

Vector Series 55 Drilling Motor

The Vector™ Series 55 drilling motor couples the next generation universal joint design with a robust mud lubricated bearing pack. The driveline incorporates a high strength bearing mandrel that is supported over its length by the mud lubricated bearing stack composed of a series of high strength ball bearings.

Built with customized spacers allowing a precise amount of preload on the thrust stack - Series 55 drilling motor is designed to maximize bearing assembly's capacity to handle axial loads. Tungsten carbide coated upper and lower radial bearings prevent accelerated erosion and enable the assembly to withstand higher radial loads.

Combined with NOV's proprietary driveshaft design, which facilitates seamless torque transfer from the power section via flat faces at the pivot points – Series 55 drilling motor provides exceptional reliability and high torque handling capability.

With the short bit-to-bend feature and an option to add near bit stabilization providing exceptional build rates, stability, and steerability – Series 55 drilling motor is an ideal choice for all conventional drilling applications.



Size	5¼ in.	5½ in.	6½ in.	7¼ in.	8½ in.	9⅝ in.
Bit to center of stabilizer	22.4 in.	22.6 in.	24 in.	26.6 in.	33.1 in.	37.5
Bit to bend (ADJ)	56.7 in.	n/a	n/a	n/a	n/a	101.6
Bit to bend (Fixed)	53.0 in.	54.0 in.	53.4 in.	57.2 in.	71.7 in.	n/a
Bit to stator	75.1 in.	76 in.	81.9 in.	86.1 in.	105.5 in.	130.9 in.
Max WOB @ 100 RPM	87,000 lbf	89,000 lbf	93,000 lbf	116,700 lbf	202,000 lbf	298,000 lbf
Pull to re-run	167,000 lbf	176,000 lbf	199,000 lbf	241,500 lbf	526,000 lbf	615,000 lbf
Pull to yield	431,000 lbf	447,000 lbf	537,000 lbf	697,100 lbf	1,003,100 lbf	1,650,000 lbf
Bottom connection	3½ in. REG	3½ in. REG	4½ in. REG	4½ in. REG	6⅝ in. REG	7⅝ in. REG

Features

- Short bit-to-bend
- Driveshaft design transfers torque via flat faces versus the traditional ball and socket driveshaft design
- Mud-lubricated bearing technology ideal for a wider range of temperatures and mud types
- Axial load is supported by multiple rows of bi-directional bearings
- Provides extended operating hours
- Fully protected flow diverter prevents accelerated erosion
- Robust bit box catch system

Benefits

- Provides higher operating torque capability with increased reliability
- Versatile; compatible with multiple drilling fluids
- Ideal for higher bottom hole temperatures
- Allows for higher WOB and radial load capacity
- Ideal for remote locations; easily serviced

Applications

- Hot hole
- Inverted mud systems
- Vertical drilling
- Curve drilling
- Lateral drilling