

## POWER SECTION

**Model No: AT5156710.0 OPTI**

Revised: 5/10/2022

Rotor Specifications	
	inches
Overall Length	266.00
Contour Length	260.00
Major Diameter	3.256
Eccentricity	0.192
Head diameter	3.400
Thread Form	2.875 HEF Modified
Weight	496 lbs
Material	17-4 PH <sup>1</sup>

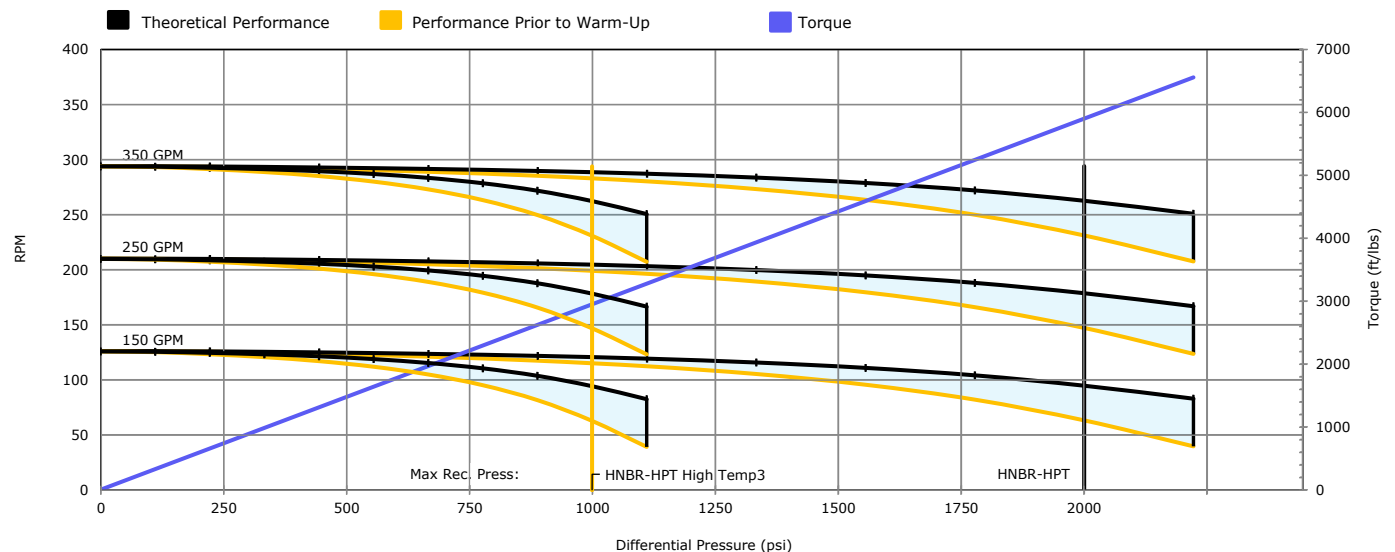
Stator Specifications	
	inches
Overall Length	275.00
Tube OD	5.15
Tube ID	4.00
Rubber Cutback Top/End	8.00 / 16.00
Weight	520 lbs
Number of Stages	10.0
Tube Material	4140/4142 Alloy Steel
Rubber Options	HNBR-HPT

Performance Specifications	
Flow Range (gpm)	150 - 350
Speed Range (rpm)	130 - 290
Torque Slope (ft-lb/psi)	2.95
Rotation (rev/gal)	0.840
Off Bottom Pressure (psi)	130

Performance Details		
	HNBR-HPT High Temp <sup>3</sup>	HNBR-HPT
Max Diff Press (psi)	1000	2000
Stall Diff Press (psi)	1500	3150
Max Torque (ft-lb)	2950	5900
Stall Torque (ft-lb)	4430	9300

Size	Minor <sup>2</sup>	Fit @ 75°F	Stator Sizing and Fit Chart <sup>4</sup>	
.5 US	-	-	-	Fit Not Available
STD	-	-	-	Fit Not Available
.5 OS	2.896	-0.024	160°F	200°F OPTIMAL RANGE 270°F 310°F
1.0 OS	2.907	-0.035	200°F	230°F OPTIMAL RANGE 310°F 340°F
1.5 OS	-	-	-	Fit Not Available
2.0 OS	-	-	-	Fit Not Available
2.5 OS	-	-	-	Fit Not Available

Minor Diameter Change = 0.001" per 3.3 °F      ΔFit = 0.0003" per 1°F



<sup>1</sup> Coating options of chrome or tungsten carbide are available <sup>2</sup> Vector Gauge Readings at Room Temp 75°F <sup>3</sup> HPT High Temp parameters are recommended when BHCT exceeds 300°F. It is recommended to run stator for no more than 15 hours at BHCT above 375°F. <sup>4</sup> Chart temp shows potential of the individual fit and not necessarily the elastomer. BHCT exceeding 430°F will void warranty. Performance curves are based on new rotor and stator dimensions and for reference only. Actual performance may vary depending on fit and drilling conditions. The stall torque may exceed that specified for the connected components. Operating over the recommended limits may result in damage to the power section and connected components. Please visit [www.AbacoDrilling.com](http://www.AbacoDrilling.com) for the latest specification revisions.

### LOCATIONS

US: Headquarters 713 Northpark Central Dr., #400 Houston, TX 77073 - Tel: (281) 869-0700 - Fax: (281) 869-0701  
 US: Sales & Distribution 11308 West Interstate 20 East, Odessa, TX 79765 - Tel: (432) 248-1814  
 CANADA: Stator Manufacturing 6303-39th Street Leduc, Alberta T9E 0Z3 Canada - Tel: (780) 986-8947 - Fax: (780) 986-8842  
 DUBAI UAE: Stator Manufacturing Oilfields Supply Center B#57, Jebel Ali, Dubai UAE, P.O. Box 19909 - Tel: 971-4-870-8600

## POWER SECTION - METRIC

Model No: **AT5156710.0 OPTI**

Revised: 5/10/2022

Rotor Specifications	
	mm
Overall Length	6756.4
Contour Length	6604.0
Major Diameter	82.70
Eccentricity	4.87
Head diameter	86.36
Thread Form	2.875 HEF Modified
Weight	225 kg
Material	17-4 PH <sup>1</sup>

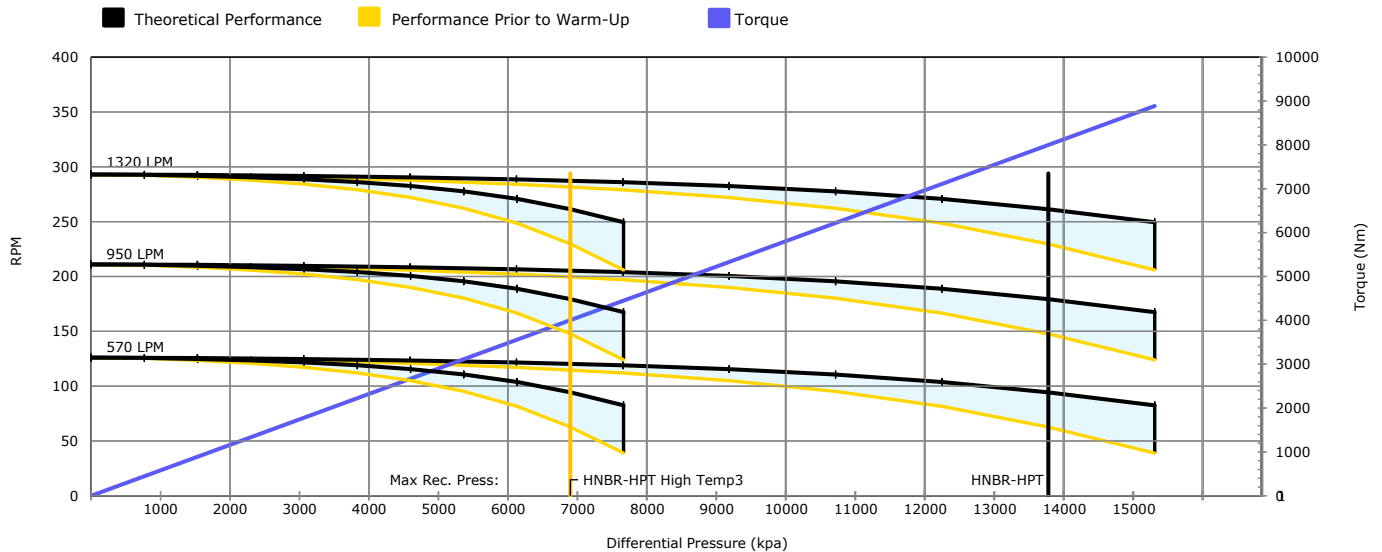
Stator Specifications	
	mm
Overall Length	6985.0
Tube OD	130.81
Tube ID	101.6
Rubber Cutback Top/End	203.0 / 406.0
Weight	236 kg
Number of Stages	10.0
Tube Material	4140/4142 Seamless Alloy Steel
Rubber Options	HNBR-HPT

Performance Specifications	
Flow Range (lpm)	570 - 1320
Speed Range (rpm)	130 - 290
Torque Slope (Nm/kpa)	0.58
Rotation (rev/Liter)	0.2219
Off Bottom Pressure (kpa)	900

Performance Details		
	HNBR-HPT High Temp <sup>3</sup>	HNBR-HPT
Max Diff Press (kpa)	6900	13800
Stall Diff Press (kpa)	10400	21800
Max Torque (Nm)	4000	8000
Stall Torque (Nm)	6000	12600

Size	Minor <sup>2</sup>	Fit@25°C	Stator Sizing and Fit Chart <sup>4</sup>	
.5 US	-	-	-	Fit Not Available
STD	-	-	-	Fit Not Available
.5 OS	73.558	-0.597	70°C	90°C OPTIMAL RANGE 130°C 150°C
1.0 OS	73.838	-0.876	90°C	110°C OPTIMAL RANGE 150°C 170°C
1.5 OS	-	-	-	Fit Not Available
2.0 OS	-	-	-	Fit Not Available
2.5 OS	-	-	-	Fit Not Available

Minor Diameter Change = 0.025 mm per 1.85 °C      ΔFit = 0.0137 mm per 1°C



<sup>1</sup> Coating options of chrome or tungsten carbide are available <sup>2</sup> Vector Gauge Readings at Room Temp 25°C <sup>3</sup> HPT High Temp parameters are recommended when BHCT exceeds 150°C. It is recommended to run stator for no more than 15 hours at BHCT above 190°C. <sup>4</sup> Chart temp shows potential of the individual fit and not necessarily the elastomer. BHCT exceeding 220°C will void warranty. Performance curves are based on new rotor and stator dimensions and for reference only. Actual performance may vary depending on fit and drilling conditions. The stall torque may exceed that specified for the connected components. Operating over the recommended limits may result in damage to the power section and connected components. Please visit [www.AbacoDrilling.com](http://www.AbacoDrilling.com) for the latest specification revisions.

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