



SpiroStar Supreme™



SpiroStar™



FlexStar™

### Rotor Dimensional Data

Length	185.50 in (4,711 mm)
Contour Length	178.1 in (4,524 mm)
Major Diameter	4.520 in (114.81 mm)
Eccentricity	0.256 in (6.50 mm)
Head Diameter	4.50 in (114.30 mm)
Weight	650 lbs (295 kg)
Material/Strength	17-4 PH / 150 ksi (1,034 Mpa)

### Fits (in) (+ Compression / - Loose)

Size	Minor <sup>1</sup>	75° F	150° F	225° F	300° F	375° F
STD	3.996	0.012	0.019	0.027	0.034	0.041
OS	4.024	-0.016	-0.009	-0.001	0.006	0.013
US*	3.996	-0.008	-0.001	0.007	0.014	0.021

\* US Rotor with STD Stator

### Power Section Specifications

Flow Range	200 - 600 gpm (757 - 2,271 lpm)
Speed Ratio	0.28 rev/gal (0.074 rev/l)
No Load Bit Speed	56 - 168 rpm
No Load Pressure Drop	450 psi (31.02 bar)

### Stator Dimensional Data

Length	215.90 in (5,844 mm)
Tube OD	6.898 in (175.21mm)
Tube ID	5.550 in (140.97 mm)
Rubber Cutback Top	8.00 in (203 mm)
Rubber Cutback Bottom	28.00 in (711.20 mm)
Weight	890 lbs (404 kg)
Material/Strength	4140 / 120 ksi (827 Mpa)

### Fits (mm) (+ Compression / - Loose)

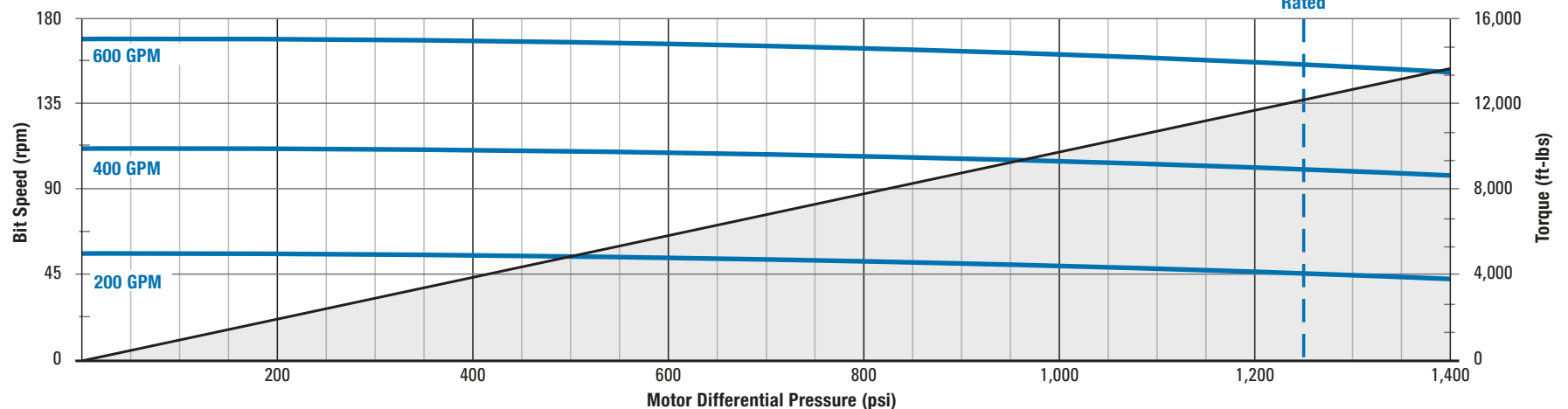
Size	Minor <sup>1</sup>	25° C	65° C	110° C	150° C	190° C
STD	127.508	0.305	0.483	0.686	0.864	1.042
OS	128.219	-0.406	-0.228	-0.025	0.153	0.331
US*	127.508	-0.203	-0.025	0.178	0.356	0.533

\* US Rotor with STD Stator

Lobes: 7/8

Max Recommended Pressure	1,250 psi (86.2 bar)
Torque Slope	9.75 ft-lbs/psi (191.73 Nm/bar)
Torque @ Max Recommended Pressure	12,188 ft-lbs (16,524 Nm)
Power @ Max Recommended Pressure	364 hp (272 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.

Minor<sup>1</sup>: Nominal Vector Gauge reading of stator elastomer minor diameter at 72°F (22°C).