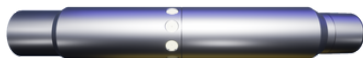


Raptor™

CLOSABLE TOE INITIATION SLEEVE



OVERVIEW

Interra Energy's Raptor™ closable toe initiation sleeve is primarily utilized in conjunction with Interra's Raptor OC™ (Open Close) coil sleeve multistage fracturing system. The Raptor closable sleeve is run into the toe of a well and is pressure activated. The additional flow into the formation assists the operator in getting the Velocity™ shifting tool to bottom in long reach applications.

OPERATION

The Raptor™ closable toe initiation sleeve is installed in the casing string near the toe of the well. The unique design prevents premature shifting of the sleeve with wiper plugs or coiled tubing tools.

To activate, pressure is increased in the well to the predetermined activation pressure. Flow can then be initiated into the formation. When desired, the operator can run in hole with the Velocity shifting tool to close the Raptor closable sleeve with a simple up-to-close operation.

Features & Benefits

- ★ Shift up to close design.
- ★ Customizable opening pressures in 500 psi increments.
- ★ Differential or atmospheric designs with a ±3% accuracy.
- ★ Entire wellbore is isolated post-frac without the need to run plugs.
- ★ Open hole and cemented applications.
- ★ Short design eliminates the need for pup joints.
- ★ Torque through for easy installation.
- ★ Frac through capability.

SPECIFICATIONS

Tool Size mm (in.)	Casing Weight kg/m (lb/ft)	Min. Inside Diameter (ID) mm (in.)	Max. Outside Diameter (OD) mm (in.)	Made up Length m (ft)
114.3 (4.500)	17.26 (11.6)	101.60 (4.000)	139.70 (5.500)	0.61 (2.00)