

## POWER SECTION

**Model No: AT312563.5**

Revised: 10/28/2021

Rotor Specifications	
	inches
Overall Length	86.00
Contour Length	82.00
Major Diameter	2.174
Eccentricity	0.156
Head diameter	2.175
Thread Form	N/A
Weight	69 lbs
Material	17-4 PH <sup>1</sup>

Stator Specifications	
	inches
Overall Length	88.00
Tube OD	3.13
Tube ID	2.63
Rubber Cutback Top/End	4.00 / 4.00
Weight	65 lbs
Number of Stages	3.5
Tube Material	4140/4142 Alloy Steel
Rubber Options	NBR-HPX/HPW & NBR-HPO

NBR-HPX/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	1.863	0.000	0.005	0.010	0.017	0.022
.5 OS						
1.0 OS	1.874	-0.011	-0.006	-0.001	0.006	0.011
1.5 OS						
2.0 OS						
2.5 OS						

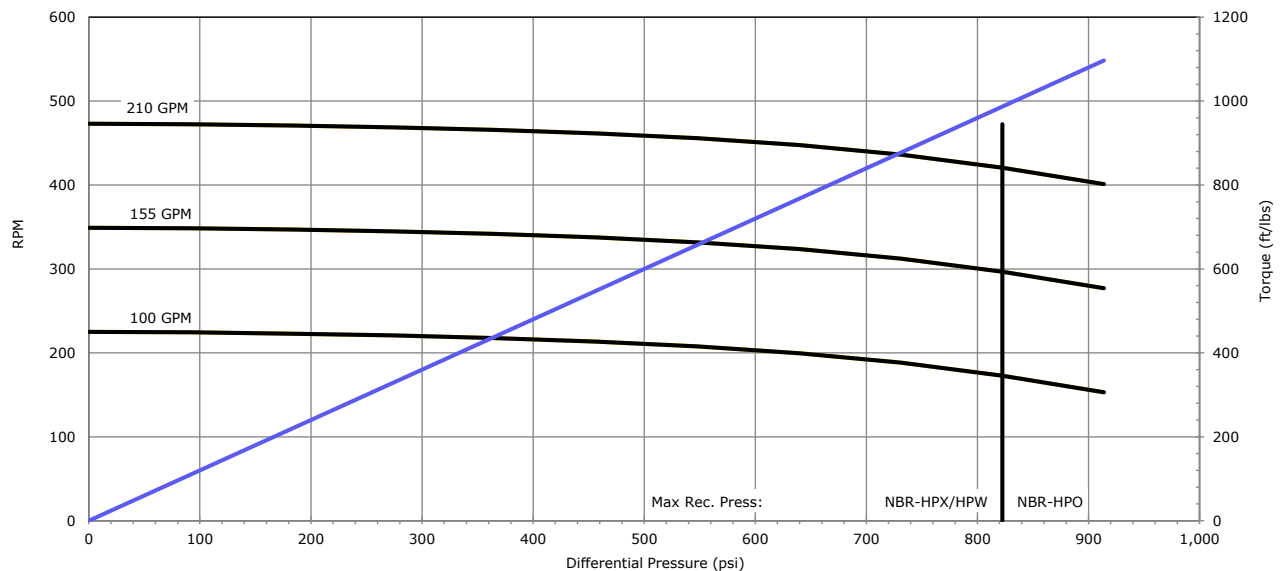
NBR-HPO (in)		Fits (+ Compression / - Loose)				
Size	Minor <sup>2</sup>	75 °F	125 °F	175 °F	250 °F	300 °F <sup>3</sup>
.5 US						
STD	1.863	0.000	0.005	0.010	0.017	0.022
.5 OS						
1.0 OS	1.874	-0.011	-0.006	-0.001	0.006	0.011
1.5 OS						
2.0 OS						
2.5 OS						

Performance Specifications	
Flow Range (gpm)	100 - 210
Speed Range (rpm)	230 - 470
Torque Slope (ft-lb/psi)	1.20
Rotation (rev/gal)	2.250
Off Bottom Pressure (psi)	90

Performance Details		
	NBR-HPX/HPW	NBR-HPO
Max Diff Press (psi)	830	830
Stall Diff Press (psi)	1300	1300
Max Torque (ft-lb)	990	990
Stall Torque (ft-lb)	1560	1560

■ (NBR-HPX/HPW/HPO)

■ Torque



<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-HPX/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: AT312563.5**

Revised: 10/28/2021

Rotor Specifications	
	mm
Overall Length	2184.4
Contour Length	2082.8
Major Diameter	55.22
Eccentricity	3.95
Head diameter	55.25
Thread Form	N/A
Weight	31 kg
Material	17-4 PH <sup>1</sup>

Stator Specifications	
	mm
Overall Length	2235.2
Tube OD	79.4
Tube ID	66.7
Rubber Cutback Top/End	102.0 / 102.0
Weight	30 kg
Number of Stages	3.5
Tube Material	4140/4142 Seamless Alloy Steel
Rubber Options	NBR-HPX/HPW & NBR-HPO

BR-HPX/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	47.32	0.00	0.23	0.34	0.45	0.57
.5 OS						
1.0 OS	47.60	-0.28	-0.06	0.06	0.17	0.28
1.5 OS						
2.0 OS						
2.5 OS						

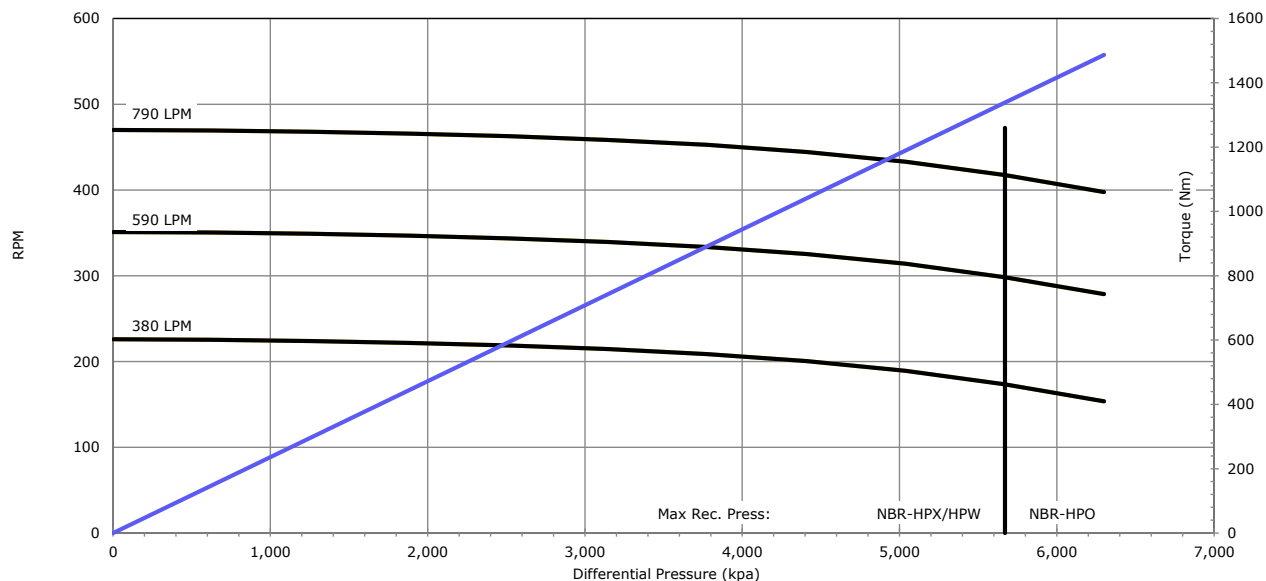
NBR-HPO (mm)		Fits (+ Compression / - Loose)				
Size	Minor <sup>2</sup>	25 °C	75 °C	100 °C	125 °C	150 °C <sup>3</sup>
.5 US						
STD	47.32	0.00	0.23	0.34	0.45	0.57
.5 OS						
1.0 OS	47.60	-0.28	-0.06	0.06	0.17	0.28
1.5 OS						
2.0 OS						
2.5 OS						

Performance Specifications	
Flow Range (lpm)	380 - 790
Speed Range (rpm)	230 - 470
Torque Slope (Nm/kpa)	0.24
Rotation (rev/Liter)	0.5944
Off Bottom Pressure (kpa)	610

Performance Details		
	NBR-HPX/HPW	NBR-HPO
Max Diff Press (kpa)	5700	5700
Stall Diff Press (kpa)	8900	9000
Max Torque (Nm)	1400	1400
Stall Torque (Nm)	2200	2200

■ (NBR-HPX/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-HPX/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.

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