

Bulldog™ Frac Multi-Open/Close (MOC) Sleeve

Bulldog Frac MOC sleeve was developed from our successful North Sea i-Valve technology featuring a mechanical shift, multiple open and close sleeve specifically designed for horizontal multistage land applications. The Bulldog Frac sleeve is activated using proprietary, coiled tubing deployed Bulldog Frac bottom hole assembly (BHA), which allows operators to locate, shift open and stimulate each isolated stage. The sleeve, along with the BHA design allows for flexibility with fracing operations. Treatments can be performed as “Open-Frac-Close” or “Open-Frac”. The Multi-Open close feature permits closing sleeves at a later date should well conditions dictate.

The Bulldog Frac sleeve is small, light and easy to handle improving make-up efficiencies and safety in the field. No pup joints are required and the sleeve is a mere 33 in. (840 mm) in length. The Bulldog Frac sleeve has a full bore ID and is designed with large treatment ports, removing choke points maximizing stimulation and production flow area.

Features

- Field proven i-Valve shifting profiles
- Multi-open/close functionality through mechanical shifting tools
- Full bore ID body design
- Fully compatible with cemented and open hole completions
- Pinpoint fracture initiation in cemented applications
- Each sleeve provides accurate depth location during shifting operations
- Compact, lightweight and robust

Benefits

- Flexibility in frac design, “Open-Frac-Close”/“Open-Frac”
- i-Valve patented & field proven sealing system offers full pressure testing of closed sleeves even after several years in service
- No ID restriction to choke production
- Safe, simple and efficient handling on the rig floor
- No handling pup joints required
- No stage count limitations

Applications

- Acid or proppant stimulations
- Completions requiring reliable, single point of entry
- High stage count stimulation designs
- Formations with a high frequency of screen outs



Technical Data

Bulldog MOC	OD in. (mm)	Body ID in. (mm)	Length ¹ in. (mm)	Weight lbs (kg)	Working Pressure psi (kPa)	Tensile Strength lbf (kg)	Temperature °F (°C)	Flow Area in ² (cm ²)	Threads ²
450 MOC	5.6 (142.24)	3.93 (99.82)	33.10 (840)	97 (44)	10,000 (69,000)	325,875 (147,814)	350 (177)	7.03 (45.35)	LTC Standard

¹ Lengths will vary depending on end sub threading and screen size

² Premium Connections available