

Bulldog™ Frac Dual Shift (DS) Sleeve

Bulldog Frac DS sleeve was developed from our successful North Sea i-Valve technology featuring a mechanical shift, multiple open and close sleeve specifically designed for extended reach horizontal multistage land applications. In most extended horizontal wells, sufficient downward force is limited. The Bulldog DS sleeve requires only upward movement to open and close, providing a reliable means of stimulation. It 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 Bulldog BHA uses the proven i-Shift tool to engage each sleeve profile independently, preventing inadvertent closing of the sleeve. The unique design allows for future re-fracturing operations as required. The Bulldog Frac sleeve has a fullbore ID and is designed with large treatment ports, removing choke points maximizing stimulation and production flow area.

Features

- Separate i-Valve profiles for opening and closing using only upward movement
- Multi-open/close functionality through i-Shift mechanical shifting tools
- Fully compatible with either cemented or openhole completions
- Pinpoint fracture initiation in cemented applications
- Fullbore body design
- Each sleeve provides accurate depth location during the shifting operations

Benefits

- i-Valve patented and field proven sealing system offers full pressure testing of closed sleeves even after several years in service
- Closable sleeves give the option to perform future re-fracturing as required
- Increased pumping efficiency and rate
- No stage count limitations
- No ID restriction to choke production
- No handling pup joints required

Applications

- Extended reach horizontal completions
- Acid or proppant stimulations
- Completions requiring reliable, single point of entry
- High stage count stimulation designs
- Formations with a high frequency of screenouts



Technical Data

Bulldog DS	OD in. (mm)	Body ID in. (mm)	Length ¹ in. (mm)	Weight lbs (kg)	Working Pressure psi (kPa)	Tensile Strength lbf (kN)	Temperature °F (°C)	Threads ²
450 DS	5.6 (142.24)	3.90 (99.06)	44 (1118)	132 (60)	10,000 (69,000)	325,000 (147,425)	350 (177)	LTC Standard

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

² Premium Connections available