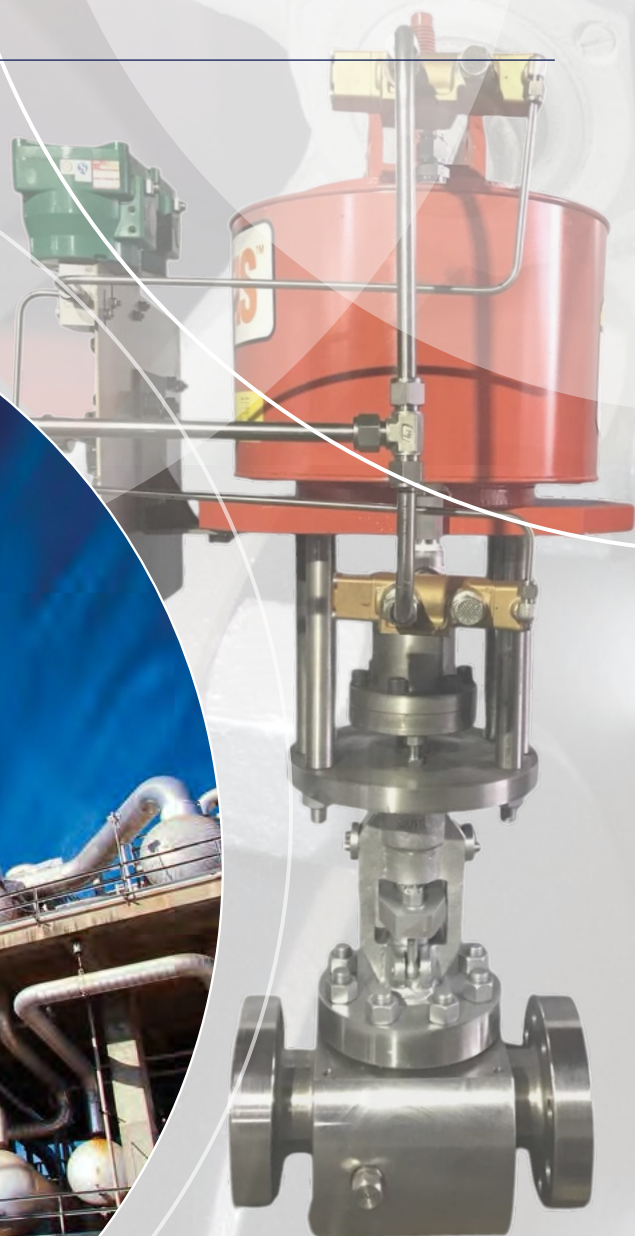


# Rising Stem Ball Valves (Orbit Ball Valves)



# XIAMEN GUTE VALVE COMPANY

## Rising stem ball valves(Orbit ball valves)

### Function

Rising stem ball valves are optimal solution in case there is a requirement for zero leakage in the presence of hard particles in the working medium, in case of high temperature and pressure or their fluctuation or in case that frequent valve opening/closing is required. This kind of ball valve ensures its tightness without rubbing between sealing surfaces. The ball makes first linear movement, then starts to rotate. This unique design substantially decreases wearing of sealing surfaces, resulting in less frequent maintenance and longer valve lifetime. In addition, the top entry design enables to carry out inspection, repair and replacing of the inner parts without the need of dismantling the valve from the pipeline. Rising stem ball valves are widely used for hydrogen service in oil processing, including hydrofining, hydrotreating and hydrocracking units.



### Main Features

Non-contact opening and closing – significant decreasing of abrasive wear and friction, being the main problem of standard ball, gate and plug valves.

One seat design – ensures bidirectional tightness, thus decreases spare parts consumption.

Self-cleaning – at the moment of diversion of ball from the seat the flow of the medium starts to flush ball and seat sealing surfaces, unwanted substances are washed away, without localized, high-velocity erosive flow.

Easy operation – Top entry design simplifies visual inspection and ball valve operating, without the necessity of dismantling the valve from the pipeline.

Mechanically energized sealing – tightness between ball and seat is achieved only by mechanical force, without any springs or pressure.

Operating life – is longer in comparison with standard ball valves, gate and plug valves.

Description:	Standard:	Options:
Nominal diameter	2" - 12"	Sizes bigger than 12" –upon request
Nominal pressure	ASME 150-1500	Class 2500 – upon request
Temperature	-46...300°C	Others upon request
Bore	Full	Reduced
Body type	Class 150-600 - casted, 900-1500 - forged	Others upon request
Body material	Carbon, alloy and stainless steel	duplex, inconel, monel, hastelloy
Seat	Stainless steel with hardfacing)	Soft (PTFE, PEEK, etc..)
Packing	Graphite, PTFE	ISO 15848/TA LUFT, Bellevile springs
Connection	Welded, flanged	Others upon request
Design standards	AP1 6D, API 607, ASME B16.34, ASME B16.10, ASME B 16.25	API 6A, NACE MR 0103, MR 0175, others upon request
Tightness standards	EN 12266, API 598, ANSI FCI-70-2	GOST R - 54808-2011
Operation	Lever, gear, pneumatic, electric	Extended bonnet

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### STEM

The helix shaped stem design ensures absolutely no stem rotation, Anti-blowout stem design.

### OPERATION

Mounting top flange according to ISO 5211 enables connection of gear, electric, pneumatic and hydraulic actuators.

### BONNET

Bolted connected with the body, either enclosed or OS&Y design.

### PACKING

High quality graphite material ensures optimal tightness and long service life.

### BALL

The ball is polished, with bottom trunnion installation. Sealing surface material is selected in order to guarantee reliable operation even in severe service conditions.

### SEALANT INJECTION VALVE

Capable of providing proper lubrication and sealing for

### DUAL GUIDE PINS

The lift and turn action of the stem is controlled by guide pins interacting with stem slots. Proper

### BODY

One-piece body made from forging or casting. Quality of material

### SEAT

It is inserted into the body, normally made from stainless steel with hardfacing or soft material used for sealing.

