

# Ball Segment valve



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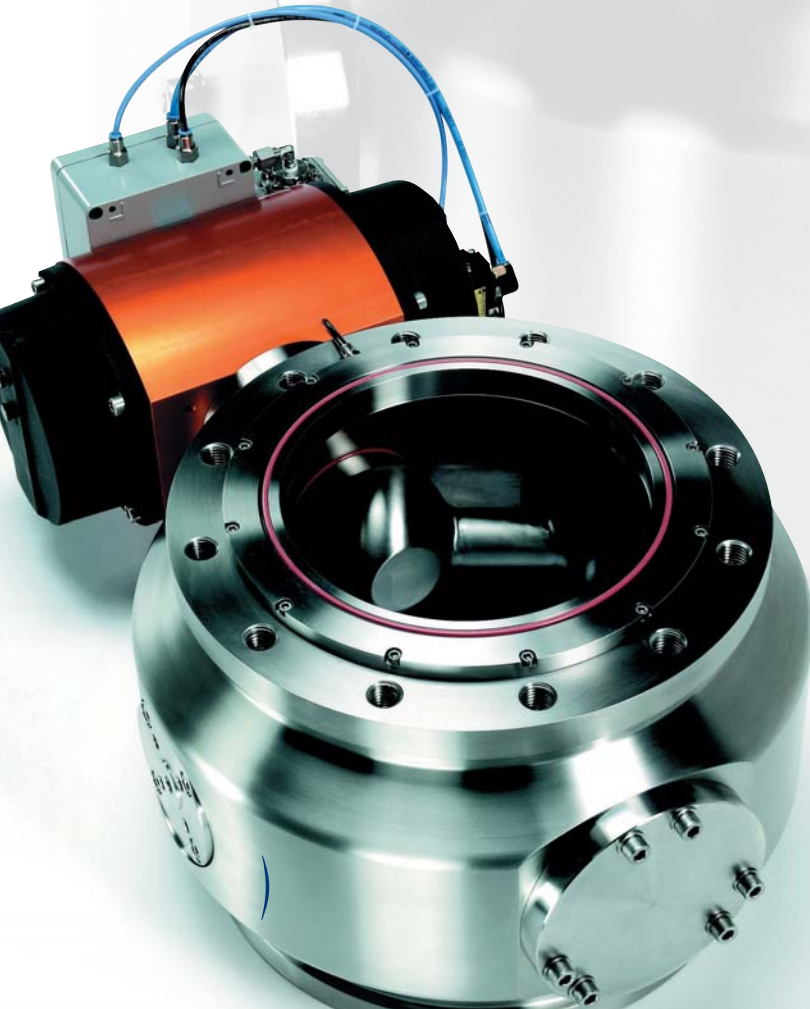
# BALL SEGMENT VALVES

The unique properties of the Ball Segment Valves are that it can handle both liquid and dry abrasive products from fine powder to coarse abrasives. It has an opening where materials cannot build up, accumulate, or be captured within the valve body.

The Ball Segment Valves are used in a wide range of applications in the pharmaceutical, chemical, food and mining industries.

The valve can be supplied with an optional full fail-safe system. In this case, the valve closes whenever there is a loss of electric power or compressed air/nitrogen. When a failure occurs, a pressurized accumulator tank filled with air/nitrogen closes the valve. After the valve is closed, the inflatable seal is pressurized to close the space between the Ball Segment and the valve housing. Our standard Ball Segment Valve is equipped with an inflatable seal.

- There are two main advantages of the inflatable seal
- Reduced wear and tear because the seal is inflated when the valve is fully closed and deflated before the valve is opened.
  - Withstand pressure up to 10 bar and full vacuum.



## THE UNIQUE FEATURES

- Full bore to allow maximum flow
- Ability to open and close with static or flowing material
- Standard sizes up to 12" (300mm).
- Larger sizes available up to 20" (500mm) on request.
- Designed for full vacuum and overpressure in both directions
- Seals made of high chemical resistant perfluoroelastomer FDA compliant materials
- Can operate in temperatures up to 400°F or 230°C
- Inflatable seal to prevent jamming and leaking
- Seal inflates only when valve is fully closed and deflates upon opening of the valve, therefore eliminating unnecessary wear and tear to insure longer seal life.
- Inflatable seals to reduce opening and closing torque requirements
- Special design to eliminate product build-up on seal face
- Manual or pneumatically operated
- Can be supplied with positioner actuator with monitoring
- Valve body polished and constructed for pharmaceutical and food applications

## TECHNICAL DATA

### DESIGN

- Design according to
- ASME VIII Div. 1 Boiler pressure vessel code
- Design pressure
- Full Vacuum up to 10 bar
- Flange
- ANSI drilling
  - DIN drilling
  - Alternative/custom flange designs can be supplied on request

### MATERIAL

- Product contacting parts
- AISI 316, AISI 316L, 1.4401, 1.4404.
  - Hastelloy C22, 2.4602
  - Alternative materials on request
- Non-product contacting parts
- AISI 316, AISI 316L, 1.4401, 1.4404, carbon steel
- Inflatable seal
- Perfluoroelastomer
  - Viton
  - EPDM
- All of which are FDA compliant
- Static seal
- PTFE envelope type seal, only dust tight.
- O-rings
- PTFE/FEP (FDA Compliant)

### FINISH

- Inside and all product contacting parts
- Ra < 0,8 µm (standard)
- Non product contacting parts
- Ra < 1,6 µm (standard)

### UTILITIES AND CONSUMPTIONS

- Available
- Air or Nitrogen
- Pressure
- For inflatable seal, 2 Bar above max. process pressure
  - For actuator 6-8 Bar
- Conditions
- Dry and free of oil

We strongly advise a control box for the correct and safe operation of the Ball Segment Valve. This control box contains mechanically actuated valves and time delays that prevent the seal from being inflated when the Ball Segment Valve is opened.

The pressure on the seal can be set with a pressure regulator, found in the control box.



## OPTIONS

### CIP

Clean in Place (CIP) spray system can be supplied with removable or permanent spray nozzle.

### SIGHT GLASS

For inspection and viewing flow.

### CUSTOM BUILT VALVES

#### TO BE APPLIED IN EXISTING SYSTEMS

- Samples are:
- Connection to a block flange
  - Ball Segment heating
  - Heated jacket
  - Flanges at an angle
  - Tri clamp connection
  - Dead space free design

## QUALITY STANDARDS

All our Ball Segment Valves can be manufactured to the following international standards. Equipment directive (PED), ASME + U-Stamp, TUV.