

POWER SECTION

Model No: AT650783.0 SLOW

Revised: 9/22/2020

Rotor Specifications	
	inches
Overall Length	197.50
Contour Length	191.00
Major Diameter	4.57
Eccentricity	0.255
Head diameter	4.000
Thread Form	2.875 API REG
Weight	754 lbs
Material	17-4 PH ¹

Stator Specifications	
	inches
Overall Length	204.00
Tube OD	6.50
Tube ID	5.50
Rubber Cutback Top/End	7.50 / 7.50
Weight	608 lbs
Number of Stages	3.0
Tube Material	4140/4142 Alloy Steel
Rubber Options	NBR-HPW & NBR-HPO

NBR-HPW (in)		Fits (+ Compression / - Loose)				
Size	Minor ²	75 °F	125 °F	175 °F	250 °F	300 °F ³
.5 US						
STD	4.054	0.006	0.023	0.039	0.064	0.081
.5 OS	4.066	-0.006	0.010	0.027	0.052	0.068
1.0 OS	4.074	-0.014	0.002	0.019	0.043	0.060
1.5 OS	4.086	-0.026	-0.010	0.007	0.031	0.047
2.0 OS						
2.5 OS						

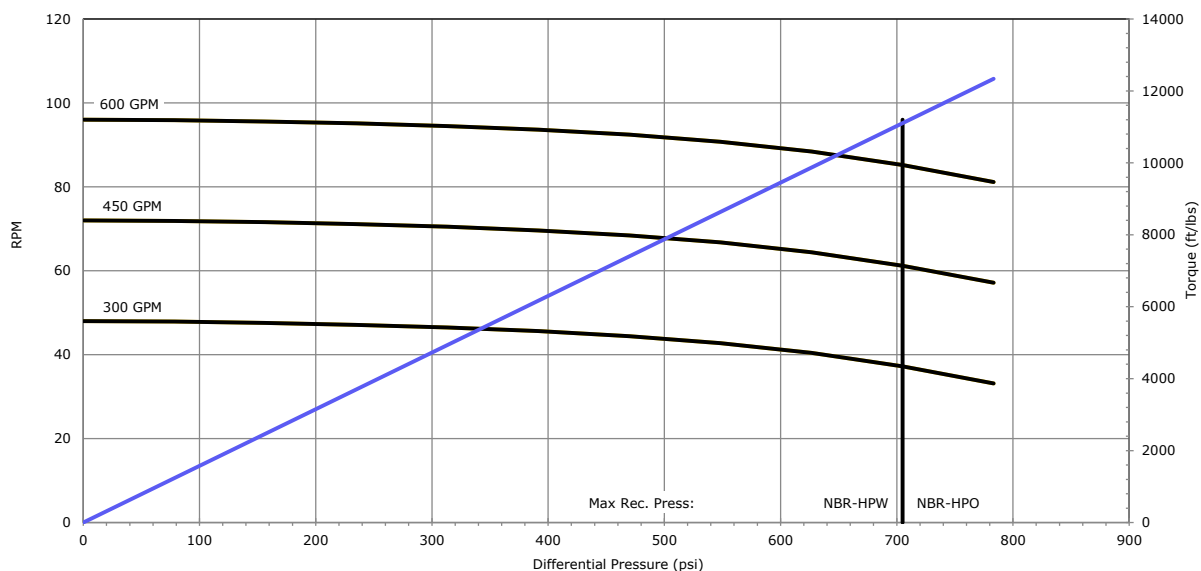
NBR-HPO (in)		Fits (+ Compression / - Loose)				
Size	Minor ²	75 °F	125 °F	175 °F	250 °F	300 °F ³
.5 US						
STD	4.054	0.006	0.023	0.039	0.064	0.081
.5 OS	4.066	-0.006	0.010	0.027	0.052	0.068
1.0 OS	4.074	-0.014	0.002	0.019	0.043	0.060
1.5 OS	4.086	-0.026	-0.010	0.007	0.031	0.047
2.0 OS						
2.5 OS						

Performance Specifications	
Flow Range (gpm)	300 - 600
Speed Range (rpm)	50 - 100
Torque Slope (ft-lb/psi)	15.75
Rotation (rev/gal)	0.160
Off Bottom Pressure (psi)	70

Performance Details		NBR-HPW	NBR-HPO
Max Diff Press (psi)		710	710
Stall Diff Press (psi)		1120	1120
Max Torque (ft-lb)		11110	11110
Stall Torque (ft-lb)		17490	17490

■ (NBR-HPW/HPO)

■ Torque



¹ Coating options of chrome or tungsten carbide are available ² Vector Gauge Readings at Room Temp 75°F ³ 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 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: AT650783.0 SLOW

Revised: 9/24/2020

Rotor Specifications	
	mm
Overall Length	5016.5
Contour Length	4851.4
Major Diameter	116.08
Eccentricity	6.48
Head diameter	101.60
Thread Form	2.875 API REG
Weight	342 kg
Material	17-4 PH ¹

Stator Specifications	
	mm
Overall Length	5181.6
Tube OD	165.1
Tube ID	139.7
Rubber Cutback Top/End	191.0 / 191.0
Weight	276 kg
Number of Stages	3.0
Tube Material	4140/4142 Seamless Alloy Steel
Rubber Options	NBR-HPW & NBR-HPO

NBR-HPW (mm)		Fits (+ Compression / - Loose)				
Size	Minor ²	25 °C	75 °C	100 °C	125 °C	150 °C ³
.5 US						
STD	102.97	0.15	0.91	1.29	1.67	2.05
.5 OS	103.28	-0.15	0.60	0.98	1.36	1.73
1.0 OS	103.48	-0.36	0.39	0.77	1.14	1.52
1.5 OS	103.78	-0.66	0.08	0.45	0.83	1.20
2.0 OS						
2.5 OS						

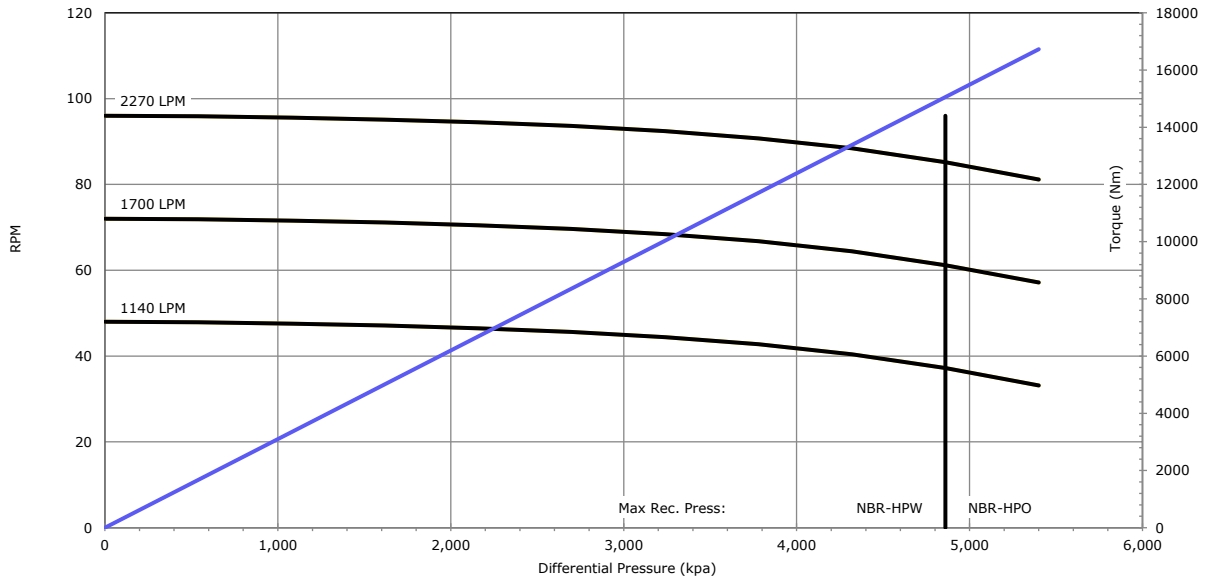
NBR-HPO (mm)		Fits (+ Compression / - Loose)				
Size	Minor ²	25 °C	75 °C	100 °C	125 °C	150 °C ³
.5 US						
STD	102.97	0.15	0.91	1.29	1.67	2.05
.5 OS	103.28	-0.15	0.60	0.98	1.36	1.73
1.0 OS	103.48	-0.36	0.39	0.77	1.14	1.52
1.5 OS	103.78	-0.66	0.08	0.45	0.83	1.20
2.0 OS						
2.5 OS						

Performance Specifications	
Flow Range (lpm)	1140 - 2270
Speed Range (rpm)	50 - 100
Torque Slope (Nm/kpa)	3.10
Rotation (rev/Liter)	0.0423
Off Bottom Pressure (kpa)	460

Performance Details		
	NBR-HPW	NBR-HPO
Max Diff Press (kpa)	4900	4900
Stall Diff Press (kpa)	7700	7700
Max Torque (Nm)	15100	15100
Stall Torque (Nm)	23800	23800

■ (NBR-HPW/HPO)

■ Torque



¹ Coating options of chrome or tungsten carbide are available ² Vector Gauge Readings at Room Temp 25°C ³ BHCT Exceeding 160°C will void warranty for NBR-HPW (163°C for NBR-HPO).

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