

# Power Sections

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



Conventional

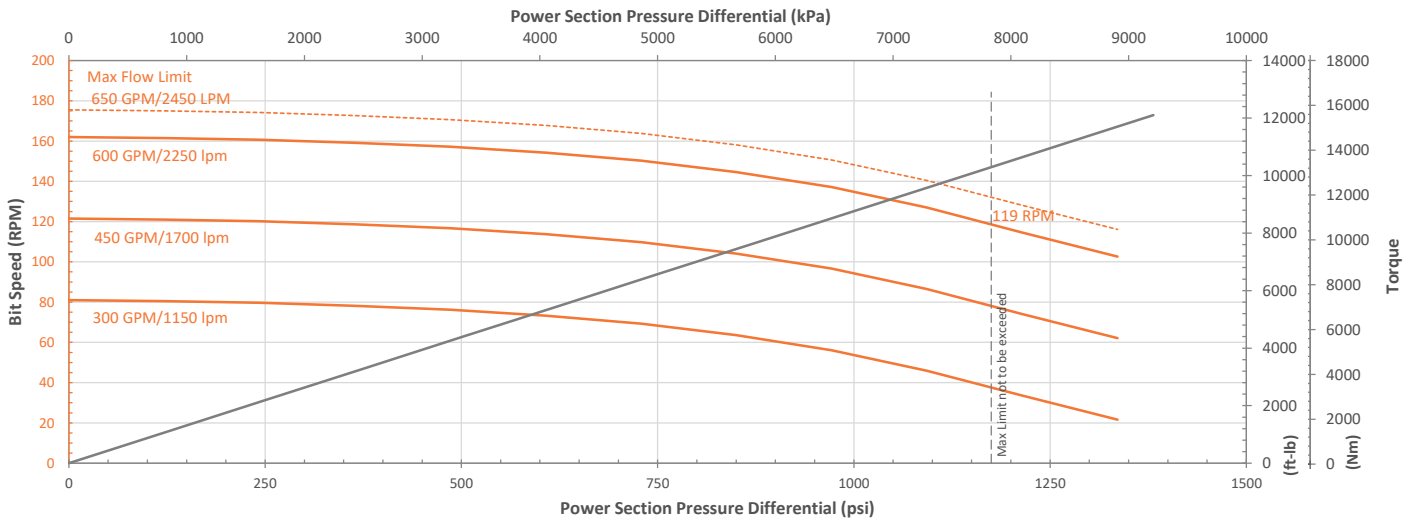
Stator Specifications	
Overall Length in. [mm]	194.5 [4940]
Tube O.D. in. [mm]	7.00 [178]
Tube I.D. (Terminal) in. [mm]	5.50 [140]
Rubber Cutback Top in. [mm]	8.0 [203.2]
Rubber Cutback Btm in. [mm]	8.0 [203.2]
Weight lb [kg]	790 [360]
Tube Material	4140-4145
To be threaded and ID Banded by customer	

Rotor Specifications	
Overall Length in. [mm]	188.0 [4775]
Contour Length in. [mm]	181.0 [4597]
Major Diameter in. [mm]	4.520 [114.8]
Eccentricity in. [mm]	0.256 [6.5]
Head Diameter in. [mm]	4.000 [101.6]
Gunbored Weight lb [kg]	510 [231]
Solid Weight lb [kg]	675 [306]
Material Options	17-4 PH 925 Min Yield 140ksi 17-4 PH 1150 Min Yield 110ksi
Coating Options	Chrome or Carbide
To be threaded by customer	

Performance Specifications	
Flow Range GPM [lpm]	300 - 650 [1140 - 2460]
Speed Range RPM	80 - 160
Torque Slope ft-lb/psi [Nm/kPa]	9.060 [1.782]
Rotation rev/Gal [rev/lit]	0.270 [0.071]
Stall Torque ft-lb [Nm]	15,950 [21,700]
Operating Parameters	
Max Diff Pressure psi [kPa]	1,200 [8,100]
Torque ft-lbs [Nm]	10,650 [14,400]
Flow Rate GPM [lpm]	600 [2,250]
Full Load RPM	119 at 600 GPM

Minor Diameter Fit Details at 20°C [68°F]							
SPR-15				SPR-20			
Size Band	Vector Fit <sup>1</sup> (in.)	Vector <sup>2</sup> (in.)	Recommended Max Operating Temperature <sup>3,4</sup>	Size Band	Vector Fit <sup>1</sup> (in.)	Vector <sup>2</sup> (in.)	Recommended Max Operating Temperature <sup>3,4</sup>
1.0T	0.022	3.986	160°F [70°C]	1.0T	0.022	3.986	160°F [70°C]
0.5T	0.012	3.996	190°F [85°C]	0.5T	0.012	3.996	190°F [85°C]
STD	0.002	4.006	220°F [105°C]	STD	0.002	4.006	225°F [105°C]
0.5L	-	-	-	0.5L	-	-	-
1.0L	-	-	-	1.0L	-	-	-
1.5L	-	-	-	1.5L	-	-	-
2.0L	-	-	-	2.0L	-	-	-
Minor Shrinkage (in/°F) [in/°C]			0.000334 [0.000601]	Minor Shrinkage (in/°F) [in/°C]			0.000260 [0.000468]

- All default tolerances are +/- 0.015 unless otherwise explicitly agreed upon with Spira Systems. Call for availability of sizes not listed.
- Negative fits indicate clearance fit at room temperature using nominal new rotor
- Approximate Vector/laser gauge conversion: 0.007
- Reduce differential pressure by 20% for temperatures above 275°F (135°C) and by 40% for temperatures above 320°F (160°C)



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

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.