the valve from the pipeline when fully open.

Widely used in pulp & paper, mining, metallurgy, chemical

Flow passage fully lined with wear-resistant rubber, providing excellent abrasion and corrosion resistance.

Full-bore design ensures high flow capacity.



When fully open, sealing surfaces at both ends contact each other tightly, preventing media from entering the valve cavity and avoiding blockage.

Technical Parameters

Size: DN50~DN600

Pressure: PN6-PN10

Connection Type: Flanged

Operating Temperature: -20℃ ~ +120℃

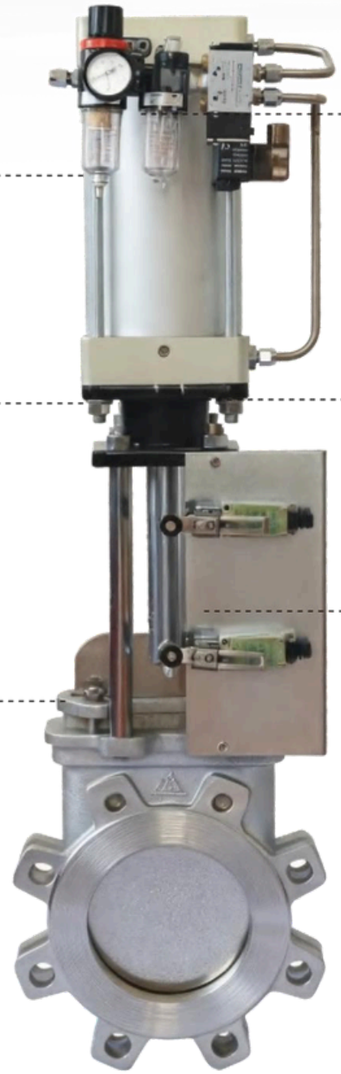
Sealing Material: EFDM、soft seal

Leakage Class: A (Zero Leakage)

Application industry

Power generation, mining & metallurgy, pulp & paper, wastewater treatment, chemical & petrochemical, food & pharmaceutical

The live-sealing knife gate valve adopts a dynamic sealing design in which the valve seat automatically follows and engages with the gate during opening and closing, providing pressure-assisted sealing that becomes tighter as medium pressure increases. This structure ensures reliable sealing performance and effectively prevents leakage. The full-bore, straight-through flow passage eliminates dead zones, allowing smooth media flow and minimizing the risk of material buildup or blockage. The knife-type gate offers excellent cutting capability, enabling efficient shut-off of media containing fibers, solids, and particulate matter. The valve body features high wear and corrosion resistance and supports pneumatic, electric, and other actuation options with fast response, making it well suited for automated control systems. It is widely applied in flue gas desulfurization, mining tailings, pulp and paper processing, wastewater treatment, and chemical industries, delivering long service life with low maintenance requirements. material buildup or blockage. The knife-type gate offers excellent cutting capability, enabling efficient shut-off of media containing fibers, solids, and particulate matter.



Compact internal structure with close contact between gate plate and sealing ring for enhanced sealing.

Pressure-adaptive sealing: higher medium pressure results in better sealing performance.

Full-bore, non-restrictive flow path prevents clogging and material buildup.

Integrated sealing ring and valve seat design prevents seal displacement during operation.

Sealing ring can be easily replaced while the valve remains open, significantly improving maintenance efficiency.

Widely used in pulp & paper, sugar processing, mining, metallurgy, hemical processing, power generation, and water treatment industries.

Technical Parameters

Size: DN50~DN600

Pressure: PN6-PN25

Connection Type: Flanged

Operating Temperature: -60℃ ~ +350℃

Leakage Class: IV

Application industry

Power generation, mining & metallurgy, pulp & paper, wastewater treatment, chemical & petrochemical, environmental engineering

Knife Gate Valve

This knife gate valve adopts a polyurethane-lined design, offering excellent wear resistance, corrosion resistance, and sealing performance. It is ideal for conveying highly abrasive and corrosive media.The elastic polyurethane lining features low friction, ensuring smooth operation and extended service life. With a compact valve body and pneumatic actuator, the valve supports automated control and is widely used in mining, power generation, metallurgy, and wastewater treatment industries. It is an ideal solution for slurry, sediment, and other complex media.

All wetted parts are fully lined with polyurethane, providing superior wear resistance and long service life.

Packing adopts an integrally molded rubber structure, achieving zero leakage at the upper seal.

Full-bore design with zero leakage.

Replaceable integral polyurethane liner and stainless steel gate plate reduce maintenance costs.

Widely used in pulp & paper, mining,metallurgy, chemical processing, power generation, and water treatment industries.

High-elasticity polyurethane tightly seals against the gate plate and seat, enabling bidirectional zero-leakage sealing under severe service conditions.



Technical Parameters

Size: DN50~DN600

Pressure: PN6-PN16

Connection Type: Flanged

Operating Temperature: -20℃ ~ +100℃

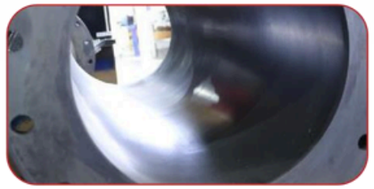
Leakage Class: A (Zero Leakage)

Application industry

Mining & metallurgy, power generation, pulp & paper, chemical industry, wastewater treatment, food & pharmaceutical, building materials & ceramics

The pinch valve features a clamp-type structural design, offering a dead-zone-free flow path, easy cleaning, and reliable sealing performance. It is specially designed for conveying slurry, sludge, fibrous media, or fluids containing solidparticles.The valve interior is smooth and free of internal metal components, effectively preventing material accumulation and blockage. With fast opening and closing response and simple operation, the valve can be equipped with pneumatic or electric actuators to achieve automated control.Pinch valves are widely used in mining, wastewater treatment, pulp and paper, and chemical industries, particularly suitable for high-abrasion, high-viscosity, or corrosive service conditions, making them an efficient and low-maintenance solution.

No metal components in contact with the medium; the flow path is entirely formed by a flexible rubber sleeve (or other elastomeric materials), ensuring true full-bore flowwith no dead zones or material buildup.



Mechanical or pneumatic compression of the rubber sleeve provides reliable bidirectional zero-leakage sealing, even in media containing impurities.

Liner material can be selected according to media characteristics, including natural rubber, NBR, EPDM, neoprene, or FKM, suitable for acids, alkalis, slurries, and abrasive media.

Simple structure with fast response and short opening/closing time; the rubber sleeve is the only wear part and can be easily replaced without removing the valve from the pipeline, significantly reducing maintenance cost and downtime.



Technical Parameters

Size: DN25~DN1500

Pressure: PN6-PN16

Connection Type: Flange

Operating Temperature: –20 °C to +80 °C (up to +120 °C with special materials)

Body Material: Cast iron, ductile iron, carbon steel, stainless steel (304/316)

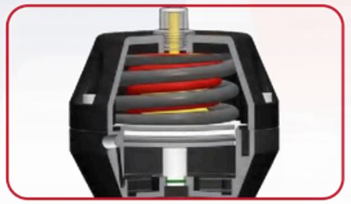
Sleeve Material: Natural rubber, NBR, EPDM, neoprene, FKM (selected according to media)

Application industry

Suitable for conveying abrasive slurries containing solid particles, such as cement slurry, ore slurry, slag slurry, coal slurry, pulp, liquid slag slurry, fiber slurry, and sedimentation tank slurry in mining pipeline systems.

Diaphragm Valve

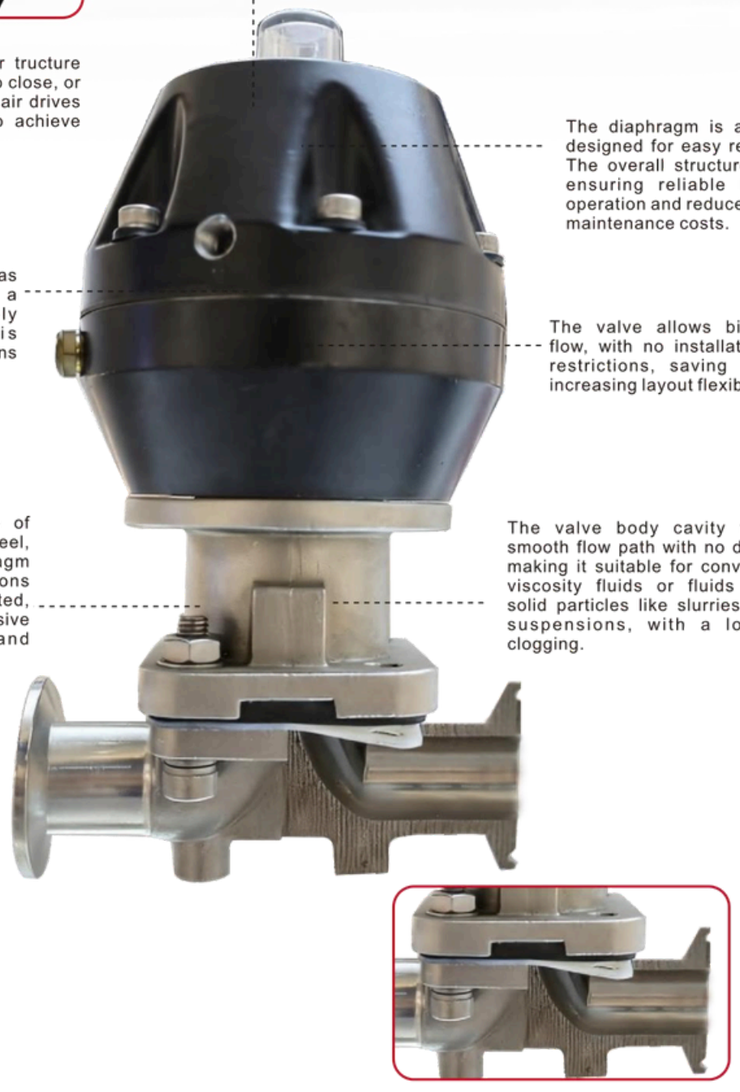
Detail Highlights



Utilizes a double-acting cylinder tructure (i.e., air-in to open, air-exhaust to close, or vice-versa), where compressed air drives the piston in both directions to achieve quick opening and closing.

Employs a flexible diaphragm as the sealing element, achieving a complete seal and effectively preventingleakage. This is particularly suitable for applications with high hygiene requirements.

The valve body can be made of materials such as stainless steel, cast steel, or PVDF. Diaphragm materials include rubber options (e.g., EPDM, NBR, PTFE-coated, etc.), adapting to various corrosive media like acids, alkalis, and organic solvents.



The diaphragm is a wear part designed for easy replacement. The overall structure is stable, ensuring reliable long -term operation and reduced maintenance costs.

The valve allows bi-directional flow, with no installation irection restrictions, saving space and increasing layout flexibility .

The valve body cavity features a smooth flow path with no dead zones, making it suitable for conveying high-viscosity fluids or fluids containing solid particles like slurries, mud, and suspensions, with a low risk of clogging.

VATTEN Valves & Controls

Pneumatic Bottom Ball Valve



Pneumatic Bottom Discharge Valve



Pneumatic / Manual Top-Discharge Valve



Technical Parameters

Size: DN15~DN200

Operation Mode: Pneumatic actuator、Lever operation

Working Pressure: PN10、PN16

Working Temperature: -15℃~120℃

Diaphragm Material: EPDM、EPDM+PTFE

Body Material: PP、PVDF、UPVC、PVC(Engineering Plastics), Cast Iron, Cast Steel

Medium: Strong acids, strong alkalis, organic solvents, corrosive gases, etc.

Connection Standard: Flanges, clamps, and yokes (plastic)

Application industry



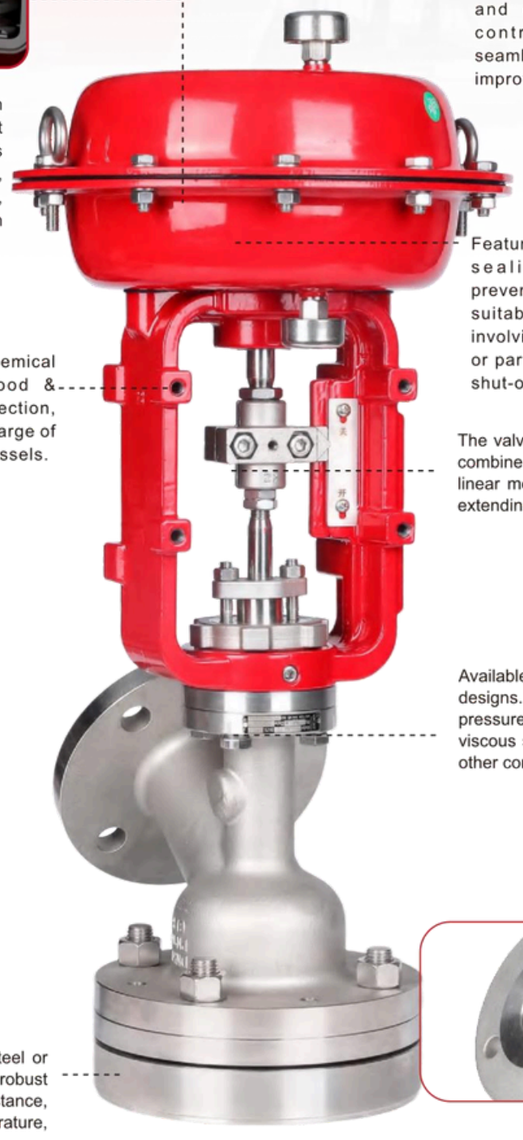
Tank Bottom Discharge Valve

Detail Highlights



Equipped with pneumatic diaphragm or piston actuators, enabling fast opening and closing. Supports automatic control, remote operation, and seamless PLC integration, significantly improving system automation levels.

Widely used in industries such as chemical processing, pharmaceuticals, food & beverage, and environmental rotection, particularly suitable for bottom discharge of reactors, storage tanks, and mixing essels.



Equipped with pneumatic diaphragm or piston actuators, enabling fast opening and closing. Supports automatic control, remote operation, and seamless PLC integration, significantly improving system automation levels.

Features a dual-seat (top and bottom) sealing structure, effectively preventing media leakage. Especially suitable for discharge applications involving high-viscosity, crystallizing, or particle-laden media, ensuring tight shut-off performance.

The valve stem adopts a segmented design combined with guiding devices, ensuring linear motion during frequent operation and extending service life.

Available with Y-type or angle-type body designs. The smooth flow passage reduces pressure loss and is ideal for handling viscous slurries, powders, suspensions, and other complex media.





Valve body materials include carbon steel or stainless steel, offering a compact and robust structure with high pressure resistance, suitable for high-pressure, high-temperature, or corrosive service conditions.

Pneumatic Bottom Ball Valve



Pneumatic Bottom Discharge Valve



Pneumatic / Manual Top-Discharge Valve



Technical Parameters

Size: DN40~DN250

Operation Mode: Pneumatic actuator、Electric actuator、Lever operation

Working Pressure: PN16~PN160

Working Temperature: -25℃~200℃

Sealing Material: Metal Seal、304+PFA, 304

Body Material: SS304、SS316、SS2205、SS2507

Medium: Water, Solvents、Acidic substances、Natural gas、Oxygen , Hydrogenperoxide、Methane

Connection Standards: GB、ANSI、JIS

Application industry



Cryogenic Valve

VATTEN Valves & Controls

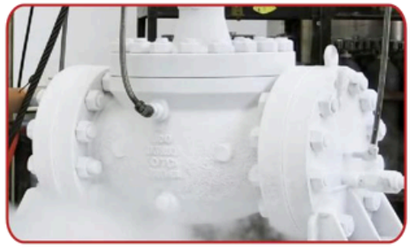
Detail Highlights

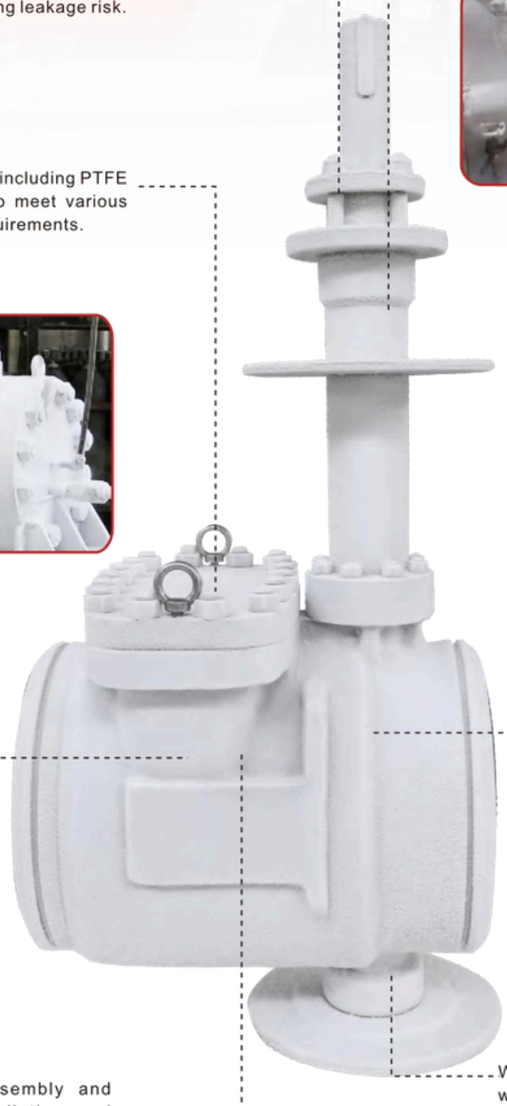
Specifically designed for cryogenic service, capable of stable operation at extremely low temperatures; suitable for LNG, liquid nitrogen, liquid oxygen, and other cryogenic media.



Innovative structural design effectively reduces friction between the valve body and seat, improving sealing performance and minimizing leakage risk.

Multiple sealing options available, including PTFE soft seals and metal hardseals,to meet various cryogenic media and pressure requirements.





Sealing materials feature excellent aging resistance and low friction coefficients, extending service life and reducing operating torque.

Structural design helps prevent condensation pricing on the valve exterior,ensuring safe and reliable operation.

Compact structure, easy disassembly and maintenance, suitable for installation and servicing in complex operating conditions.

Widely used in cryogenic systems within petrochemical, energy,and refrigeration industries,offering high reliability and long service life.

Cryogenic Ball Valve

Connection Type: flanged, welded

Pressure: PN<10.0MPa, DN<150mm
PN<4.0MPa, DN<200mm,

Minimum Temperature: ⩾-196℃.



Cryogenic Butterfly Valve

Connection Type: Flanged, welded

Pressure: PN<5.0MPa, DN<400mm,
PN≤4.0MPa, DN<600mm,

Minimum Temperature: ⩾-196℃.



Cryogenic Control Valve

Connection Type: flanged, welded

Pressure: PN<6.4MPa,DN<200mm,

Minimum Temperature: ⩾-196℃.



Cryogenic Globe&Check Valve

Connection Type: flanged, welded

Control Valve Pressure: PN≤15.0MPa, DN≤150mm
PN≤6.3MPa, DN≤300mm

Check Valve Pressure: PN≤10.0MPa、DN≤400mm

Minimum Temperature: ⩾-196℃.



Sanitary valve

Sanitary Ball Valve

Connection Type: Clamp
Pressure: PN10、PN16
Body Material: 304、316L
Trim Material: 304、316、316L
Seat: PTFE(other savail able up on request)
Packing: PTFE



Sanitary Butterfly Valve

Connection Type: Clamp
Pressure: PN10、PN16
Body Material: 304、316L
Trim Material: 304、316L
Seat: VMQ、FKM、EPDM、FFKM
Sealing Material: VMO、FKM、EPDM、FFKM



Sanitary Diaphragm Valve

Connection Type: Clamp
Pressure: PN10、PN16
Body Material: 304stainlesssteel、316L
Operating Temperature: upto+120°C with special materials
Seat: EPDM、PTFE
Sealing Material: EPDM、PTFE



Sanitary lobe Valve

Working Pressure: 1.6Mpa~16Mpa
Applicable Media : Water, steam, oil, mildly corrosive media Materials
Materials: Body & Bonnet: Carbonsteel, Cr-Ni-Tistainlesssteel
Stem: Chromium stainlesssteel, Cr-Ni-Tistainlesssteel
Sealing Surface : Hardfaced iron-based alloy, hardfaced carbide alloy, or base material



Sanitary Check Valve

Connection Type: Clamp
Pressure: PN10、PN16
Body Material: 304stainlesssteel、316L
Trim Material: 304stainlesssteel、316L



Sanitary Angle Seat Valve

Connection Type: Clamp
Pressure: PN10、PN16
Body Material: 304 stainlesssteel、316L
Trim Material: 304 stainlesssteel、316L
Seat: PTFE
Sealing Material: PTFE



Actuator

ActuatorOverview

VATTEN Valves provides a wide range of actuator solutions to meet the requirements of different operating conditions. Pneumatic actuators can be classified by structure into rack-and-pinion piston actuators (stable output, fast response, suitable for ball valves and butterfly valves), scotch yoke piston actuators (high torque output, ideal for large diameters or high differential pressure applications), pneumatic diaphragm actuators (simple structure and high safety, commonly used for control valves), and linear piston actuators (providing linear thrust, suitable for gate valves, globe valves, and similar linear-motion valves). Electric actuators include compact electric actuators (small size and flexible installation, suitable for pace-limited applications) and Q-type electric actuators (part-turn actuators designed for 90° operation of ball valves and butterfly valves), among other electric actuation options.



ScotchYoke Pneumatic Actuator



Pneumatic Diaphragm Actuator



Linear Piston Actuator



Electric Linear Actuator



Rack-and-Pinion Piston Actuator



Q-TypeElectricActuator



Q-Type Electric Actuator



Compact Electric Actuator



Accessories

Actuator Accessories Overyview

VATTEN offers a mature and reliable pneumatic accessory system, widely used in automation systems for on-off valves and control valves. The product range includes mechanical positioners, intelligent electro-pneumatic valve postioners 3/2-way and 5/2-way solenoid valves, limit switches, air filter regulators, declutchable handwheel devices, and pneumatic control valves. These accessories feature fast response and reliable performance, with modular design and strong compatibility, allowing flexible integration with various pneumatic actuators. In abnormal conditions such as power or air supply failure, manual operation or position locking can be realized to ensure system safety. All products comply with international standards including ISO, NAMUR, and VDI/VDE, providing customers with a highly reliable, safe, and intelligent one-stop pneumatic control solution.

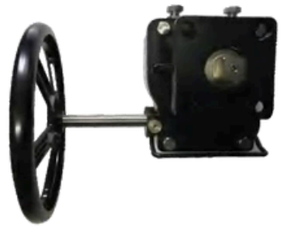
Valve Positioner








Declutchable Handwheel



Solenoid Valve






Air Filter Regulator






Limit Switch






For detailed technical parameters and accessory configurations,
please refer to the corresponding product datasheets.

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