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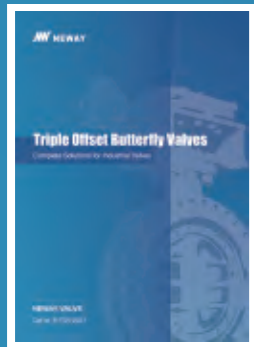
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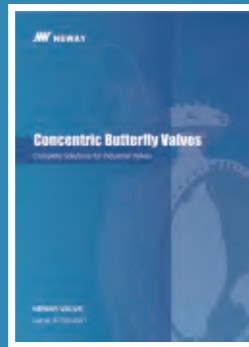
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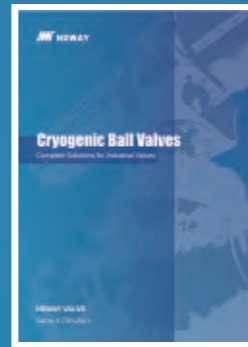
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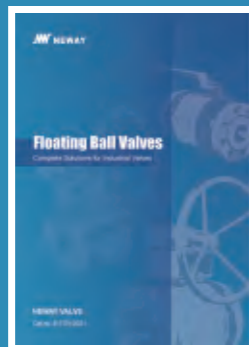
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Cat.no.:E-CBV



Cat.no.:E-FWBV



Cat.no.:E-FBV



Cat.no.:E-TMBV



Cat.no.:E-MSBV

# Cryogenic Gate, Globe & Check Valves

Complete Solutions for Industrial Valves

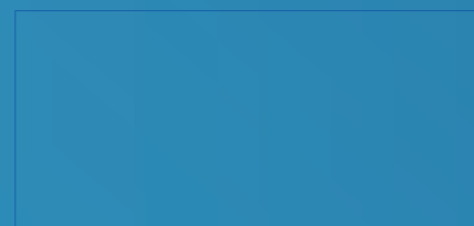


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Complete Solutions for Industrial Valves

As a global leader of valve manufacturing, Neway (SSE:603699) is dedicated to the production, research, and development of industrial valves. Neway is committed to providing complete valve solutions to all industries through advanced engineering and innovation.

Neway's product line includes Ball, Butterfly, Gate, Globe, Check, Nuclear, Control, Subsea, Safety valves. Our high quality standards and innovative ability are recognized by many global end users and EPCs. Neway valves are utilized in a wide variety of industries and working conditions such as Refining, Chemical, Coal Chemical, Offshore(including subsea), Air Separation, LNG, Nuclear Power, Power Generation, and Pipeline Transmission applications.

Facilities & Service

Neway has developed a sophisticated multi-plant management system operating one valve assembly plant, one API6A valve plant, three foundries, and one R&D center. Our largest assembly plant was expanded in 2013, and it now covers 35,000 square meters.

Advanced software (ANSYS, FE-Safe, CF-Design, Siemens PLM and NX) is applied here at Neway for the Research & Development of products. We use SAP to control the traceability and status of all products during the manufacturing process. In order to ensure the safety, eco-friendliness, and reliability of our products, we use the most advanced fire-safe, cryogenic, high pressure, and fugitive emission test equipment.

As part of Neway's global strategy, to provide better service to our customers, we have established our overseas subsidiaries in USA, Netherlands, Italy, Singapore, and Dubai along with over 80 agents and distributors worldwide.

Quality Assurance

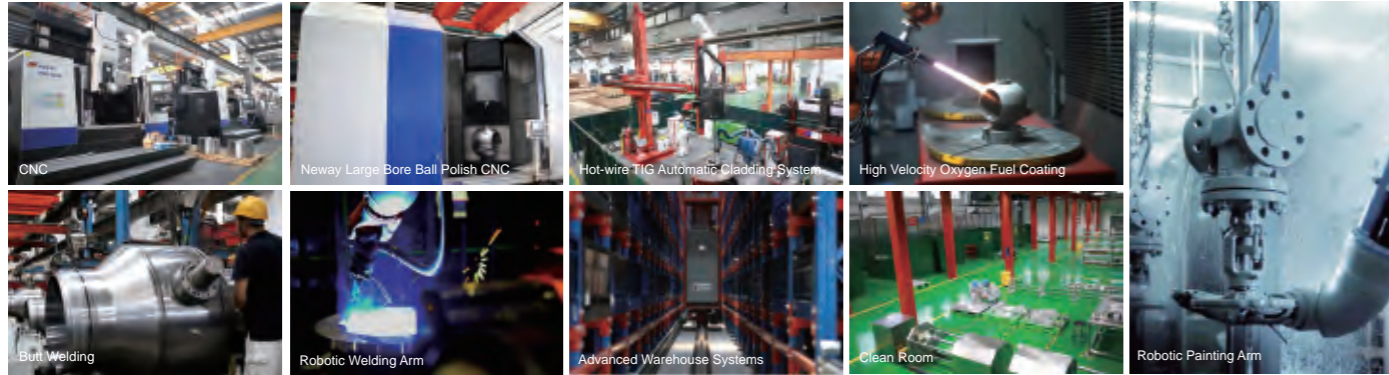
Neway is dedicated to the pursuit of "Zero Defect". We maintain a quality management system that encompasses our entire operation from order entry, to final inspection. Through Neway's continuous efforts, our products have successfully achieved industrial certificates including ISO 9001, API 6A, API 6D, CE/PED, ASME N & NPT, TA-Luft, ABS, CU-TR, and Fire-Safe approvals.



Neway recognizes the importance of valve quality for the safety and protection of personnel health and property. It is our quality commitment to focus our resources to provide our customers with first class products at a competitive price, designed, manufactured, inspected and tested in accordance with our customers specifications and complying with all international standards.

Current industrial standards do not always take into consideration the likelihood and consequences of possible deterioration in service, related to specific service fluids or the external environments in which they operate. Therefore we request that our customers communicate with our engineering department. Our valve optimization program continuously strives to provide valves that withstand deterioration in service, and ensure safety over the valves expected lifetime.

The latest computer technology has been extensively applied in NEWAY manufacturing, which includes a large number of numeric control machines (machining center, CNC horizontal and vertical lathe, and CNC drilling machine) and ERP management system. Additionally, the data through all factories has been connected and shared. These facilitate resource integration, boost productivity, evidently enhancing machining quality and tightening process control.



NEWAY developed comprehensive and advanced inspection and test facilities to control the quality from rough castings or forgings to final products, which enable us to perform ultrasonic testing, radiographic test, liquid penetrant test, magnetic-particle test, spectrum analysis, Material Positive Identification (MPI), impact test, tensile test, hardness test, fire safe test, cryogenic test, vacuum test, low fugitive emission test, high pressure gas test and hydrostatic test.



Cryogenic Gate Valve

Size(IN)	Pressure Range(CLASS)	End Connection	Temperature Range	Operation	Structural Style
1/2"- 42"	150 - 2500	SW,BW,RF	-196°C - 400°C	Manual/Pneumatic/Hydraulic	Flexible Wedge

- Extended bonnet and extended stuffing box to protect packing effectively;
- Use PCTFE shaft sleeve at the middle of stem to keep stem stable;
- Cryogenic Gate valve use welded seat;
- Hardening facing with Stellite on sealing surface of both sides.



Cryogenic Globe Valve

Size(IN)	Pressure Range(CLASS)	End Connection	Temperature Range	Operation	Structural Style
1/2"- 28"	150 - 2500	SW,BW,RF	-196°C - 400°C	Manual/Pneumatic/Hydraulic	Lifting Type

- Extended bonnet and extended stuffing box to protect packing effectively;
- Use PCTFE shaft sleeve at the middle of stem to keep stem stable;
- Cryogenic Globe valve use integrated seat;
- Hardening facing with Stellite on sealing surface of both sides.



Cryogenic Check Valve (Swing Type)

Size(IN)	Pressure Range(CLASS)	End Connection	Temperature Range	Operation	Structural Style
1/2"- 32"	150 - 2500	SW,BW,RF	-196°C - 400°C	-	Swing Type

- Ball-like pin can achieve self-alignment, which makes it easier to seal at low temperature;
- Ensure the optimal flow design & the maximum flow capacity by fluid analysis software calculation;
- Metal-seat structure, with sealing surface subject to hard-alloy weld overlay, which performs well in scouring & particle resistance and improves service life;
- Dedicated accurate and match grinding to guarantee the sealing performance in low temperature;
- Internally assembled hinge pin design.



Cryogenic Check Valve (Axial Flow Type)

Size(IN)	Pressure Range(CLASS)	End Connection	Temperature Range	Operation	Structural Style
2"- 42"	150 - 900	BW,RF	-196°C - 150°C	-	Axial Flow Type

- Venturi streamline design, low flow resistance, without impact;
- Dual sealing (Lipseal + Graphite) between body and seat;
- One-piece body, without external leaking point;
- Ensure minimum flow resistance and best dynamic characteristics by fluid analysis software calculation;
- Specialized machining & grinding process to achieve good sealing performance.



Cryogenic Check Valve (Lifting Type)

Size(IN)	Pressure Range(CLASS)	End Connection	Temperature Range	Operation	Structural Style
1/2"- 2"	150 - 1500	SW,BW,RF	-196°C - 400°C	-	Lifting Type

- Integral closed die forging is used for body, without welded flange;
- With disc guided & spring return structure, the valve is closed without jamming and can be installed vertically or horizontally;
- To prolong the service life, the seal surface is made of cobalt-based alloy by weld overlay.



Cryogenic Check Valve (Dual-plate Type)

Size(IN)	Pressure Range(CLASS)	End Connection	Temperature Range	Operation	Structural Style
2"- 36"	150 - 1500	SW,BW,RF	-196°C - 400°C	-	Dual-plate Type

- Short length, light weight and compact structure;
- Low flow resistance with desirable flow capacity, without water hammer;
- One-piece body, without external leaking point;
- Ensure superior sealing capability via specialized production process.



Universal Characteristics

Body Material Selection

Brittleness occurs in common steel at low temperature, the body material should meet the requirements of working conditions.

Temp Range: -110°C -196°C

Recommended Material: CF3MICF3/CF8M/CF8 F316L/F304L/F316/F304/Dual Certified

Stem extension structure (Not applicable to Check valve)

Lengthen the valve bonnet to keep the packing working at room temperature and ensure the good sealing performance of the packing.

Extending height of valve bonnet by default meets the requirements of BS6364. SPE 77/200, and also can be designed according to customer requirements.

The valve bonnet with lengthening structure is more convenient for winding the insulation layer to prevent the loss of cold energy.

End Connection

RF, NW RTJ, Bw, SW, WAFR etc.

Prevention of overpressure in valve cavity

To avoid the risk of overpressure, following designs are recommended: self-relief seat, drilling holes in the ball or the gate (upstream).

Fire safe, Anti-static

Neway meet the requirement with appropriate fire and anti-static design, and the corresponding qualification certificate are available.

Low Emission

All cryogenic valves are low emission designed and meet ISO15848, SHELL 77/312 requirements, and have corresponding qualification certificates.

Domestic
Guangzhou Huangfeng Sinoenergy LNG Co.Ltd.-Chaozhou LNG
ENN (Zhoushan) LNG Co.,Ltd.-Zhoushan LNG
CNOOC Fuian LNG Co.Ltd.-CNOOC Fujian LNG Terminal
CNOOC Zheliang Ningbo LNG Co.Ltd.-Zheliang LNG Terminal
Sinopec Tianjin Liquefied Natural Gas Co., Ltd. -Sinopec Tianjing LNG Project
CNOOC Guangxi Fangchenggang Natural Gas Corporation Limited-Guanaxi LNG Project
CNOOC Guangxi Fangchenggang Natural Gas Corporation Limited-Guangai LNG Project
CNOOC Tianing LNG Co., Ltd. -Tianing FLNG Terminal
Kunlun Energy Huanggang LNG Co.Ltd.-5000,000mday LNG Plant localization Project
Shandong Taian Kunlun Energy Co. Ltd-Taian 600.000 tons/year LNG localization Project
Ninaxia Hanas LNG Co., Ltd. -3000.000m/day LNG Plant
Guangdong Dapena LNG Co..Ltd. - Shenzhen LNG Terminal

Overseas
Eni Coral South Development Project
Novatek Yamal LNG
Freeport LNG
Portovaya LNG
Puget Sound Energy Tacoma LNG
Knpc Al-zour LNG Import Project
Shell Prelude FLNG Project
Petronas FLNG 1 & 2 Project
Shell Sakhalin II
Dominion Cove Point Liquefaction Expansion Project
QCLNG Project
Donggi Senoro LNG Project
Petronas Mdd Project
Shell Pearl GTL Project

## Product Warranty

Seller will replace without charge or refund the purchase price of products provided by Seller which prove to be defective in material or workmanship, provided in each case that the product is properly installed and is used in the service for which Seller recommends it and that written claim, specifying the alleged defect, is presented to the Seller within 18 months from the date of shipment or 12 months after installation, whichever occurs first. Seller shall in no event bear any labor, equipment, engineering or other costs incurred in connection with repair or replacement. The warranty stated in this paragraph is in lieu of all other warranties, either expressed or implied. With respect to warranties, this paragraph states Buyer's exclusive remedy and seller's exclusive liability.