

INNOVUS™ frac sleeves for pinpoint stimulation

Innovus frac sleeves deliver reliability and cost-efficiency for pinpoint stimulation and for long-term, stage-by-stage wellbore production management. They incorporate exclusive features developed over almost 14,000 completions totaling more than 257,000 sleeves.

General Features

- Typically part of a cemented completion string, but can be deployed in open-hole completions.
- Sleeves are operated by the Innovus frac-isolation assembly deployed on coiled tubing or jointed pipe.
- No pumpdown plugs or balls required. No drillouts needed.
- Sleeves can accommodate frac rates up to 80 bbl/min (12.7 m³/min).
- Sleeve make-up length is 40 in. (101.6 cm) or less, allowing frac-port spacing as close as 15 ft (4.6 m).
- Compact and easy to handle, with no pup joints required for API connections. Sleeves can be torqued through.
- Sleeves can be installed in any order, unless port sizes are varied along the lateral on request.
- Sleeve materials and ratings match host casing.
- Proven NCS MultiCycle® sleeve functionality for stage-by-stage wellbore management.
- Also available in OpenOnly versions.
- Optional Shift-Frac-Close® sequence stops proppant flowback and allows fracs to heal before reopening sleeves for production.

Innovus SD Frac Sleeves

Innovus SD sleeves are the most economical and shortest frac sleeves in the Innovus system. They are typically used for completions having lower frac rates, lower proppant concentration, and less total tonnage.

Innovus HD Frac Sleeves

Innovus HD sleeves are approximately 7 in. (18 cm) longer than SD sleeves and are typically used for more intensive stimulations involving higher frac rates, sand concentrations, and total tonnage. HD sleeves are compatible with Innovus frac-isolation assemblies that have special erosion-resistant components positioned across the frac ports. HD sleeves also incorporate premium MBED™ reclosing seals and other features that ensure reliable performance in the most demanding applications.

Innovus SD Convertible Sleeve

This special-purpose, dual-inner-barrel sleeve can be converted post-frac or post-production to a regulated water-injection mode. The injection barrel is shifted into position across the sleeve ports using a stroker tool deployed on coiled tubing. Injection regulation is provided by the Torius™ calibrated tortuous flow path, which induces back pressure without relying on small-diameter orifices that are prone to erosion and plugging.



Innovus Sleeve Specifications

Sleeve Type	SD	HD	SD Convertible	
Casing size, in. / mm	4.50 / 114.30	4.50 / 114.30	5.50 / 139.70	4.50 / 114.30
Casing wt, lb/ft / kg / m	11.60 / 17.26	11.60, 13.5, 15.1 / 17.26, 20.09, 22.47	17.00, 20.00 / 25.30, 29.76	11.60 / 17.26
Casing grade	L80	L80, P110, or custom	L80, P110, or custom	L80
Connections	LTC, BTC, or custom	LTC, BTC, or custom	LTC, BTC, or custom	LTC, BTC, or custom
*Overall length, in. / cm	~33/ ~85	~40/ ~101	~43/ ~108	~40/ ~101
*Make-up length, in. / cm	~30/ ~77	~37/ ~93	~40/ ~101	~36/ ~93
OD, in. / mm	5.50 / 139.70	5.50 / 139.70	7.00 / 177.80	5.50 / 139.70
ID, in. / mm	>Drift	>Drift	>Drift	>Drift

*Dimensions given are approximate. Exact dimensions vary depending on casing weight and/or thread type. For exact values contact sales for detailed sleeve specification sheets.

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