

Optibarrier™ Mechanical Ball Valve

Provides unlimited mechanical opening and closing functionality

Applications

- Sand control
- Isolation of lower-completion system for upper-completion installation or workovers
- Platform for hydraulically setting production packers

Features and Benefits

- The Optibarrier mechanical ball valve can be operated via industry-standard shifting tools for operational flexibility.
- The ball valve has increased differential opening capacity.
- The ball valve has unlimited mechanical opening and closing functionality.
- Initial valve closure is achieved when the washpipe and collet shifting tool are retrieved through the valve.
- The full-bore inside diameter (ID) of the ball valve maximizes production and enhances access to the formation.
- The bidirectional sealing mechanism provides a robust downhole barrier.
- The ball mechanism is rotationally locked to facilitate contingency milling.
- The ball valve can be manufactured in a variety of metallurgies, ranging from basic 4140 to high-nickel premium alloys, to suit specific wellbore conditions and operational needs.
- By exceeding ISO 28781-V1 standards, and having passed extended debris and life-cycle testing, the ball valve demonstrates reliable performance.

Tool Description

The Weatherford Optibarrier mechanical ball valve is a tubing-mounted bidirectional ball valve that controls wellbore flow. It is opened and closed mechanically by using industry-standard shifting tools or a stinger module in the upper-completion system. The ball valve has a modular design that enables compatibility with the other Optibarrier products, including those that are operated mechanically, hydraulically, or remotely using radio-frequency-identification (RFID) technology.

The Optibarrier ball valve exceeds ISO 28781 standards and has undergone extended debris testing as evidence of life-of-well performance capabilities. The ball valve can be manufactured in a variety of metallurgies, from basic 4140 to high nickel premium alloys.



The Weatherford Optibarrier mechanical ball valve can be opened and closed an unlimited numbers of times using common industry shifting tools.



Optibarrier™ Mechanical Ball Valve

Specifications

Size	Maximum OD	Minimum ID	Maximum Differential Rating Across Ball	Temperature	Connections	Qualification Standard
4.50 in. (114.30 mm)	7.75 in. (196.85 mm)	3.75 in. (95.25 mm)	10,000 psi (68.90 MPa)	39 to 302°F 4 to 150°C	4-1/2 in. premium	ISO 28781-V1
5.50 in. (216 mm)	8 in. (203.20 mm)	4.63 in. (117.60 mm)	7,500 psi (51.70 MPa)		5-1/2 in. premium	
5.50 in. (216 mm)	8.25 in. (209.55 mm)	4.25 in. (107.95 mm)	10,000 psi (68.90 MPa)		5-1/2 in. premium	

*Maximum differential ratings across ball are metallurgy dependent.

