Valves For Heavy Oil Applications

Valves for Critical and High Temperature Service

GENERAL® ORBIT® TBV™ TK® WKM®
ORBIT® RISING STEM BALL VALVE

ORBIT Valve technology provides customers with unmatched durability, safety and long term performance.

Sizes:
1 in. through 30 in. (25 mm through 750 mm)
Full Port and Reduced Port Designs.

Pressure Classes:
ASME 150, 300, 400, 600, 900, 1500, 2500

Operating Temperatures:
-50°F to 800°F (-46°C to 427°C)

Materials:
Carbon Steel, Stainless Steel,
Duplex SS and other Materials as Applicable.

Features
- Friction Free Opening & Closing
- Injectable Packing
- Single Seat Design
- Long Life Performance
- Low Torque Operation
- Wear Resistant Hard Facing on Core
- Optimum Flow
- Top Entry Design
- Dual Stem Guides
- Self Cleaning
- Mechanical CAM Closure

NOTE: Never remove any part from an ORBIT valve unless specifically instructed to do so in ORBIT literature, or without first consulting an ORBIT Representative. Incorrect procedure could result in personal injury and/or property damage.
"TM" offers materials specifically designed for high temperature steam and abrasive slurry service applications.

**Sizes:**
2 in. through 12 in. (50 mm through 300 mm)
Full Port and Reduced Port Designs.

**Pressure Classes:**
ASME 150, 300, 400, 600, 900, 1500, 2500

**Operating Temperatures:**
-50°F to 662°F (-46°C to 350°C)

**Materials:**
Carbon Steel and Stainless Intervals with applicable hard faced coatings per process requirements.

**Features**
- Double-Block-and-Bleed
- Bi-Directional Sealing to Class V and VI
- Redundant Seals
- Fire Tested to API 607
- Extended Bonnet Design

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**TBV™ SERIES 1800 AND 3300 FLOATING BALL VALVES**

Series 1800 and 3300 ball valves are designed to solve the most demanding process applications. Both series offering quality, flexibility, long service life and safety. This makes the TBV valve the top choice for most critical applications.

**Sizes:**
1/2 in. through 16 in. (15 mm through 400 mm)
Full Port and Reduced Port Designs.

**Pressure Classes:**
ASME 150, 300, 400, 600, 900, 1500

**Operating Temperatures:**
Cryogenic to 1000°F (special low temp to 538°C)

**Materials:**
Carbon Steel, Stainless Steel, Hastelloys, Monel, Inconel and Titanium.

**Features**
- Fugitive Emissions Bonnet available
- Plasma Spray Ceramic and Carbide Internals available
- Widely used in the chemical, petrochemical and refinery industries Since 1978
- Fire Tested to API 607
- Corrosion resistant and cryogenic trims available for most critical applications
**TK® HI-INTEGRITY TRUNNION MOUNTED BALL VALVES**

The TK valve uses a proprietary grade tungsten carbide coating which is applied to both the ball and seats using computer controlled equipment ensuring even application and hardness.

**Sizes & Pressures Class:**
- 2 in - 36 in. (150 to 600)
- 2 in - 24 in. 900 and 1500
- 2 in - 16 in. 2500 Class

**Full Port and Reduced Port Design**

**Operating Temperatures:**
- -50°F to 550°F (-46°C to 288°C)

**Materials:**
Carbon, Stainless Steel, Duplex SS, Inconel, Monel, Hastelloy and others upon request.

**Features**
- Critical Metal Seated Performance
- Design for High Temperature, Abrasive and Severe Corrosive Applications.
- API 6D Design

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**GENERAL VALVE® TWIN SEAL™**

**THE EVOLUTION OF DOUBLE-BLOCK-AND-BLEED CONTINUES . . .**

The Twin Seal is a high-integrity positive shut-off Double-Block-and-Bleed valve designed for custody transfer for the petroleum, oil and gas industries.

**Sizes:**
- 2 in. through 36 in. (50 mm through 900 mm)

**Full Port and Reduced Port Designs.**

**Pressure Classes:**
- ASME 150, 300, 400, 600, 900, 1500

**Operating Temperatures:**
- -50°F to 300°F (-46°C to 150°C)

**Materials:**
Carbon Steel and others as applicable.

**Features**
- Positive Double-Block-and-Bleed Design
- Mechanical Double Seal Design
- Simple, In-Line Field Maintenance
- Safe and Proven Pressure Relief Systems Available
- Available in 4-Way Diverter Design

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TWIN SEAL’S totally retracted slip design eliminates wear, minimizes leakage risk and reduces maintenance.
**WKM® POW-R-SEAL® API 6D THROUGH-CONDUIT GATE VALVES**

The Pow-R-Seal Gate Valve can handle most fluids and gases with its mechanical seal design.

**Sizes:**
2 in. through 36 in. (50 mm through 914 mm)  
Full Port Designs.

**Pressure Classes:**
ASME 150, 300, 400, 600, 900, 1500, 2500

**Operating Temperatures:**
-50°F to 1000°F (-46°C to 538°C)

**Materials:**
Carbon Steel with various internals as applicable.

**Features**
- Metal-to-Metal Mechanical Seal Design
- Adjustable Outside Packing Gland
- Metal-to-Metal Bonnet Seal
- Protector Seat Faces
- Smooth, Continuous Conduit
- Rising Stem Design
- Proven History in Critical Applications
- Full bore through-conduit design eliminates turbulence; pressure drop no more than through an equal length of pipe.
- Seat faces are protected from flow, as upstream and downstream seats are both in full contact with gate in either fully open or fully closed position.  
  Seats and gate have Stellite #6 providing a Metal-to-Metal seal.