

POWER SECTION

Model No: AT500678.8 OPTI

Revised: 10/12/2021

Rotor Specifications	
	inches
Overall Length	265.00
Contour Length	258.00
Major Diameter	3.298
Eccentricity	0.217
Head diameter	3.400
Thread Form	2.375 HEF Modified
Weight	496 lbs
Material	17-4 PH ¹

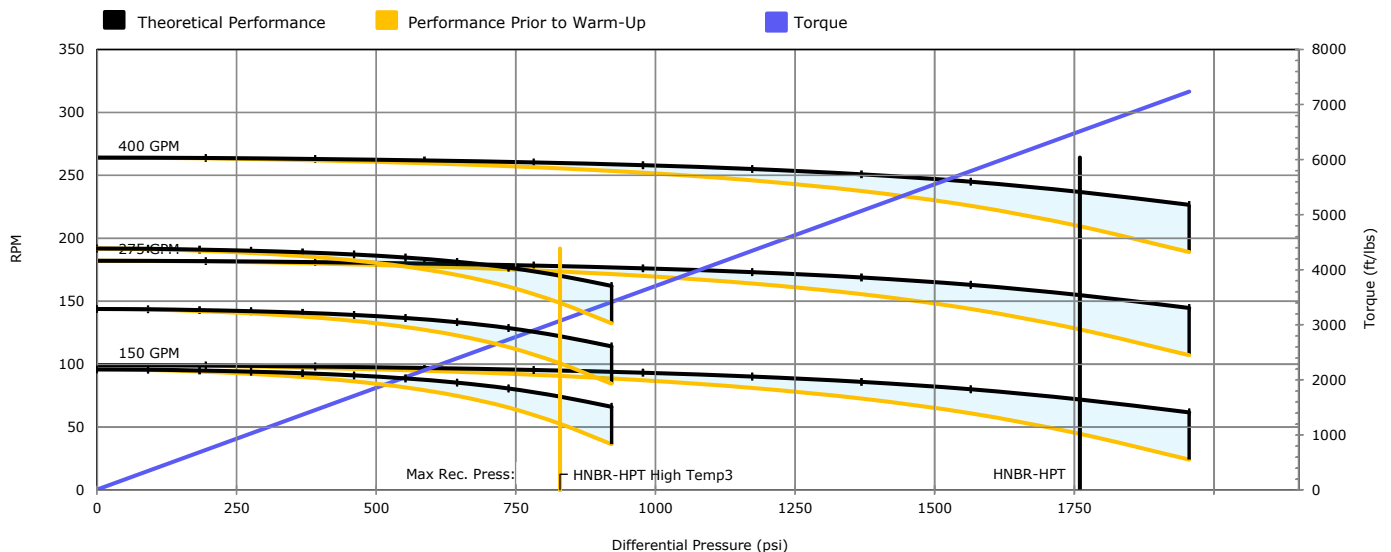
Performance Specifications	
Flow Range (gpm)	150 - 400
Speed Range (rpm)	100 - 260
Torque Slope (ft-lb/psi)	3.70
Rotation (rev/gal)	0.660
Off Bottom Pressure (psi)	120

Stator Specifications	
	inches
Overall Length	275.00
Tube OD	5.00
Tube ID	4.00
Rubber Cutback Top/End	8.00 / 8.00
Weight	519 lbs
Number of Stages	8.8
Tube Material	4140/4142 Alloy Steel
Rubber Options	HNBR-HPT

Performance Details		
	HNBR-HPT High Temp ³	HNBR-HPT
Max Diff Press (psi)	880	1760
Stall Diff Press (psi)	1320	2780
Max Torque (ft-lb)	3260	6520
Stall Torque (ft-lb)	4890	10260

Size	Minor ²	Fit @ 75°F	Stator Sizing and Fit Chart ⁴			
.5 US	-	-	-	-	Fit Not Available	-
STD	2.870	-0.006	110°F	140°F	OPTIMAL RANGE	220°F 250°F
.5 OS	-	-	-	-	Fit Not Available	-
1.0 OS	2.894	-0.030	190°F	220°F	OPTIMAL RANGE	300°F 340°F
1.5 OS	2.901	-0.037	220°F	250°F	OPTIMAL RANGE	330°F 360°F
2.0 OS	-	-	-	-	Fit Not Available	-
2.5 OS	-	-	-	-	Fit Not Available	-

Minor Diameter Change = 0.001" per 3.4 °F ΔFit = 0.00029" per 1°F



¹ Coating options of chrome or tungsten carbide are available ² Vector Gauge Readings at Room Temp 75°F (measured from the top end) ³ 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. ⁴ 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 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: AT500678.8 OPTI

Revised: 10/12/2021

Rotor Specifications	
	mm
Overall Length	6731.0
Contour Length	6553.2
Major Diameter	83.77
Eccentricity	5.51
Head diameter	86.36
Thread Form	2.375 HEF Modified
Weight	225 kg
Material	17-4 PH ¹

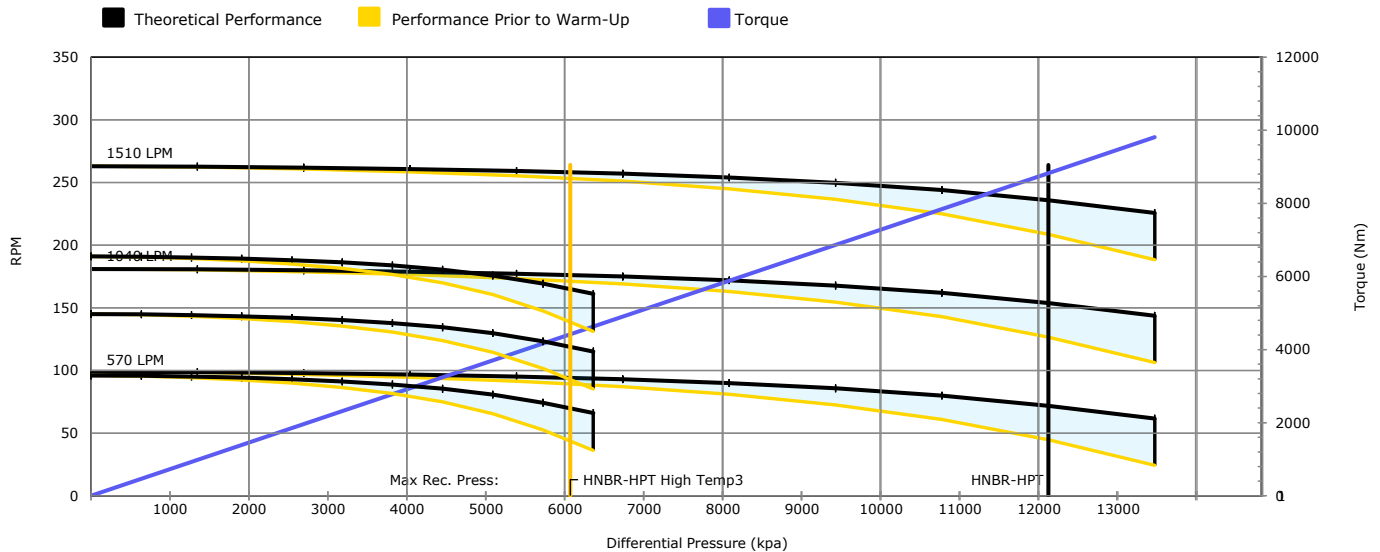
Stator Specifications	
	mm
Overall Length	6985.0
Tube OD	127.0
Tube ID	101.6
Rubber Cutback Top/End	203.0 / 203.0
Weight	235 kg
Number of Stages	8.8
Tube Material	4140/4142 Seamless Alloy Steel
Rubber Options	HNBR-HPT

Performance Specifications	
Flow Range (lpm)	570 - 1510
Speed Range (rpm)	100 - 260
Torque Slope (Nm/kpa)	0.73
Rotation (rev/Liter)	0.1744
Off Bottom Pressure (kpa)	820

Performance Details		
	HNBR-HPT High Temp ³	HNBR-HPT
Max Diff Press (kpa)	6100	12200
Stall Diff Press (kpa)	9200	19200
Max Torque (Nm)	4500	8900
Stall Torque (Nm)	6700	14000

Size	Minor ²	Fit@25°C	Stator Sizing and Fit Chart ⁴	
.5 US	-	-	-	Fit Not Available
STD	72.898	-0.152	40°C	60°C OPTIMAL RANGE 100°C 120°C
.5 OS	-	-	-	Fit Not Available
1.0 OS	73.508	-0.762	90°C	100°C OPTIMAL RANGE 150°C 170°C
1.5 OS	73.685	-0.940	100°C	120°C OPTIMAL RANGE 170°C 180°C
2.0 OS	-	-	-	Fit Not Available
2.5 OS	-	-	-	Fit Not Available

Minor Diameter Change = 0.025 mm per 1.9 °C ΔFit = 0.0134 mm per 1°C



¹ Coating options of chrome or tungsten carbide are available ² Vector Gauge Readings at Room Temp 25°C (measured from the top end) ³ 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. ⁴ 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 for the latest specification revisions.

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