

- This Catalogue is an easy version,if detailed info needed.please contact us directly



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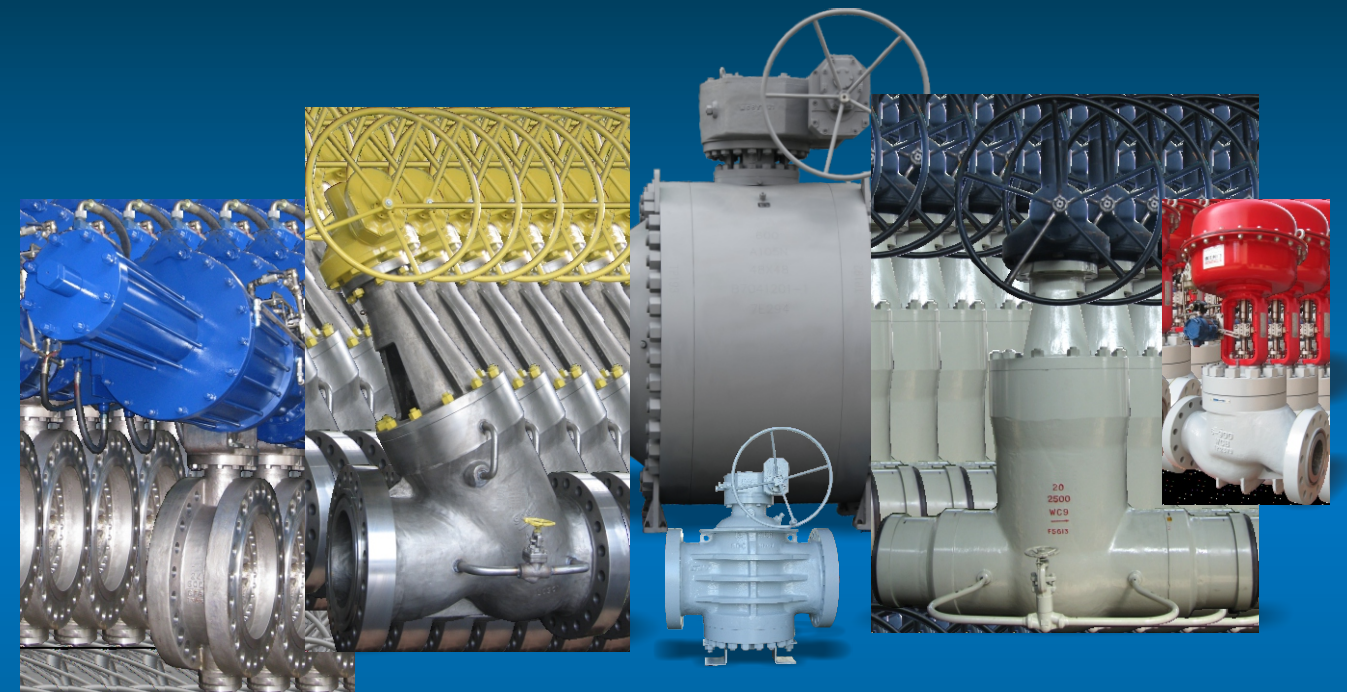
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Product Summary

INO - catalog000 - 2016



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Features of INO Gate Valve

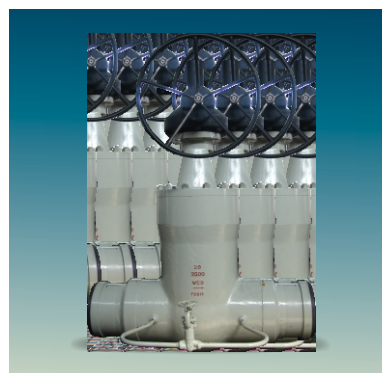
- Design as per API600, ASME B16.34, BS1414, or API603;
- BB (Bolted Bonnet), PSB (Pressure Sealed Bonnet), or WB(Welded Bonnet);
- OS&Y, Rising Stem, Non-rising Hand Wheel;
- Single or double disc;
- Wedged or parallel disc;
- Renewable seat or integrated seat;
- Flanged or butt-welded connections;
- Casted or forged body;
- Trim as per API600;
- Inspection and testing as per API598 / ISO5208;
- Manual, motorized, pneumatic or hydraulic actuators available

Optional features upon request

- NACE MR 0175/ NACE MR 0103;
- HIC/SSCC;
- Fugitive Emission;
- Fire Safe;
- Live Loading Packing;
- Water Sealing, Vacuum Isolation design;
- Extended stem;
- Double-head Screwed Stem;
- Free of oil & water;
- Pup piece;
- Bypass, drain or Vent;
- Locking device;
- Position indicator;
- Limit switch;
- Mechanical interlock device;
- Insulation jacket;
- Chain wheel operation;
- Cardan joint operation;
- Corrosion-resistant coating for internal surfaces;
- Underground installation.

INO Gate Valve Range

- Class: 150lb~ 4500lb
- Size: 2"~ 60"
- Material: CS, LCS, Alloy, SS, DSS, and Inconel, Monel, Hastelloy Alloy, etc.
- Temperature: -46~750°C
- Medium: Oil, Gas, Water, Steam, Hydrocarbon, etc.



Features of INO Globe Valve and Stop-check Valve

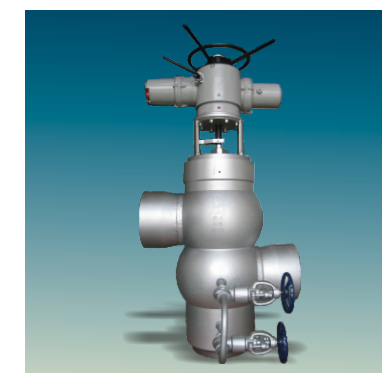
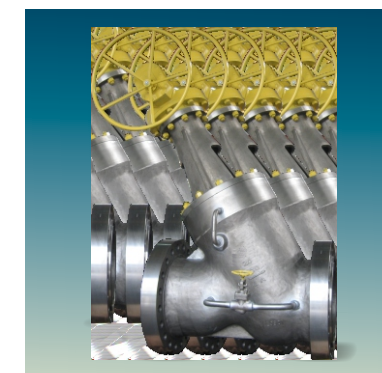
- Design as per BS1873, ASME B16.34;
- Straight, Y-type, Angle, or Three-way type;
- BB (Bolted Bonnet), PSB (Pressure Sealed Bonnet), or WB (Welded Bonnet);
- OS&Y;
- Rising or Non-rising Stem;
- Rising or Non-rising Hand Wheel;
- Conical, Chamfer, spherical, flat, parabolic disc;
- Renewable or integrated seat;
- Flanged or butt-welded end connections;
- Casted or forged body;
- Trim as per API600;
- Inspection and testing as per API598/ ISO5208;
- Manual, motorized, pneumatic or hydraulic actuators available.

Optional features upon request

- NACE MR 0175/ NACE MR 0103;
- HIC/SSCC;
- Fugitive Emission;
- Fire Safe;
- Live Loading Packing;
- Water Sealing, Vacuum Isolation design;
- Extended stem;
- Double-head Screwed Stem;
- Free of Oil & Water;
- Pup piece;
- Bypass, Drain or Vent;
- Locking Device;
- Position Indicator;
- Limit Switch;
- Mechanical Interlocking Device;
- Insulation Jacket;
- Chain Wheel Operation;
- Cardan joint operation.

INO Globe and Stop-check Valve Range

- Class: 150lb~ 4500lb
- Size: 2"~ 30"
- Material: CS, LCS, AS, SS, DSS, and Inconel, Monel, Hastelloy alloy, etc.
- Temperature: -46~550°C
- Medium: Oil, Gas, Water, Steam, Hydrocarbon, etc.



Features of INO Check Valve

- Design as per BS1868, ASME B16.34, API594, or API6D;
- BC(Bolted Cover), PSC(Pressure Sealed Cover), or WC(Welded Cover);
- Lift type, Swing type, Tilting type, Axial flow type, or Dual-plate type;
- Horizontal or vertical installation;
- Full internal hinge pin or external;
- Renewable or integrated seat;
- Metallic or elastic seat;
- Flange, butt-weld, wafer, lug or clamp type end connections;
- Casted or forged body;
- Trim as per API600;
- Inspection and testing as per API598/ ISO5208.

Optional features upon request

- NACE MR 0175/ NACE MR 0103;
- HIC/SSCC;
- Fugitive Emission;
- Fire Safe;
- Free of Oil & Water;
- C/w damper, counter weight or hydraulics;
- Pup piece;
- Bypass, Drain or Vent;
- Insulation jacket.

INO Check Valve Range

- Class: 150lb~ 4500lb
- Size: 2"~ 56"
- Material: CS, LCS, AS, SS, DSS, and Inconel, Monel, Hastelloy alloy, etc.
- Temperature: -46~750°C
- Medium: Oil, Gas, Water, Steam, Hydrocarbon, etc.



Features of INO Forged GGC Valve

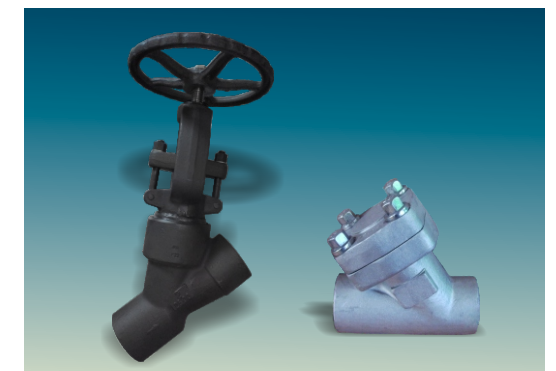
- Design as per PI602, ASME B16.34;
- BB (Bolted Bonnet), PSB (Pressure Sealed Bonnet), or WB (Welded Bonnet);
- Regular Port;
- OS&Y, Rising stem (Except Check Valve)
- SW, NPT, butt-welded or flanged connections;
- Die-forged body or welded flange;
- Trim as per API602;
- Inspection and testing as per API598/ ISO5208;
- Manual, motorized or pneumatic actuators (Except Check Valve).

Optional features upon request

- NACE MR 0175/ NACE MR 0103,;
- HIC/SSCC;
- Fugitive Emission;
- Fire Safe;
- Live Loading Packing;
- Full Bore;
- Extended stem (Except Check Valve);
- Free of Oil & Water;
- Pup piece (Extended Nipple) ;
- Locking Device.

INO Forged GGC Valve Range

- Class: 150lb~ 4500lb
- Size: 1/2"~ 2"
- Material: CS, LCS, AS, SS, DSS, and Inconel, Monel, Hastelloy alloy, etc.
- Temperature: -46~593°C
- Medium: Oil, Gas, Water, Steam, Hydrocarbon, etc.



Feature of INO Floating Ball Valve

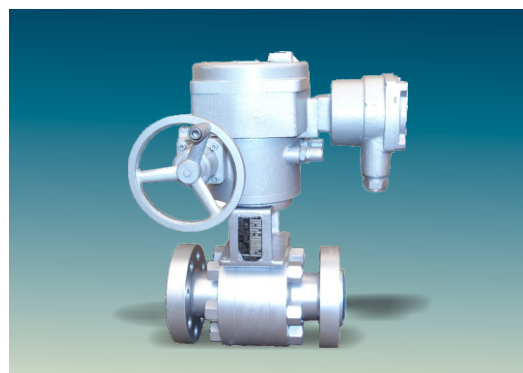
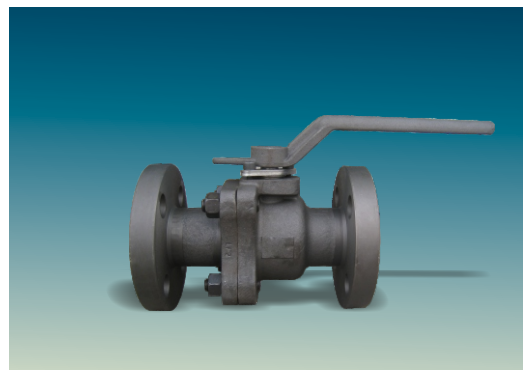
- Design as per ASME B16.34, API6D, API608, or ISO17292;
- Side Entry(one-piece, 2-pcs, or 3-pcs); Top Entry; or Single body double ball;
- Fire-safe, anti-static, anti blow-out;
- FB (Full bore) or RB (Reduced bore);
- Metallic or elastic seat;
- SW, NPT, butt-welded, or flanged connections;
- ISO5211 mounting flange;
- Casted or forged body;
- Solid ball;
- Dual guidings for stem;
- Locking Device;
- Inspection and testing as per API598, API6D, ISO5208;
- Manual, motorized or pneumatic actuators.

Optional features upon request

- NACE MR 0175/ NACE MR 0103;
- HIC/SSCC;
- Fugitive Emission;
- Live Loading Packing;
- Extended stem;
- Pup piece (Extend Nipple);
- Free of Oil & Water;
- Insulation jacket.

INO Floating Ball Valve Range

- Class: 150lb~ 2500lb
- Size: 1/2"~12"
- Material: CS, LCS, AS, SS, DSS, and Inconel, Monel, Hastelloy alloy, etc.
- Temperature: -46~593°C
- Medium: Oil, Gas, Water, Steam, Hydrocarbon, etc.



Features of INO Trunnion Ball Valve

- Design as per API6D, API6A, API608, or ISO14313;
- Side Entry(2-pcs or 3-pcs),Top Entry, Full Welded body, or DBB (Single body double ball);
- FB (Full bore) or RB (Reduced bore);
- Metallic or elastic seated;
- DBB, DIB-1, or DIB-2;
- DPE(Double Piston Effective)Seat,or SPE(Single Piston Effective)Seat;
- Trunnion or Retainer for Ball Settlement;
- Fire-safe, anti-static, anti blow-out;
- O-rings or lip-seals for stem & seat seal;
- Emergent sealant injection;
- Drain;
- Thermal relief function;
- Flanged, butt-welded or clamped connections;
- ISO5211 mounting flange;
- Locking Device;
- Casted or forged body;
- Solid ball;
- Inspection and testing as per API598, API6D, ISO5208;
- Manual, motorized, pneumatic, hydraulic, gas-over-oil or electro-hydraulic actuators available.

Optional features upon request

- NACE MR 0175/ NACE MR 0103,;
- HIC/SSCC;
- Fugitive Emission;
- Vacuum isolation design;
- Live Loading Packing;
- Extended stem;
- Pup piece;
- Insulation jacket;
- Free of Oil & Water;
- Inconel 625 or Stainless steel cladding for wetted parts, or organic coatingupon request;
- Underground installation.

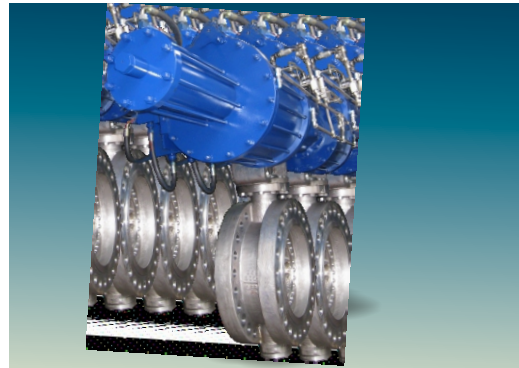
INO Trunnion Ball Valve Range

- Class: 150lb~ 2500lb, 2000psi~15000psi
- Size: 1/2"~60"
- Material: CS, LCS, AS, SS, DSS, and Inconel, Monel, Hastelloy alloy etc.
- Temperature: -46~593°C
- Medium: Oil, Gas, Water, Steam, Hydrocarbon, etc.



Features of INO Butterfly Vavle

- Design as per API609, MSS SP-67, AWWA C504, or BS5155;
- Centric, double eccentric, or tripple eccentric structure;
- Multi-layer compound metallic or elastic seated;
- Bi-directional;
- Wafer, Lug, Flanged or butt-welded connections;
- ISO5211 mounting flange;
- Inspection and testing as per API598 / ISO5208;
- Manual, motorized, pneumatic or hydraulic actuators.



Optional features upon request

- NACE MR 0175/ NACE MR 0103;
- HIC, SSCC;
- Fire-safe design;
- Fugitive Emission;
- Vacuum isolation design;
- Live Loading Packing;
- Extended stem;
- Locking Device;



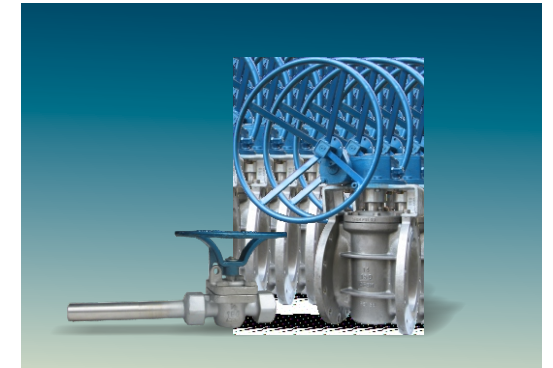
INO Butterfly Valve Range

- Class: 125lb~ 600lb (PN10~PN100)
- Size: 2"~160" (DN50~DN4000)
- Material: CI, DI, CS, LCS, AS, SS, DSS, Copper-Nickel alloy, nickel-aluminum bronze, etc.
- Temperature: -46~750°C
- Medium: oil, gas, water, steam, hydrocarbon, etc.



Features of INO Plug Valve

- Design as per API6D, API599;
- Bolted bonnet;
- Self-lubricated, pressure-balanced, or twin-seal;
- Regular bore or Venturi;
- SW, NPT, BW, or flanged connection;
- Solid casted body;
- ISO5211 mounting flange for actuator;
- Manual, motorized, pneumatic, hydraulic, gas-over-oil, or elect-hydraulic actuators.



Optional features upon request

- NACE MR 0175/ NACE MR 0103;
- HIC, SSCC;
- Fugitive Emission;
- Full bore;
- Lined with PFA, PTFE; etc.
- Pup piece;
- Extended stem;
- Locking device.



INO Plug Valve Range

- Class: 150lb~ 2500lb, 3000psi~15000psi
- Size: 1/2"~36"
- Material: CS, LCS, AS, SS, DSS, and Inconel, Monel, Hastelloy alloy, etc.
- Temperature : -46~204°C
- Medium: oil, gas, EOEG, water, etc.



INO cryogenic valve is designed for -196°C cryogenic services. Rich references and experiences we have in cryogenic applications especially for LNG reception stations, LNG ship, ethylene, air separation. Thousands of cryogenic valves supplied by INO provide reliable performance in fields.

Product Series

- Cryogenic Gate Valve
- Cryogenic Globe Valve
- Cryogenic Check Valve
- Cryogenic Floating Ball Valve (Side-entry, Top-entry)
- Cryogenic Trunnion Ball Valve (Side-entry, Top-entry)
- Cryogenic Butterfly Valve

Size: 2"~36"

Class: 150lb~ 2500lb

Material: Stainless Steel, such as ASTM A351 Gr. CF8, CF8M, CF3, CF3M, etc.

Design Standard

- BS6364
- ASME B16.34
- SHELL SPE 77/200
- API 600, API 602, BS1873, BS1868, API 608, API 6D, and API 609, etc.

Inspection and testing Criteria

- API 598
- BS6364
- SHELL SPE 77/306, 77/312
- ISO 15848-1, -2

Features of INO Cryogenic Valve

- Extended bonnet for cold box or non cold box service. Optimized stem seal to eliminate over-pressurized bonnet cavity;
- Live loaded packing to compensate packing over long service time;
- Fugitive emission design, dual guidings and dual seals for stem;
- Low operation torque due to the self-lubricated bearings ;
- Drop plate, prevents condensates from dripping on insulated area;
- Thermal relief device to prevent cavity over-pressurized;
- Lip seals for stem and seat, to ensure the sealing in cryogenic services;
- Cryogenic treatment to eliminate stress and strain due to deformation;
- Deoiling & Degreasing treatment;
- Cryogenic test and certification.



INO pipeline valves are designed as per API 6D, widely used for long-distance pipeline, gas supply, oil storage applications, are known for safety, reliability, and maintainability.

Product Series

- Gate Valve
 - Slab Gate Valve
 - Expanded Gate Valve
- Ball Valve (refer to Page 9)
 - Fully welded ball valve (underground or above ground)
 - Top-entry ball valve
 - Side-entry ball valve
 - DBB(Single Body Double Ball)
 - Pig valve
- Check Valve (refer to Page 6)
 - Swing check valve
 - Axial flow check valve
 - Tilting check valve
 - Dual plate check valve
- Plug valve (refer to Page 11)
 - Pressure balanced plug valve
 - Twin Seal Plug valve

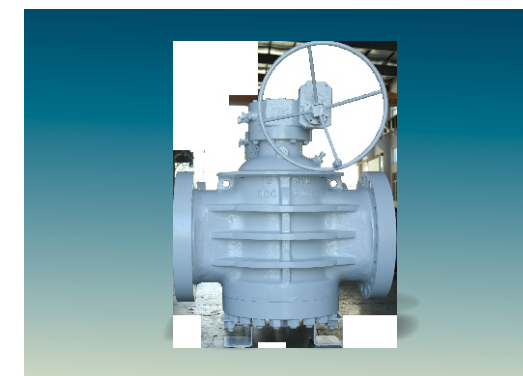
Class: 150lb~ 2500lb

Size: 2"~60"

Material: CS, LCS, AS, SS, DSS, etc.

Features of INO Pipeline Valve

- NACE MR 0175;
- HIC/SSCC;
- Low torque, long life span;
- Certificated fire-safe design;
- Certificated fugitive emission design;
- Double block and bleeding;
- Multi-seals seat design;
- Dual-seal stem design;
- Automatic cavity relief function;
- Emergent grease injection;
- ISO 5211 mounting flange (Check Valve excepted);
- Locking device (Check Valve excepted);
- Slow closing function for Check Valve;
- Extended stem upon request (Check Valve excepted);
- Pup piece upon request;
- Inconel or SS cladding available for wetted parts.



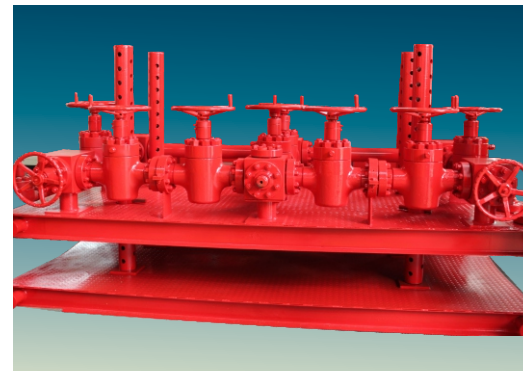
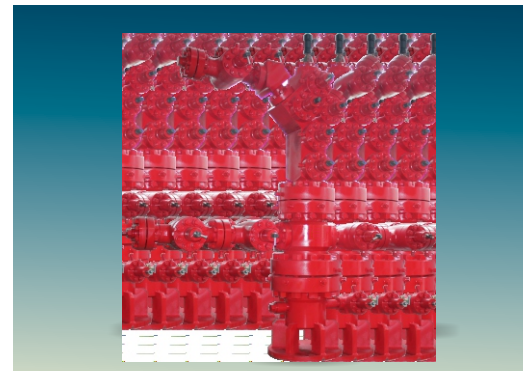
INO has independent team dedicated for design, manufacture and testing of API 6A valve and wellhead equipment. After years of experience accumulation, our product range includes valve, Christmas tree, BOP, manifold, etc., widely applied in offshore & onshore projects.

Product Range

- Slab Gate Valve
- Expanded Gate Valve
- Mud Valve
- Choke Valve
- Ball Valve
- Check Valve Christmas
- tree BOP
- Manifold

Technical Parameters

- Working pressure: 2000 psi ~ 20000psi
- Temperature Class: -46°C ~ 121 °C (LU)
- Material Class: AA, BB, CC, DD, EE, FF, HH
- Specification Level: PSL1~3
- Performance Level: PR1~2
- Medium: Oil, gas slurry, sweet gas, etc.



INO has mature flow measurement and analysis techniques combined with rich field experiences, to provide appropriate solutions for process control valves. These control valves precisely modulate the process parameters such as pressure, flow rate, temperature, etc. through throttling or blocking the fluid. INO is capable of supplying control valves for general services as well as special ones upon request.

Product Range

- Globe Control Valve
- Butterfly Control Valve
- Axial Control Valve V-
- ball Control Valve Choke
- valve
- HIPPS

Class: 150lb ~ 2500lb

Size: 1/2" ~ 88"

Body Material: CS, LCS, AS, SS, DSS;

Temperature: -196°C ~ 593°C

Features of INO Control Valve

- Noise-attenuated trim;
- Anti-cavitation trim;
- Solid carbon tungsten trim;
- Highly precise control characteristic;
- Quick-release trim;
- Low operation thrust/torque, long life span;
- NACE MR 0175;
- HIC, SSCC;
- Fugitive emission as per ISO 15848;
- Cryogenic application.



Compact valve

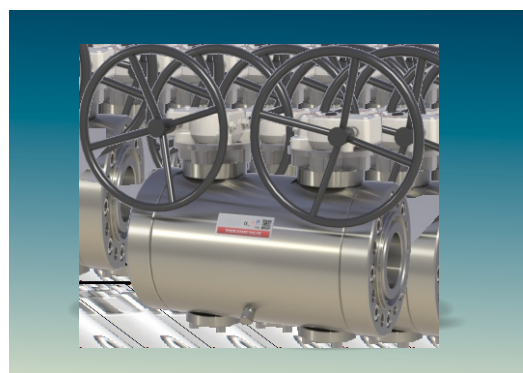
Compact valve series are designed for offshore projects, i.e. FPSO, drilling platform, etc., taking both API 6A and Norsok specifications into consideration, verified and validated through massive calculations, analysis, inspection and testing. The new structure is especially suitable for offshore projects which usually have problems such as limited installation space, severe service condition, and demand for high performance & long life span.

Product Range

- Compact Gate valve;
- Compact check valve;
- Compact globe valve;
- Compact Ball valve;
- DBB(Single Body Double Ball), Compact Valve.

Technical parameters

- Rating: 5000 psi ~ 15000 psi
- Size: 2"~16"
- Specification level: PSL3
- Performance level: PR2
- Material: ASTM A522 type I, etc.
- Temperature: -196°C ~ 350°C
- Medium: Oil, gas slurry, etc.



Bellow Sealed Valve

INO bellow Sealed valves are used for explosive, toxic or radioactive services, eliminate the possibility of leakage from stem and bonnet/body joint.

Product Range

- Bellow Sealed Globe Valve
- Bellow Sealed Gate Valve

Class: 150lb~ 1500lb

Size: 1/2"~24"

Body Material: CS, LCS, AS, SS, DSS, etc.

Bellow Material: Stainless Steel, Inconel 625, Inconel 718, etc.

Features of Bellow Sealed Valve

- NACE MR 0175/ NACE MR 0103;
- HIC, SSCC;
- Zero leakage, zero emission;
- Fire safe design;
- Multi-layer bellow;
- Welded bonnet;
- Dual stem seals including bellow and packing;
- Live load packing design;
- Backseat design;
- High flow capacity;
- Locking device;
- ISO 5211 mounting flange upon request;
- Extended stem upon request;
- Pup piece upon request.

