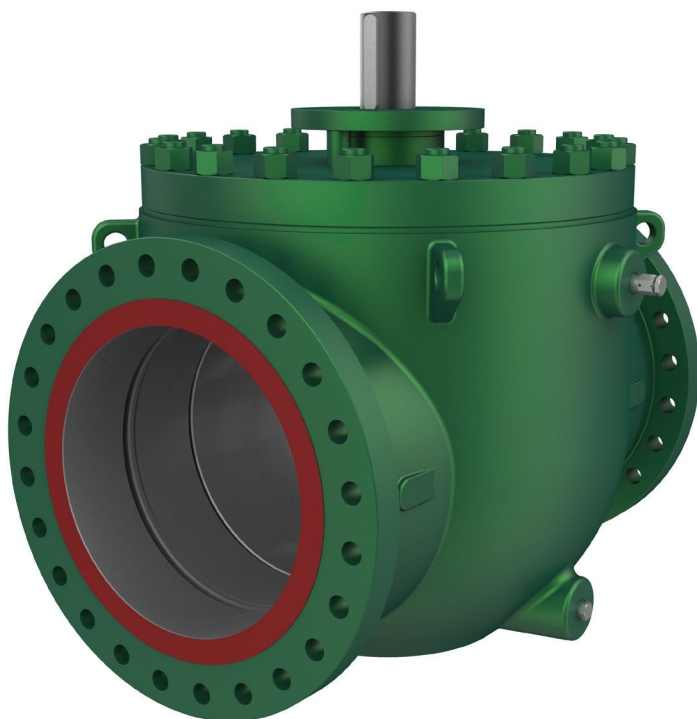


### Top-entry trunnion ball valves BTE and TSB series

**NPS 2–56 (DN 50–1400), ASME Classes 150–2500**  
**NPS 1<sup>13</sup>/<sub>16</sub>–16<sup>3</sup>/<sub>4</sub> (DN 46–425), API Classes 5000–15000**

Top-entry trunnion ball valves are the perfect solution for both offshore and onshore systems. Convenience of operation and maintenance are essential features of our design simplifying in-line disassembly for trim inspection or internal repairs even where space is restrictive. Our valves also offer excellent corrosion resistance and superior sealing performance at both high and low pressures.



Valves are manufactured in a single forged or cast piece and configured with two independent seats for a bi-directional sealing and are manufactured in accordance with customer specific requirements and international standards.

#### Design features

- Double block and bleed design (DBB).
- Secondary seals in pure Graphite.
- Anti-static device.
- Anti-blowout stem.
- Soft-seated or metal-seated designs with hardfacing on ball and seats.
- Seat configurations available: self-relieving and double piston.
- O-ring/lip seal configuration.
- Emergency sealant injection on seats and stem available.
- Low fugitive emission stem packing available.
- CRA overlay on all dynamic sealing areas or on all wetted parts available.
- Special maintenance tool for in-line seat disengagement.
- Stem extension for underground installations available.

#### Operator

- Manual: wrench or gear with padlocking.
- Actuated: pneumatic/hydraulic/electric.

#### Specifications

<b>Valve design</b>	As per API 6D or API 6A or API 6DSS standards and customer requirements.
<b>Body design</b>	Forged or cast one-piece
<b>Temperature range</b>	-150 to 662°F (-101 to 350°C)
<b>Face-to-face</b>	As per API 6D or API 6A standard
<b>End connections</b>	RF, RTJ as per B16.5 & B16.47 BW, Butt weld as per B16.25 Hub connection 6B, 6BX as per API6A

#### Testing & certification

- Compliance with inspection and testing: API 6D, ISO 5208, and API 598 or API 6A or API 6DSS.
- Fire safe and fire tested as per API 6FA/607.
- SIL 3 Certification as per IEC 61508.
- Fugitive emission as per ISO 15848.
- PED 2014/68/UE.
- Available as per API 6A:  
Product specification levels PSL 1, 2, 3, 3G, and 4.  
Performance requirement levels PR1, PR2.  
Design validation as per PR2F.