VTE® - SERIES F15 / F30 FLOATING, FLANGED BALL VALVES
RECOMMENDED SPECIFICATION SHEET

VAL-TECH

VALVE DETAILS

- Flanged End Connections
- 1/2" to 12" | DN 15 to 300
- ASME Class 150 and 300 | PN 10, 16, 25, 40

BODY

- Body shall be offered in a two-piece, side entry assembly.
- Body shall be offered in cast material grades.
- 1/2" – 4" valve bodies shall be investment castings.
- Body casting shall be marked with a foundry heat code for full traceability.
- Body shall be full port.
- Standard product shall be designed in accordance with ASME B16.34 and pressure-temperature ratings established by ASME B16.34.
- Body and end cap wall thickness shall meet or exceed ASME B16.34 minimum wall thickness requirements.
- End flanges designed per international flange standard as specified. ASME B16.5 | DIN EN 1092-1
- Valve face-to-face dimensions are in accordance with ASME B16.10:
  - Long Pattern: F15/F30, 1/2" – 12"
  - Short Pattern: F15, 1/2" – 4"
  - Short Pattern: F30, 1/2" – 6"
- Materials are in accordance with NACE MR0175.
- Bolted body connection shall utilize a spiral wound, 316SS/graphite body joint gasket.
- For valve sizes 6" through 12", a ball support is utilized to help maintain ball-to-seat contact and lower operating torque.
- Carbon steel bodies and end caps are to be phosphate coated for increased corrosion resistance.
- The body shall be designed for internal stem entry to create a safe, blowout proof assembly.

BALL

- Ball is to be precision machined and polished for a smooth surface that will allow for bubble tight shut off and low operating torque.
- The ball is provided with a pressure equalization hole in the stem slot to equalize pressure between the body cavity and the pipe when the valve is in the full open position.
- The ball shall be offered in cast material grades. The standard ball material is ASTM A351 Gr CF8M stainless steel. Custom materials are available upon request.
- When metal seats are used, the ball shall receive advanced coating or hard chrome plating. The ball is to be 360° mate lapped with the seats after coating to ensure proper sealing and low-torque.

STEM

- The stem shall be a one-piece, blowout proof design.
- The stem shall have a double "D" design at the ball and operator interface.
- The stem must contain (2) anti-static devices which maintain constant contact with the body and ball to eliminate risk of static discharge.
- As a standard, the stem for valve sizes 1/2" to 2" shall be threaded for installation of the stem nut that is used to compress the live-load, Belleville washers.
- As a standard, top portion of the stem for valves sizes 2-1/2" to 12" is non-threaded for utilization of an independent packing gland.
- The standard stem material is ASTM A479 Type 316 stainless steel. Additional materials are available upon request.
- For valve sizes 1/2" to 2", a lock washer is utilized to prevent the stem nut from unthreading in high-cycle automation applications due to vibration.

SEAT

- Seats are designed to ensure bidirectional, bubble tight shut off with low operating torques.
- Seats are positively preloaded to ensure low-pressure and vacuum sealing ability.
- The standard resilient seat material is TFM 1600. Other resilient seat materials available are: PTFE, RPTFE, Tek-Fil™, UHMWPE, and PEEK.
- Metal seats are available and are ANSI/FCI 70-2 Class V shut off rated.
- Metal seats are coated or hard faced for resistance to wear, reduced torque, and extended seal surface life.
- Metal seats are 360° mate-lapped with the ball to ensure proper sealing and low-torque.
- Wave springs are used with the metal seats to maintain contact with the ball through thermal cycling.
- The standard metal seat base material is ASTM A351 Gr. CF8M stainless steel.
- Utilizing metal seats allows for use of the valve in temperatures up to 750°F.
- When metal seats are used, the valve becomes unidirectional.

PACKING AND BEARINGS

- Valve sizes 1/2" – 2" shall have a live-loaded, self-adjusting stem seal that utilizes Belleville Washers. The stem seal adjusts to compensate for changes in temperature and normal wear.
- For valve sizes 1/2" – 2" where live-load stem sealing is used, the stem nut is to be tightened until the Belleville washers are flat and then the stem nut is to be backed off ½ turn and secured with the lock washer.
- Valves sizes 2-1/2" – 12" utilize an independent packing gland that can be adjusted without removal of the mounting hardware or operator. The packing gland uniformly distributes load to the packing.
- The standard stem packing is composed of RPTFE V-rings.
- The adjustable V-Ring stem seal design creates a seal between the stem and body packing box. The stem packing is composed of 3 or 4 seal rings (quantity is dependent on size) to provide high-cycle life and resistance to creep and cold flow.
- A thrust washer and thrust washer protector are required to reduce torque and prevent galling.
- Graphite stem packing is available for fire safe configurations in compliance with API 607. Graphite packing is composed of a single ring.
- Combination packing (TFM / Graphite) stem packing is available for valves with fugitive emissions requirements to API 641 or ISO 15848-1.

APPROVALS AND CERTIFICATIONS:

- API 607 - Optional
- API 608 – Optional
- API 641 - Optional
- ISO 15848-1 - Optional
- NACE MR0175
- PED 2014/68/EU - Optional
- ATEX 94/9/EC
- SIL IEC 61508 SC 3
- NSF/ANSI/CAN 61 & 372 – Optional
- ABS
- CRN
- CSA
- TSG
- TR CU
- UA TR
- UKCA

VALVE ACTUATOR MOUNTING PAD

- ISO 5211
- Integrally cast actuator mounting pad.

TESTING

- API 598
- MSS SP-72
- Others upon request

PRESSURE RATINGS

- Bidirectional, Zero Leakage
- F15 - ASME Class 150 | PN 10 & 16
- F30 - ASME Class 300 | PN 25 & 40

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