

DynaForce DTX thin-wall motor

Improves drilling performance in harsh drilling environments

Applications

- Performance drilling
- Drilling of hard rock and interbedded formations
- High-dogleg-severity trajectories

Benefits

- Optimizes drilling performance with increased WOB and torque range
- Enhances reliability with integrated power section and lower end
- Improves ROP in harsh drilling environments
- Expands operational temperature range

Features

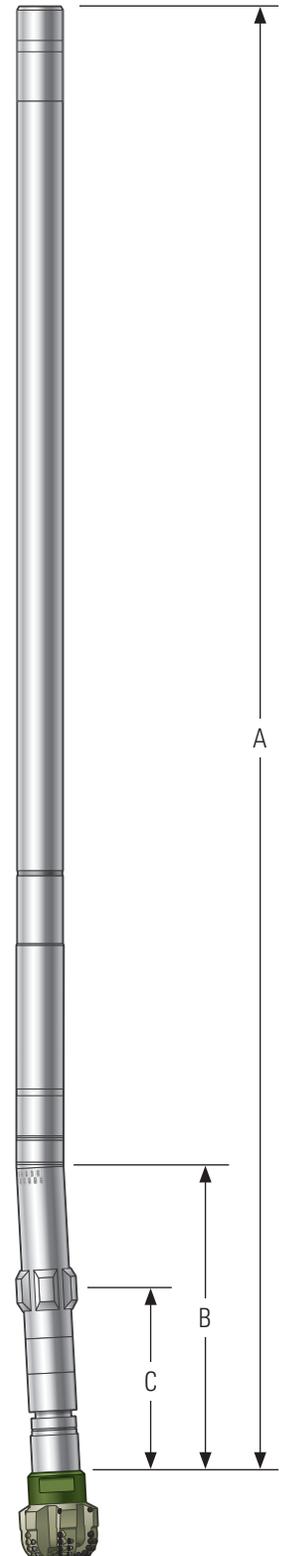
- Thin-wall power section
- DynaPower* motor elastomers
- High-torque transmission and drive shaft
- High-capacity bearing section
- Adjustable, fixed, or straight housing
- Optional short bit-to-bend motor configuration for 8 $\frac{3}{8}$ - to 9 $\frac{7}{8}$ -in hole sizes

The DynaForce DTX* thin-wall motor features an innovative high-torque transmission and drive shaft design that improves drilling performance in harsh drilling environments. The thin-wall design of the power section offers increased power output for maximized ROP, reduced motor-stall risk, and improved steering accuracy.

Improve reliability with fully integrated motor

The power section and lower end function as one tool, increasing reliability and improving performance, especially in hard rock and interbedded formations.

With increased power output from the thin-wall design of the power section, the DynaForce DTX motor optimizes the balance between stator performance and reliability, even in a wide range of temperatures. The DynaForce DTX motor outperforms conventional motor configurations with its stiffer profile, enabling you to achieve higher torque at the same differential pressure and flow rate.



DynaForce DTX

DynaForce DTX Motor Specifications	675	962
Hole size, in	8 $\frac{3}{8}$ to 9 $\frac{1}{8}$	12 to 28
Nominal length (A) , ft [m]	26.3 [8.0]	31.9 [9.7]
Power Section		
Configuration [†]	7 $\frac{1}{8}$ lobes, 3.4 stages	7 $\frac{1}{8}$ lobes, 3.7 stages
Nominal OD, in [cm]	6.75 [17.14]	9.62 [24.45]
Elastomers	DynaPower XP* extreme-power motor elastomer	DynaPower XP elastomer
	DynaPower XR* extreme-wear-resistant motor elastomer	DynaPower XR elastomer
	DynaPower HR* high-torque motor elastomer	DynaPower HR elastomer
Torque slope, lbf.ft/psi [N.m/kPa]	8.808 [1.73]	23.44 [4.61]
Flow range, galUS/min [L/min]	300–650 [1,135–2,460]	600–1,200 [2,271–4,542]
Rotational speed, rpm/galUS [rpm/L]	0.27 [0.07]	0.113 [0.030]
Speed range, rpm	80 to 175	68 to 136
Off-bottom pressure, psi [kPa]	240 [1,655]	105 [724]
Differential pressure at max. power, psi [kPa]	1,550 [10,690]	1,950 [13,440]
Torque at max. power, lbf.ft [N.m]	13,760 [18,660]	45,530 [61,730]
Stall pressure, psi [kPa] (at flow rate galUS/min)	2,300 [15,860] (at 325)	2,200 [15,170] (at 600)
Stall torque, lbf.ft [N.m]	18,100 [24,540]	51,020 [69,170]
Max. power hp [kW] (at flow rate galUS/min)	360 [270] (at 650)	720 [540] (at 1,200)
Lower End		
Nominal OD, in [cm]	7.25 [18.42]	10.125 [25.72]
Bit box to fixed bend (B), in [cm]	48 [122]	74 [188]
Bit box to adjustable bend (B), in [cm]	68 [172]	90 [228]
Bit box to center of stabilizer (C), in [cm]	30 [76]	34.6 to 38.9 [87.9 to 98.8] [‡]
Bearing housing stabilizer	Slick or integral blade (7 $\frac{3}{4}$ –9 $\frac{3}{4}$ in) (straight or spiral blades)	Slick or integral blade (12–27 $\frac{7}{8}$ in) (straight or spiral blades)
Bent housing	Straight, fixed-bend, or adjustable-bend housing	Straight, fixed-bend, or adjustable-bend housing
Max. WOB with flow (no motor damage), lbf [kN]	55,000 [245]	120,000 [534]
Max. operating torque, lbf.ft [N.m]	30,000 [40,675]	65,000 [88,128]
Absolute overpull (motor damage will occur), lbf [kN]	910,000 [4,048]	1,340,000 [5,960]
Working overpull (no motor damage), lbf [kN]	192,000 [854]	350,000 [1,557]
Mud properties		
Max. mud weight, ppg	18	18
Max. lost circulation material, lbm/bbl	Medium nut plug: 50	Medium nut plug: 50
Max. sand content, %	2	2
Max. low-gravity solids (LGS) content, %	5	5

[†]Other power sections available upon request. Other power section specifications are at slb.com/DynaForce.

[‡]Varies based on stabilizer gauge size.

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