

## POWER SECTION

**Model No: AT650676.0**

Revised: 9/22/2020

Rotor Specifications	
	inches
Overall Length	242.00
Contour Length	236.00
Major Diameter	4.316
Eccentricity	0.288
Head diameter	4.000
Thread Form	2.875 API REG
Weight	759 lbs
Material	17-4 PH <sup>1</sup>

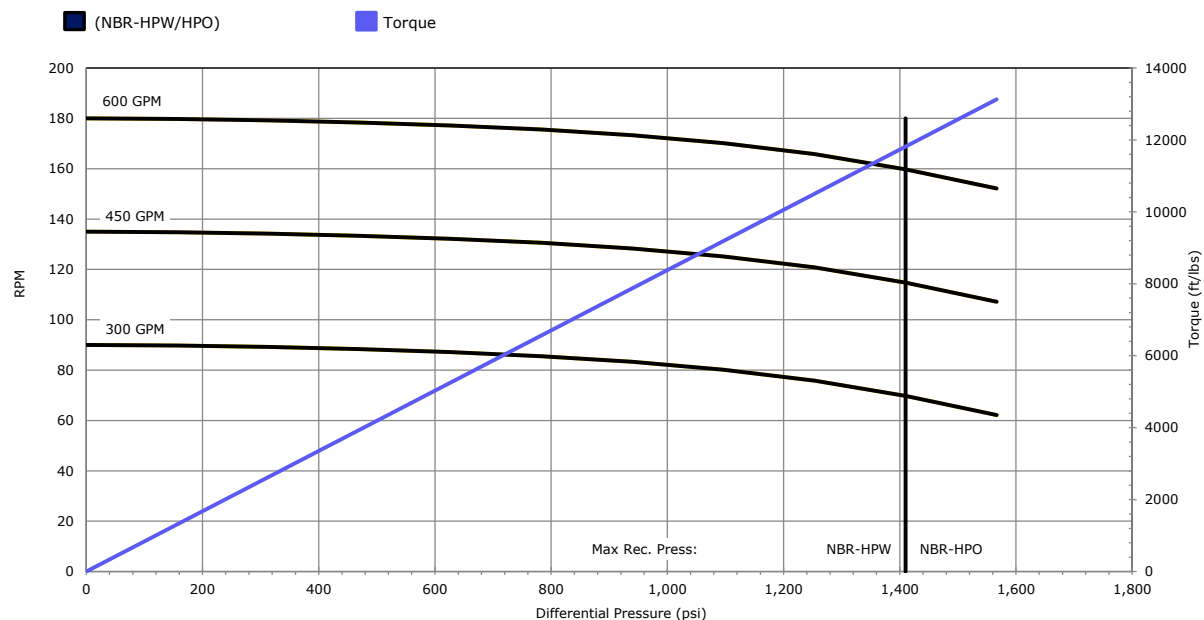
Stator Specifications	
	inches
Overall Length	250.00
Tube OD	6.50
Tube ID	5.50
Rubber Cutback Top/End	8.00 / 8.00
Weight	772 lbs
Number of Stages	6.0
Tube Material	4140/4142 Alloy Steel
Rubber Options	NBR-HPW & NBR-HPO

NBR-HPW (in)		Fits (+ Compression / - Loose)				
Size	Minor <sup>2</sup>	75 °F	125 °F	175 °F	250 °F	300 °F <sup>3</sup>
.5 US						
STD	3.734	0.006	0.024	0.041	0.068	0.085
.5 OS	3.749	-0.009	0.009	0.026	0.052	0.070
1.0 OS	3.760	-0.020	-0.003	0.015	0.041	0.058
1.5 OS	3.771	-0.031	-0.014	0.004	0.030	0.047
2.0 OS	3.781	-0.041	-0.024	-0.007	0.019	0.036
2.5 OS						

NBR-HPO (in)		Fits (+ Compression / - Loose)				
Size	Minor <sup>2</sup>	75 °F	125 °F	175 °F	250 °F	300 °F <sup>3</sup>
.5 US						
STD	3.734	0.006	0.024	0.041	0.068	0.085
.5 OS	3.749	-0.009	0.009	0.026	0.052	0.070
1.0 OS	3.760	-0.020	-0.003	0.015	0.041	0.058
1.5 OS	3.771	-0.031	-0.014	0.004	0.030	0.047
2.0 OS	3.781	-0.041	-0.024	-0.007	0.019	0.036
2.5 OS						

Performance Specifications	
Flow Range (gpm)	300 - 600
Speed Range (rpm)	90 - 180
Torque Slope (ft-lb/psi)	8.38
Rotation (rev/gal)	0.300
Off Bottom Pressure (psi)	110

Performance Details		NBR-HPW	NBR-HPO
Max Diff Press (psi)		1410	1410
Stall Diff Press (psi)		2230	2230
Max Torque (ft-lb)		11820	11820
Stall Torque (ft-lb)		18610	18610



<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> BHCT Exceeding 320°F will void warranty for NBR-HPW/HPO.

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: AT650676.0**

Revised: 9/22/2020

Rotor Specifications	
	mm
Overall Length	6146.8
Contour Length	5994.4
Major Diameter	109.63
Eccentricity	7.32
Head diameter	101.60
Thread Form	2.875 API REG
Weight	344 kg
Material	17-4 PH <sup>1</sup>

Stator Specifications	
	mm
Overall Length	6350.0
Tube OD	165.1
Tube ID	139.7
Rubber Cutback Top/End	203.0 / 203.0
Weight	350 kg
Number of Stages	6.0
Tube Material	4140/4142 Seamless Alloy Steel
Rubber Options	NBR-HPW & NBR-HPO

NBR-HPW (mm)		Fits (+ Compression / - Loose)				
Size	Minor <sup>2</sup>	25 °C	75 °C	100 °C	125 °C	150 °C <sup>3</sup>
.5 US						
STD	94.84	0.15	0.96	1.36	1.77	2.17
.5 OS	95.22	-0.23	0.57	0.97	1.37	1.77
1.0 OS	95.50	-0.51	0.29	0.69	1.08	1.48
1.5 OS	95.78	-0.79	0.00	0.40	0.79	1.19
2.0 OS	96.04	-1.04	-0.26	0.14	0.53	0.92
2.5 OS						

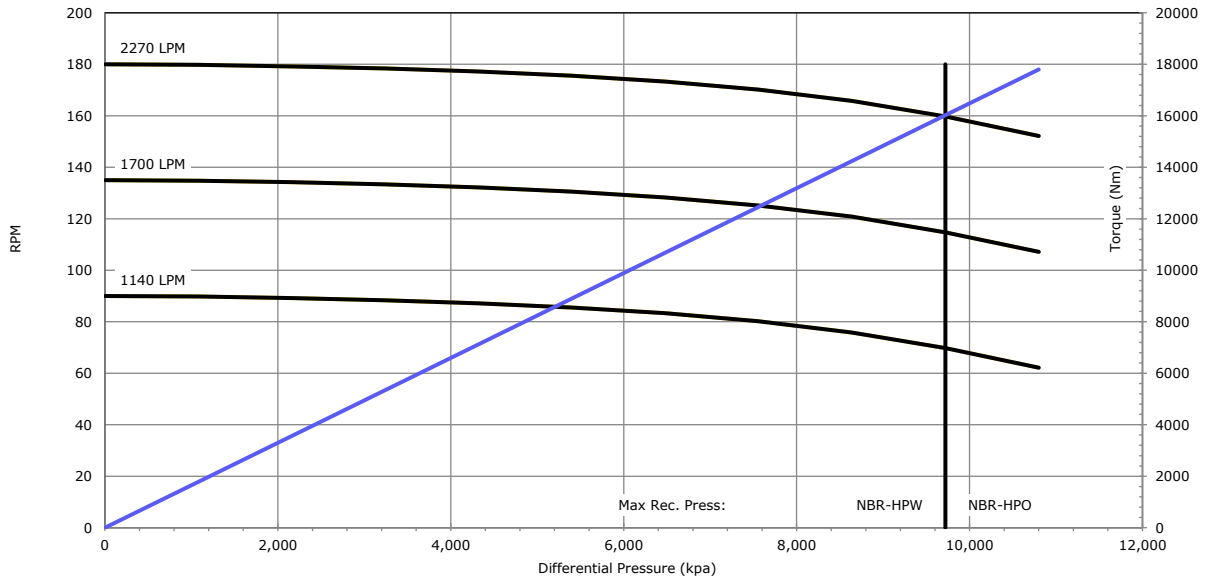
NBR-HPO (mm)		Fits (+ Compression / - Loose)				
Size	Minor <sup>2</sup>	25 °C	75 °C	100 °C	125 °C	150 °C <sup>3</sup>
.5 US						
STD	94.84	0.15	0.96	1.36	1.77	2.17
.5 OS	95.22	-0.23	0.57	0.97	1.37	1.77
1.0 OS	95.50	-0.51	0.29	0.69	1.08	1.48
1.5 OS	95.78	-0.79	0.00	0.40	0.79	1.19
2.0 OS	96.04	-1.04	-0.26	0.14	0.53	0.92
2.5 OS						

Performance Specifications	
Flow Range (lpm)	1140 - 2270
Speed Range (rpm)	90 - 180
Torque Slope (Nm/kpa)	1.65
Rotation (rev/Liter)	0.0793
Off Bottom Pressure (kpa)	770

Performance Details		
	NBR-HPW	NBR-HPO
Max Diff Press (kpa)	9800	9800
Stall Diff Press (kpa)	15300	15400
Max Torque (Nm)	16100	16100
Stall Torque (Nm)	25300	25300

■ (NBR-HPW/HPO)

■ Torque



<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> BHCT Exceeding 160°C will void warranty for NBR-HPW/HPO.

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