

## **Power Sections**

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



Model: SPS475568.3

**Canadian Oilfield Units** 





Stator Specifications				
Overall Length (in.)	242.6 [6162 mm]			
Tube O.D. (in.)	4.75 [121 mm]			
Tube I.D. at Terminal (in.)	3.75 [95 mm]			
Rubber Cut Back Top (in.)	8.0			
Rubber Cut Back Bott (in.)	8.0			
Weight (kg)	245			
Tube Material	4140-4145			
To be threaded and ID Banded by customer				

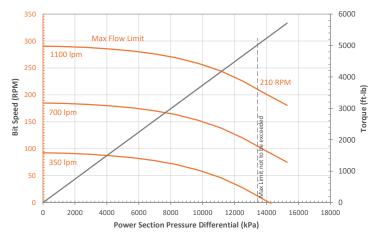
Rotor Specifications				
Overall Length (in.)	229.5 [5829 mm]			
Contour Length (in.)	223 [5664 mm]			
Major Diameter (in.)	2.916			
Eccentricity (in.)	0.207			
Head Diameter (in.)	2.750			
Bored Weight (kg)	125			
Solid Weight (kg)	148			
Material	17-4PH			
Coating option 1	Chrome			
Coating option 2	Carbide			
To be threaded by customer				

Performance Specifications						
Flow Range (lpm)	350 - 1100					
Speed Range (RPM)	90 - 290					
Torque Slope (ft-lb/kPa)	0.374					
Rotation (rev/l)	0.264					
Stall Torque (ft-lb)	7,550					
Operating Parameters						
Max Diff Pressure (kPa)	13,400					
Torque (ft-lb)	5,000					
Flow Rate (lpm)	1,100					
Full Load RPM	210 at 1100 lpm					

Minor Diameter Fit Details (at 20°C)						
	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	-0.005	2.507	0.009	2.493	50 - 120 °C	
STD	-0.015	2.517	-0.001	2.503	70 - 140 °C	
0.5L	-0.025	2.527	-0.011	2.513	90 - 150 °C	
1.0L	-	-	-	-	-	
1.5L	-	-	-	-	-	
2.0L	-	-	-	-	-	
Minor Shrinkage (in./°C)			0.0	00050		

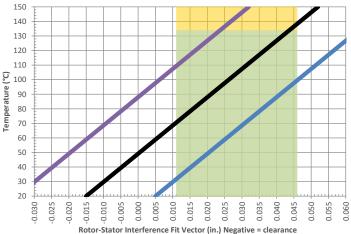
All default tolerances are +/- 0.015 unless otherwise explicitly agreed upon with Spira Systems. Call for availability of sizes not listed.

<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.





 $---\cdot$  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
 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

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:  $0.014 \pm 0.005$ 

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