

## **Power Sections**

22 East Lake Crescent N.E., Airdrie, Alberta, Canada, T4A 2H3 Ph: (587) 775-7777 www.spirasystems.com



**Imperial Units** 





Stator Specifications				
	Inches			
Overall Length	200.0			
Tube O.D.	6.60			
Tube I.D.	5.50			
Rubber Cut Back Top	8.0			
Rubber Cut Back Bottom	8.0			
Weight (lb)	670			
Tube Material	4140-4145			
To be threaded and ID Banded by customer				

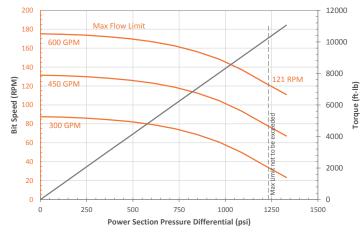
Rotor Specifications				
	Inches			
Overall Length	194.0			
Contour Length	188			
Major Diameter	4.316			
Eccentricity	0.288			
Head Diameter	4.000			
Gunbored Weight (lb)	440			
Solid Weight (lb)	611			
Material	17-4PH			
Coating option 1	Chrome			
Coating option 2	Carbide			
To be threaded by customer				

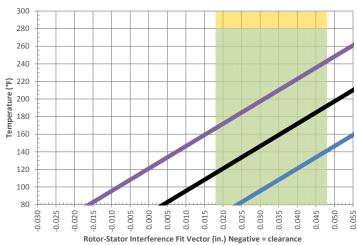
Performance Specifications						
Flow Range (GPM)	300 - 600					
Speed Range (RPM)	90 - 175					
Torque Slope (ft-lbs/psi)	8.313					
Rotation (rev/Gal)	0.292					
Stall Torque (ft-lbs)	13,550					
Operating Parameters						
Max Diff Pressure (psi)	1,250					
Torque (ft-lbs)	10,200					
Flow Rate (GPM)	600					
Full Load RPM	121 at 600 GPM					

Minor Diameter Fit Details (at 68°F)							
	Nominal Fit (in.)**	Minor Dia (in.)*	Nominal Fit (in.)**	Minor Dia (in.)*	Operating Temp		
Size Band	Vector Measurements		True Size Laser Measurements		Optimal		
1.0T	-	-	-	-	-		
0.5T	0.010	3.730	0.017	3.723	100 - 155 °F		
STD	0.000	3.740	0.007	3.733	125 - 180 °F		
0.5L	-0.010	3.750	-0.003	3.743	150 - 205 °F		
1.0L	-	-	-	-	-		
1.5L	-	-	-	-	-		
2.0L	-	-	-	-	-		
Minor Shrinkage (in./°F)			0.0	0039			

All default tolerances are +/- 0.015 unless otherwise explicitly agreed upon with Spira Systems. Call for availability of sizes not listed.

<sup>\*\*\*</sup>Best operating temperatures are based on new stators subject to normal thermal expansion conditions. Operators may wish to consider swell and run life when selecting sizes.





----- Expected slightly reduced torque when operating at this flow limit

--- Expect reduced life when operating at this pressure limit for extended periods of time

1. Choose desired operating temperature

Read across to middle of shaded region

3. Follow *slope* down to room temperature to determine which fit to order

Acceptable Fit at Reduced Diff
Optimal Operating Fit Range
1L Size Band

STD Size Band

1T Size Band

Performance curves are for reference only. Actual power section performance may vary depending on operating conditions (e.g. chosen rotor/stator interference fit, possible rubber swelling by drilling fluid, rotor and stator wear, actual downhole temperature, actual stator temperature, physical and chemical properties of the drilling fluid and other factors encountered downhole). The torque may exceed that specified for the connected components. Operating above the recommended limits may result in damage to the power section and connected components which will be the liability of the operator. Data subject to change without notice. Visit www.spirasystems.com for most up to date information.

<sup>\*</sup>Approximate Vector/laser gauge conversion:  $0.007 \pm 0.005$ 

<sup>\*\*</sup>Negative fits indicate clearance fit at room temperature using nominal new rotor