

## POWER SECTION

**Model No: AT5156710.9 OPTI**

Revised: 1/7/2021

| Rotor Specifications |                      |
|----------------------|----------------------|
|                      | inches               |
| Overall Length       | 269.00               |
| Contour Length       | 258.00               |
| Major Diameter       | 3.419                |
| Eccentricity         | 0.215                |
| Head diameter        | 3.500                |
| Thread Form          | 1.375-6 SA           |
| Weight               | 553 lbs              |
| Material             | 17-4 PH <sup>1</sup> |

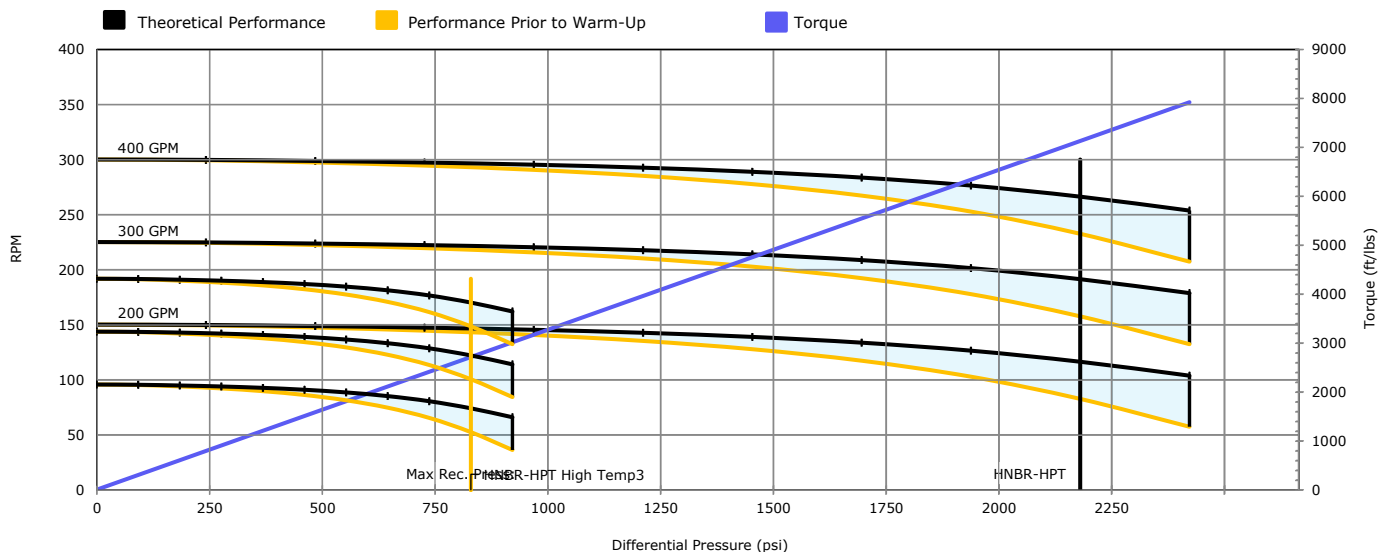
| Stator Specifications  |                       |
|------------------------|-----------------------|
|                        | inches                |
| Overall Length         | 275.00                |
| Tube OD                | 5.15                  |
| Tube ID                | 4.00                  |
| Rubber Cutback Top/End | 12.00 / 12.00         |
| Weight                 | 544 lbs               |
| Number of Stages       | 10.9                  |
| Tube Material          | 4140/4142 Alloy Steel |
| Rubber Options         | HNBR-HPT              |

| Performance Specifications |           |
|----------------------------|-----------|
| Flow Range (gpm)           | 200 - 400 |
| Speed Range (rpm)          | 150 - 300 |
| Torque Slope (ft-lb/psi)   | 3.27      |
| Rotation (rev/gal)         | 0.750     |
| Off Bottom Pressure (psi)  | 150       |

|                        | HNBR-HPT High Temp <sup>3</sup> | HNBR-HPT |
|------------------------|---------------------------------|----------|
| Max Diff Press (psi)   | 1090                            | 2180     |
| Stall Diff Press (psi) | 1640                            | 3440     |
| Max Torque (ft-lb)     | 3570                            | 7130     |
| Stall Torque (ft-lb)   | 5350                            | 11230    |

| Size   | Minor <sup>2</sup> | Fit @ 75°F | Stator Sizing and Fit Chart <sup>4</sup> |       |                   |                          |
|--------|--------------------|------------|--|-------|-------------------|--------------------------|
| .5 US  | -                  | -          | -  | -     | Fit Not Available | -                        |
| STD    | -                  | -          | -  | -     | Fit Not Available | -                        |
| .5 OS  | -                  | -          | -  | -     | Fit Not Available | -                        |
| 1.0 OS | -                  | -          | -  | -     | Fit Not Available | -                        |
| 1.5 OS | 3.028              | -0.039     | 240°F                                    | 270°F | OPTIMAL RANGE     | 350°F 380°F <sup>4</sup> |
| 2.0 OS | -                  | -          | -  | -     | Fit Not Available | -                        |
| 2.5 OS | -                  | -          | -  | -     | Fit Not Available | -                        |

Minor Diameter Change = 0.001" per 3.6 °F      ΔFit = 0.00028" 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 <sup>3</sup> 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. <sup>4</sup> 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](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: AT5156710.9 OPTI**

Revised: 1/7/2021

| Rotor Specifications |                      |
|----------------------|----------------------|
|                      | mm                   |
| Overall Length       | 6832.6               |
| Contour Length       | 6553.2               |
| Major Diameter       | 86.84                |
| Eccentricity         | 5.47                 |
| Head diameter        | 88.90                |
| Thread Form          | 1.375-6 SA           |
| Weight               | 251 kg               |
| Material             | 17-4 PH <sup>1</sup> |

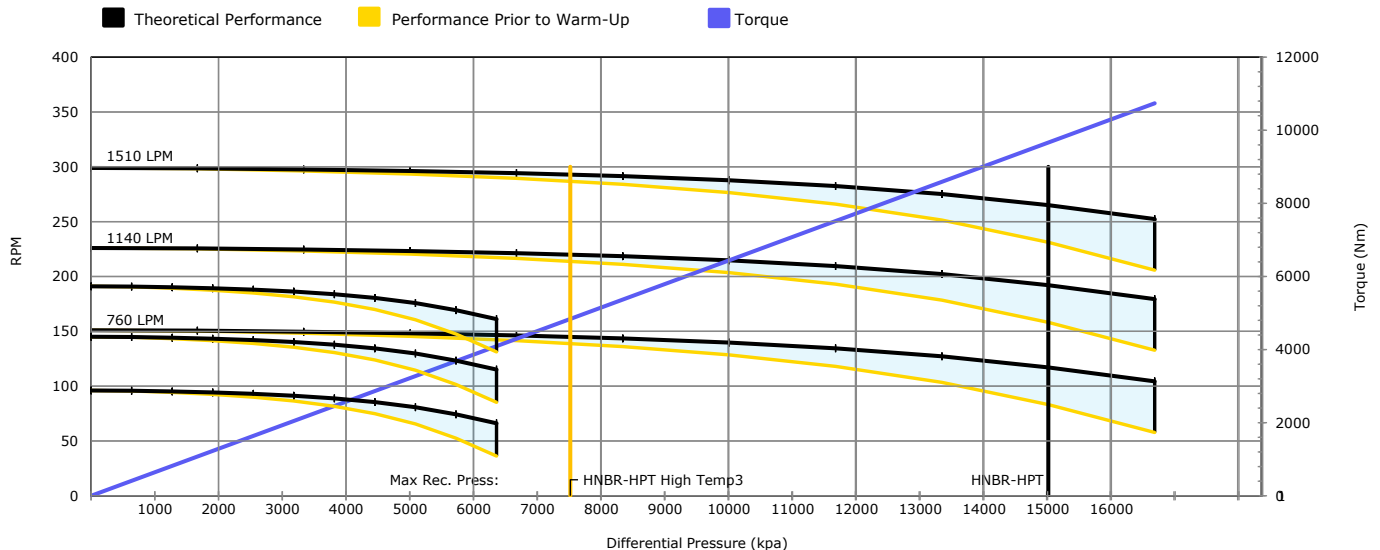
| Stator Specifications  |                                |
|------------------------|--------------------------------|
|                        | mm                             |
| Overall Length         | 6985.0                         |
| Tube OD                | 130.8                          |
| Tube ID                | 101.6                          |
| Rubber Cutback Top/End | 305.0 / 305.0                  |
| Weight                 | 247 kg                         |
| Number of Stages       | 10.9                           |
| Tube Material          | 4140/4142 Seamless Alloy Steel |
| Rubber Options         | HNBR-HPT                       |

| Performance Specifications |            |
|----------------------------|------------|
| Flow Range (lpm)           | 760 - 1510 |
| Speed Range (rpm)          | 150 - 300  |
| Torque Slope (Nm/kpa)      | 0.64       |
| Rotation (rev/Liter)       | 0.1981     |
| Off Bottom Pressure (kpa)  | 1060       |

| Performance Details    |                                 |          |
|------------------------|---------------------------------|----------|
|                        | HNBR-HPT High Temp <sup>3</sup> | HNBR-HPT |
| Max Diff Press (kpa)   | 7600                            | 15100    |
| Stall Diff Press (kpa) | 11300                           | 23700    |
| Max Torque (Nm)        | 4900                            | 9700     |
| Stall Torque (Nm)      | 7300                            | 15300    |

| Size   | Minor <sup>2</sup> | Fit@25°C | Stator Sizing and Fit Chart <sup>4</sup> |  |
|--------|--------------------|----------|--|--|
| .5 US  | -                  | -        | -  | Fit Not Available                            |
| STD    | -                  | -        | -  | Fit Not Available                            |
| .5 OS  | -                  | -        | -  | Fit Not Available                            |
| 1.0 OS | -                  | -        | -  | Fit Not Available                            |
| 1.5 OS | 76.911             | -1.003   | 120°C                                    | 130°C OPTIMAL RANGE 180°C 190°C <sup>4</sup> |
| 2.0 OS | -                  | -        | -  | Fit Not Available                            |
| 2.5 OS | -                  | -        | -  | Fit Not Available                            |

Minor Diameter Change = 0.025 mm per 2 °C      ΔFit = 0.0127 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 <sup>3</sup> 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. <sup>4</sup> 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](http://www.AbacoDrilling.com) for the latest specification revisions.

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