

## BALL VALVES WELDED BODY & FULLY WELDED Trunnion Mounted

The main features of this design are the absence of body joints with no leak paths to the external and the reduced weight if compared with the bolted side entry and top entry ball valve designs. The Welded Body/Fully Welded Ball valve is most commonly used for oil and natural gas transportation (and natural gas applications in general), frequently in

Description	Product Features and Options
Pibiviesse valve models	W series
Main Standards and Codes	API 6D & IOGP S-562, API 6A, ASME B16.34, ASME VIII, NACE MR 01-75/ISO 15156
Body design	2 or 3 piece Welded Body
Size range	API 6D: from 2" to 64"
Pressure Ratings	ASME 150# to 2500#
Design Temperature range	-46 / 230°C
End Connections	Flanged RF/RTJ to ASME B16.5, ASME B16.47 Series A or B, EN 1092-1, API 6A Compact to Norsok L005 Clamped Hubs to Customer request Butt-Welded to ASME B31.3, ASME B31.4, or ASME B31.8. Profile as illustrated in ASME B16.25.
General Design features	Full and Reduced Bore Long Pattern Spring Energized Floating seats Bidirectional, Bidirectional preferential or Unidirectional Anti-blow out stem Anti-static design Emergency sealant injection on stem and seats Fire Safe
Ball-to-Seats seal	Soft, Metal-to-Metal, Primary Metal Secondary Soft (PMSS)
Seat design	SPE (Self Relieving), DIB-1, DIB-2
Optional Design features	Bolted body cover or Fully Welded   Special Bore (Controlled Bore for Pigging)   Compact design with end-to-end shorter than API 6D/ASME B16.10 (only with BW ends)   Pup pieces on weld ends   Double Block and Bleed   Double Isolation & Bleed   Pressure Equalizing Hole in the ball   Stem extensions (including for buried installation)   Extended bonnet   Locking devices   Position indication Limit Switches   Combined upstream Metal-to-Metal / downstream Soft ball-to-seats sealing   Ball bearings and seat pockets protections from sand/debris in dirty service   Quick operation ≤ 3 secs for HIPPS applications
Materials Selection	Manufactured from forged materials CS, LTCS, 316ss, Duplex CRA weld overlays in 316 St. Steel or Inconel 625 Tungsten Carbide Coating (TCC) Electroless Nickel Plating Compliance with NACE MR 01-75/ISO 15156 when applicable.
Seals and Gaskets	RPTFE, PEEK, PCTFE and NYLON grades seat inserts, Metal with TCC Elastomeric (HNBR, FKM, FFKM), PTFE lip-seals, Metallic, Graphite and V-Packings
Operation	Manual with Lever or Gearbox w/handwheel Actuation: Electric, Pneumatic and Hydraulic actuators
Product Certifications and Qualifications	API 6D, PED 2014/68/EU, SIL 3 to IEC 61508 Parts 1-7:2010 ISO 15848-1 for Fugitive Emissions (to be confirmed case by case) Fire Safe ISO 10497, API 607 or API 6FA
Applications	Onshore Oil and Gas Production Onshore & Offshore Oil and Gas Transportation Refining & Petrochemical Onshore Gas Treatment Onshore Storage