

Extreme-Power Motor Elastomer Rivals Conventionally Lined Thin-Wall Power Section

DynaPower XP elastomer developed for use in conventional power sections

Development of extreme-power elastomer for conventional power sections enables operators to achieve the high performance associated with thin-wall technology while maintaining the cost and agility of conventional power sections.

Conventional vs. thin-wall power sections

Historically, thin-wall power sections are deemed the industry leader in power and torque output due to their unique stator configuration. However, thin-wall stators require extensive machining and are, therefore, inherently more expensive than conventional stators. There are also additional costs associated with thin-wall power sections, because they require the directional drilling companies to invest in new, unique stators that have limited applications.

Laboratory test findings

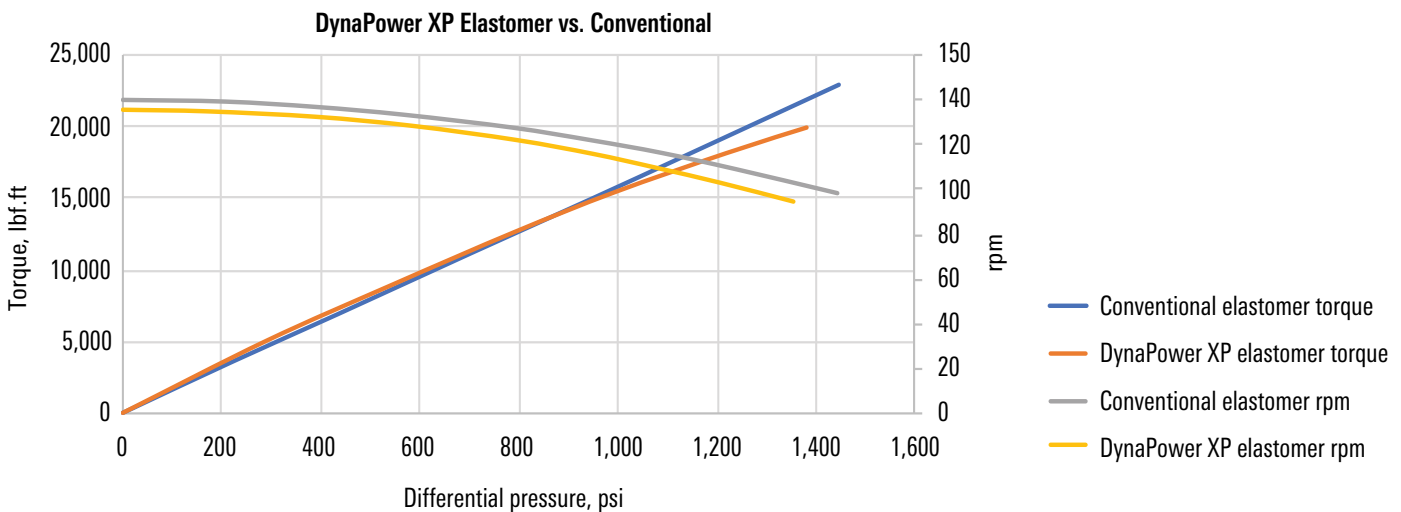
Dyno-Flo, an independent test facility, performed a standard dynamometer test to evaluate the power and torque output of an 8.00 in, seven eighths (lobes), 4.0 (stages) conventional power section and thin-wall power section. The conventional power section was lined with DynaPower XP* extreme-power motor elastomer whereas the thin-wall power section was lined with a higher modulus elastomer.

Lab tests showed the conventional power section lined with DynaPower XP elastomer produced the same power and torque output as the thin-wall power section lined with the other elastomer. This result means that customers can reline their conventional power sections with DynaPower XP elastomer and expect the same performance as a thin-wall power section.

High-performance design

DynaPower XP elastomer provides high power for challenging drilling environments. It also provides 30% improvement in abrasion resistance, enabling the customer to maintain ROP while drilling longer sections. The elastomer is formulated to survive large operating temperature gradients, enabling drilling from shoe to shoe in oil-based and water-based muds.

Dyna-Drill proprietary modeling software shows DynaPower XP elastomer to have three times longer life than conventional elastomers, optimizing its performance in extended-reach wells.



Data from lab tests indicated that the DynaPower XP elastomer produced the same power and torque output as the thin-wall power section lined with a conventional elastomer.