SNY VALVE

Leading Technology Solutions For Engineering Valve

PRODUCT SUMMARY

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Leading Technology Solutions For Engineering Valve

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TO SERVE CUSTOMERS

TO RESPECT EMPLOYEES

TO DEDICATE TO SHOPFLOORS

STRONG TECHNICAL RESEARCH AND DEVELOPMENT CAPABILITIES

The Company has introduced advanced simulation technology and a research, development, and design management system. It is also equipped with advanced testing equipment. Through continuous research and innovation, the Company has gained a large amount of independent intellectual property rights.

Customer

Needs | Wants

- Timely and reliable delivery
- Quality assurance
- Persistence in safety

- Technical supports with rich experiences
- Professional product solution for valves
- Competitive prices
- Procurement capability
- Well-established service system

PRODUCTS

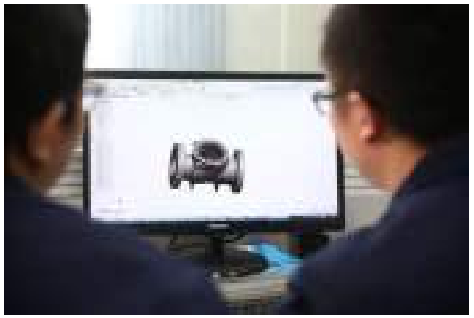
- General-purpose industrial valves
- Automated valves
- Corrosion resistant valves
- Special valves

MATERIALS

- Carbon steel
- Low temperature carbon steel
- High temperature alloy steel
- Stainless steel
- Duplex steel
- Super duplex steel
- High nickel alloy

INDUSTRIAL APPLICATIONS

- Marine engineering and naval architecture
- Oil and gas production
- Oil and gas field construction
- Natural gas transportation lines
- Liquefied natural gas (LNG)
- Air separating tank
- Refining
- Coal chemical industry
- Refining chemical industry
- Power and energy



POWERFUL MANUFACTURING CAPABILITIES

The application of the multi-factory management mode enables the interconnection and sharing of all data between SNY factories through optical cables.
SNY has a large number of CNC and automated production equipment, and uses advanced ERP systems to manage production plans.

Customer

Needs | Wants

- Timely and reliable delivery
- Quality assurance
- Persistence in safety

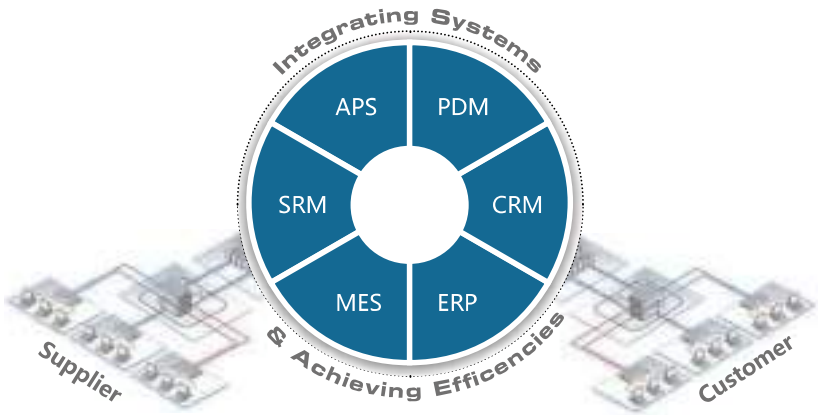
- Production capability
- Professionalism in material management
- Procurement capability
- Intelligent software
- Efficient processes

MULTI-FACTORY MANAGEMENT MODE

- No. 1 Factory : established in 2003, with a total area of 34,000 ㎡ .
- No. 2 Factory : established in 2008, with a total area of 58,000 ㎡ .
- No. 3 Factory : established in 2023, with a total area of 53,333 ㎡ .

INTERLINK OF PRODUCTION SYSTEM

In order to meet the needs and capabilities of our customers, SNY has customized our intelligent software system to simplify and automate business processes, thereby improving the efficiency of the system.



QUALITY CONTROL

For SNY's customers, quality assurance is critical. Not all valve manufacturers can product produce products with high quality in a reliably and consistent manner. SNY is constantly facing challenges, and has passed many international quality certifications. Our quality control is our core competitiveness, and it is also a solution that our customers urgently need.

Customer

Needs | Wants

- Timely and reliable delivery
- Quality assurance
- Persistence in safety
- Procurement capability
- Competitive prices
- Product standardization
- Efficient processes

SNY has obtained all major industry qualification certificates, including ISO 9001, API 600, API 6D, CE/PED, fire test, and ISO 15848 low leakage test certificates.

Key elements of quality control

Our supply chain management, specifications for internal control and inspection, and nonconforming product management are all important aspects of our quality control.

SUPPLY CHAIN AUDIT

- On-site evaluation conducted by internal chief auditor
- Hierarchical management of supply chain
- Monthly supply quality evaluation
- Information feedback system for supply chain

NONCONFORMING PRODUCT MANAGEMENT

- Timely report by electronic means
- Identify the problem
- Contain adverse effects
- Identify the cause
- Solve and correct

INTERNAL INSPECTION

- Visual inspection
- Dimensional inspection
- PMI
- Mechanical property tests
- Tensile tests
- Intergranular corrosion of stainless steel
- Non-destructive testing
- Pressure tests
- Low fugitive emission tests
- Cryogenic tests
- Various limits and special tests

SAFETY CULTURE

SNY is committed to creating a safe and healthy workplace. We provide extensive training and all necessary resources to promote safe practices across all of our business departments. Every employee is personally responsible for ensuring that they and their colleagues can safely return home at the end of each day. We believe that the only way to serve our customers is to put safety first.

Customer

Needs | Wants

- Persistence in safety
- A solid supplier base
- Stable supplier basis

Safety is Our First Priority.

Zero Accidents is Our Goal.

SNY'S SAFETY POLICY

- **Consistency** No matter where in the world, SNY employees maintain the same commitment to health and safety.
- **Culture** In SNY, we are responsible for each other, we minimize risks, and we continuously strive to create a safe working environment.
- **Competitiveness** We focus on prevention, and we implement safety training and development for our employees throughout their careers.
- **Connectivity** Our safety leaders sincerely pay attention to the welfare of their team and we encourage individuals to participate in creating a safe workplace.
- **Credibility** As a company, we invest time and resources to enhance our safety culture. We don't just talk about safety being our top priority - we take real measures to create a safe and efficient company.

MATERIAL MANAGEMENT

We focus on providing appropriate products to customers at the time and place they require. We have established an internal lean management system to predict and manage inventory in the most effective and economical way, while optimizing availability and customer service to the maximum.

Customer

Needs | Wants

- Timely and reliable delivery
- Quality assurance
- Professionalism in material management
- Stable supplier basis
- Standardization of parts and spare parts
- Efficient processes

SOLUTION

- Warehouse management
- Supplier-managed inventory
- Regional warehouse management
- Management of critical spare parts and major equipment parts
- Global procurement services
- Concentrated customer service center

TECHNICAL NETWORKS

We utilize scanning technology, QR codes, and traceability systems to provide a well-established and mature material management system.

REGIONAL DISTRIBUTION NETWORK

SNY is also attempting to establish distribution models across the world.

WELL-ESTABLISHED SERVICE SYSTEM

SNY is committed to maintaining long-term cooperation with our customers and providing them with long-term services.

Customer

Needs | Wants

- Timely and reliable delivery
- Professionalism in material management
- Stable supplier basis
- Standardization of parts and spare parts
- Efficient processes

PRE-SALES SERVICE

- Valve application and selection for various service conditions
- Interpretation and sharing of international leading valve technical specifications
- Preparation and advisory services for technical experience related to valves
- Sharing of strategic cooperation experience among global energy giants
- One-stop "valve supermarket" supply service

IN-SALE SERVICE

- Professional project management team
- Customized contract and project management plan
- 100% contract review and output
- Well-established and comprehensive customized ITP
- Modern intelligent software system covering all processes
- Well-established identification and traceability system
- Professional inspection, cooperation and coordination

AFTER-SALE SERVICE

- More than 30 national and international bilingual after-sales service experts
- 24-hour hotline, 365 days a year
- 24-hour on-site response
- Massive MRO inventory of finished machines and parts
- CNAS laboratory can conduct failure analysis at any time
- Sync point services for large-scale project
- One-key file recording, download and query

Conventional Gate, Globe and Check Valves

G/GL/S00000 Series General-Purpose Engineering Valves

As one of SNY's main products, this series of products are supplied to our national and international customers in large quantities every year. SNY can provide a full range of sizes, pressures, and material choices.

All products in this series comply with API 591, and have passed the pressure tests conducted in accordance with API 598. This series of valves have been certified in accordance with ISO 15848-1 and API 624 for fugitive emission.

SNY holds a massive inventory of parts for this series of products so that the user's on-site urgent needs can be met.

Size
2" to 60" [50 to 1,500 mm]

Pressure Classes
ASME 150 to 2500
DIN PN10 to 420
ISO PN 20 to 420

End Connection
Double Flanged RF/RTJ, Butt weld.

Temperature Range
-320 to +1500°F [-196 to +815°C]

Body Material
WCB, LCB;
WC6, WC9, C5, C12;
CF8, CF8M,CF3, CF3M,CF8C;
Duplex, Superduplex;
Inconel®, Alloy 20, Monel®, Incoloy®, Hastelloy®, Titanium.

Operating Means
- Handwheel
- Gear
- Electric actuator
- Pneumatic actuator

Industry Applications
Petrochemical industry,
long-distance oil and gas transportation pipelines

G00,000 Gate Valve

Size:
2" to 60" (DN 50 to DN 1500)
Pressure Classes:
Class 150 lb to 2500 lb (PN 16 to PN 420)
Body Material:
Carbon steel, stainless steel, alloy steel, duplex steel
End Connection:
Flanged RF/RTJ, butt-welding (BW)
Operating Means:
Handwheel, gear, electric actuator, and pneumatic actuator
Design Features:
- Bolted body and bonnet construction. Different types of gasket are used for different pressure classes.
- Anti blow-out stem design ensures that the conical back seat contacts against the back seat of the bonnet when the valve is in fully open position.
- Flexible-wedge gate can make compensation for the deformation of the valve body.
- The lifetime of the stem nut threads is sufficiently guaranteed, and allows for the removal of the handwheel while keeping the stem in the fully open position.
- Double packing and spacer rings can be provided as required by the customers.
- The integral full length of guide rail inside the valve body ensures that the gate can remain alignment at any position during opening and closing
- The strength of the stem-to-gate connection exceeds the strength of the root of the valve stem thread.
- The sealing surface of the seat rings faced with No. 6 cobalt-based material are installed by sealing welding, and threaded seat rings can be used when required by the customer.
- Optional stem extension.

GL00,000 Globe Valve

Size:
2" to 24" (DN 50 to DN 600)
Pressure Classes:
Class 150 lb to 2500 lb (PN 16 to PN 420)
Body Material:
Carbon steel, stainless steel, alloy steel, duplex steel
End Connection:
Flanged RF/RTJ, butt-welding (BW)
Operating Means:
Handwheel, gear, electric actuator, and pneumatic actuator
Design Features:
- Standard plug type disc, and ball type, parabola type,needle type, or flat seat type can be available.
- The sealing surfaces of the seat rings are faced with No. 6 cobalt-based material.
- Anti blow-out stem design allows for the replacement of packing when the valve is in fully open position.
- Hinged bolts that can be rotated in the lateral direction are better for packing maintenance.
- Optional stem extension.
- Optional high-in-low-out design for large diameters.
- Impact handwheel can be equipped according to SNY standards or customer requirements.

S00,000 Check Valve

Size:
2" to 60" (DN 50 to DN 1500)
Pressure Classes:
Class 150 lb to 2500 lb (PN 16 to PN 420)
Body Material:
Carbon steel, stainless steel, alloy steel, duplex steel
End Connection:
Flanged RF/RTJ, butt-welding (BW)
Design Features:
- Metallic spiral wound gaskets are used for classes 600 LB and lower, and standard metallic ring gaskets are used for classed 900 LB and higher.
- Standard swing type disc, which are suitable for horizontal lines or vertical lines with the flow be in an upward direction.
- The sealing surfaces of the seat rings are faced with No. 6 cobalt-based material by standard sealing welding, and threaded seat rings are optional.
- Hinge pin built-in design, no external leakages, which allows for the sufficient movement of the disc.
- Optional external heavy damping type disc.

Forged Steel Valve

G/GL/C00000 Series General-Purpose Engineering Valves

Small forged steel valves are a universal and reliable valve solution. One key feature of small forged steel valves is their compact size, which facilitates installation and maintenance in narrow spaces. The valves are also characterized by their firm structure, efficient operation, and strong adaptability, which make them suitable for a variety of applications under different service conditions.

SNY forged steel valves include gate valves, globe valves, and check valves, which are designed in accordance with API602/ISO15761.

SNY holds a massive inventory of parts for this series of products, so that the on-site urgent needs of the user can be met.

Size
1/2" to 2" (DN 15 to DN 50)

Pressure Classes
ASME 150 to 2500
DIN PN10 to 420
ISO PN 20 to 420

End Connection
Socket-welding , Threaded NPT, Flanged RF/RTJ, Butt-welding.

Temperature Range
-425 to +1500°F [-254 to +815°C]

Body Material
A105, LF2;
F11, F22, F5, F9;
F304, F316,F304L, F316L;
Duplex, Superduplex;
Inconel®, Alloy 20, Monel®, Incoloy®, Hastelloy®, Titanium.

Operating Means
- Handwheel
- Electric actuator

Industry Applications
Petrochemical industry

Forged Steel Gate Valve

Size:
1/2" to 2" (DN 15 to DN 50)
Pressure Classes:
CLASS 150 to 2500
Body Material:
Carbon steel, stainless steel, alloy steel
End Connection:
Socket-welding, Threaded NPT, Flanged RF/RTJ, Butt-welding.
Operating Means: Handwheel
Design Features:
- Active back seats and leak-proof stuffing box with long lifetime are used for the stem seal(s) to guarantee the safe use.
- The valve stem and gate are connected using a T-joint, thus making it easy to install.
- Fully guided gate to reduce friction on the surface of the seat ring.
- Compression joint bolted connection facilitates the packing maintenance.
- A leak-proof cavity design is used for the valve cover connection, which can eliminate the ductile deformation of stainless steel wound gasket under the preload.
- Pressed-in seat rings ensure that the seat rings are installed in a compactly and effective manner.

Forged Steel Globe Valve

Size:
1/2" to 2" (DN 15 to DN 50)
Pressure Classes:
CLASS 150 to 2500
Body Material:
Carbon steel, stainless steel, alloy steel
End Connection:
Socket-welding, Threaded NPT, Flanged RF/RTJ, Butt-welding.
Operating Means: Handwheel
Design Features:
- Active back seats and leak-proof stuffing box with long lifetime are used for the stem seal(s) to guarantee the safe use.
- The valve disc is guided by the valve body, ensuring that a tight fit between the disc and seat ring is achieved when the valve is closed, and also reducing friction on the surface of the seat ring.
- Compression joint bolted connection facilitates the packing maintenance.
- A leak-proof cavity design is used for the valve cover connection, which can eliminate the ductile deformation of stainless steel wound gasket under the preload.
- The plug type disc is a SNY standard design; flat seat type, needle type, ball type, or parabola type can also be provided as required by the customer.

Forged Steel Check Valve

Size:
1/2" to 2" (DN 15 to DN 50)
Pressure Classes:
CLASS 150 to 2500
Body Material:
Carbon steel, stainless steel, alloy steel
End Connection:
Socket-welding, Threaded NPT, Flanged RF/RTJ, Butt-welding.
Design Features:
- A leak-proof cavity design is used for the valve cover connection, which can eliminate the ductile deformation of stainless steel wound gasket under the preload.
- The valve disc is guided by the valve body, ensuring that a tight fit between the disc and seat ring is achieved when the valve is closed, even if at high flow rates.
- The swing type disc is an optional design; T-type lifting check valves can also be provided as required by the customer.

Floating Ball Valve

B/BU/BF00,000 Series

Ball valves are mainly used to block, distribute, and change the flow direction of fluids or gases in pipelines. A tight seal can be achieved through a 90-degree rotation and a small rotational torque.

For SNY floating ball valves, there are four different series of design:
- B00,000 Series: Two-piece side entry cast steel floating ball valve
- BU00,000 Series: One-piece side entry cast steel floating ball valve
- BF00,000 Series: Two-piece side entry forged steel floating ball valve

The design of the SNY floating ball valve complies with ISO 17292, API 6D, and API 608. This series of soft-seated valves shall be fire-tested and certified in compliance with API 607 and API 6FA. Soft or hard seat designs can be provided according to the service conditions.

Size
1/2" to 12" [15 to 300 mm]

Pressure Classes
ASME 150 to 2500
DIN PN10 to 420
ISO PN 20 to 420

End Connection
Flanged RF/RTJ, Butt-welding.

Temperature Range
-320 to +392°F [-196 to +200°C]

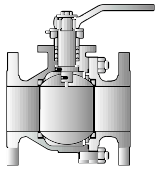
Body Material
WCB/A105, LCB/LF2; WC6/F11, WC9/F22, C5/F5, C12/F9;
CF8/F304, CF8M/F316,CF3/F304L, CF3M/F316L;
Duplex, Superduplex;
Inconel®, Alloy 20, Monel®, Incoloy®, Hastelloy®, Titanium

Operating Means
- Handwheel/gear
- Electric actuator
- Pneumatic actuator
- Pneumatic-hydraulic actuator
- Electric-hydraulic actuator

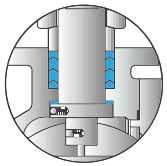
Industry Applications
Petrochemical industry, long-distance oil and gas transportation pipelines,paper making, chemicals, pharmaceutical, and food industries

Design Features:

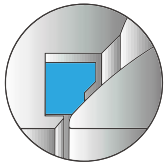
- Full bore or reduced bore design.
- Equipped with a valve opening and closing position indicator and an optional locking device to prevent mis-operation.
- Low torque design.
- ISO 5211 standard upper attachment dimensions are used.
- Fugitive emission design.
- Optional hard seat design.



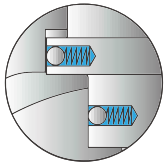
- The valve stem and ball are designed with an independent split design, and the end of the valve stem near the ball is designed as an integral shoulder to prevent the stem from being ejected from the cavity by the media under abnormal pressure rise.



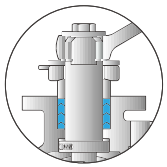
- The fire-safe design complies with API 607/API 6FA. In the event of a fire, the non-metallic materials will melt and fail, allowing the lips of metal seat ring to be pushed towards and contact the ball. This will block fluid leakage between the valve body and seat.



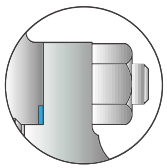
- An electrostatic path is created between the valve stem, body, and ball to dissipate static electricity generated by friction during operation. This helps to prevent fire or explosion hazards caused by static sparks.



- To reduce environmental pollution, SNY takes fugitive emissions as a standard technical requirement. The company uses unique packing with fugitive emissions and strictly controls the surface roughness of the valve stem to ensure a well-lubricating function and minimal friction. This minimizes stem leakage and ensures stable sealing performance under long-term rotating conditions.



- Fugitive emission gaskets are used in the valve body and cover cavity, and torque wrenches are used to control bolt preload during assembly to minimize cavity leakage.



Trunnion Ball Valve

BS/BD/BT00,000 Series

Ball valves are used to block, distribute, and change the flow direction of media in pipelines. A tight shutoff is achieved with a 90-degree rotation and a small rotational torque.

SNY trunnion ball valves are available in two-piece or three-piece split side entry designs, or top entry designs as required. They are suitable for fluid control in large-diameter and high-pressure pipelines, and can achieve double block and bleed.

The SNY trunnion ball valve is designed in accordance with ISO 17292, API 6D, and API 608. This series of soft-seated valves is fire-tested and certified in compliance with API 607 and API 6FA. Soft or hard seat designs can be provided according to the service conditions.

Size
1/2" to 60" [15 to 1500 mm]

Pressure Classes
ASME 150 to 2500
DIN PN10 to 420
ISO PN 20 to 420

End Connection
Flanged RF/RTJ, Butt-welding.

Temperature Range
-320 to +392°F [-196 to +200°C]

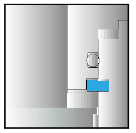
Body Material
WCB/A105, LCB/LF2; WC6/F11, WC9/F22, C5/F5, C12/F9;
CF8/F304, CF8M/F316,CF3/F304L, CF3M/F316L;
Duplex, Superduplex;
Inconel®, Alloy 20, Monel®, Incoloy®, Hastelloy®, Titanium.

Operating Means
- Handwheel/gear
- Electric actuator
- Pneumatic actuator
- Pneumatic-hydraulic actuator
- Electric-hydraulic actuator

Industry Applications
Petrochemical industry, long-distance oil and gas transportation pipelines,paper making, chemicals, pharmaceutic al, and food industries

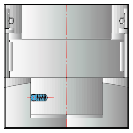
Design Features:

- Full bore or reduced bore design
- Equipped with a valve opening and closing position indicator and an optional locking device to prevent misoperation.
- Low torque design.
- High strength, high wear resistance bearings.
- Reasonable ball support type.
- The preload of spring ensures a tight and reliable sealing at low pressure.
- ISO 5211 standard upper attachment dimensions are used.
- Fugitive emission design.
- Optional hard seated design.



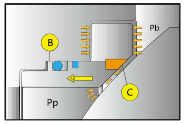
Anti blow-out stem

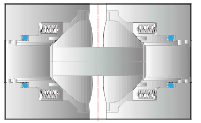
Fire-safe seat



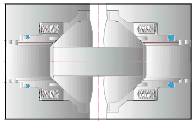
Anti-static

DBB



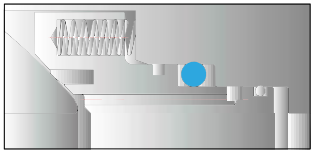


DIB-1

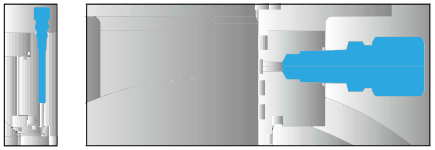


DIB-2

- Different valve seat construction can be selected in accordance with the requirements of pipeline service conditions to meet different requirements.



- Soft plus hard seat design of the valve seat can effectively prevent internal leakage.



- The valve seat and stem are equipped with sealant injection fittings and lubricating devices. The sealant injection fittings can be used for emergency sealing of the seat and stem, and the lubricating devices can be used for lubricating the seat and stem under certain severe service conditions.

Full-welded Ball Valve

BSW00,000 Series

Fully-welded ball valves have excellent performance, with zero external leakage and reliable sealing. They are suitable for fluid control in large-diameter and high-pressure pipelines. Full bore design is usually used, which is convenient for pipeline pigging and characterized by low flow resistance, high circulation volume, and excellent flow characteristics.

SNY fully-welded trunnion ball valves can achieve double block and bleed. This enables online emergency sealant injection. SNY uses forged steels to ensure uniform material composition and strength. The valves are designed, manufactured, and tested to API 6D and ASME B16.34 standards, and can meet the requirements of API 6FA and API 607.

Sleeves for operation, lifting, etc., can be provided as required by the customer.

Size
2" to 60" [50 to 1500 mm]

Pressure Classes
ASME 150 to 2500
DIN PN10 to 420
ISO PN 20 to 420

End Connection
Butt-welding.

Temperature Range
-45 to +248°F [-50 to +120°C]

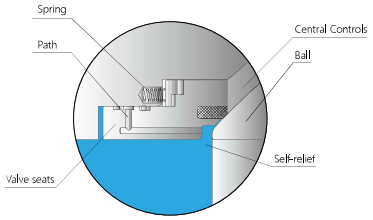
Body Material
WCB/A105, LCB/LF2; WC6/F11, WC9/F22, C5/F5, C12/F9;
CF8/F304, CF8M/F316,CF3/F304L, CF3M/F316L;
Duplex, Superduplex;
Inconel®, Alloy 20, Monel®, Incoloy®, Hastelloy®, Titanium.

Operating Means
- Handwheel/gear
- Electric actuator
- Pneumatic actuator
- Pneumatic-hydraulic actuator
- Electric-hydraulic actuator

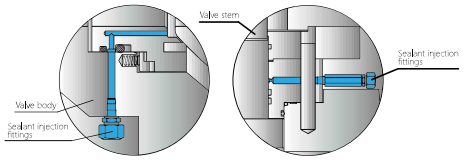
Industry Applications
Long-distance pipeline, oil and natural gas transportation.

Design Features:

- Standard fire-safe and anti-static design.
- Standard anti blow-out stem design.
- Fully-welded body construction can effectively prevent the media leakage towards outside the pipeline.
- Online replacement of stem seal(s) can achieve.
- The standard ISO5211 upper flanges matched with actuator are used.
- Optional DBB, DIB-1 or DIB-2 to accommodate different requirements.
- Optional buried for operation and extension design.

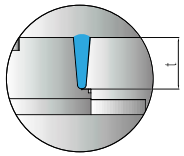


- When the pressure in the cavity overcomes the spring force, the valve seat moves away from the ball, relieving the pressure into the path.

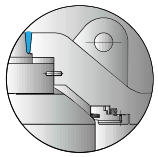


- Sealant injection fittings are equipped on the valve seat and stem for emergency sealing. They can also be used for lubricating grease injection under normal conditions where the valve seat, ball, or stem are required to be lubricated.

- The depth of the welds between the valve body and cover, t, is calculated using the ASME thin-walled cylinder formula. This ensures that the valve has a more compact construction and reduces one external leakage point.



- To prevent damage from welding heat, welds should be kept as far away from non-metallic trims as possible. An insulation slot at the bottom of the weld seam can maximize the protection of non-metallic trims from damage while avoiding significant stress concentration in the weld area.



Hard-seated Wear Resistant Ball Valve

BM/BMF/BSM/BSMO 00,000 Series

Metal hard-seated ball valves are suitable for more severe service conditions, including high temperature, high pressure, strong corrosion, and particle-containing media. A unique hardening is applied to the sealing surface to achieve a safe and reliable seal with long service life and easy operation. The valves also have the characteristic of low pressure loss, which is common to ball valves.

SNY hard-seated ball valves are available with the following different series of design:

Floating Ball Valve:
- BM00,000 Series: Two-piece side entry cast steel ball valve
- BMF00,000 Series: Two-piece side entry forged steel ball valve

Trunnion Ball Valve:
- BSM00,000 Series: Two-piece side entry cast steel ball valve, with graphite construction
- BSMO00,000 Series: Three-piece side entry forged steel ball valve, with O-ring construction

Size
2" to 40" [50 to 1000 mm]

Pressure Classes
ASME 150 to 2500
DIN PN10 to 420
ISO PN 20 to 420

End Connection
Double Flanged RF/RTJ, Butt-welding

Temperature Range
-45 to +752°F [-50 to +400°C]

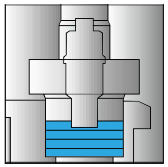
Body Material
WCB/A105, LCB/LF2; WC6/F11, WC9/F22, C5/F5, C12/F9;
CF8/F304, CF8M/F316,CF3/F304L, CF3M/F316L;
Duplex, Superduplex;
Inconel®, Alloy 20, Monel®, Incoloy®, Hastelloy®, Titanium.

Operating Means
- Handwheel/gear
- Electric actuator
- Pneumatic actuator
- Pneumatic-hydraulic actuator
- Electric-hydraulic actuator

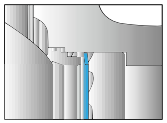
Industry Applications
Coal chemical industry, photovoltaic industry, strong acid media, paper making, air separation, H2S-containing media.

Design Features:

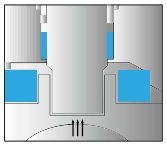
- Several customized valve seat designs accommodate different severe services.
- The standard ISO5211 upper flanges matched with actuator are used.
- Packing and gaskets with fugitive emission, which meet requirements for fugitive emission.
- Anti blow-out stems guarantee the safety and reliability under full pressure.
- Special hard alloy coatings are applied according to service conditions, thus effectively extending the online operation life of the valve.



- The unique dynamic pressure retainer plate design provides stable and continuous preload for the packing, compensating for temperature and pressure fluctuations in the pipeline system and packing wear. This achieves good dynamic sealing of the stem packing and prevents external leakage for a long time.



- In service conditions with solids, the spring cavity of the seat-compensated spring often experiences material accumulation and failure. This is because once solids enter the spring cavity, they can easily cause the valve seat to get stuck. To address this problem, SNY specially designed a dirt-excluding slot. Although materials will enter the disc spring, they are discharged into the pipeline through the dirt-excluding slot. This prevents the disc spring from getting stuck and effectively ensures the flexibility of the valve seat and normal operation of the valve.



- The double-bearing design and unique hardening maximize the stability of torque on the valve shaft, solving the problems of poor wear resistance, easy seizure, and short service life of single bearings. By applying preload, two wedge surfaces are created to prevent ultrafine powders from entering the bearing cavity.

- The scraper-type valve seat design can effectively prevent the media from sticking on the sealing surface, ensuring reliable sealing and extending the service life of the valve.

Forged Steel Ball Valve

BC00,000 Series

Forged steel ball valves operate in the same way as conventional cast steel ball valves. They are opened or closed by rotating the valve stem. This ball valve is usually a full bore ball valve with a 90 degree angle switch. The biggest advantage of this valve is its light weight and small size.

SNY forged steel ball valves have reliable sealing, simple construction, and are easy to maintain. The sealing surface and spherical surface are often in a closed state, which makes them resistant to erosion by media. They have been widely used in various industries.

SNY forged steel ball valves consist of low- and high-pressure forged steel ball valves.

Size
1/2"to 2" (DN 15 to DN 50)

Pressure Classes
ASME 150 to 2500
DIN PN10 to 420
ISO PN 20 to 420

End Connection
Socket-welding , Threaded NPT, Flanged RF/RTJ, Butt-welding

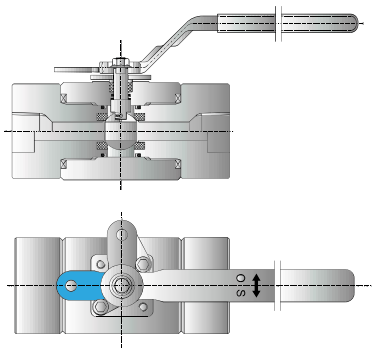
Temperature Range
-425 to +1500°F [-254 to +815°C]

Body Material
A105, LF2;
F11, F22, F5, F9;
F304, F316,F304L, F316L;
Duplex, Superduplex;
Inconel®, Alloy 20, Monel®, Incoloy®, Hastelloy®, Titanium.

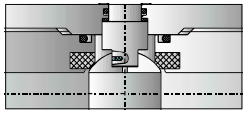
Operating Means
- Handwheel
- Gear
- Electric actuator

Industry Applications
Petrochemical industry

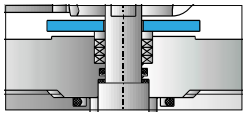
Design Features:



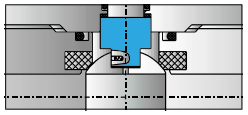
- The valve is equipped with an integral locking device for reliable flow direction locking and to prevent unauthorized operation.



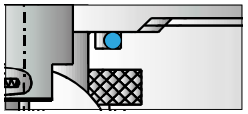
- The anti-static grounding device, a spring grounding plug, ensures that a conductive circuit is established between the valve stem, ball, and valve body to prevent static electricity from accumulating.



- ISO5211-compliant attachment dimensions are used to simplify the installation of actuators.



- The anti-blowout stem design features a T-shaped construction at the bottom of the valve stem with an integral boss on the valve body. This design ensures that the valve stem is not ejected from the valve under pressure.



- The O-ring seal design ensures that threaded connections are protected from crevice corrosion.

Triple Offset butterfly valve

TT00,000 Series

The triple offset-type butterfly valve is a lightweight, low-torque, compact, and low-cost valve that can replace conventional gate valves, globe valves, or ball valves under most service conditions. It is developed on the basis of conventional resilient seated butterfly valves and has the following features: light weight, low torque, compact design, and low cost.

The metal valve seat design makes the valve suitable for severe service conditions. The offset-type design allows the disc to detach from the valve seat upon valve opening, reducing seat friction and significantly improving the service life of the valve. The valve also has inherent fire resistance and can be widely used for blocking and regulating various fluids in pipelines.

The SNY triple offset-type butterfly valve features a hard seat design with one-quarter turn, bidirectional sealing, and fire-safe performance. This eliminates the material aging and deformation issues of soft-seated butterfly valves. The top entry design also allows for online maintenance.

The SNY triple offset-type butterfly valve meets the design, inspection and testing requirements of API 609, API 598, etc..

Size
2" to 160" [50 to 4000 mm]

Pressure Classes
ASME 150 to 2500
DIN PN10 to 420
ISO PN 20 to 420

End Connection
Double Flanged, Wafer, Lug.

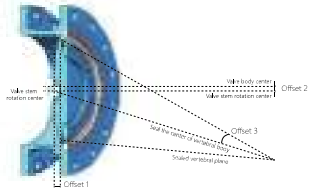
Temperature Range
-425 to +1500°F [-254 to +815°C]

Body Material
WCB, LCB;
WC6, WC9, C5, C12;
CF8, CF8M,CF3, CF3M, CF8C;
Duplex, Superduplex;
Inconel®, Alloy 20, Monel®, Incoloy®, Hastelloy®, Titanium

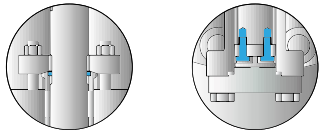
Operating Means
- Gear
- Electric actuator
- Pneumatic actuator
- Pneumatic-hydraulic actuator
- Electric-hydraulic actuator

Industry Applications
Petrochemical industry, refineries, shipbuilding, power plants, steel mills, water treatment

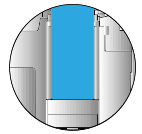
Design Features:



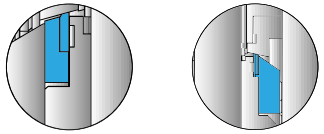
- Reliable bidirectional zero-leakage and tight sealing.
- Replaceable sealing pair.
- No dead-end construction.
- All metal construction with intrinsic fire resistance is suitable for a wider range of temperature and pressure.
- Torque forced seals.
- Integral valve stem design with high stiffness.
- Hardened valve seat,which extends the lifetime of the valve, and reduce the frequency of maintenance.
- The standard ISO5211 upper flanges matched with actuator are used.



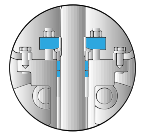
- Double valve stem anti blow-out design, effectively ensuring pressure safety. The upper valve stem is slotted and embedded into the split ring. The bottom valve stem is designed as a stepped shaft.



- The extended bearing design, combined with unique finish machining and hardening treatment, reduces friction on the valve stem and reduces torque.



- Optional multi-level and all-metal sealing ring constructions can be used with a variety of media.



- Valve stem sealing design with fugitive emission:
  API622 stem packing with fugitive emission.
  The valve stem is guided and positioned throughout its travel to avoid packing leakage due to lateral displacement.
  Surface roughness control of the valve stem and stuffing box.
  Optional gland flange for dynamic load.
  The fugitive emissions comply with ISO 15848, API 641 and TA-Luft.

Double Offset Butterfly Valve

TB00,000 Series

Conventional resilient seated butterfly valves have limited temperature and pressure ranges. High-performance double offset-type butterfly valves are developed to meet the market demands for valves that can operate in wider temperature and pressure ranges.

The double offset-type design of the valve ensures excellent sealing performance. The disc detaches from the valve seat immediately upon valve opening, which minimizes the possibility of seat wear compared to traditional center line-type butterfly valves.

The SNY double offset-type butterfly valve features a double offset-type design with one-quarter turn. It has the advantages of light weight, compact structure, and low operating torque, among others.

The SNY double offset-type butterfly valve meets the design, inspection, and testing requirements of API 609, API 598, and other relevant standards.

Size
2" to 80" [50 to 2000 mm]

Pressure Classes
ASME 150 to 600
DIN PN10 to 100
ISO PN 20 to 100

End Connection
Double Flanged, Wafer, Lug.

Temperature Range
-45 to +392°F [-50 to +200°C]

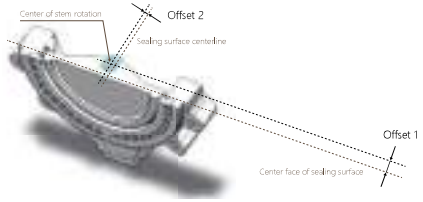
Body Material
WCB, LCB;
WC6, WC9, C5, C12;
CF8, CF8M,CF3, CF3M, CF8C;
Duplex, Superduplex;
Inconel®, Alloy 20, Monel®, Incoloy®, Hastelloy®, Titanium

Operating Means
- Handwheel/gear
- Electric actuator
- Pneumatic actuator
- Pneumatic-hydraulic actuator
- Electric-hydraulic actuator

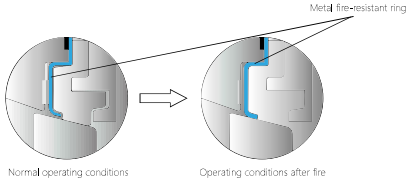
Industry Applications
Petrochemical industry, refineries, offshore platform, LNG, shipbuilding, paper making, power plants, fuel processing, industrial systems.

Design Features:

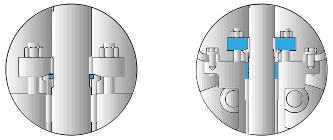
- The standard ISO5211 upper flanges matched with actuator are used.
- Bidirectional tight sealing.
- Offset-type design allows the dick to quickly detach from the valve seat.
- Long service life, suitable for high-frequency service conditions.
- Fire-safe can be designed according to API 607.
- Simple valve seat replacement and easy maintenance.
- Both cut-off and control are possible.



- Offset 1: The center of the valve stem deviates from the sealing surface, which guarantees the continuity of the sealing surface.
  Offset 2: The center of the valve stem deviates from the center of the valve body, which reduces the opening friction force between the disc and seat.
- The opening and closing torque is transmitted to the sealing pair of the valve disc through the valve stem. The unique resilient sealing design ensures zero leakage under both water pressure and air pressure.



- Fire-safe design (optional): The soft seats provide sealing under normal operating conditions. In the event of a fire, the soft seat burns out and the metal fire-resistant ring provides sealing, which reduces fire safety hazards.



- The anti-blowout valve stem design uses an externally secured valve stem, which meets the requirements of API 609.
- Valve stem sealing design with fugitive emission:
  API622 stem packing with fugitive emission.
  The valve stem is guided and positioned throughout its travel to prevent packing leakage due to lateral movement.
  Surface roughness control of the valve stem and stuffing box.
  Optional gland flange for dynamic load.
  The fugitive emissions comply with ISO 15848, API 641 and TA-Luft.

Dual-plate Wafer Check Valve

CD00,000 Series

Compared with traditional flanged check valves, dual-plate wafer check valves are simple in construction, have small face-to-face dimensions, and are also simpler to install and maintain. SNY can provide a full range of design solutions.

SNY dual-plate wafer check valves are designed and manufactured to API 594 and ASME B16.34 standards. Pressure tests are conducted in accordance with API 598.

The wafer check valve applies an internal pin design with no external leakage points (no bolted or threaded connections). It can be installed in horizontal or vertical pipelines. This series of SNY valves have excellent sealing performance, with lower pressure loss.

Size
2" to 60" [50 to 1500 mm]

Pressure Classes
ASME 150 to 1500
DIN PN10 to 250
ISO PN 20 to 250

End Connection
Double Flanged, Wafer, Lug.

Temperature Range
-320 to +1500°F [-196 to +815°C]

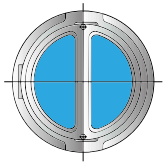
Body Material
WCB, LCB;
WC6, WC9, C5, C12;
CF8, CF8M,CF3, CF3M, CF8C;
Duplex, Superduplex;
Inconel®, Alloy 20, Monel®, Incoloy®, Hastelloy®, Titanium.

Industry Applications
- Oil and gas production
- Oil refining, petrochemical
- Pulp and paper making
- Shipbuilding
- Other services that the backflow prevention is necessary

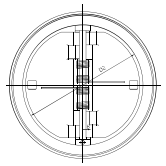
Design Features:

- Compact design with light weight.
- Flexible pipeline installation orientation.
- Intrinsic fire-safe design.
- Unobstructed port is designed with low fluid resistance.
- Quick action and excellent sealing performance.
- Short travel of valve disc and low impact force.
- The valve disc is closes quickly, and the pressure of water hammer is low.

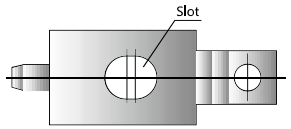
- Based on the predetermined design requirements, SNY uses optimized and mature calculation methods to design springs that meet the requirements. The material used is Inconel, which has excellent corrosion resistance, oxidation resistance, and strength, as well as good relaxation resistance and excellent mechanical properties.
- Two independent torsion springs improve the response speed of the valve, extend the service life of the valve, and reduce the effect of water hammer, thereby improving the performance of the entire pipeline system.



- For severe service conditions, such as hazardous or toxic media, integral design eliminates the need for fixed external plugs and makes external leakage impossible. This is the best choice to reduce the risk of unwanted leakage.
- The valve body's continuous and complete gasket contact surface ensures effective sealing between the valve and pipeline.



- Integrally cast anti-collision blocks on the back of the dual plate can effectively prevent frequent collisions, extend the lifetime of trims, minimize wear under severe services, and reduce maintenance costs as much as possible.



- The support seat has waist-shaped holes through which the pin shaft only moves in the direction of flow without radial movement. This prevents galling between the disc sealing surface and body sealing surface when opening. Moreover, the valve operates smoothly, stably, and with low noise.