

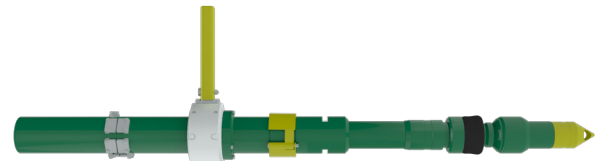
Well Construction

Drilling Technologies

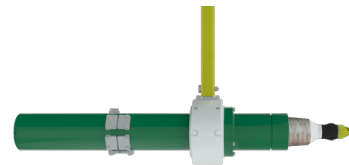
VERSAFLO™ - Casing and Drill Pipe Flowback and Circulation Tool

Features and benefits

- Drill pipe and casing flowback/circulation capability accomplished with one tool without the need to swap bails
- Casing Module is efficiently rigged down with a special breakout plate that holds the backup against the rig's bails
- Drill Pipe Module is ready to stab into the landing string after connecting a packer cup
- Casing Module (lower portion of VERSAFLO™ tool)
 - Packer cup seal assembly can be outfitted to stab into a range of casing sizes from 7-inch to 18 5/8-inch
 - Fill-up, circulation, and flowback can be accomplished while casing is being run; no shut down required
 - Automatically-operated internal valve prevents unwanted drilling fluid spilling out on the rig floor
 - Capable of sealing up to 5,000 psi
- Drill Pipe Module (upper portion of VERSAFLO™ tool)
 - Hydraulically-operated piston allows stabbing into drill string for circulation and flowback operations
 - Wireless controls allow tool operations from outside of the red zone
 - Special packer cup creates an effective seal on a range of drill pipe IDs
 - Automatically-operated internal fluid valve prevents unwanted drilling fluid spilling out on the rig floor
 - Hydraulic swivel allows rotation without the need to disconnect
 - umbilical lines
 - The drill pipe module can be screwed into a 6 5/8-inch full hole drill pipe connection without the need to disconnect or remove the piston or the packer cup from the ID of the drill string
 - Compact tool design allows the use of 16-foot bails based on rig survey



Casing configuration



Drill pipe configuration



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Specifications	
Drill pipe module operation	Hydraulic (via wireless control)
Tensile capacity	2,577,000 lbs [1,168,908 kg]
Minimum flow area	3.258 in ² [2,102 mm ²]
Maximum operating pressure	5,000 psig [34.5 megapascals]
Drill pipe module stroke	24 in [610 mm]
Minimum bails required	16.6 ft [5,060 mm]
Torsional capacity	70,000 ft-lbs [94,907 newton meters]
Maximum mud flow rate	750 gallons per minute [2,840 litres per minute]
Box/pin connection	API 6 5/8 full hole
RPM, maximum	40 RPM
RPM, continuous	20 RPM