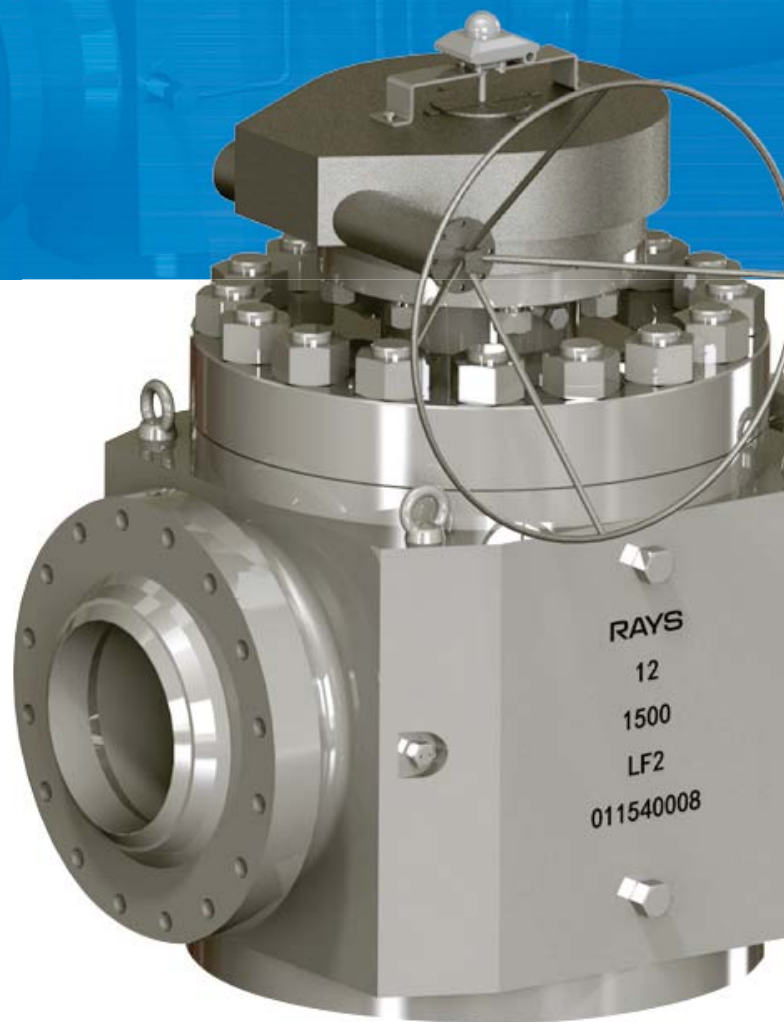
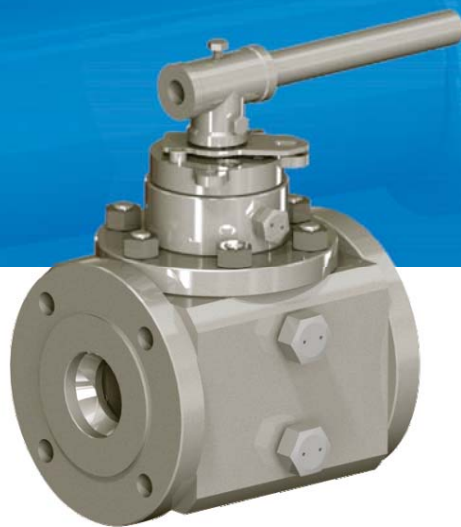


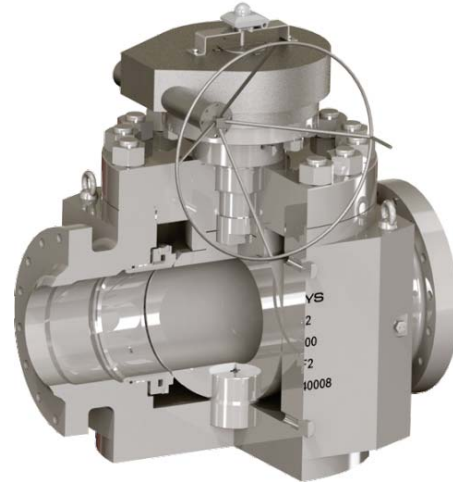
Top Entry Ball Valve



Top Entry Ball Valve

Product Introduction

Top entry ball valve is used mainly in pipeline and industrial system which can be online maintenance easily. Its main features are simple structure design, low flow drop, compact size, light weight, reliable sealing and quick open/close. The operation methods can be manual, gear, pneumatic, electric, gas-over-oil, electro-hydraulic and others.





Top Entry Ball Valve

Structures and Features

■ Top Entry

The biggest difference between top entry and regular valves is that it can be online maintenance without removing the valve from the pipeline. It lowers maintenance cost and extends service life. The structure of the seat is retreat type which has the bevel angle design at the end section of seat ring, eliminating accumulation of impurities.

■ One Piece Body

The valve body is one-piece type. Our finite element analysis ensures valve body strength and stiffness and thus ensures the safety performance under maximum rated working pressure. Valve parts have been carefully designed and selected to ensure the performance under various working conditions. Sufficient wall thickness and high strength bolts, is conducive to maintenance and bearing the mechanical load of the pipeline. Top entry ball valve can also be welded directly to the pipeline without disassembly.

■ Reliable Sealing

The seat seal consists of a seat insert, a seat retainer and other components. The seat retainer can be independent axial float, through the preload spring to achieve the valve seat sealing at zero pressure and low pressure condition. It's also designed to shut off the working medium by using the pressure from working medium automatically in high pressure condition. Outer of the seat retainer, we insert O-Ring and Elastic Ring to ensure the sealing between seat and valve body, with additional expanding graphite to assure the sealing performance even during fire condition.

■ Emergency Sealing

Seat Retainer, joint part of bonnet and stem are equipped with grease injection structure and injection valves. In case there are damages between the valve seat and ball that could not be properly sealed, the worker can temporary inject the grease as secondary sealing. There is a check valve inside the grease injection valve which preventing the grease from spilling under internal pressure from the valve. The grease injection valve is designed with a quick coupling for grease gun.



Structures and Features

■ Extended Stem

For the underground buried installation ball valve, the extended stem can be applied, and the corresponding grease injection valve, drain valve and other components extended to the top of the valve which could be easily operated. Extended stem ball valve for non-buried application can also be designed accordingly.

■ DBB/DIB-1/DIB-2 Design Available

When the ball valve is in close position, the inlet valve seat is in sealed state, the working medium trapped in the valve cavity could be discharged through drain and bleed valves. At the same time, when the working pressure increasing in the valve cavity, it will be self-relieved into outlet seat side.

■ Low Torque

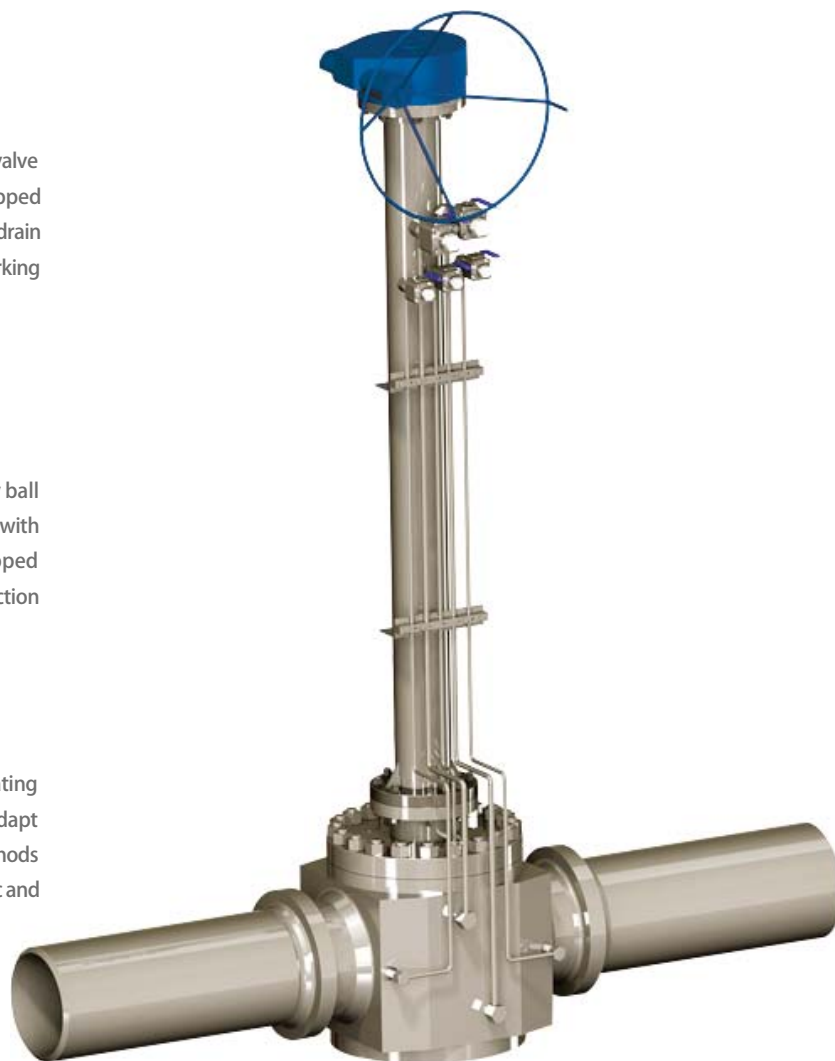
The ball is trunnion mounted type for top entry ball valve, surface of the ball is grinded, polished and with hardened treatment. A sliding bearing is equipped between the ball and stem to minimize the friction radius and operating torque.

■ Operation Type

The connection flange between valve and actuating device is per ISO 5211, which makes it easier to adapt and interchangeable. The regular operation methods including manual, pneumatic, electric, pneumatic and hydraulic, electro-hydraulic and so on.

■ Anti-static Design

There is anti-static design in both upper and lower stem according to API6D and ISO17292.





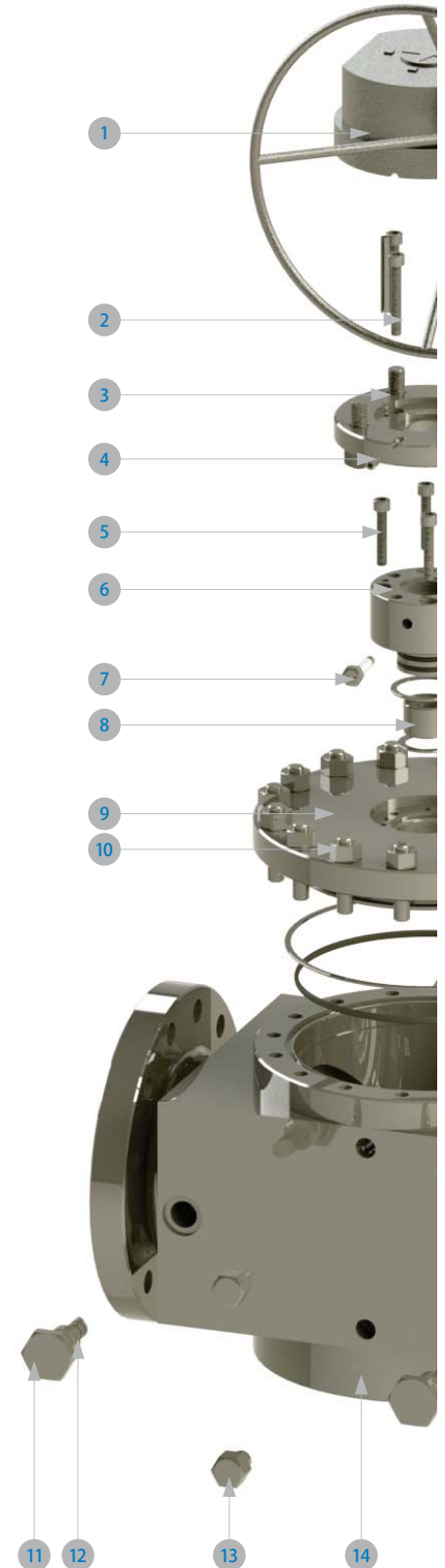
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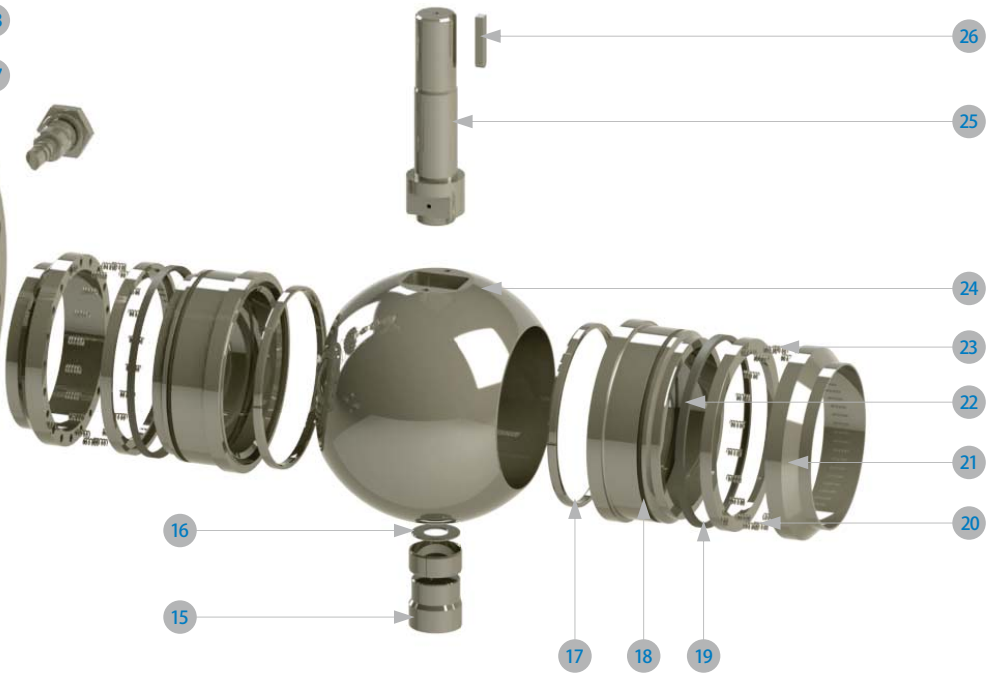
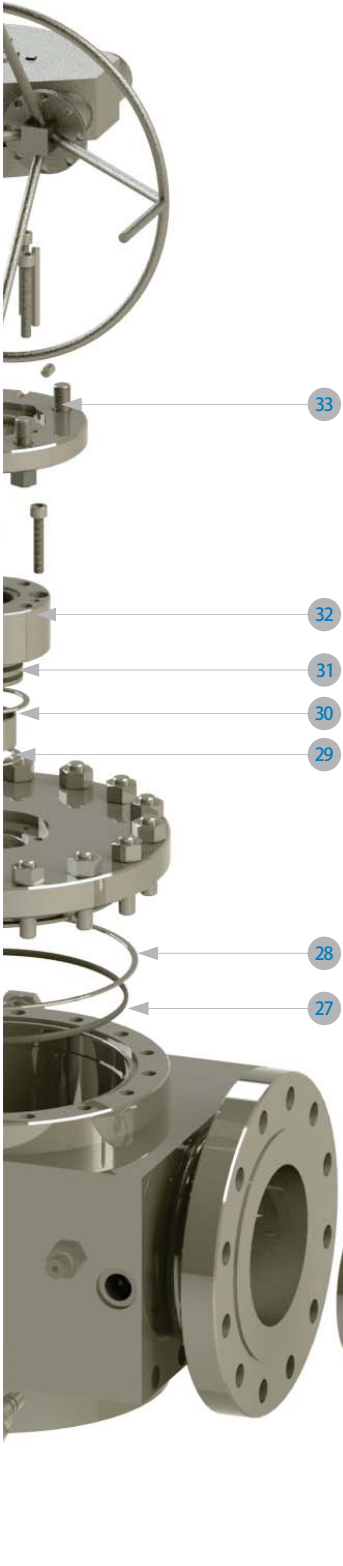
Implementation Standards

Size	NPS2"~24"
Pressure Rating	Class150~2500
Face to face	ASME B16.10, API 6D
End Connection	ASME B16.5,ASME B16.47,ASME B16.25
Test and inspection	ISO5208, API 6D
Operation method	Manual,Worm Gear, Electric Actuator,Pneumatic Actuator

Main Part Name

1 Gear	18 Seat
2 Screw	19 O-ring
3 Connection disk	20 pressure ring
4 Screw	21 Spring seat
5 Screw	22 Graphite
6 Packing	23 Spring
7 Grease injection valve	24 Ball
8 Bushing	25 Stem
9 Bonnet	26 Key
10 Nut	27 O-ring
11 Screw	28 Gasket
12 Adjusting screw	29 Shim
13 Drain valve	30 Gasket
14 Body	31 O-ring
15 Shaft	32 Upper car
16 Shim	33 Stud
17 Seal ring	







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6 Bushing	22 Ball
7 Nut	23 Bushing
8 Bonnet	24 Stem
9 Gasket	25 Key
10 O-ring	26 O-Ring
11 Lip-ring	27 Gasket
12 Body	28 Packing
13 Grease injection valve	29 Connection disk
14 Drain valve	30 Stud
15 Chain	31 Screw
16 Shaft	32 Spring pin
	33 Gear



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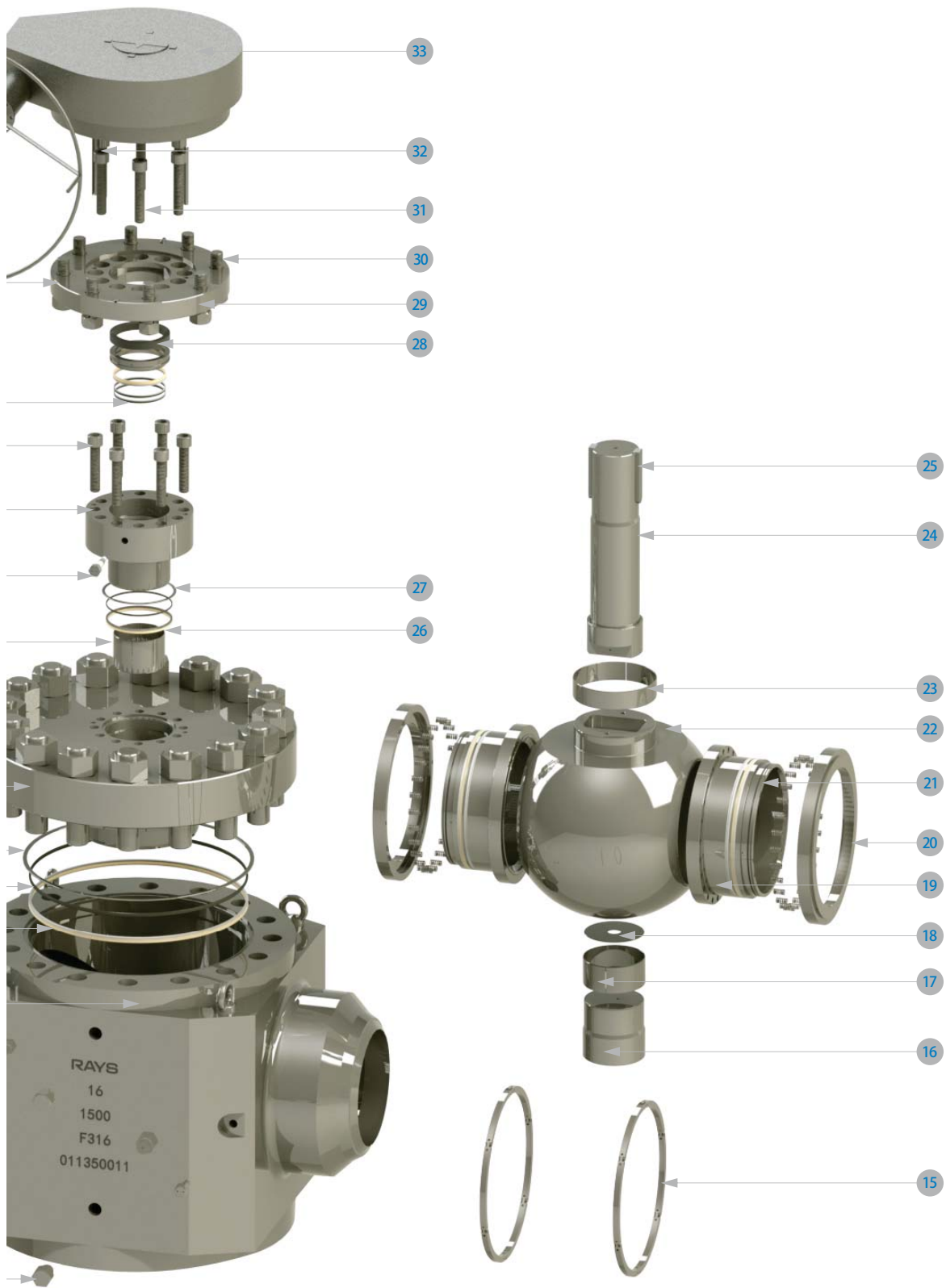
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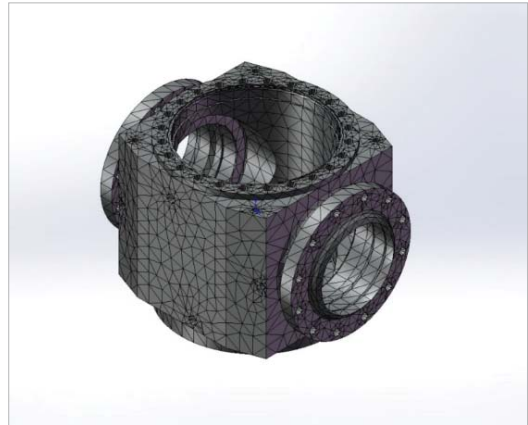
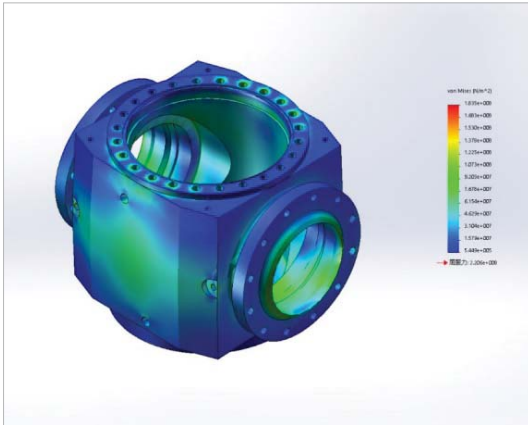
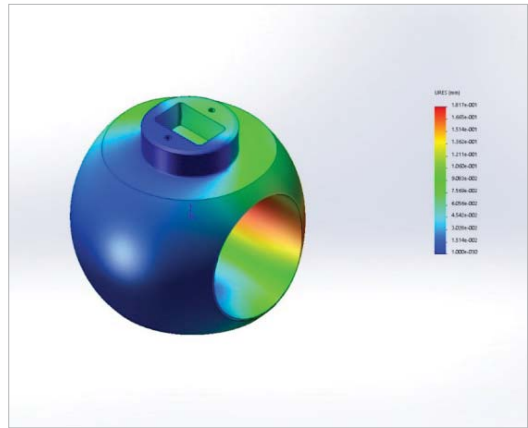
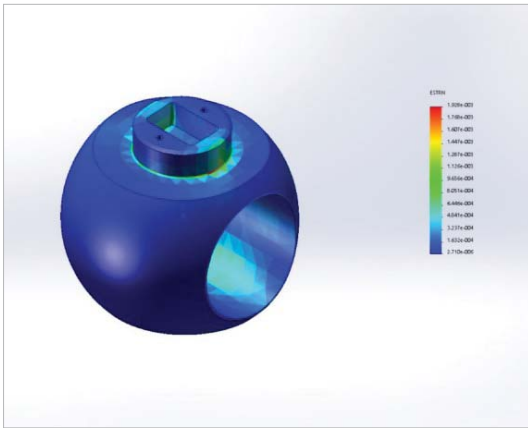
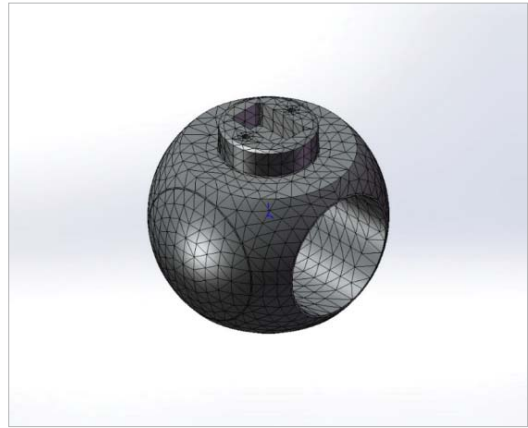
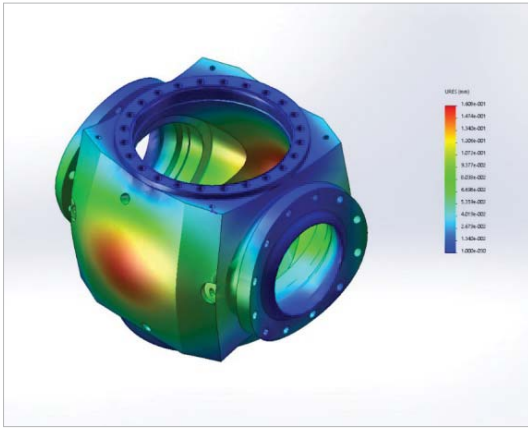




Top Entry Ball Valve

■ Design & Engineering

3D Design Finite Element Analysis



■ Application

Top entry ball valve is widely used in oil and gas pipeline, oil production, oil refining, petrochemical, chemical, chemical fiber, metallurgy, electric power, nuclear power, food and other industries. For its less leakage point characteristic, it is more suitable for low emission requirement.





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