

Cryogenic Valve

MT GROUP

Cyrogenic Valve



Product Standard:

ISO 28921
BS 6364
MESC SPE 77/200

Application:

Minimum design temperature -50~-196℃
LNG plant, terminal, storage tank, ship
LPG plant
Ethylene plant
Low temperature industrial gas plant

Manufacture:

Use high quality casting and forging resources, and high precision machining for key components accuracy. Strictly control welding, cleaning, assembly and other processes, to ensure the reliable quality of the valve. Clean assembly area to avoid the dust particles affect valve performance.

Cryogenic Treatment for Compents:

The key components are placed in liquid nitrogen for cryogenic treatment before final machining to improve the microstructure stability of austenitic stainless steel at low temperature.

Full Set of Cryogenic Test Equipment

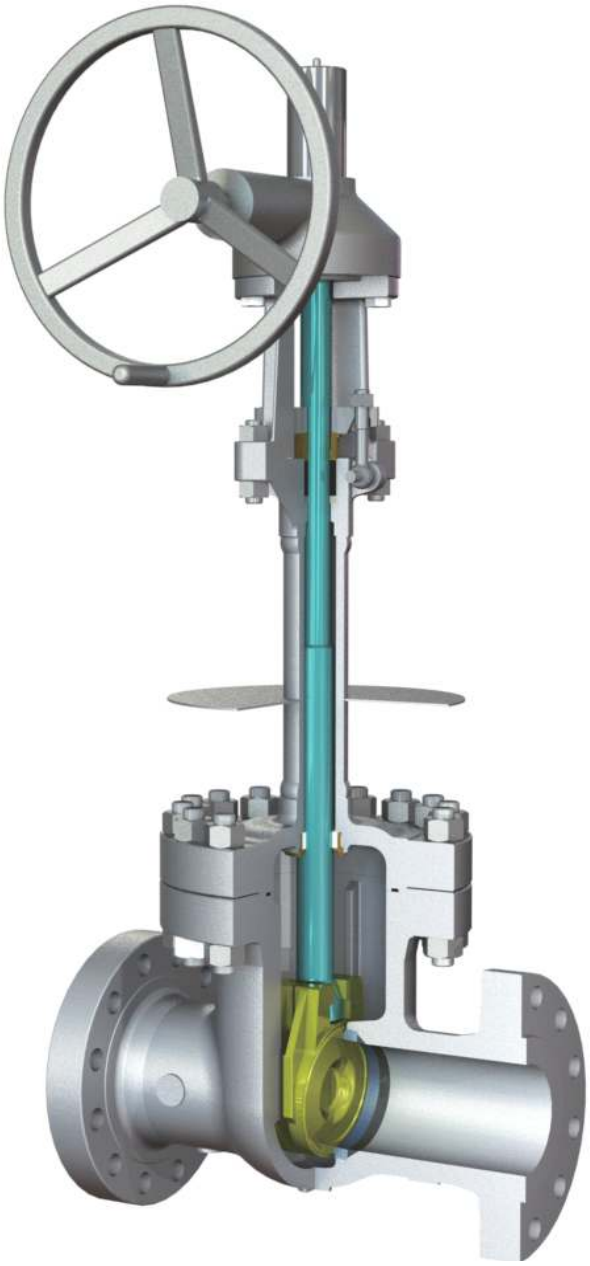






The company has a full set of cryogenic valve test equipment, including full-size liquid nitrogen pool, valve seat leakage flowmeter, torque and test machine, helium detector, to provide capability and product research and development and production test.

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Extended Bonnet Design

The extended bonnet provides sufficient vaporization space for the cryogenic medium to maintain the stem packing at a temperature high enough to permit operation. The extension length is according to the MESC SPE 77/200 which is accepted widely in the industry. The gap between the extended bonnet and the stem is minimized to reduce cold energy loss.

Drip Plate Design

Drip plate prevents condensation water on the top from dripping into the insulation layer to avoid freezing the pipeline.

Cavity Relief Design

For the valve with cavity structure, such as gate valve and ball valve, the medium trapped in the cavity may cause an excessive rise in cavity pressure. A cavity relief hole faces upstream to avoid pressure buildup in the cavity.

Stem Guide Design

The shaft sleeve is equipped at the lower part of the stem to make stem alignment and sealing when operation to avoid the problems of torque increasing and stem scratch.

The Seat Design

For Gate, Globe and Check Valves, the seat face is CoCr Alloy hardfaced, and the seating face width is optimized for cryogenic application. For floating ball valves, the upstream seat is preloaded by springs to compensate the dimensional change of nonmetallic material at low temperatures and to reduce valve torque. For trunnion mounted ball valves, high performance lipseal is used for seat, body and stem seal. Both single piston and double piston seat are available upon request.

Low Emission

Low emission gasket and packing are used for body and stem seal. The assembly torque for bolts is controlled to ensure the reliability of the sealing. The valves are designed and certified to meet the fugitive requirement of ISO 15848-1.

Product Range

Gate valve
2"-24" Class 150 / 300 / 600 / 900 / 1500

Globe valve
2"-12" Class 150 / 300 / 600 / 900 / 1500

Check valve
2"-24" Class 150 / 300 / 600 / 900 / 1500

Floating ball valve
1/2"-6" Class 150 / 300
1/2"-2" Class 600
1/2"-1-1/2" Class 900 / 1500

Trunnion mounted ball valve
2"-24" Class 150 / 300 / 600
2"-12" Class 900 / 1500

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MT GROUP

INDUSTRIAL VALVE MANUFACTURER

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