

DynaMic

Variable Temperature Power Section

APPLICATIONS

- Wells having large temperature differentials between Kick Off Point and Total Depth
- High temperature environments
- Extended reach wells
- Monobore wells
- Performance drilling

BENEFITS

- Reduced heat generation within the power section, extends motor life in high temperature and extended reach wells
- Optimal stator profile provides increased reliability and drilling speed throughout varying temperature ranges
- Reduced risk of elastomer chunking and unplanned trips
- Single motor solution for monobore wells

FEATURES

- Unique stator profile stator, designed to extend motor life
- Compatible with existing rotors
- Compatible with existing stators
- Compatible with DynaPower elastomers

The DynaMic High Temperature Power Section has a unique, deviated stator profile designed to reduce heat generation in the power section, extending motor life in high temperature environments and extended reach wells.

Challenges Downhole

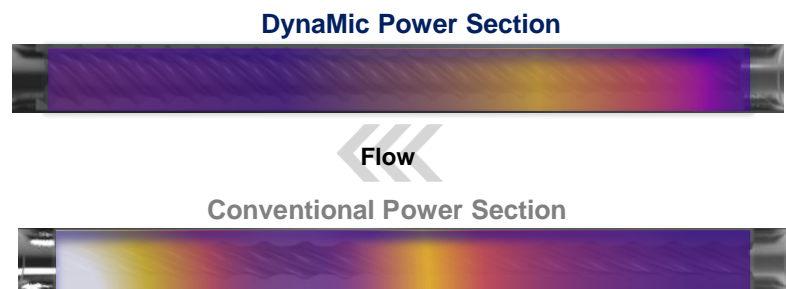
Today, many operators are forced to plan unnecessary trips to change the motor in extended reach wells. The power section's drilling efficiency decreases with increasing temperature. Often, the tighter fit power section, which is required to begin drilling the interval, is not effective in deeper parts of the well.

As a result, customers must make multiple trips to pick-up new motors with unique power sections. These trips result in excess drilling time and operations cost. The requirement for custom power sections also leads to inefficiencies and lack of tool availability for motor rental companies.

Step-Change in Performance

While high temperatures elastomers help to increase downhole performance, their benefits are often limited specific temperature intervals and drilling conditions. The DynaMic Power Section provides a step-change in performance across a large range of downhole temperatures.

The unique, deviated stator profile in the DynaMic Power Section significantly reduces the heat generation in the lower end, prolonging motor life while also providing optimal power output throughout the duration of the run interval.



Existing stators may be relined with the DynaMic profile and DynaPower elastomers to provide fit-for-purpose solutions and optimal performance in each well.

DynaMic Optimal Temperature Ranges

Stator OD [in]	Lobes	Stages	Type	Elastomer	Nominal Minor Diameter [in] (Vector)	Nominal Fit at 75 DegF [in] (Vector)	Operating Temperature [DegF]									
							100	120	140	160	180	200	220	240	260	280
7.00	5/6	8.2	DynaMic 2OS/3OS	DynaPower XP	3.721 +/- 0.015	-0.011	Optimal Range									
7.00	5/6	8.2	Conventional 1OS	DynaPower XP	3.706 +/- 0.015	0.004	Optimal Range									
7.00	5/6	8.2	Conventional 2OS	DynaPower XP	3.721 +/- 0.015	-0.011	Optimal Range									
7.00	6/7	12.1	DynaMic STD/1OS	DynaPower XP	4.333 +/- 0.015	0.000	Optimal Range									
7.00	6/7	12.1	Conventional STD	DynaPower XP	4.333 +/- 0.015	0.000	Optimal Range									
7.00	6/7	12.1	Conventional 1OS	DynaPower XP	4.344 +/- 0.015	-0.011	Optimal Range									
7.00	6/7	12.1	DynaMic 2OS/3OS	DynaPower XP	4.363 +/- 0.015	-0.030	Optimal Range									
5.00	7/8	8.4	DynaMic STD/1OS	DynaPower XP	3.009 +/- 0.011	0.000	Optimal Range									
5.00	7/8	8.4	Conventional STD	DynaPower XP	3.006 +/- 0.011	0.003	Optimal Range									
5.00	7/8	8.4	Conventional 1OS	DynaPower XP	3.024 +/- 0.011	-0.015	Optimal Range									
5.00	7/8	8.4	DynaMic US/STD	DynaPower HR	2.997 +/- 0.011	0.012	Optimal Range									
5.00	7/8	8.4	Conventional STD	DynaPower HR	3.009 +/- 0.011	0.000	Optimal Range									
5.00	7/8	8.4	Conventional 1OS	DynaPower HR	3.024 +/- 0.011	-0.015	Optimal Range									
5.00	6/7	8.0	DynaMic 2OS/3OS	DynaPower XP	2.651 +/- 0.011	-0.016	Optimal Range									
5.00	6/7	8.0	Conventional 2OS	DynaPower XP	2.651 +/- 0.011	-0.016	Optimal Range									
5.00	6/7	8.0	Conventional 3OS	DynaPower XP	2.655 +/- 0.011	-0.020	Optimal Range									

DynaMic Power Section measurements recorded from the top of the power section.