

# Power Sections

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



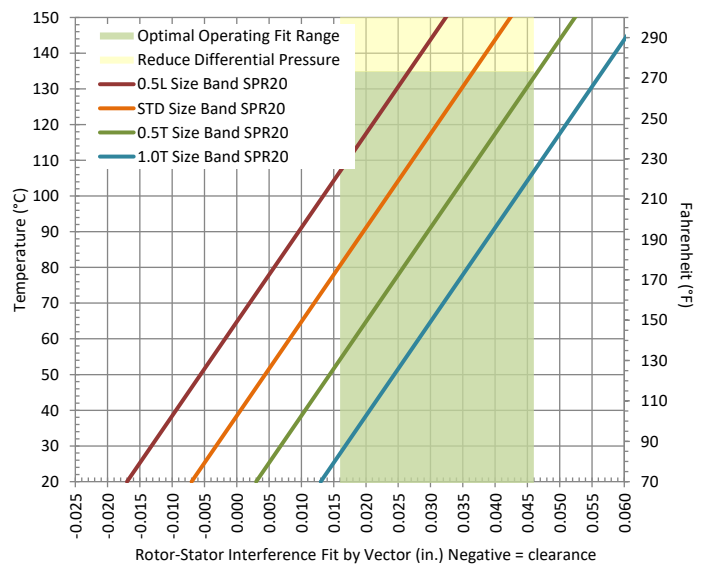
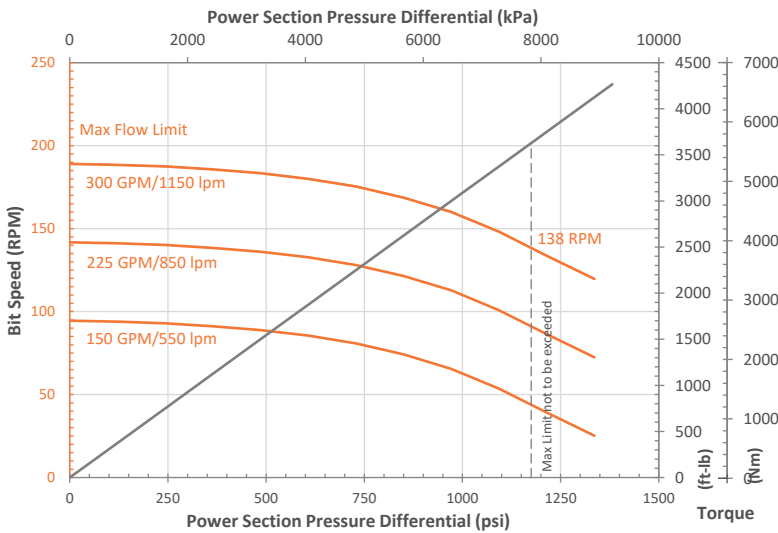
Stator Specifications	
Overall Length in. [mm]	198.0 [5029]
Tube O.D. in. [mm]	5.00 [127]
Tube I.D. (Terminal) in. [mm]	3.88 [99]
Rubber Cutback Top in. [mm]	8.0 [203.2]
Rubber Cutback Btm in. [mm]	8.0 [203.2]
Weight lb [kg]	475 [215]
Tube Material	4140-4145
To be threaded and ID Banded by customer	

Rotor Specifications	
Overall Length in. [mm]	186.0 [4724]
Contour Length in. [mm]	180.0 [4572]
Major Diameter in. [mm]	3.041 [77.2]
Eccentricity in. [mm]	0.169 [4.3]
Head Diameter in. [mm]	2.750 [69.9]
Gunbored Weight lb [kg]	265 [120]
Solid Weight lb [kg]	306 [139]
Material Options	17-4 PH 140ksi Min Yield 17-4 PH 110ksi Min Yield
Coating Options	Chrome or Carbide
To be threaded by customer	

Performance Specifications	
Flow Range GPM [lpm]	150 - 300 [570 - 1140]
Speed Range RPM	95 - 190
Torque Slope ft-lb/psi [Nm/kPa]	3.193 [0.628]
Rotation rev/Gal [rev/lit]	0.630 [0.166]
Stall Torque ft-lb [Nm]	5,650 [7,600]
Operating Parameters	
Max Diff Pressure psi [kPa]	1,200 [8,100]
Torque ft-lbs [Nm]	3,750 [5,100]
Flow Rate GPM [lpm]	300 [1,100]
Full Load RPM	138 at 300 GPM

Minor Diameter Fit Details at 20°C [68°F]					
SPR-20					
Size Band	Vector Fit (in.) (see note 1)	Vector Measurement (in.)	Recommended Min Operating Temperature	Recommended Optimal Operating Temperature (see note 2)	Recommended Max Operating Temperature (see note 2)
1.0T	0.013	2.690	80°F [30°C]	155°F [65°C]	225°F [105°C]
0.5T	0.003	2.700	130°F [55°C]	200°F [95°C]	270°F [135°C]
STD	-	-	-	-	-
0.5L	-	-	-	-	-
1.0L	-	-	-	-	-
<b>Minor Shrinkage (in/°F) [in/°C]</b>					<b>0.000204 [0.000366]</b>

- Notes:
- Negative fits indicate clearance fit at room temperature using nominal new rotor.
  - Reduce differential pressure by 20% for temperatures above 275°F (135°C) and by 40% for temperatures above 320°F (160°C)
  - Tolerances in the above table are +/- 0.015 unless otherwise explicitly agreed upon with Spira Systems.
  - Custom targets can be requested by providing a single number. A +/-0.010 tolerance will be applied. Specify pass/fail by vector or laser on your purchase order.



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 the operator may be liable for. Data subject to change without notice. Visit [www.spirasystems.com](http://www.spirasystems.com) for most up to date information.