

Metal Seated Ball Valve: Abrasive and High-Temperature Service

In a metal seated ball valve, the ball and seats seal against each other on hard-faced metal surfaces instead of soft inserts. It provides long service life where PTFE and similar soft seats degrade quickly because of solid particles, catalyst, ash, slurry or high temperature.

Technical specifications

Design	Floating or trunnion mounted; metal-to-metal seats
Coating	Tungsten carbide (HVOF), chromium carbide, Stellite; lapped matched set
Pressure class	ASME Class 150–2500 (by type and size)
Materials	WCB, WC6, WC9, CF8M, duplex; to suit the service
Applications	Abrasive particles, high temperature, slurry, catalyst and ash lines



Three-piece forged body ball valve, bare stem · representative image

Key features

- Long life at temperatures and wear levels that soft seats cannot withstand
- Lapped ball-to-seat matching
- Coating type and thickness selected for the service
- Shutoff class stated clearly in the quotation

Catalog data

- **Body:** 3-piece forged or cast body; easy to dismantle for maintenance.
- **Ball and seat coatings:** tungsten carbide (HVOF), chromium carbide, CoCr hardfacing (Stellite); ball and seats are lapped as a matched pair.
- **Operation:** bare stem with ISO 5211 mounting pad, ready for actuation; for high torque, sizing is done at quotation stage.
- **Leakage class:** on request, tested to ANSI/FCI 70-2 Class V or API 598 metal-seated leakage criteria.