

Forged Steel Trunnion Ball Valve: High Pressure, API 607

Forged steel trunnion ball valves have bodies and end closures machined from forged blocks rather than cast. Because forging does not produce casting defects such as gas porosity and shrinkage, they are preferred for high pressure classes, sour (H₂S) service and lines that require a compact installation.

Technical specifications

Pressure class	ASME Class 150–2500 (mainly 900–2500)
Size	2"–60" (DN50–DN1500); full or reduced bore
End connections	RF / RTJ flanged, butt-weld
Materials	A105N, A350 LF2, A182 F316, F51; other alloys on request
Design	Trunnion mounted, spring-loaded seats, antistatic, anti-blowout stem, fire-safe (API 607)
Testing	API 6D / API 598; gas testing and EN 10204 3.2 on request



Forged body trunnion mounted ball valve with gear operator · representative image

Key features

- Forged body: no casting defects such as gas porosity or shrinkage
- Compact, lighter construction at high pressure
- Design fire-tested to API 607
- NACE MR0175 compliant materials and hardness control for sour service

Catalog data

Size and class	2"–60", Class 150–2500 (forged body; 2-piece in smaller sizes, 3-piece side entry in larger sizes)
Design and testing	API 6D, ASME B16.34; API 607 fire-tested design
Design features	Anti-blowout stem, anti-static design, ISO 5211 actuator mounting pad, double block and bleed (DBB), cavity pressure relief, low-emission packing, low torque

Typical part materials

Part	Carbon steel	Low temperature	Stainless (316)	Stainless (304)
Body, end caps	A105N	A350 LF2	A182 F316	A182 F304
Ball, stem, seat ring	A105N + ENP	A350 LF2 + ENP	A182 F316	A182 F304

Part	Carbon steel	Low temperature	Stainless (316)	Stainless (304)
Seat insert	PTFE / RPTFE / PEEK	PTFE / RPTFE / PEEK	PTFE / RPTFE / PEEK	PTFE / RPTFE / PEEK
Spring	Alloy X-750	Alloy X-750	Alloy X-750	Alloy X-750
Stud bolts / nuts	A193 B7 / A194 2H	A320 L7 / A194 7	A193 B8M / A194 8M	A193 B8 / A194 8