



SpiroStar Supreme™



SpiroStar™



FlexStar™

Rotor Dimensional Data

Length	223 in (5,664 mm)
Contour Length	215.50 in (5,474 mm)
Major Diameter	4.693 in (119.20 mm)
Eccentricity	0.197 in (5.00 mm)
Head Diameter	4.50 in (114.30 mm)
Weight	761 lbs (346 kg)
Material/Strength	17-4 PH / 150 ksi (1,034 Mpa)

Fits (in) (+ Compression / - Loose)

Size	Minor ¹	75° F	150° F	225° F	300° F	375° F
STD	4.319	-0.019	-0.013	-0.005	0.002	0.009
OS*	4.319	-0.004	0.003	0.011	0.018	0.025
2OS	-	-	-	-	-	-

*OS Rotor with STD Stator

Power Section Specifications

Flow Range	350 - 750 gpm (1,325 - 2,839 lpm)
Speed Ratio	0.35 rev/gal (0.092 rev/l)
No Load Bit Speed	123 - 263 rpm
No Load Pressure Drop	650 psi (44.81 bar)

Stator Dimensional Data

Length	251.97 in (6,400 mm)
Tube OD	7.087 in (180.01 mm)
Tube ID	5.500 in (1439.70 mm)
Rubber Cutback Top	8.00 in (203 mm)
Rubber Cutback Bottom	28.00 in (711.20 mm)
Weight	1,346 lbs (612 kg)
Material/Strength	4140 / 120 ksi (827 Mpa)

Fits (mm) (+ Compression / - Loose)

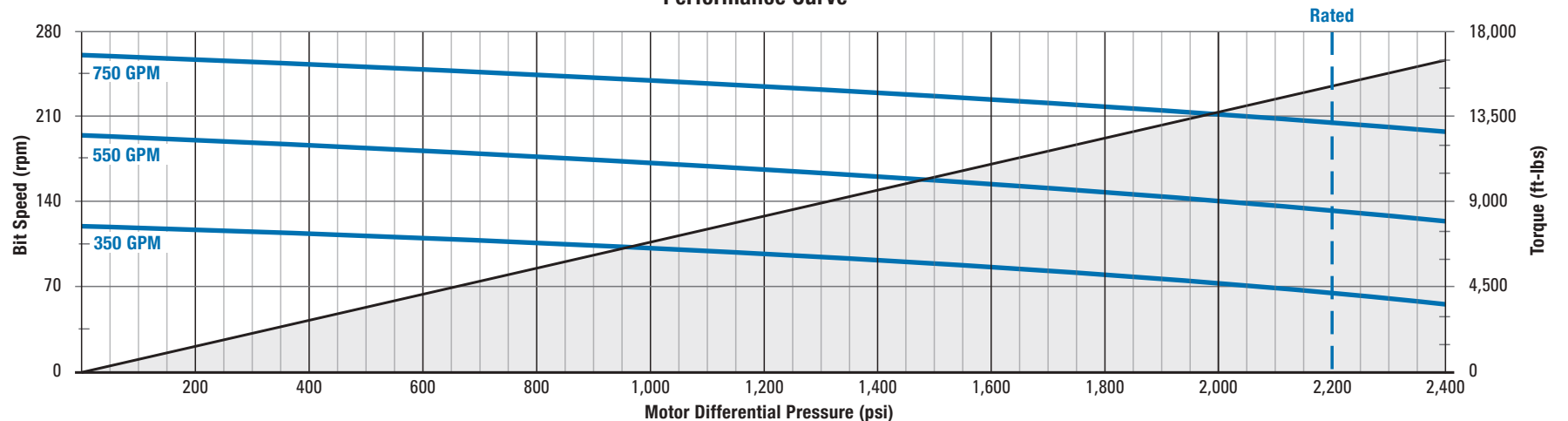
Size	Minor ¹	25° C	65° C	110° C	150° C	190° C
STD	109.703	-0.496	-0.330	-0.127	0.051	0.229
OS*	109.703	-0.102	0.076	0.279	0.457	0.635
2OS	-	-	-	-	-	-

*OS Rotor with STD Stator

Lobes: 7/8

Max Recommended Pressure	2,200 psi (151.7 bar)
Torque Slope	6.90 ft-lbs/psi (135.68 Nm/bar)
Torque @ Max Recommended Pressure	15,180 ft-lbs (20,581 Nm)
Power @ Max Recommended Pressure	593 hp (442 kW)

Performance Curve



Disclaimer: The Performance Curve and Performance Data published by BICO Drilling Tools are based on recorded dynamometer data at surface temperature (72 degF) on a standard fit configuration between rotor and stator, with clean water, and are presented as a reference to the potential power of the power section and or motor. Downhole conditions such as highly elevated bottom hole temperatures and different drilling/intervention fluids shall require adjusted loose fits that may produce reduced power during surface (dynamometer) testing and will achieve the expected torque and speed values when reaching planned conditions. Contact BICO for the adjusted performance curves.

Minor¹: Nominal Vector Gauge reading of stator elastomer minor diameter at 72°F (22°C).