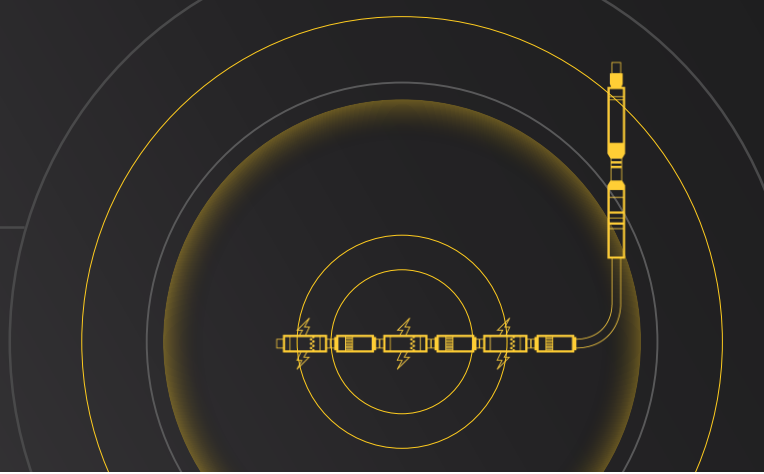


TECH DATA SHEET

Frontier Hydro Mechanical Open Hole Packer



OVERVIEW

The Open Hole Packer is a downhole device used in Multi-Stage fracturing operations for zonal isolation. This hydraulic set packer is specifically designed to set and seal in the open hole straddling a ball open frac. sleeve, isolating the open hole intervals into fracturing stages. The Open Hole Packer is equipped with an internal locking mechanism which ensures a positive and reliable long term set.

FEATURES

- Reliable hydraulic activation
- Compact design for ease of handling and running
- 10,000 PSI differential pressure rating
- Full casing ID
- Gauge ring protection system
- Anti-preset mechanism
- Standard Environment
- Single Sealing Element

APPLICATIONS

- Open hole uncemented multistage isolations
- Off-bottom liner cemented installations
- Short radius horizontal deployments



Specifications and Dimensions

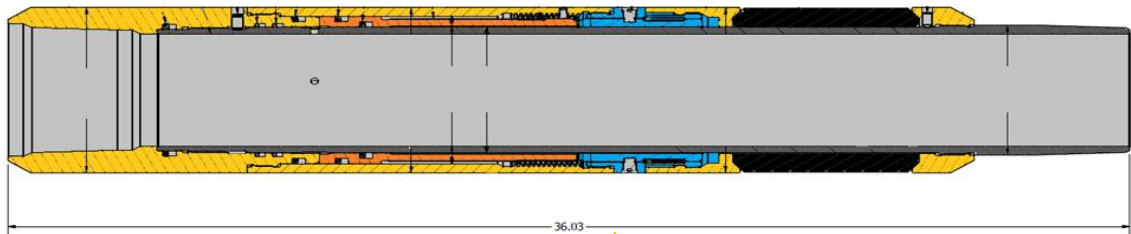
Size (in)	Weight (lbs. ft)	Nominal OD (in)	Max. Tool O.D. (in)	Min. Tool ID (in)	Open Hole Size (in)	Pressure Rating (PSI)	Setting Force per Pin (lbs)	Min. Setting Force (lbs)
4-½	11.6# - 15.1#	5.750	5.750	3.906	6.125	10,000	3,004	15,020



Seal Element Material	Type	Thread Type	Material/ Grade	Max. Number of Shear Pins	Shear Pin Value (PSI/Pin)
80 Duro HNBR	Single Element	LTC 8rd	P110	12	536

Max. Temperature (°F)	Max. Setting Pressure (PSI)/ (Optimum)	Min Setting Pressure (PSI)	Piston Area (SQIN)	Burst and Collapse (PSI)
325	6,441 PSI (12 pins)	2,680 psi (5 pins)	5.600	12,434/11,805

15% +/- Shear Tolerance on Shear Values



FOP Cross Section. Single Element.

PRESSURE RATING VS. OPEN HOLE ID

Open Hole Packer - FOP4500 - Performance Curve

