

## POWER SECTION

**Model No: AT700788.5 OPTI**

Revised: 8/9/2022

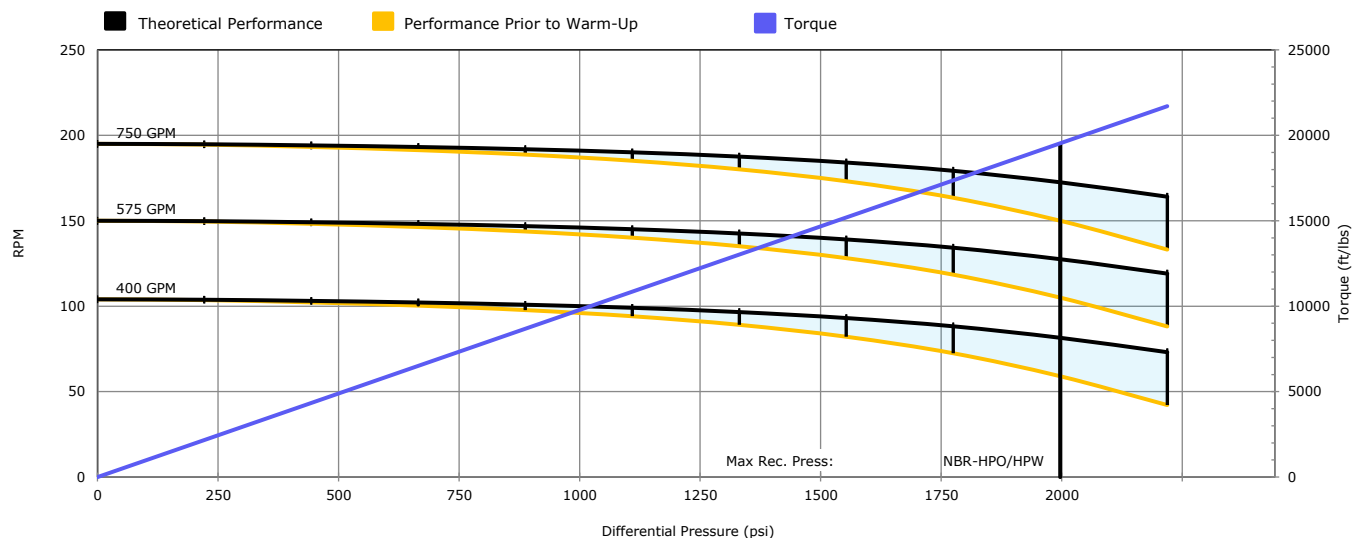
Rotor Specifications	
	inches
Overall Length	294.00
Contour Length	288.00
Major Diameter	5.024
Eccentricity	0.268
Head diameter	5.000
Thread Form	1.375-6 SA
Weight	1269 lbs
Material	17-4 PH <sup>1</sup>

Stator Specifications	
	inches
Overall Length	300.00
Tube OD	7.00
Tube ID	5.75
Rubber Cutback Top/End	7.00 / 7.00
Weight	989 lbs
Number of Stages	8.5
Tube Material	4140/4142 Alloy Steel
Rubber Options	NBR-HPO/NBR-HPW

Performance Specifications	
Flow Range (gpm)	400 - 750
Speed Range (rpm)	100 - 200
Torque Slope (ft-lb/psi)	9.78
Rotation (rev/gal)	0.260
Off Bottom Pressure (psi)	150

Performance Details	
	NBR-HPO/NBR-HPW
Max Diff Press (psi)	2000
Stall Diff Press (psi)	3150
Max Torque (ft-lb)	19540
Stall Torque (ft-lb)	30770

Size	Minor <sup>2</sup>	Fit @ 75°F	Stator Sizing and Fit Chart <sup>3</sup>			
.5 US	-	-	-	-	Fit Not Available	-
STD	4.482	0.007	70°F	110°F	OPTIMAL RANGE	210°F 240°F
.5 OS	4.493	-0.004	110°F	160°F	OPTIMAL RANGE	260°F 290°F
1.0 OS	-	-	-	-	Fit Not Available	-
1.5 OS	-	-	-	-	Fit Not Available	-
2.0 OS	-	-	-	-	Fit Not Available	-
2.5 OS	-	-	-	-	Fit Not Available	-
Minor Diameter Change = 0.001" per 3.9 °F      ΔFit = 0.00026" 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 (measured from the top end) <sup>3</sup> Chart temp shows potential of the individual fit and not necessarily the elastomer. BHCT Exceeding 320°F will void warranty for NBR-HPO/NBR-HPW. 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: **AT700788.5 OPTI**

Revised: 8/9/2022

Rotor Specifications	
	mm
Overall Length	7467.6
Contour Length	7315.2
Major Diameter	127.61
Eccentricity	6.79
Head diameter	127.00
Thread Form	1.375-6 SA
Weight	575 kg
Material	17-4 PH <sup>1</sup>

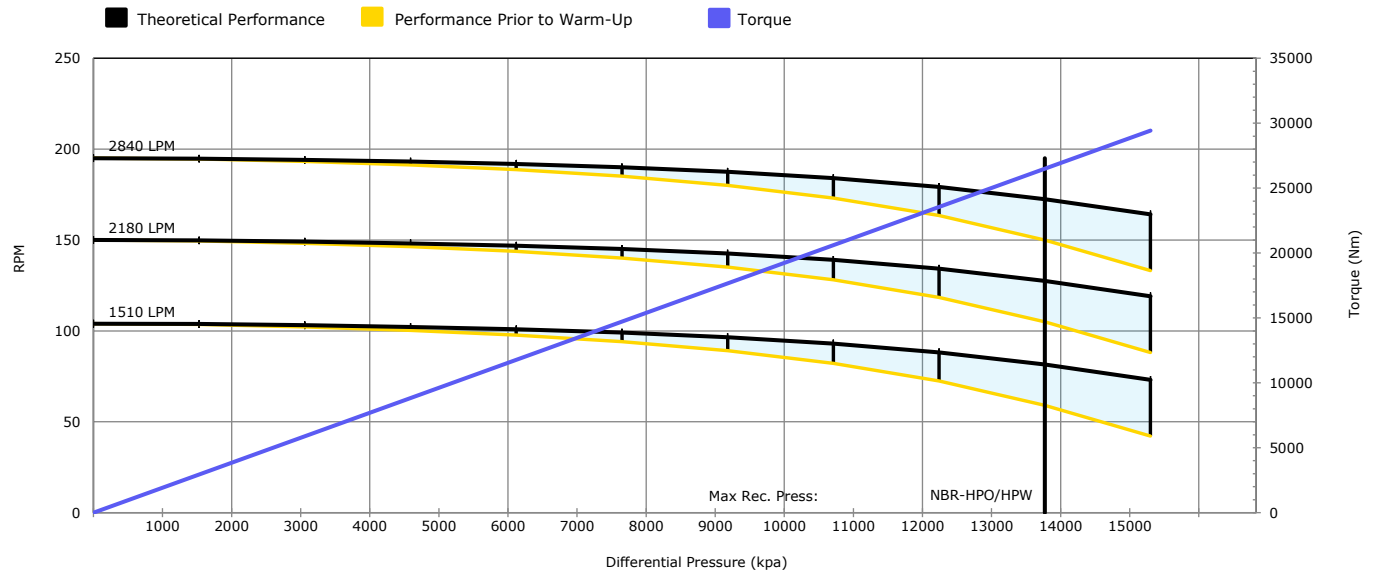
Stator Specifications	
	mm
Overall Length	7620.0
Tube OD	177.8
Tube ID	146.1
Rubber Cutback Top/End	178.0 / 178.0
Weight	449 kg
Number of Stages	8.5
Tube Material	4140/4142 Seamless Alloy Steel
Rubber Options	NBR-HPO/NBR-HPW

Performance Specifications	
Flow Range (lpm)	1510 - 2840
Speed Range (rpm)	100 - 200
Torque Slope (Nm/kpa)	1.92
Rotation (rev/Liter)	0.0687
Off Bottom Pressure (kpa)	1060

Performance Details	
	NBR-HPO/NBR-HPW
Max Diff Press (kpa)	13800
Stall Diff Press (kpa)	21700
Max Torque (Nm)	26500
Stall Torque (Nm)	41800

Size	Minor <sup>2</sup>	Minor <sup>2</sup>	Stator Sizing and Fit Chart <sup>3</sup>	
.5 US	-	-	-	Fit Not Available
STD	113.843	0.178	20°C	40°C OPTIMAL RANGE 100°C 120°C
.5 OS	114.122	-0.102	40°C	70°C OPTIMAL RANGE 130°C 140°C
1.0 OS	-	-	-	Fit Not Available
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 2.15 °C      ΔFit = 0.0118 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 (measured from the top end)    <sup>3</sup> Chart temp shows potential of the individual fit and not necessarily the elastomer. BHCT Exceeding 160°C will void warranty for NBR-HPO/NBR-HPW.

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

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