

## POWER SECTION

**Model No: AT550788.3 HT OPTI**

Revised: 2/22/2021

Rotor Specifications	
	inches
Overall Length	253.00
Contour Length	247.00
Major Diameter	3.422
Eccentricity	
Head diameter	3.400
Thread Form	1.375-6 SA
Weight	513 lbs
Material	17-4 PH <sup>1</sup>

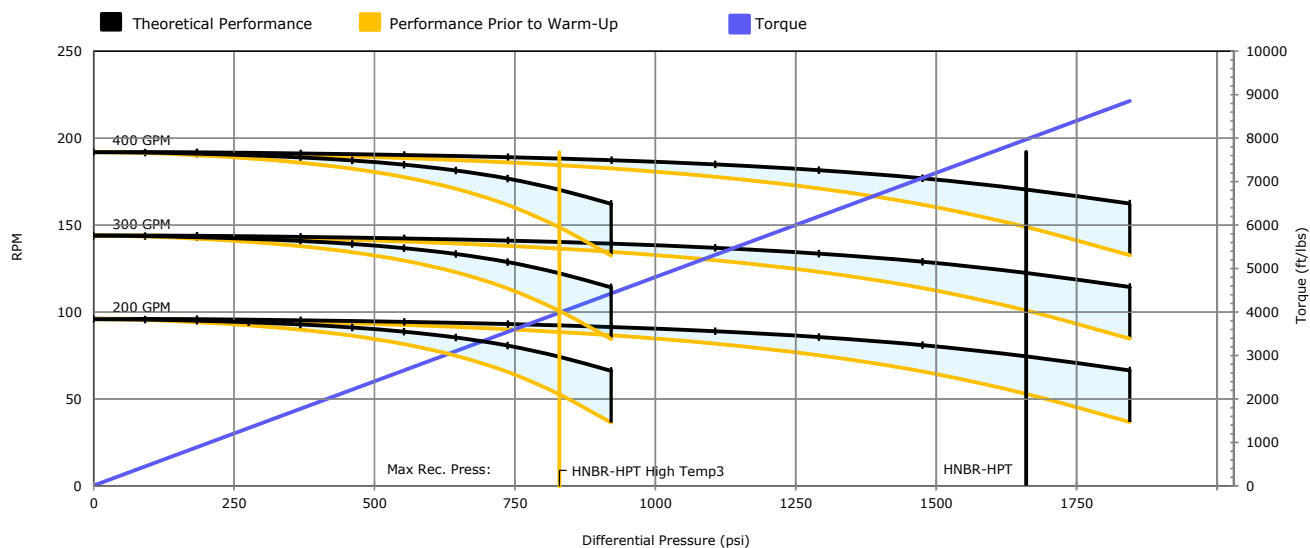
Stator Specifications	
	inches
Overall Length	275.00
Tube OD	5.50
Tube ID	4.00
Rubber Cutback Top/End	12.00 / 18.00
Weight	540 lbs
Number of Stages	8.3
Tube Material	4140/4142 Alloy Steel
Rubber Options	HNBR-HPT

Performance Specifications	
Flow Range (gpm)	200 - 400
Speed Range (rpm)	100 - 190
Torque Slope (ft-lb/psi)	4.80
Rotation (rev/gal)	0.480
Off Bottom Pressure (psi)	110

Performance Details		
	HNBR-HPT High Temp <sup>3</sup>	HNBR-HPT
Max Diff Press (psi)	830	1660
Stall Diff Press (psi)	1250	2620
Max Torque (ft-lb)	3990	7970
Stall Torque (ft-lb)	5980	12550

Size	Minor <sup>2</sup>	Fit @ 75°F	Stator Sizing and Fit Chart <sup>4</sup>	
.5 US	-	-	-	Fit Not Available
STD	3.006	-0.011	130°F	160°F OPTIMAL RANGE 240°F 270°F
.5 OS	3.018	-0.023	170°F	200°F OPTIMAL RANGE 280°F 310°F
1.0 OS	3.028	-0.033	200°F	230°F OPTIMAL RANGE 310°F 350°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 3.2 °F      ΔFit = 0.00031" 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  
 US: Sales & Distribution  
 CANADA: Stator Manufacturing  
 DUBAI UAE: Stator Manufacturing

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

## POWER SECTION - METRIC

**Model No: AT550788.3 HT OPTI**

Revised: 2/22/2021

Rotor Specifications	
	mm
Overall Length	6426.2
Contour Length	6273.8
Major Diameter	86.92
Eccentricity	
Head diameter	86.36
Thread Form	1.375-6 SA
Weight	233 kg
Material	17-4 PH <sup>1</sup>

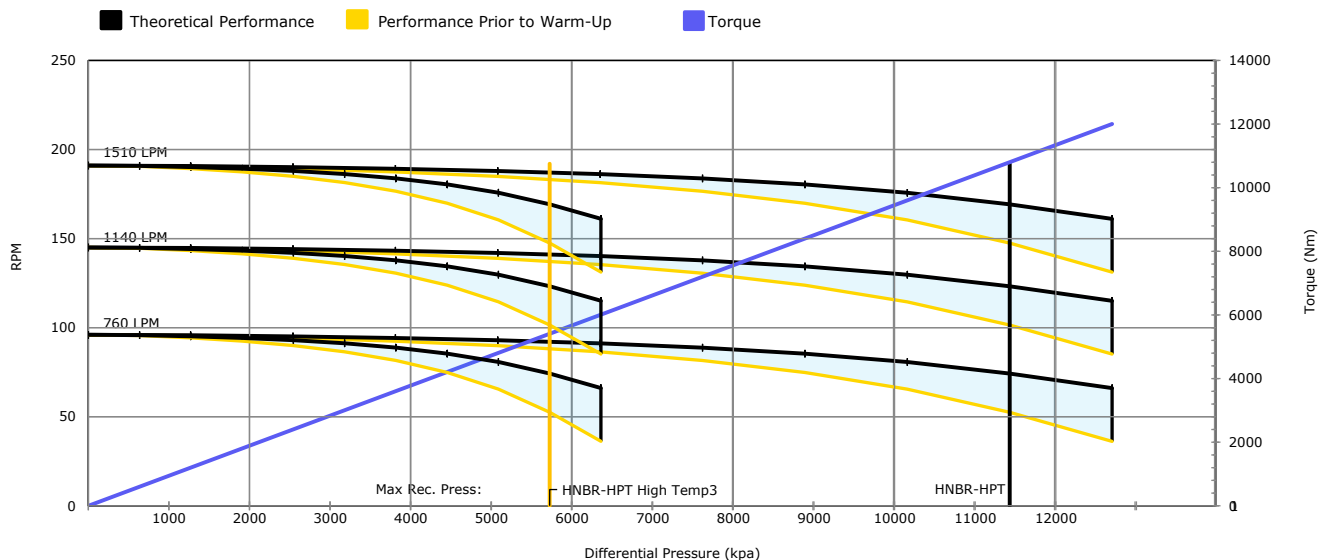
Stator Specifications	
	mm
Overall Length	6985.0
Tube OD	139.7
Tube ID	101.6
Rubber Cutback Top/End	305.0 / 457.0
Weight	245 kg
Number of Stages	8.3
Tube Material	4140/4142 Seamless Alloy Steel
Rubber Options	HNBR-HPT

Performance Specifications	
Flow Range (lpm)	760 - 1510
Speed Range (rpm)	100 - 190
Torque Slope (Nm/kpa)	0.94
Rotation (rev/Liter)	0.1268
Off Bottom Pressure (kpa)	740

Performance Details		
	HNBR-HPT High Temp <sup>3</sup>	HNBR-HPT
Max Diff Press (kpa)	5800	11500
Stall Diff Press (kpa)	8600	18100
Max Torque (Nm)	5500	10900
Stall Torque (Nm)	8200	17100

Size	Minor <sup>2</sup>	Fit@25°C	Stator Sizing and Fit Chart <sup>4</sup>	
.5 US	-	-	-	Fit Not Available
STD	76.352	-0.292	50°C	70°C OPTIMAL RANGE 120°C 130°C
.5 OS	76.657	-0.597	80°C	90°C OPTIMAL RANGE 140°C 150°C
1.0 OS	76.911	-0.851	90°C	110°C OPTIMAL RANGE 150°C 180°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 1.8 °C      ΔFit = 0.0141 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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