



Martec Solutions

Downhole Tools & Accessories

MOTOR MANUAL SPECIFICATIONS AND PERFORMANCE CURVES

**MARTEC SOLUTIONS LLC
MAGNOLIA, TEXAS**

PHONE: 281-703-9655 (English) / 281-703-1563 (Spanish)
EMAIL: sales@martecsolutions.com (English or Spanish)



MARTEC SOLUTIONS manufactures J-TEC mud-lube motors in Houston, Texas for a wide variety of thru-tubing and intervention applications. Our goal is to meet our customer's requirements for dependable and robust motor solutions in thru-tubing, coiled-tubing, fishing, clean-out, and intervention operations. In addition to producing reliable and durable mud-lube motors, MARTEC's cutting-edge organization is uniquely positioned to provide clients efficient and economical motor solutions in an ever changing and demanding environment.

MARTEC's J-TEC mud-lube motors are based on a proven design with thousands of hours of successful service operation in active basins in the USA, Mexico, South America, Africa and the Middle East. Our current design takes advantage of continuous design improvements providing for superior catch system, roller ball transmission, and bearing assembly which also allow for easy tool maintenance.

MARTEC's J-TEC mud lube motors for thru-tubing and intervention operations are manufactured in sizes ranging from 1½" to 3½" OD. Our motors are available with a variety of conventional and even-wall power sections from USA manufacturers capable of meeting many demanding service environments. J-TEC mud lube motors employ the latest power section designs incorporating superior wear resistant hard rubber-NBR elastomers and 17-4 PH stainless steel chrome coated rotors. Our motors come with standard or oversize fit configurations as well as with straight or adjustable bend housings. J-TEC mud-lube motors and components are sold in both national and international markets.

We listen carefully to our customer base to effectively communicate specific motor and spare part options while considering many operating parameters such as, but not limited to, speed, torque, flow rate, and temperature. We look forward to providing effective mud-lube motor solutions to serve and support our customer's operational objectives.

COMPANY MISSION

MARTEC's mission is simple: deliver our cost effective, reliable, and durable J-TEC mud-lube motors on a timely basis to ensure our customers meet their service, operational and production objectives.



Martec Solutions

Some factors to consider when selecting motor and configuration:

- RPM vs. Flow Rate
- Flow Rate vs. Operating Torque
- Min and Max Flow Rate
- Low Speed / High Torque vs. High Speed / Low Torque
- Lobe Configuration and Stages
- Max Pressure Drop
- Differential Pressure at Max Operating Torque
- Max Operating Torque
- Stall Pressure

|  Martec Solutions | MOTOR SELECTION WORK SHEET | | | | | | | |
|---|----------------------------|--------|---------|--------|---------|--------|---------|--------|
| | MOTOR 1 | | MOTOR 2 | | MOTOR 3 | | MOTOR 4 | |
| | LOBES | STAGES | LOBES | STAGES | LOBES | STAGES | LOBES | STAGES |
| | | | | | | | | |
| J-TEC MODEL NUMBER | | | | | | | | |
| RPM | | | | | | | | |
| FLOW RATE | | | | | | | | |
| MIN FLOW RATE | | | | | | | | |
| MAX FLOW RATE | | | | | | | | |
| MAX PRESSURE DROP | | | | | | | | |
| DIFF. PRESS. @ MAX OPERATING TORQUE | | | | | | | | |
| MAX OPERATING TORQUE | | | | | | | | |
| STALL PRESSURE | | | | | | | | |

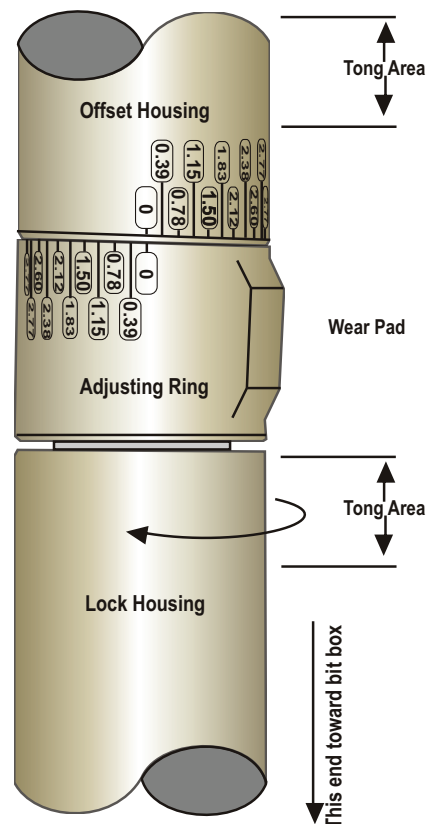
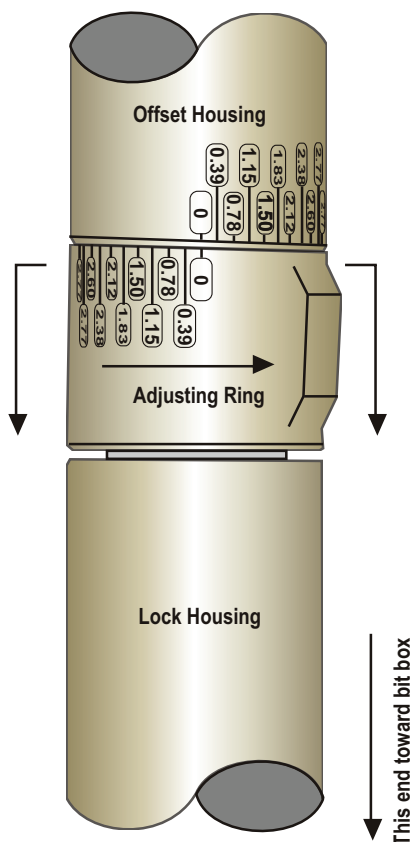


Martec Solutions

Adjustable Bend Housing Operation

The J-TEC motor adjustable bend housing (ABH) allows for quick and easy bend angle adjustments from zero (0) to three (3) degrees. Below is the procedure for setting the J-TEC motor ABH.

1. Place the jaws of tongs in the tong areas shown and break the tool joint.
2. While keeping the Adjusting Ring teeth engaged with the mated slots in the offset housing, unscrew the lock housing two to four complete turns in the clockwise direction (unthread).

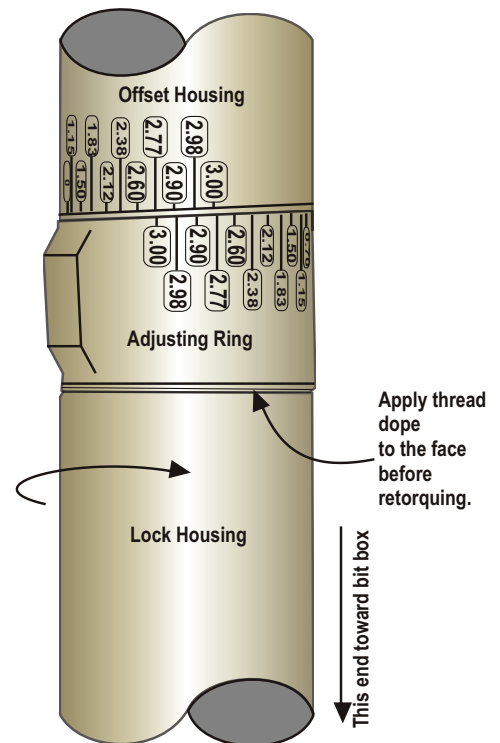


3. Slide the Adjusting Ring down to disengage the teeth in the ring and the Offset Housing.
4. To adjust the bend angle of the bent housing, rotate the Adjusting Ring clockwise until the desired bend-angle marking matches the bend angle marking on the Offset Housing.

Martec Solutions

Adjustable Bend Housing Operation (continued)

5. Engage the teeth of the Adjusting Ring and the Offset Housing at the desired bend angle.
6. Apply thread dope to the mated faces of the lock housing and the Adjusting Ring.
7. Screw the Lock Housing and the Adjusting Ring together and apply the torque value listed in the chart below. The matching markings on the OD of the Offset Housing and the Adjusting Ring indicate the bend angle selected as well as the high side marks to identify the high side of the tool.



Adjustable Torque Guide Table

| MOTOR SIZE | TORQUE AMOUNT | TORQUE AMOUNT (METRIC) |
|-----------------|-----------------------------|------------------------|
| 2-7/8" (287) | 3,650 lbs - ft | 4,950 N-m |
| 3-1/8" (312) | 3,650 lbs - ft | 4,950 N-m |
| 3-1/2" (350) | 4,100 lbs - ft | 5,560 N-m |
| 3-3/4" (375) | 4,800 lbs - ft | 6,300 N-m |
| 0 - 1.00 DEG | 50 RPM No Greater | |
| 1.00 - 2.00 DEG | Short Period 40 RPM or less | |
| 2.00 - 3.00 DEG | Not Recommended | |

Rotating the rotary higher than the specified recommendations may result in damage to motor or failure.

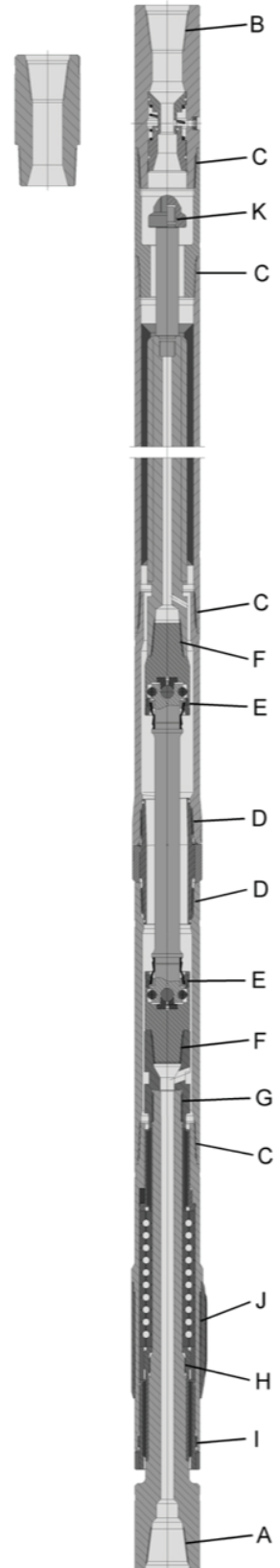


MOTOR ASSEMBLY

- J-TEC motors and components are produced in USA
- OD sizes range from 1.5" to 3.5"
- J-TEC motors are compatible with WBM, OBM, and can be operated with nitrogen levels up to 50% depending on specific power section configuration, stator selection, temperature, and well environment.
- Motor assembly options include:
 - Conventional or even-wall power sections
 - Straight, ABH, or Fixed
 - Slick or Stabilized (for larger ODs)
- Maintenance redress training is available with purchase of motors

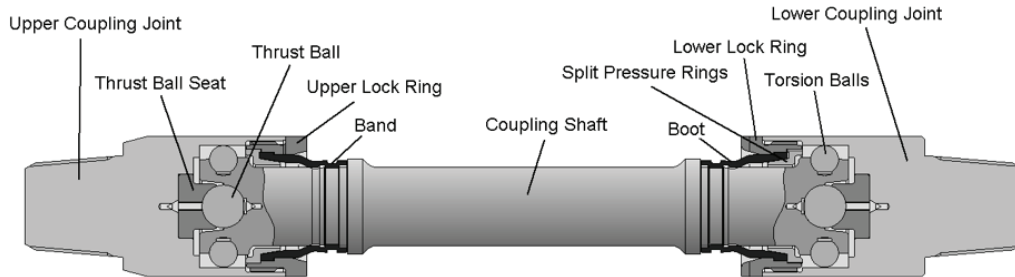
NOTE: OPERATION OF MOTOR ASSEMBLIES WITH OBM OR NITROGEN REQUIRE POST RUN STATOR REPLACEMENT

| | THREAD CONNECTION |
|----------|---|
| A | Bit Box Connection |
| B | Upper Box Connection |
| C | Stator / Outer Housings |
| D | ABH |
| E | Upper lock ring Lower lock ring – <i>left hand</i> |
| F | Coupling |
| G | Diverter cap (or) Integrated diverter cap |
| H | Safety retention nut – <i>left hand</i> |
| I | Lower stationary bearing – <i>left hand</i> |
| J | Changeable stabilizer |
| K | Catch Nut – <i>left Hand</i> |



- J-TEC motor transmission employs ROLLER BALL technology

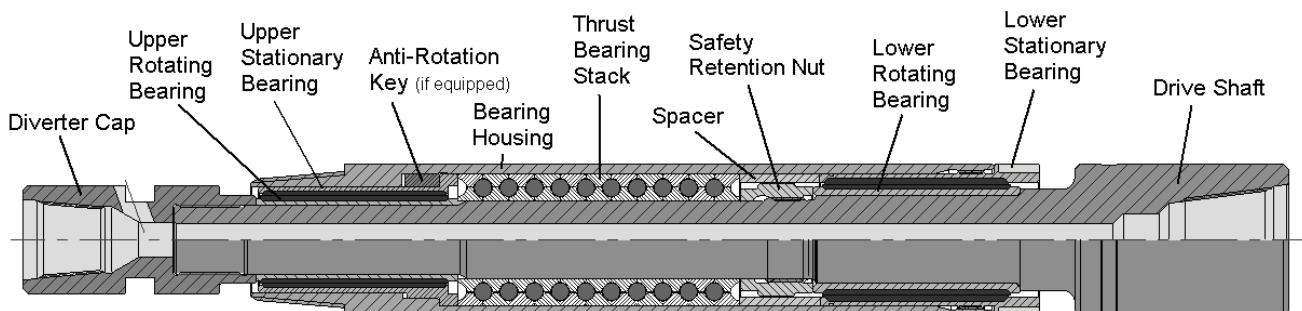
Roller Ball Transmission



BEARING ASSEMBLY DETAILS

- Bearing assembly consists of S2 tool steel thrust stack and tiled carbide radial bearings
- The bearing assembly is a proven design concept with tens of thousands of successful run hours
- Most other components are manufactured from 4145 and/or 4330 v mod materials.
- Transmission components are a heat treated 4340.

BEARING ASSEMBLY





Martec Solutions

Downhole Tools & Accessories

**MARTEC'S J-TEC MUD LUBE MOTOR
SPECIFICATIONS
AND
PERFORMANCE CURVES**

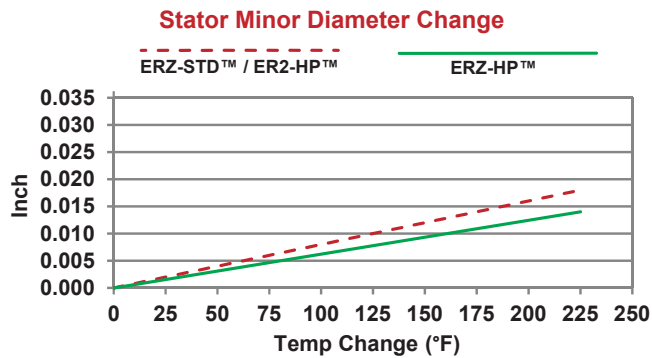
Model No. **150JTEC5632**

POWER SECTION 5:6 LOBES – 3.2 STAGES

Email: sales@martecsolutions.com

| Rotor Specifications | |
|----------------------|-----------|
| Overall Length | 79.75 in. |
| Profile Length | 75.75 in. |
| Major Diameter | 0.99 in. |
| Eccentricity | 0.064 in. |
| Head Diameter | 1 in. |
| Thread Form | N/A |
| Weight | 15 lbs. |
| Material | 17-4 PH |

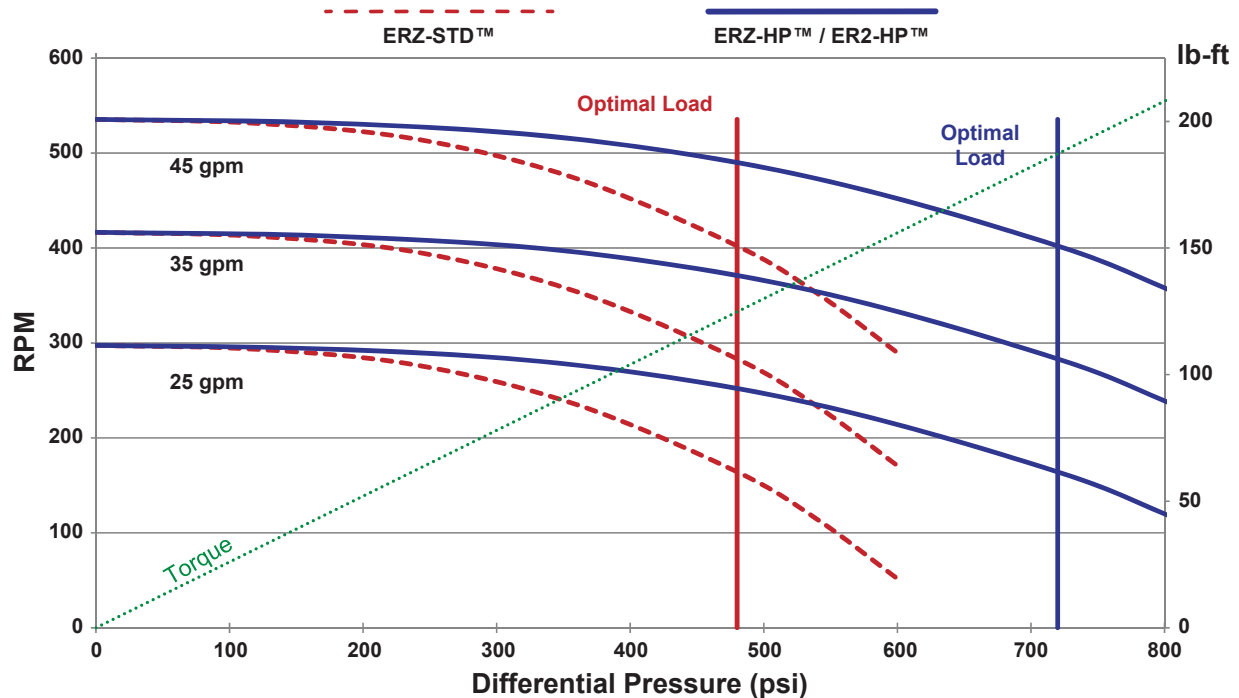
| Stator Specifications | |
|------------------------|----------|
| Overall Length | 86.8 in. |
| Tube OD | 1.5 in. |
| Tube ID | 1.25 in. |
| Rubber Cutback Top/End | 4/9 in. |
| Weight | 21 lbs. |
| Number of Stages | 3.2 |
| Tube Material | 4140HT |
| Rubber Options | N/A |



| Stator Minor Dimensions | | |
|-------------------------|-------|-------|
| STD | 0.85 | 2x OS |
| OD | 0.864 | 3x OS |

| Performance Specifications | |
|----------------------------|-----------------|
| Flow Range | 25 - 45 GPM |
| Speed Range | 300 - 540 RPM |
| Torque Slope | 0.26 ft-lb./psi |
| Rotation | 11.9 rev/gal |
| Off Bottom Pressure | 75 psi |

| Performance Details | | |
|---------------------|------------|------------|
| | STD | HP |
| Max Diff. Press. | 480 psi | 720 psi |
| Stall Diff. Press. | 720 psi | 1080 psi |
| Max Torque | 120 ft-lb. | 190 ft-lb. |
| Stall Torque | 190 ft-lb. | 280 ft-lb. |
| Max WOB | | 3,000 lb. |
| Max Pull to Re-Run | | 6,000 lb. |
| Pull to Yield | | 35,000 lb. |



Power section performance curves are for reference only. Actual performance will vary with different downhole conditions and rotor/stator fits. If operated above the optimal differential pressure, stator life will be reduced. Optimal load power calculation is based on maximum RPM and optimal load torque. Information contained in this document is subject to change without notice. The above is referenced from a Roper Pumps® Power Section.

Model No. 169JTEC5623

POWER SECTION 5:6 LOBES – 2.3 STAGES

Email: sales@martecsolutions.com

| Rotor Specifications | |
|----------------------|----------------------|
| Overall Length | 55.00 in. |
| Contour Length | 51.00 in. |
| Major Diameter | 1.063 in. |
| Eccentricity | 0.076 in. |
| Head Diameter | 1.000 in. |
| Thread Form | N/A |
| Weight | 11 lbs. |
| Material | 17-4 PH ¹ |

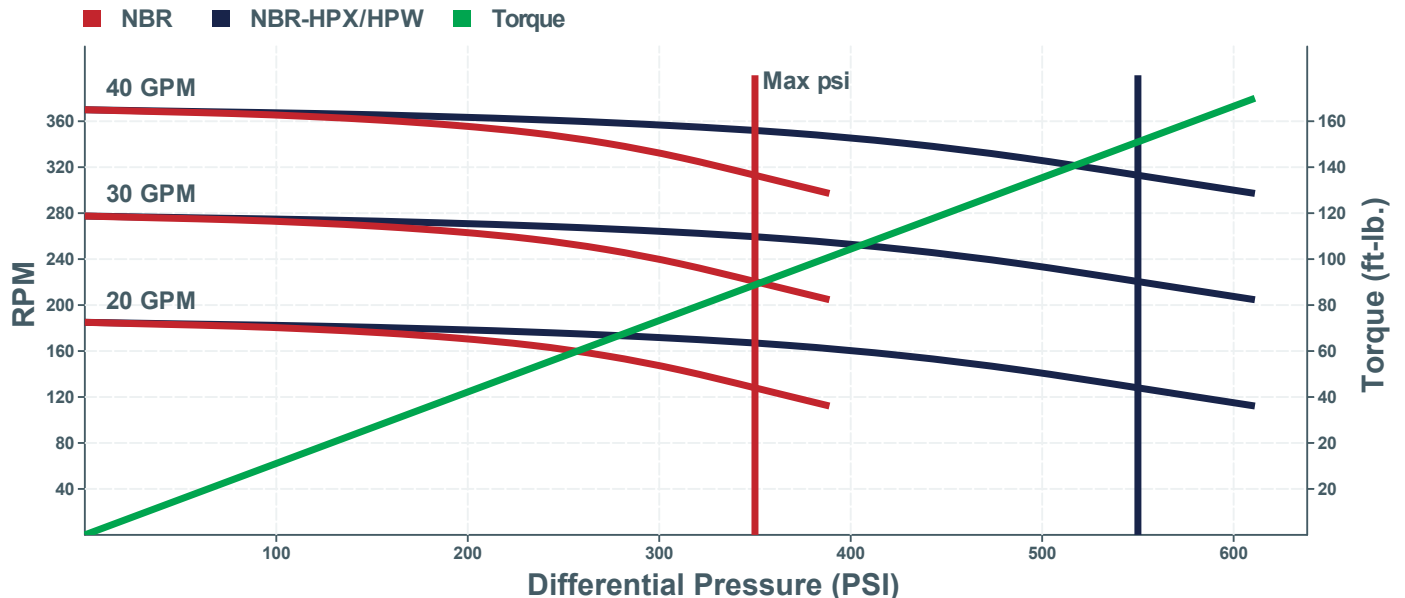
| Stator Specifications | |
|------------------------|-----------------------|
| Overall Length | 60.00 in. |
| Tube OD | 1.69 in. |
| Tube ID | 1.38 in. |
| Rubber Cutback Top/End | 4/4 in. |
| Weight | 15 lbs. |
| Number of Stages | 2.3 |
| Tube Material | 4140/4142 Alloy Steel |
| Rubber Options | NBR, NBR-HPX/HPW |

| NBR (in.) | | Fits (+Compression / -Loose) | | | | |
|-----------|--------------------|------------------------------|-------|-------|-------|--------------------|
| Size | Minor ² | 75°F | 125°F | 175°F | 250°F | 300°F ³ |
| 0.5 US | -- | -- | -- | -- | -- | -- |
| STD | 0.909 | 0.003 | 0.008 | 0.012 | 0.019 | 0.024 |
| 0.5 OS | -- | -- | -- | -- | -- | -- |
| 1 OS | -- | -- | -- | -- | -- | -- |
| 1.5 OS | -- | -- | -- | -- | -- | -- |
| 2 OS | -- | -- | -- | -- | -- | -- |
| 2.5 OS | -- | -- | -- | -- | -- | -- |

| NBR-HPX/HPW (in.) | | Fits (+Compression / -Loose) | | | | |
|-------------------|--------------------|------------------------------|-------|-------|-------|--------------------|
| Size | Minor ² | 75°F | 125°F | 175°F | 250°F | 300°F ³ |
| 0.5 US | -- | -- | -- | -- | -- | -- |
| STD | 0.909 | 0.003 | 0.008 | 0.012 | 0.019 | 0.024 |
| 0.5 OS | -- | -- | -- | -- | -- | -- |
| 1 OS | -- | -- | -- | -- | -- | -- |
| 1.5 OS | -- | -- | -- | -- | -- | -- |
| 2 OS | -- | -- | -- | -- | -- | -- |
| 2.5 OS | -- | -- | -- | -- | -- | -- |

| Performance Specifications | |
|----------------------------|-----------------|
| Flow Range | 20 - 40 GPM |
| Speed Range | 190 - 370 RPM |
| Torque Slope | 0.29 ft-lb./psi |
| Rotation | 9.250 rev/gal |
| Off Bottom Pressure | 30 psi |

| Performance Details | | |
|---------------------|------------|-------------|
| | NBR | NBR-HPX/HPW |
| Max Diff. Press. | 350 psi | 550 psi |
| Stall Diff. Press. | 520 psi | 860 psi |
| Max Torque | 100 ft-lb. | 160 ft-lb. |
| Stall Torque | 150 ft-lb. | 250 ft-lb. |
| Max WOB | | 4,000 lb. |
| Max Pull to Re-Run | | 7,000 lb. |
| Pull to Yield | | 40,000 lb. |



¹ Coating options of chrome or tungsten carbide are available

² Vector Gauge Readings at Room Temp 75°F

³ BHCT Exceeding 275°F will void warranty for NBR (320°F for HPW/HPX)

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. The above is referenced from an Abaco® Power Section.



Martec Solutions

Model No. **169JTEC5650**

POWER SECTION 5:6 LOBES – 5.0 STAGES

Email: sales@martecsolutions.com

| Rotor Specifications | |
|----------------------|----------------------|
| Overall Length | 93.00 in. |
| Contour Length | 87.00 in. |
| Major Diameter | 0.990 in. |
| Eccentricity | 0.069 in. |
| Head Diameter | 1.100 in. |
| Thread Form | N/A |
| Weight | 16 lbs. |
| Material | 17-4 PH ¹ |

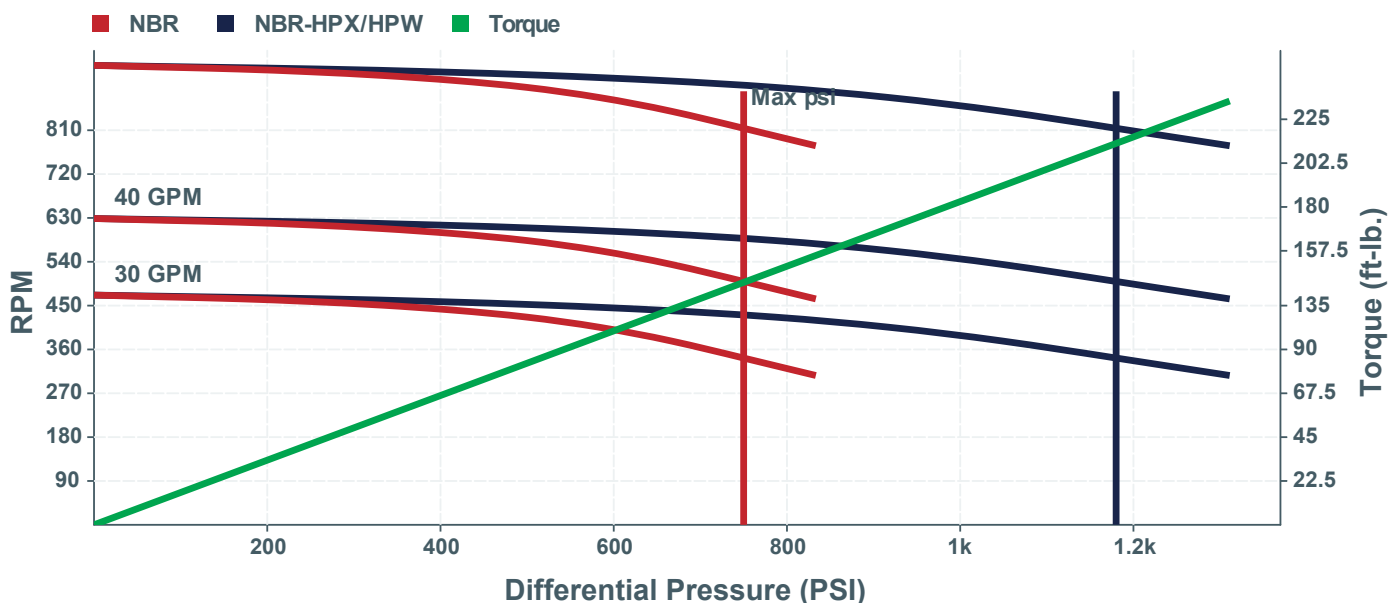
| Stator Specifications | |
|------------------------|-----------------------|
| Overall Length | 99.00 in. |
| Tube OD | 1.69 in. |
| Tube ID | 1.38 in. |
| Rubber Cutback Top/End | 4/4 in. |
| Weight | 27 lbs. |
| Number of Stages | 5.0 |
| Tube Material | 4140/4142 Alloy Steel |
| Rubber Options | NBR, NBR-HPX/HPW |

| NBR (in.) | | Fits (+Compression / -Loose) | | | | |
|-----------|--------------------|------------------------------|--------|-------|-------|--------------------|
| Size | Minor ² | 75°F | 125°F | 175°F | 250°F | 300°F ³ |
| 0.5 US | -- | -- | -- | -- | -- | -- |
| STD | 0.851 | 0.001 | 0.006 | 0.011 | 0.018 | 0.023 |
| 0.5 OS | -- | -- | -- | -- | -- | -- |
| 1 OS | 0.861 | -0.009 | -0.004 | 0.000 | 0.008 | 0.012 |
| 1.5 OS | -- | -- | -- | -- | -- | -- |
| 2 OS | -- | -- | -- | -- | -- | -- |
| 2.5 OS | -- | -- | -- | -- | -- | -- |

| NBR-HPX/HPW (in.) | | Fits (+Compression / -Loose) | | | | |
|-------------------|--------------------|------------------------------|--------|-------|-------|--------------------|
| Size | Minor ² | 75°F | 125°F | 175°F | 250°F | 300°F ³ |
| 0.5 US | -- | -- | -- | -- | -- | -- |
| STD | 0.851 | 0.001 | 0.006 | 0.011 | 0.018 | 0.023 |
| 0.5 OS | -- | -- | -- | -- | -- | -- |
| 1 OS | 0.861 | -0.009 | -0.004 | 0.000 | 0.008 | 0.012 |
| 1.5 OS | -- | -- | -- | -- | -- | -- |
| 2 OS | -- | -- | -- | -- | -- | -- |
| 2.5 OS | -- | -- | -- | -- | -- | -- |

| Performance Specifications | |
|----------------------------|-----------------|
| Flow Range | 30 - 60 GPM |
| Speed Range | 390 - 860 RPM |
| Torque Slope | 0.19 ft-lb./psi |
| Rotation | 15.720 rev/gal |
| Off Bottom Pressure | 70 psi |

| Performance Details | | |
|---------------------|------------|-------------|
| | NBR | NBR-HPX/HPW |
| Max Diff. Press. | 750 psi | 1180 psi |
| Stall Diff. Press. | 1130 psi | 1860 psi |
| Max Torque | 150 ft-lb. | 230 ft-lb. |
| Stall Torque | 220 ft-lb. | 360 ft-lb. |
| Max WOB | | 4,000 lb. |
| Max Pull to Re-Run | | 7,000 lb. |
| Pull to Yield | | 40,000 lb |



¹ Coating options of chrome or tungsten carbide are available

² Vector Gauge Readings at Room Temp 75°F

³ BHCT Exceeding 275°F will void warranty for NBR (320°F for HPW/HPX)

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. The above is referenced from an Abaco® Power Section.



Martec Solutions

Model No. **213JTEC5660**

POWER SECTION 5:6 LOBES – 6.0 STAGES

Email: sales@martecsolutions.com

| Rotor Specifications | |
|----------------------|----------------------|
| Overall Length | 83.13 in. |
| Contour Length | 79.00 in. |
| Major Diameter | 1.236 in. |
| Eccentricity | 0.087 in. |
| Head Diameter | 1.250 in. |
| Thread Form | N/A |
| Weight | 21 lbs. |
| Material | 17-4 PH ¹ |

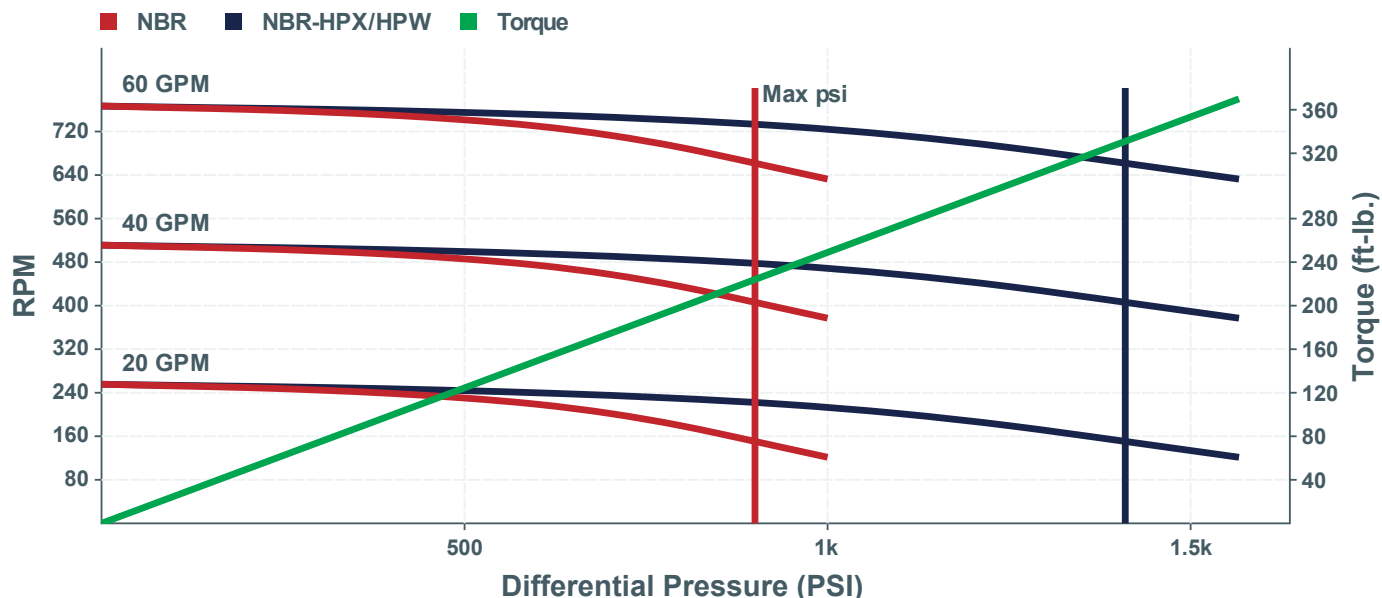
| Stator Specifications | |
|------------------------|-----------------------|
| Overall Length | 88.00 in. |
| Tube OD | 2.13 in. |
| Tube ID | 1.75 in. |
| Rubber Cutback Top/End | 4/4 in. |
| Weight | 34 lbs. |
| Number of Stages | 6.0 |
| Tube Material | 4140/4142 Alloy Steel |
| Rubber Options | NBR, NBR-HPX/HPW |

| NBR (in.) | | Fits (+Compression / -Loose) | | | | |
|-----------|--------------------|------------------------------|-------|-------|-------|--------------------|
| Size | Minor ² | 75°F | 125°F | 175°F | 250°F | 300°F ³ |
| 0.5 US | -- | -- | -- | -- | -- | -- |
| STD | 1.059 | 0.003 | 0.008 | 0.013 | 0.021 | 0.026 |
| 0.5 OS | -- | -- | -- | -- | -- | -- |
| 1 OS | -- | -- | -- | -- | -- | -- |
| 1.5 OS | -- | -- | -- | -- | -- | -- |
| 2 OS | -- | -- | -- | -- | -- | -- |
| 2.5 OS | -- | -- | -- | -- | -- | -- |

| NBR-HPX/HPW (in.) | | Fits (+Compression / -Loose) | | | | |
|-------------------|--------------------|------------------------------|-------|-------|-------|--------------------|
| Size | Minor ² | 75°F | 125°F | 175°F | 250°F | 300°F ³ |
| 0.5 US | -- | -- | -- | -- | -- | -- |
| STD | 1.059 | 0.003 | 0.008 | 0.013 | 0.021 | 0.026 |
| 0.5 OS | -- | -- | -- | -- | -- | -- |
| 1 OS | -- | -- | -- | -- | -- | -- |
| 1.5 OS | -- | -- | -- | -- | -- | -- |
| 2 OS | -- | -- | -- | -- | -- | -- |
| 2.5 OS | -- | -- | -- | -- | -- | -- |

| Performance Specifications | |
|----------------------------|-----------------|
| Flow Range | 20 - 60 GPM |
| Speed Range | 260 - 770 RPM |
| Torque Slope | 0.24 ft-lb./psi |
| Rotation | 12.780 rev/gal |
| Off Bottom Pressure | 60 psi |

| Performance Details | | |
|---------------------|------------|-------------|
| | NBR | NBR-HPX/HPW |
| Max Diff. Press. | 900 psi | 1410 psi |
| Stall Diff. Press. | 1350 psi | 2230 psi |
| Max Torque | 220 ft-lb. | 340 ft-lb. |
| Stall Torque | 330 ft-lb. | 540 ft-lb. |
| Max WOB | 10,000 lb. | |
| Max Pull to Re-Run | 25,000 lb. | |
| Pull to Yield | 60,000 lb. | |



¹ Coating options of chrome or tungsten carbide are available

² Vector Gauge Readings at Room Temp 75°F

³ BHCT Exceeding 275°F will void warranty for NBR (320°F for HPW/HPX)

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. The above is referenced from an Abaco® Power Section.

Model No. 238JTEC7840

POWER SECTION 7:8 LOBES – 4.0 STAGES

Email: sales@martecsolutions.com

| Rotor Specifications | |
|----------------------|----------------------|
| Overall Length | 79.20 in. |
| Contour Length | 75.00 in. |
| Major Diameter | 1.500 in. |
| Eccentricity | 0.082 in. |
| Head Diameter | 1.500 in. |
| Thread Form | N/A |
| Weight | 32 lbs. |
| Material | 17-4 PH ¹ |

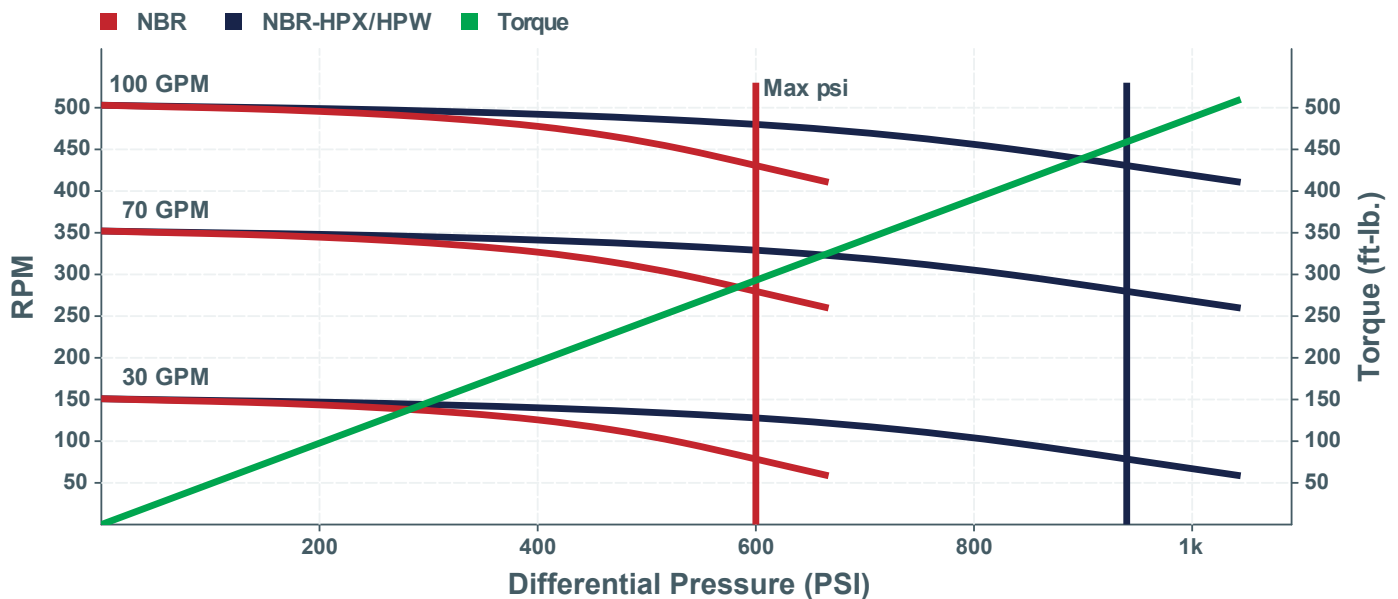
| Stator Specifications | |
|------------------------|-----------------------|
| Overall Length | 82.00 in. |
| Tube OD | 2.38 in. |
| Tube ID | 1.88 in. |
| Rubber Cutback Top/End | 4/4 in. |
| Weight | 44 lbs. |
| Number of Stages | 4.0 |
| Tube Material | 4140/4142 Alloy Steel |
| Rubber Options | NBR, NBR-HPX/HPW |

| NBR (in.) | | Fits (+Compression / -Loose) | | | | |
|-----------|--------------------|------------------------------|--------|--------|-------|--------------------|
| Size | Minor ² | 75°F | 125°F | 175°F | 250°F | 300°F ³ |
| 0.5 US | -- | -- | -- | -- | -- | -- |
| STD | 1.336 | 0.000 | 0.005 | 0.010 | 0.018 | 0.023 |
| 0.5 OS | -- | -- | -- | -- | -- | -- |
| 1 OS | 1.348 | -0.012 | -0.007 | -0.002 | 0.006 | 0.011 |
| 1.5 OS | -- | -- | -- | -- | -- | -- |
| 2 OS | -- | -- | -- | -- | -- | -- |
| 2.5 OS | -- | -- | -- | -- | -- | -- |

| NBR-HPX/HPW (in.) | | Fits (+Compression / -Loose) | | | | |
|-------------------|--------------------|------------------------------|--------|--------|-------|--------------------|
| Size | Minor ² | 75°F | 125°F | 175°F | 250°F | 300°F ³ |
| 0.5 US | -- | -- | -- | -- | -- | -- |
| STD | 1.336 | 0.000 | 0.005 | 0.010 | 0.018 | 0.023 |
| 0.5 OS | -- | -- | -- | -- | -- | -- |
| 1 OS | 1.348 | -0.012 | -0.007 | -0.002 | 0.006 | 0.011 |
| 1.5 OS | -- | -- | -- | -- | -- | -- |
| 2 OS | -- | -- | -- | -- | -- | -- |
| 2.5 OS | -- | -- | -- | -- | -- | -- |

| Performance Specifications | |
|----------------------------|-----------------|
| Flow Range | 30 - 100 GPM |
| Speed Range | 150 - 500 RPM |
| Torque Slope | 0.50 ft-lb./psi |
| Rotation | 5.030 rev/gal |
| Off Bottom Pressure | 60 psi |

| Performance Details | | |
|---------------------|------------|-------------|
| | NBR | NBR-HPX/HPW |
| Max Diff. Press. | 600 psi | 940 psi |
| Stall Diff. Press. | 900 psi | 1490 psi |
| Max Torque | 300 ft-lb. | 470 ft-lb. |
| Stall Torque | 450 ft-lb. | 750 ft-lb. |
| Max WOB | 10,000 lb. | |
| Max Pull to Re-Run | 35,000 lb. | |
| Pull to Yield | 82,000 lb. | |



¹ Coating options of chrome or tungsten carbide are available

² Vector Gauge Readings at Room Temp 75°F

³ BHCT Exceeding 275°F will void warranty for NBR (320°F for HPW/HPX)

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. The above is referenced from an Abaco® Power Section.

Model No. **288JTEC4540**

POWER SECTION 4:5 LOBES – 4.0 STAGES

Email: sales@martecsolutions.com

| Rotor Specifications | |
|----------------------|----------------------|
| Overall Length | 103.63 in. |
| Contour Length | 99.63 in. |
| Major Diameter | 1.843 in. |
| Eccentricity | 0.156 in. |
| Head Diameter | 1.800 in. |
| Thread Form | N/A |
| Weight | 56 lbs. |
| Material | 17-4 PH ¹ |

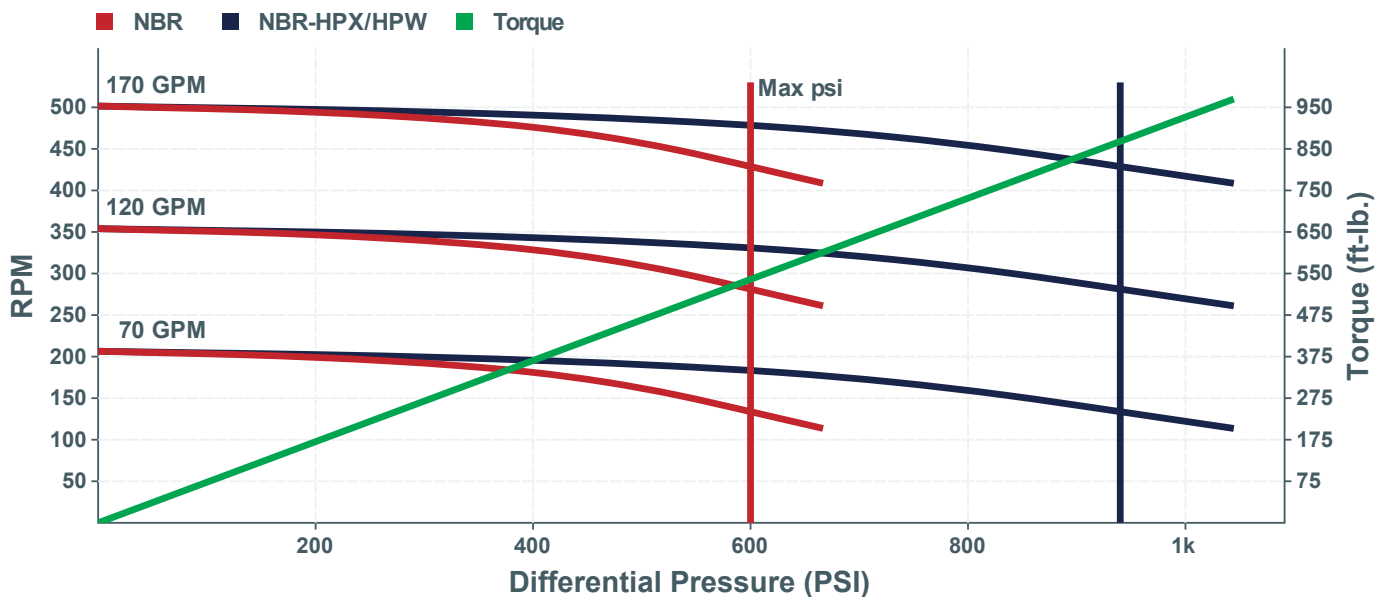
| Stator Specifications | |
|------------------------|-----------------------|
| Overall Length | 105.63 in. |
| Tube OD | 2.88 in. |
| Tube ID | 2.38 in. |
| Rubber Cutback Top/End | 4/4 in. |
| Weight | 72 lbs. |
| Number of Stages | 4.0 |
| Tube Material | 4140/4142 Alloy Steel |
| Rubber Options | NBR, NBR-HPX/HPW |

| NBR (in.) | | Fits (+Compression / -Loose) | | | | |
|-----------|--------------------|------------------------------|-------|-------|-------|--------------------|
| Size | Minor ² | 75°F | 125°F | 175°F | 250°F | 300°F ³ |
| 0.5 US | -- | -- | -- | -- | -- | -- |
| STD | -- | -- | -- | -- | -- | -- |
| 0.5 OS | 1.525 | 0.006 | 0.011 | 0.016 | 0.023 | 0.028 |
| 1 OS | -- | -- | -- | -- | -- | -- |
| 1.5 OS | -- | -- | -- | -- | -- | -- |
| 2 OS | -- | -- | -- | -- | -- | -- |
| 2.5 OS | -- | -- | -- | -- | -- | -- |

| NBR-HPX/HPW (in.) | | Fits (+Compression / -Loose) | | | | |
|-------------------|--------------------|------------------------------|-------|-------|-------|--------------------|
| Size | Minor ² | 75°F | 125°F | 175°F | 250°F | 300°F ³ |
| 0.5 US | -- | -- | -- | -- | -- | -- |
| STD | -- | -- | -- | -- | -- | -- |
| 0.5 OS | 1.525 | 0.006 | 0.011 | 0.016 | 0.023 | 0.028 |
| 1 OS | -- | -- | -- | -- | -- | -- |
| 1.5 OS | -- | -- | -- | -- | -- | -- |
| 2 OS | -- | -- | -- | -- | -- | -- |
| 2.5 OS | -- | -- | -- | -- | -- | -- |

| Performance Specifications | |
|----------------------------|-----------------|
| Flow Range | 70 - 170 GPM |
| Speed Range | 210 - 500 RPM |
| Torque Slope | 0.91 ft-lb./psi |
| Rotation | 2.950 rev/gal |
| Off Bottom Pressure | 80 psi |

| Performance Details | | |
|---------------------|-------------|-------------|
| | NBR | NBR-HPX/HPW |
| Max Diff. Press. | 600 psi | 940 psi |
| Stall Diff. Press. | 900 psi | 1490 psi |
| Max Torque | 550 ft-lb. | 860 ft-lb. |
| Stall Torque | 820 ft-lb. | 1350 ft-lb. |
| Max WOB | 10,000 lb. | |
| Max Pull to Re-Run | 60,000 lb. | |
| Pull to Yield | 100,000 lb. | |



¹ Coating options of chrome or tungsten carbide are available

² Vector Gauge Readings at Room Temp 75°F

³ BHCT Exceeding 275°F will void warranty for NBR (320°F for HPW/HPX)

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. The above is referenced from an Abaco® Power Section.

Model No. **288JTEC5635**

POWER SECTION 5:6 LOBES – 3.5 STAGES

Email: sales@martecsolutions.com

| Rotor Specifications | |
|----------------------|----------------------|
| Overall Length | 91.00 in. |
| Contour Length | 86.50 in. |
| Major Diameter | 1.675 in. |
| Eccentricity | 0.118 in. |
| Head Diameter | 1.800 in. |
| Thread Form | N/A |
| Weight | 44 lbs. |
| Material | 17-4 PH ¹ |

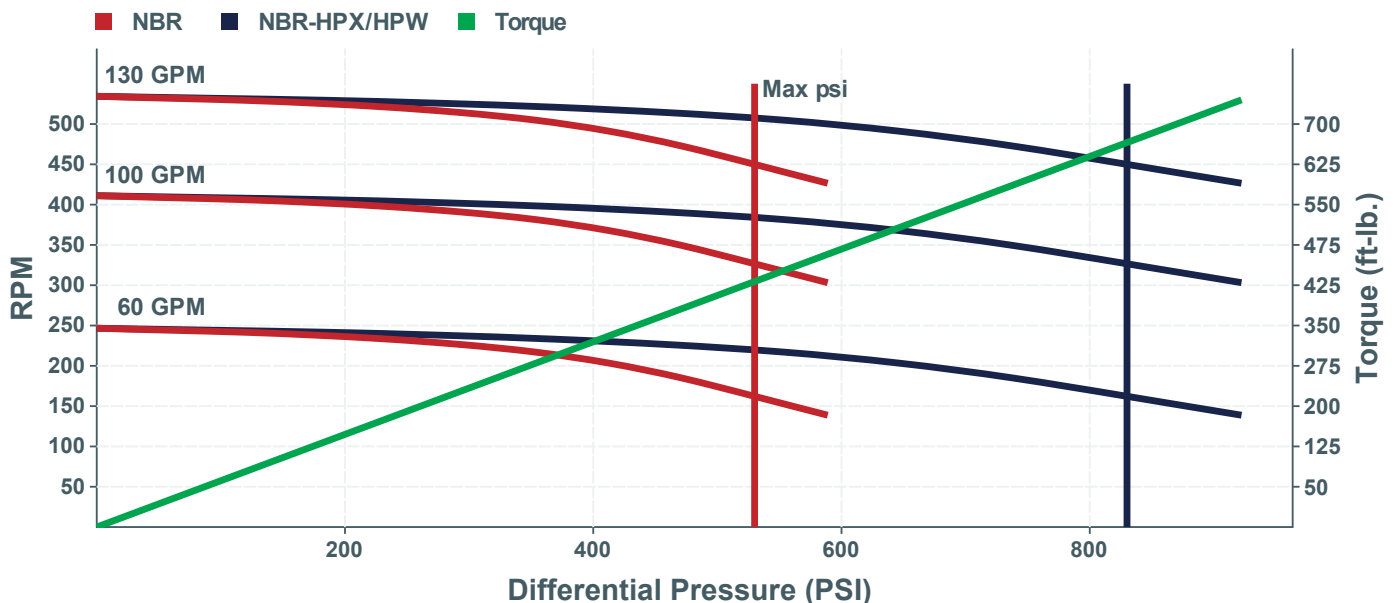
| Stator Specifications | |
|------------------------|-----------------------|
| Overall Length | 98.60 in. |
| Tube OD | 2.88 in. |
| Tube ID | 2.38 in. |
| Rubber Cutback Top/End | 7/7 in. |
| Weight | 67 lbs. |
| Number of Stages | 3.5 |
| Tube Material | 4140/4142 Alloy Steel |
| Rubber Options | NBR, NBR-HPX/HPW |

| NBR (in.) | | Fits (+Compression / -Loose) | | | | |
|-----------|--------------------|------------------------------|-------|-------|-------|--------------------|
| Size | Minor ² | 75°F | 125°F | 175°F | 250°F | 300°F ³ |
| 0.5 US | -- | -- | -- | -- | -- | -- |
| STD | 1.432 | 0.007 | 0.012 | 0.017 | 0.025 | 0.030 |
| 0.5 OS | -- | -- | -- | -- | -- | -- |
| 1 OS | -- | -- | -- | -- | -- | -- |
| 1.5 OS | -- | -- | -- | -- | -- | -- |
| 2 OS | -- | -- | -- | -- | -- | -- |
| 2.5 OS | -- | -- | -- | -- | -- | -- |

| NBR-HPX/HPW (in.) | | Fits (+Compression / -Loose) | | | | |
|-------------------|--------------------|------------------------------|-------|-------|-------|--------------------|
| Size | Minor ² | 75°F | 125°F | 175°F | 250°F | 300°F ³ |
| 0.5 US | -- | -- | -- | -- | -- | -- |
| STD | 1.432 | 0.007 | 0.012 | 0.017 | 0.025 | 0.030 |
| 0.5 OS | -- | -- | -- | -- | -- | -- |
| 1 OS | -- | -- | -- | -- | -- | -- |
| 1.5 OS | -- | -- | -- | -- | -- | -- |
| 2 OS | -- | -- | -- | -- | -- | -- |
| 2.5 OS | -- | -- | -- | -- | -- | -- |

| Performance Specifications | |
|----------------------------|-----------------|
| Flow Range | 60 - 130 GPM |
| Speed Range | 250 - 520 RPM |
| Torque Slope | 0.78 ft-lb./psi |
| Rotation | 4.111 rev/gal |
| Off Bottom Pressure | 70 psi |

| Performance Details | | |
|---------------------|-------------|-------------|
| | NBR | NBR-HPX/HPW |
| Max Diff. Press. | 530 psi | 830 psi |
| Stall Diff. Press. | 790 psi | 1300 psi |
| Max Torque | 410 ft-lb. | 650 ft-lb. |
| Stall Torque | 620 ft-lb. | 1020 ft-lb. |
| Max WOB | 10,000 lb. | |
| Max Pull to Re-Run | 60,000 lb. | |
| Pull to Yield | 100,000 lb. | |



¹ Coating options of chrome or tungsten carbide are available

² Vector Gauge Readings at Room Temp 75°F

³ BHCT Exceeding 275°F will void warranty for NBR (320°F for HPW/HPX)

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. The above is referenced from an Abaco® Power Section.

Model No. **288JTEC5647**

POWER SECTION 5:6 LOBES – 4.7 STAGES

Email: sales@martecsolutions.com

| Rotor Specifications | |
|----------------------|----------------------|
| Overall Length | 92.00 in. |
| Contour Length | 88.00 in. |
| Major Diameter | 1.909 in. |
| Eccentricity | 0.136 in. |
| Head Diameter | 1.880 in. |
| Thread Form | N/A |
| Weight | 58 lbs. |
| Material | 17-4 PH ¹ |

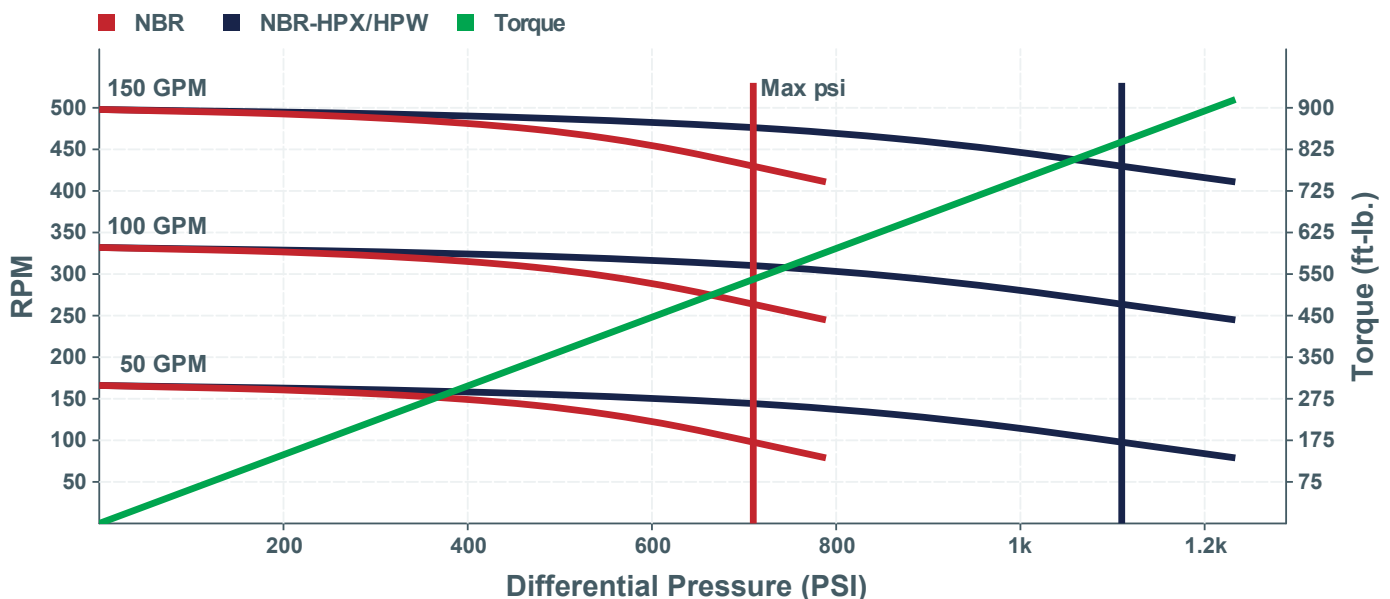
| Stator Specifications | |
|------------------------|-----------------------|
| Overall Length | 105.63 in. |
| Tube OD | 2.88 in. |
| Tube ID | 2.38 in. |
| Rubber Cutback Top/End | 4/16 in. |
| Weight | 70 lbs. |
| Number of Stages | 4.7 |
| Tube Material | 4140/4142 Alloy Steel |
| Rubber Options | NBR, NBR-HPX/HPW |

| NBR (in.) | | Fits (+Compression / -Loose) | | | | |
|-----------|--------------------|------------------------------|--------|--------|--------|--------------------|
| Size | Minor ² | 75°F | 125°F | 175°F | 250°F | 300°F ³ |
| 0.5 US | -- | -- | -- | -- | -- | -- |
| STD | 1.640 | -0.003 | 0.002 | 0.006 | 0.013 | 0.018 |
| 0.5 OS | -- | -- | -- | -- | -- | -- |
| 1 OS | 1.650 | -0.013 | -0.008 | -0.004 | 0.003 | 0.007 |
| 1.5 OS | 1.670 | -0.033 | -0.029 | -0.024 | -0.018 | -0.013 |
| 2 OS | -- | -- | -- | -- | -- | -- |
| 2.5 OS | -- | -- | -- | -- | -- | -- |

| NBR-HPX/HPW (in.) | | Fits (+Compression / -Loose) | | | | |
|-------------------|--------------------|------------------------------|--------|--------|--------|--------------------|
| Size | Minor ² | 75°F | 125°F | 175°F | 250°F | 300°F ³ |
| 0.5 US | -- | -- | -- | -- | -- | -- |
| STD | 1.636 | 0.001 | 0.006 | 0.010 | 0.017 | 0.022 |
| 0.5 OS | -- | -- | -- | -- | -- | -- |
| 1 OS | 1.646 | -0.009 | -0.004 | 0.000 | 0.007 | 0.012 |
| 1.5 OS | 1.668 | -0.031 | -0.027 | -0.022 | -0.016 | -0.011 |
| 2 OS | -- | -- | -- | -- | -- | -- |
| 2.5 OS | -- | -- | -- | -- | -- | -- |

| Performance Specifications | |
|----------------------------|-----------------|
| Flow Range | 50 - 150 GPM |
| Speed Range | 170 - 500 RPM |
| Torque Slope | 0.75 ft-lb./psi |
| Rotation | 3.320 rev/gal |
| Off Bottom Pressure | 80 psi |

| Performance Details | | |
|---------------------|-------------|-------------|
| | NBR | NBR-HPX/HPW |
| Max Diff. Press. | 710 psi | 1110 psi |
| Stall Diff. Press. | 1060 psi | 1740 psi |
| Max Torque | 530 ft-lb. | 830 ft-lb. |
| Stall Torque | 800 ft-lb. | 1310 ft-lb. |
| Max WOB | 10,000 lb. | |
| Max Pull to Re-Run | 60,000 lb. | |
| Pull to Yield | 100,000 lb. | |



¹ Coating options of chrome or tungsten carbide are available

² Vector Gauge Readings at Room Temp 75°F

³ BHCT Exceeding 275°F will void warranty for NBR (320°F for HPW/HPX)

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. The above is referenced from an Abaco® Power Section.

Model No. 288JTEC5670

POWER SECTION 5:6 LOBES – 7.0 STAGES

Email: sales@martecsolutions.com

| Rotor Specifications | |
|----------------------|----------------------|
| Overall Length | 110.00 in. |
| Contour Length | 106.00 in. |
| Major Diameter | 1.658 in. |
| Eccentricity | 0.122 in. |
| Head Diameter | 1.650 in. |
| Thread Form | N/A |
| Weight | 51 lbs. |
| Material | 17-4 PH ¹ |

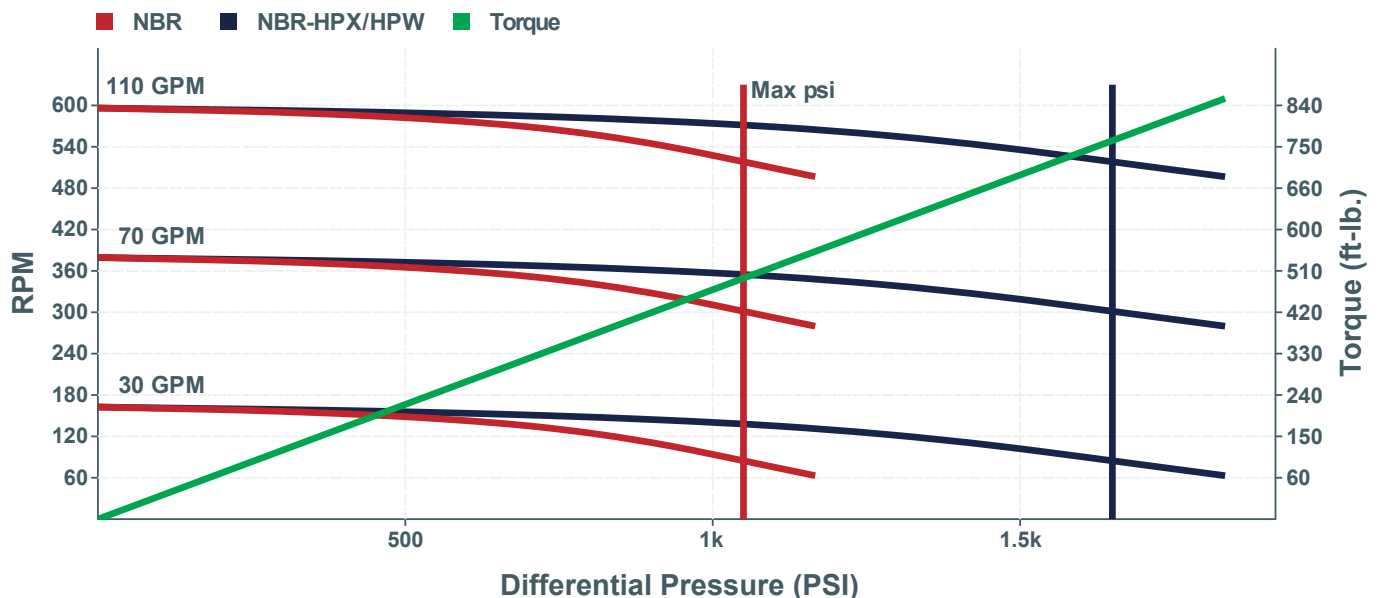
| Stator Specifications | |
|------------------------|-----------------------|
| Overall Length | 117.00 in. |
| Tube OD | 2.88 in. |
| Tube ID | 2.38 in. |
| Rubber Cutback Top/End | 8/8 in. |
| Weight | 82 lbs. |
| Number of Stages | 7.0 |
| Tube Material | 4140/4142 Alloy Steel |
| Rubber Options | NBR, NBR-HPX/HPW |

| NBR (in.) | | Fits (+Compression / -Loose) | | | | |
|-----------|--------------------|------------------------------|-------|-------|-------|--------------------|
| Size | Minor ² | 75°F | 125°F | 175°F | 250°F | 300°F ³ |
| 0.5 US | 1.406 | 0.008 | 0.015 | 0.023 | 0.033 | 0.041 |
| STD | 1.412 | 0.002 | 0.009 | 0.016 | 0.027 | 0.035 |
| 0.5 OS | -- | -- | -- | -- | -- | -- |
| 1 OS | -- | -- | -- | -- | -- | -- |
| 1.5 OS | -- | -- | -- | -- | -- | -- |
| 2 OS | -- | -- | -- | -- | -- | -- |
| 2.5 OS | -- | -- | -- | -- | -- | -- |

| NBR-HPX/HPW (in.) | | Fits (+Compression / -Loose) | | | | |
|-------------------|--------------------|------------------------------|-------|-------|-------|--------------------|
| Size | Minor ² | 75°F | 125°F | 175°F | 250°F | 300°F ³ |
| 0.5 US | 1.406 | 0.008 | 0.015 | 0.023 | 0.033 | 0.041 |
| STD | 1.407 | 0.007 | 0.014 | 0.022 | 0.032 | 0.040 |
| 0.5 OS | -- | -- | -- | -- | -- | -- |
| 1 OS | -- | -- | -- | -- | -- | -- |
| 1.5 OS | -- | -- | -- | -- | -- | -- |
| 2 OS | -- | -- | -- | -- | -- | -- |
| 2.5 OS | -- | -- | -- | -- | -- | -- |

| Performance Specifications | |
|----------------------------|-----------------|
| Flow Range | 30 - 110 GPM |
| Speed Range | 160 - 600 RPM |
| Torque Slope | 0.47 ft-lb./psi |
| Rotation | 5.420 rev/gal |
| Off Bottom Pressure | 80 psi |

| Performance Details | | |
|---------------------|-------------|-------------|
| | NBR | NBR-HPX/HPW |
| Max Diff. Press. | 1050 psi | 1650 psi |
| Stall Diff. Press. | 1580 psi | 2600 psi |
| Max Torque | 500 ft-lb. | 780 ft-lb. |
| Stall Torque | 750 ft-lb. | 1220 ft-lb. |
| Max WOB | 10,000 lb. | |
| Max Pull to Re-Run | 60,000 lb. | |
| Pull to Yield | 100,000 lb. | |



¹ Coating options of chrome or tungsten carbide are available

² Vector Gauge Readings at Room Temp 75°F

³ BHCT Exceeding 275°F will void warranty for NBR (320°F for HPW/HPX)

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. The above is referenced from an Abaco® Power Section.



Martec Solutions

Model No. **313JTEC5635**

POWER SECTION 5:6 LOBES – 3.5 STAGES

Email: sales@martecsolutions.com

| Rotor Specifications | |
|----------------------|----------------------|
| Overall Length | 86.00 in. |
| Contour Length | 82.00 in. |
| Major Diameter | 2.174 in. |
| Eccentricity | 0.155 in. |
| Head Diameter | 2.175 in. |
| Thread Form | N/A |
| Weight | 69 lbs. |
| Material | 17-4 PH ¹ |

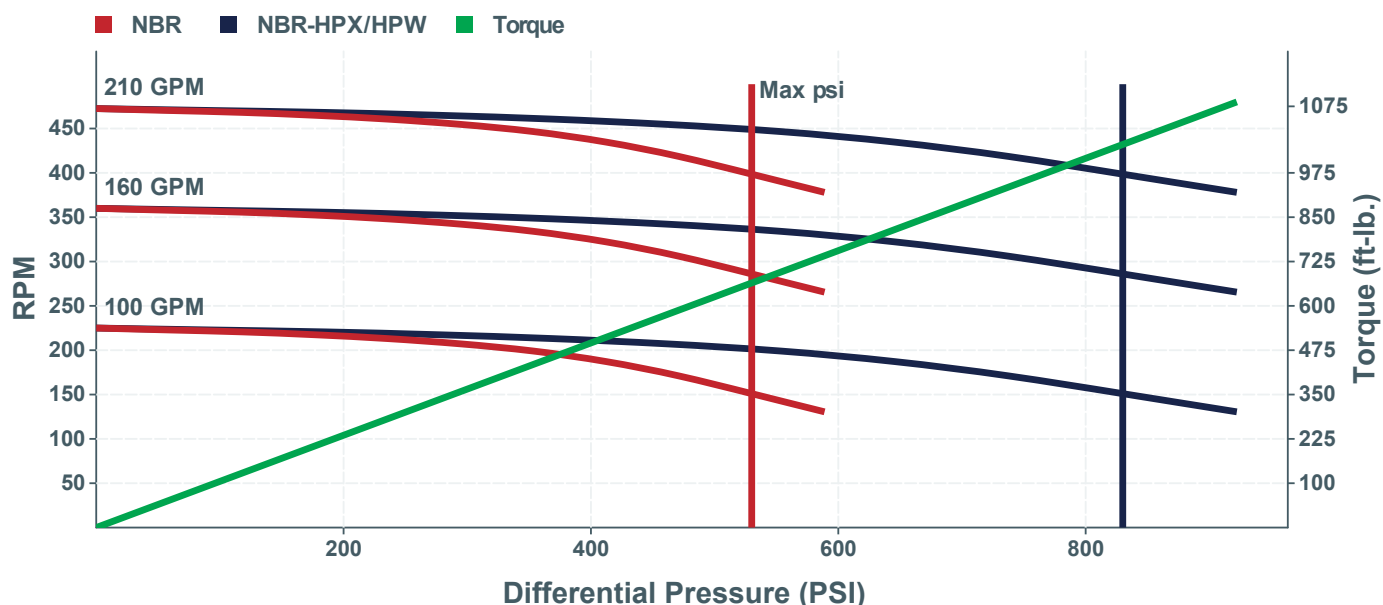
| Stator Specifications | |
|------------------------|-----------------------|
| Overall Length | 88.00 in. |
| Tube OD | 3.13 in. |
| Tube ID | 2.63 in. |
| Rubber Cutback Top/End | 4/4 in. |
| Weight | 65 lbs. |
| Number of Stages | 3.5 |
| Tube Material | 4140/4142 Alloy Steel |
| Rubber Options | NBR, NBR-HPX/HPW |

| NBR (in.) | | Fits (+Compression / -Loose) | | | | |
|-----------|--------------------|------------------------------|--------|--------|--------|--------------------|
| Size | Minor ² | 75°F | 125°F | 175°F | 250°F | 300°F ³ |
| 0.5 US | -- | -- | -- | -- | -- | -- |
| STD | 1.870 | -0.007 | -0.002 | 0.003 | 0.010 | 0.015 |
| 0.5 OS | -- | -- | -- | -- | -- | -- |
| 1 OS | 1.881 | -0.018 | -0.013 | -0.008 | -0.001 | 0.004 |
| 1.5 OS | -- | -- | -- | -- | -- | -- |
| 2 OS | -- | -- | -- | -- | -- | -- |
| 2.5 OS | -- | -- | -- | -- | -- | -- |

| NBR-HPX/HPW (in.) | | Fits (+Compression / -Loose) | | | | |
|-------------------|--------------------|------------------------------|--------|--------|-------|--------------------|
| Size | Minor ² | 75°F | 125°F | 175°F | 250°F | 300°F ³ |
| 0.5 US | -- | -- | -- | -- | -- | -- |
| STD | 1.868 | -0.005 | 0.000 | 0.005 | 0.012 | 0.017 |
| 0.5 OS | -- | -- | -- | -- | -- | -- |
| 1 OS | 1.879 | -0.016 | -0.011 | -0.006 | 0.001 | 0.006 |
| 1.5 OS | -- | -- | -- | -- | -- | -- |
| 2 OS | -- | -- | -- | -- | -- | -- |
| 2.5 OS | -- | -- | -- | -- | -- | -- |

| Performance Specifications | |
|----------------------------|-----------------|
| Flow Range | 100 - 210 GPM |
| Speed Range | 230 - 470 RPM |
| Torque Slope | 1.20 ft-lb./psi |
| Rotation | 2.250 rev/gal |
| Off Bottom Pressure | 90 psi |

| Performance Details | | |
|---------------------|-------------|-------------|
| | NBR | NBR-HPX/HPW |
| Max Diff. Press. | 530 psi | 830 psi |
| Stall Diff. Press. | 790 psi | 1300 psi |
| Max Torque | 630 ft-lb. | 990 ft-lb. |
| Stall Torque | 950 ft-lb. | 1560 ft-lb. |
| Max WOB | 15,000 lb. | |
| Max Pull to Re-Run | 80,000 lb. | |
| Pull to Yield | 120,000 lb. | |



¹ Coating options of chrome or tungsten carbide are available

² Vector Gauge Readings at Room Temp 75°F

³ BHCT Exceeding 275°F will void warranty for NBR (320°F for HPW/HPX)

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. The above is referenced from an Abaco® Power Section.

Model No. **313JTEC5650**

POWER SECTION 5:6 LOBES – 5.0 STAGES

Email: sales@martecsolutions.com

| Rotor Specifications | |
|----------------------|----------------------|
| Overall Length | 101.50 in. |
| Contour Length | 97.00 in. |
| Major Diameter | 2.073 in. |
| Eccentricity | 0.148 in. |
| Head Diameter | 1.850 in. |
| Thread Form | N/A |
| Weight | 74 lbs. |
| Material | 17-4 PH ¹ |

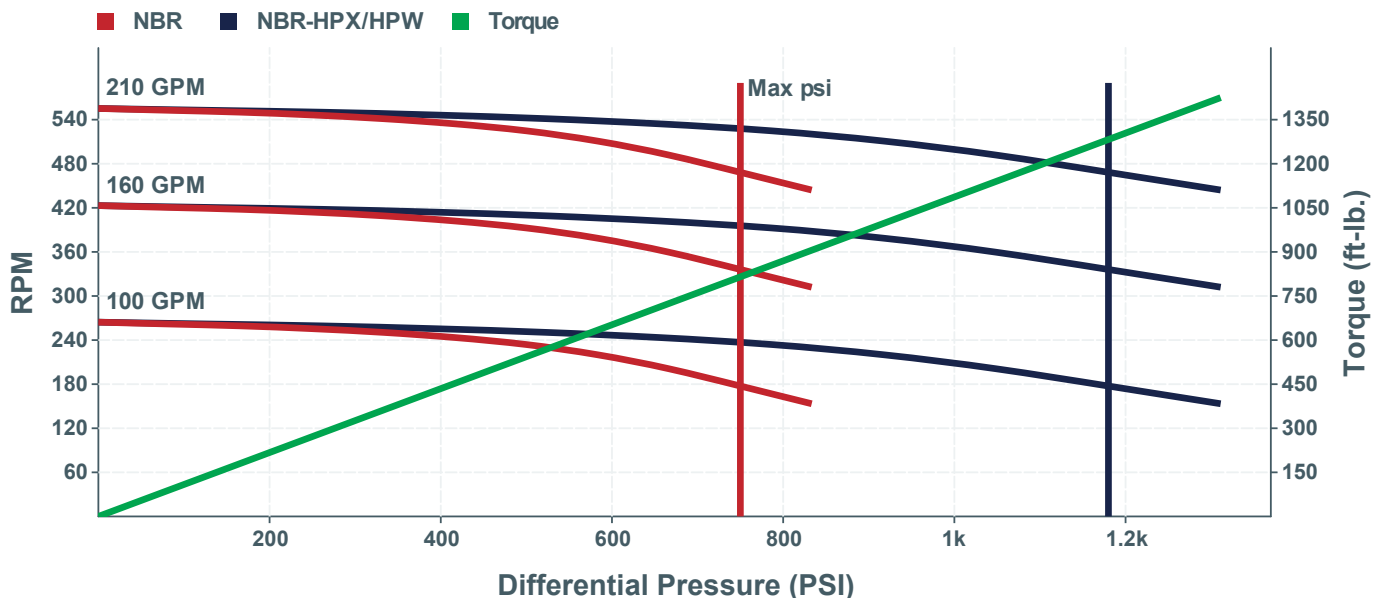
| Stator Specifications | |
|------------------------|-----------------------|
| Overall Length | 106.00 in. |
| Tube OD | 3.13 in. |
| Tube ID | 2.63 in. |
| Rubber Cutback Top/End | 5.63/5.63 in. |
| Weight | 79 lbs. |
| Number of Stages | 5.0 |
| Tube Material | 4140/4142 Alloy Steel |
| Rubber Options | NBR, NBR-HPX/HPW |

| NBR (in.) | | Fits (+Compression / -Loose) | | | | |
|-----------|--------------------|------------------------------|--------|--------|-------|--------------------|
| Size | Minor ² | 75°F | 125°F | 175°F | 250°F | 300°F ³ |
| 0.5 US | -- | -- | -- | -- | -- | -- |
| STD | 1.782 | -0.005 | 0.000 | 0.006 | 0.014 | 0.020 |
| 0.5 OS | -- | -- | -- | -- | -- | -- |
| 1 OS | 1.792 | -0.015 | -0.010 | -0.004 | 0.004 | 0.009 |
| 1.5 OS | -- | -- | -- | -- | -- | -- |
| 2 OS | -- | -- | -- | -- | -- | -- |
| 2.5 OS | -- | -- | -- | -- | -- | -- |

| NBR-HPX/HPW (in.) | | Fits (+Compression / -Loose) | | | | |
|-------------------|--------------------|------------------------------|--------|--------|-------|--------------------|
| Size | Minor ² | 75°F | 125°F | 175°F | 250°F | 300°F ³ |
| 0.5 US | -- | -- | -- | -- | -- | -- |
| STD | 1.780 | -0.003 | 0.002 | 0.008 | 0.016 | 0.022 |
| 0.5 OS | -- | -- | -- | -- | -- | -- |
| 1 OS | 1.790 | -0.013 | -0.008 | -0.002 | 0.006 | 0.011 |
| 1.5 OS | -- | -- | -- | -- | -- | -- |
| 2 OS | -- | -- | -- | -- | -- | -- |
| 2.5 OS | -- | -- | -- | -- | -- | -- |

| Performance Specifications | |
|----------------------------|-----------------|
| Flow Range | 100 - 210 GPM |
| Speed Range | 260 - 560 RPM |
| Torque Slope | 1.04 ft-lb./psi |
| Rotation | 2.644 rev/gal |
| Off Bottom Pressure | 110 psi |

| Performance Details | | |
|---------------------|-------------|-------------|
| | NBR | NBR-HPX/HPW |
| Max Diff. Press. | 750 psi | 1180 psi |
| Stall Diff. Press. | 1130 psi | 1860 psi |
| Max Torque | 780 ft-lb. | 1230 ft-lb. |
| Stall Torque | 1170 ft-lb. | 1930 ft-lb. |
| Max WOB | 15,000 lb. | |
| Max Pull to Re-Run | 80,000 lb. | |
| Pull to Yield | 120,000 lb. | |



¹ Coating options of chrome or tungsten carbide are available

² Vector Gauge Readings at Room Temp 75°F

³ BHCT Exceeding 275°F will void warranty for NBR (320°F for HPW/HPX)

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. The above is referenced from an Abaco® Power Section.

Model No. **313JTEC7825**

POWER SECTION 7:8 LOBES – 2.5 STAGES

Email: sales@martecsolutions.com

| Rotor Specifications | |
|----------------------|----------------------|
| Overall Length | 93.00 in. |
| Contour Length | 86.50 in. |
| Major Diameter | 2.120 in. |
| Eccentricity | 0.122 in. |
| Head Diameter | 2.060 in. |
| Thread Form | N/A |
| Weight | 75 lbs. |
| Material | 17-4 PH ¹ |

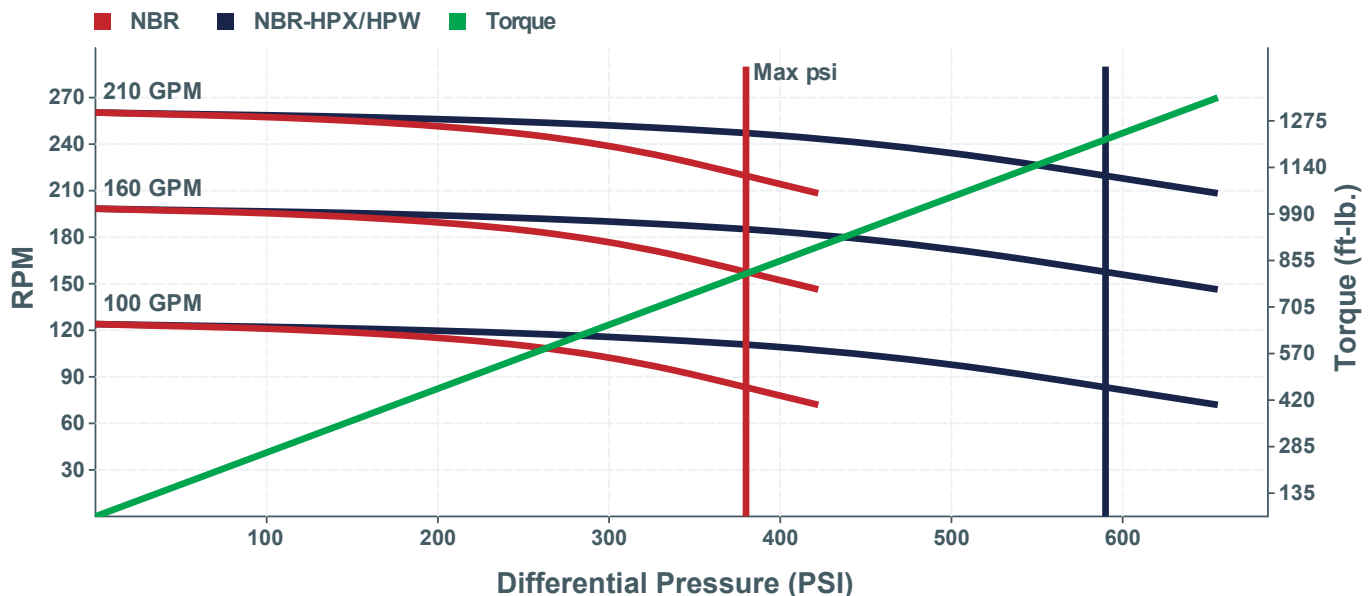
| Stator Specifications | |
|------------------------|-----------------------|
| Overall Length | 99.88 in. |
| Tube OD | 3.13 in. |
| Tube ID | 2.63 in. |
| Rubber Cutback Top/End | 7/7 in. |
| Weight | 74 lbs. |
| Number of Stages | 2.5 |
| Tube Material | 4140/4142 Alloy Steel |
| Rubber Options | NBR, NBR-HPX/HPW |

| NBR (in.) | | Fits (+Compression / -Loose) | | | | |
|-----------|--------------------|------------------------------|--------|--------|--------|--------------------|
| Size | Minor ² | 75°F | 125°F | 175°F | 250°F | 300°F ³ |
| 0.5 US | -- | -- | -- | -- | -- | -- |
| STD | 1.882 | -0.006 | -0.001 | 0.003 | 0.010 | 0.014 |
| 0.5 OS | -- | -- | -- | -- | -- | -- |
| 1 OS | 1.893 | -0.017 | -0.013 | -0.008 | -0.001 | 0.003 |
| 1.5 OS | -- | -- | -- | -- | -- | -- |
| 2 OS | -- | -- | -- | -- | -- | -- |
| 2.5 OS | -- | -- | -- | -- | -- | -- |

| NBR-HPX/HPW (in.) | | Fits (+Compression / -Loose) | | | | |
|-------------------|--------------------|------------------------------|--------|--------|-------|--------------------|
| Size | Minor ² | 75°F | 125°F | 175°F | 250°F | 300°F ³ |
| 0.5 US | -- | -- | -- | -- | -- | -- |
| STD | 1.880 | -0.004 | 0.001 | 0.005 | 0.012 | 0.016 |
| 0.5 OS | -- | -- | -- | -- | -- | -- |
| 1 OS | 1.891 | -0.015 | -0.011 | -0.006 | 0.001 | 0.005 |
| 1.5 OS | -- | -- | -- | -- | -- | -- |
| 2 OS | -- | -- | -- | -- | -- | -- |
| 2.5 OS | -- | -- | -- | -- | -- | -- |

| Performance Specifications | |
|----------------------------|-----------------|
| Flow Range | 100 - 210 GPM |
| Speed Range | 120 - 260 RPM |
| Torque Slope | 1.97 ft-lb./psi |
| Rotation | 1.240 rev/gal |
| Off Bottom Pressure | 60 psi |

| Performance Details | | |
|---------------------|-------------|-------------|
| | NBR | NBR-HPX/HPW |
| Max Diff. Press. | 380 psi | 590 psi |
| Stall Diff. Press. | 570 psi | 930 psi |
| Max Torque | 740 ft-lb. | 1160 ft-lb. |
| Stall Torque | 1110 ft-lb. | 1830 ft-lb. |
| Max WOB | 15,000 lb. | |
| Max Pull to Re-Run | 80,000 lb. | |
| Pull to Yield | 120,000 lb. | |



¹ Coating options of chrome or tungsten carbide are available

² Vector Gauge Readings at Room Temp 75°F

³ BHCT Exceeding 275°F will void warranty for NBR (320°F for HPW/HPX)

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. The above is referenced from an Abaco® Power Section.

Model No. **313JTEC7830**

POWER SECTION 7:8 LOBES – 3.0 STAGES

Email: sales@martecsolutions.com

| Rotor Specifications | |
|----------------------|----------------------|
| Overall Length | 101.00 in. |
| Contour Length | 97.00 in. |
| Major Diameter | 1.971 in. |
| Eccentricity | 0.109 in. |
| Head Diameter | 2.000 in. |
| Thread Form | N/A |
| Weight | 72 lbs. |
| Material | 17-4 PH ¹ |

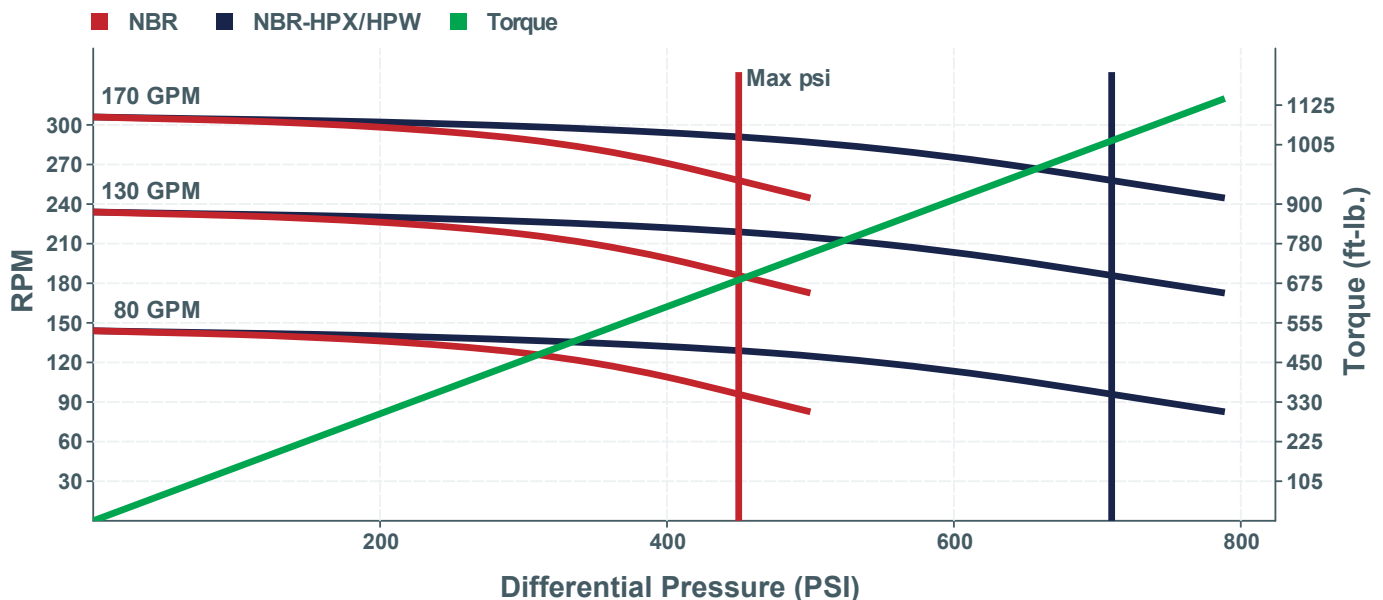
| Stator Specifications | |
|------------------------|-----------------------|
| Overall Length | 106.00 in. |
| Tube OD | 3.13 in. |
| Tube ID | 2.63 in. |
| Rubber Cutback Top/End | 5/5 in. |
| Weight | 80 lbs. |
| Number of Stages | 3.0 |
| Tube Material | 4140/4142 Alloy Steel |
| Rubber Options | NBR, NBR-HPX/HPW |

| NBR (in.) | | Fits (+Compression / -Loose) | | | | |
|-----------|--------------------|------------------------------|--------|-------|-------|--------------------|
| Size | Minor ² | 75°F | 125°F | 175°F | 250°F | 300°F ³ |
| 0.5 US | -- | -- | -- | -- | -- | -- |
| STD | 1.750 | 0.003 | 0.008 | 0.013 | 0.020 | 0.025 |
| 0.5 OS | -- | -- | -- | -- | -- | -- |
| 1 OS | 1.759 | -0.006 | -0.001 | 0.004 | 0.011 | 0.015 |
| 1.5 OS | -- | -- | -- | -- | -- | -- |
| 2 OS | -- | -- | -- | -- | -- | -- |
| 2.5 OS | -- | -- | -- | -- | -- | -- |

| NBR-HPX/HPW (in.) | | Fits (+Compression / -Loose) | | | | |
|-------------------|--------------------|------------------------------|--------|-------|-------|--------------------|
| Size | Minor ² | 75°F | 125°F | 175°F | 250°F | 300°F ³ |
| 0.5 US | -- | -- | -- | -- | -- | -- |
| STD | 1.750 | 0.003 | 0.008 | 0.013 | 0.020 | 0.025 |
| 0.5 OS | -- | -- | -- | -- | -- | -- |
| 1 OS | 1.759 | -0.006 | -0.001 | 0.004 | 0.011 | 0.015 |
| 1.5 OS | -- | -- | -- | -- | -- | -- |
| 2 OS | -- | -- | -- | -- | -- | -- |
| 2.5 OS | -- | -- | -- | -- | -- | -- |

| Performance Specifications | |
|----------------------------|-----------------|
| Flow Range | 80 - 170 GPM |
| Speed Range | 140 - 310 RPM |
| Torque Slope | 1.44 ft-lb./psi |
| Rotation | 1.800 rev/gal |
| Off Bottom Pressure | 60 psi |

| Performance Details | | |
|---------------------|-------------|-------------|
| | NBR | NBR-HPX/HPW |
| Max Diff. Press. | 450 psi | 710 psi |
| Stall Diff. Press. | 680 psi | 1120 psi |
| Max Torque | 650 ft-lb. | 1020 ft-lb. |
| Stall Torque | 980 ft-lb. | 1600 ft-lb. |
| Max WOB | 15,000 lb. | |
| Max Pull to Re-Run | 80,000 lb. | |
| Pull to Yield | 120,000 lb. | |



¹ Coating options of chrome or tungsten carbide are available

² Vector Gauge Readings at Room Temp 75°F

³ BHCT Exceeding 275°F will void warranty for NBR (320°F for HPW/HPX)

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. The above is referenced from an Abaco® Power Section.

Model No. **338JTEC5632**

POWER SECTION 5:6 LOBES – 3.2 STAGES

Email: sales@martecsolutions.com

| Rotor Specifications | |
|----------------------|----------------------|
| Overall Length | 90.00 in. |
| Contour Length | 84.00 in. |
| Major Diameter | 2.228 in. |
| Eccentricity | 0.161 in. |
| Head Diameter | 2.250 in. |
| Thread Form | N/A |
| Weight | 74 lbs. |
| Material | 17-4 PH ¹ |

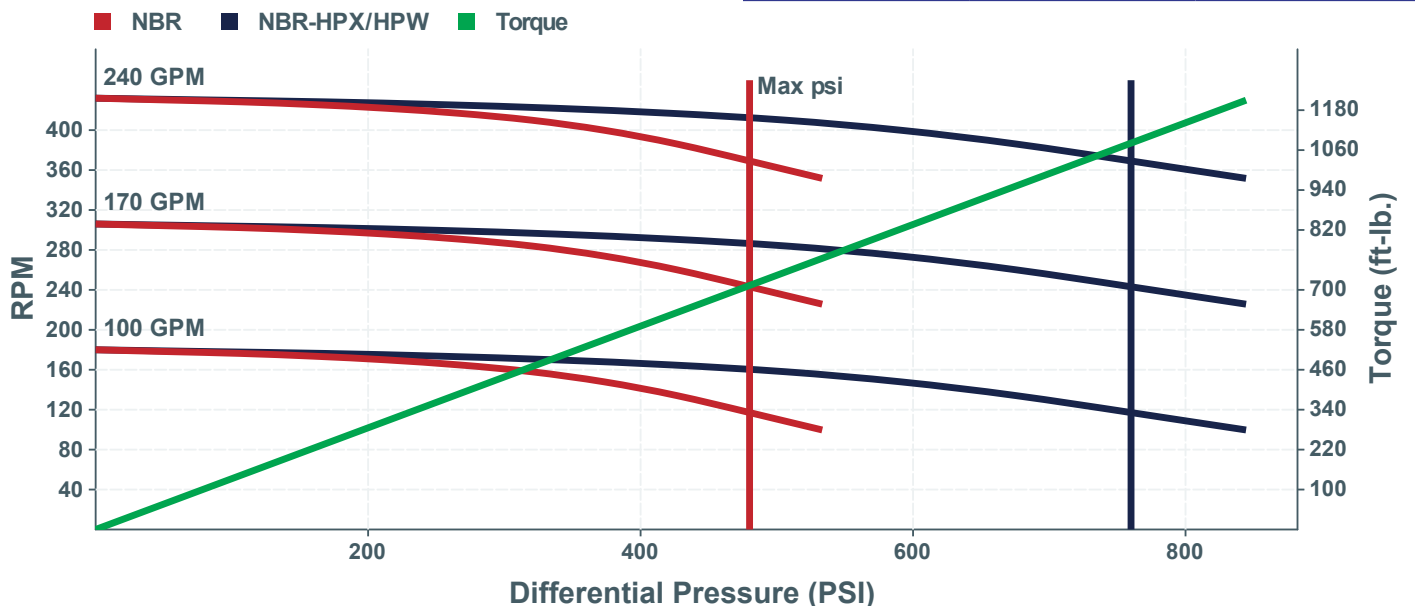
| Stator Specifications | |
|------------------------|-----------------------|
| Overall Length | 94.00 in. |
| Tube OD | 3.38 in. |
| Tube ID | 2.75 in. |
| Rubber Cutback Top/End | 7/7 in. |
| Weight | 90 lbs. |
| Number of Stages | 3.2 |
| Tube Material | 4140/4142 Alloy Steel |
| Rubber Options | NBR, NBR-HPX/HPW |

| NBR (in.) | | Fits (+Compression / -Loose) | | | | |
|-----------|--------------------|------------------------------|-------|-------|-------|--------------------|
| Size | Minor ² | 75°F | 125°F | 175°F | 250°F | 300°F ³ |
| 0.5 US | -- | -- | -- | -- | -- | -- |
| STD | 1.904 | 0.002 | 0.007 | 0.013 | 0.021 | 0.027 |
| 0.5 OS | -- | -- | -- | -- | -- | -- |
| 1 OS | 1.911 | -0.005 | 0.000 | 0.006 | 0.014 | 0.020 |
| 1.5 OS | -- | -- | -- | -- | -- | -- |
| 2 OS | -- | -- | -- | -- | -- | -- |
| 2.5 OS | -- | -- | -- | -- | -- | -- |

| NBR-HPX/HPW (in.) | | Fits (+Compression / -Loose) | | | | |
|-------------------|--------------------|------------------------------|-------|-------|-------|--------------------|
| Size | Minor ² | 75°F | 125°F | 175°F | 250°F | 300°F ³ |
| 0.5 US | -- | -- | -- | -- | -- | -- |
| STD | 1.902 | 0.004 | 0.010 | 0.015 | 0.023 | 0.029 |
| 0.5 OS | -- | -- | -- | -- | -- | -- |
| 1 OS | 1.909 | -0.003 | 0.002 | 0.008 | 0.016 | 0.022 |
| 1.5 OS | -- | -- | -- | -- | -- | -- |
| 2 OS | -- | -- | -- | -- | -- | -- |
| 2.5 OS | -- | -- | -- | -- | -- | -- |

| Performance Specifications | |
|----------------------------|-----------------|
| Flow Range | 100 - 240 GPM |
| Speed Range | 170 - 420 RPM |
| Torque Slope | 1.40 ft-lb./psi |
| Rotation | 1.800 rev/gal |
| Off Bottom Pressure | 80 psi |

| Performance Details | | |
|---------------------|-------------|-------------|
| | NBR | NBR-HPX/HPW |
| Max Diff. Press. | 480 psi | 760 psi |
| Stall Diff. Press. | 720 psi | 1190 psi |
| Max Torque | 680 ft-lb. | 1060 ft-lb. |
| Stall Torque | 1010 ft-lb. | 1660 ft-lb. |
| Max WOB | 16,000 lb. | |
| Max Pull to Re-Run | 80,000 lb. | |
| Pull to Yield | 135,000 lb. | |



¹ Coating options of chrome or tungsten carbide are available

² Vector Gauge Readings at Room Temp 75°F

³ BHCT Exceeding 275°F will void warranty for NBR (320°F for HPW/HPX)

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. The above is referenced from an Abaco® Power Section.

Model No. **350JTEC4532**

POWER SECTION 4:5 LOBES – 3.2 STAGES

Email: sales@martecsolutions.com

| Rotor Specifications | |
|----------------------|----------------------|
| Overall Length | 97.00 in. |
| Contour Length | 91.00 in. |
| Major Diameter | 2.245 in. |
| Eccentricity | 0.185 in. |
| Head Diameter | 2.250 in. |
| Thread Form | N/A |
| Weight | 78 lbs. |
| Material | 17-4 PH ¹ |

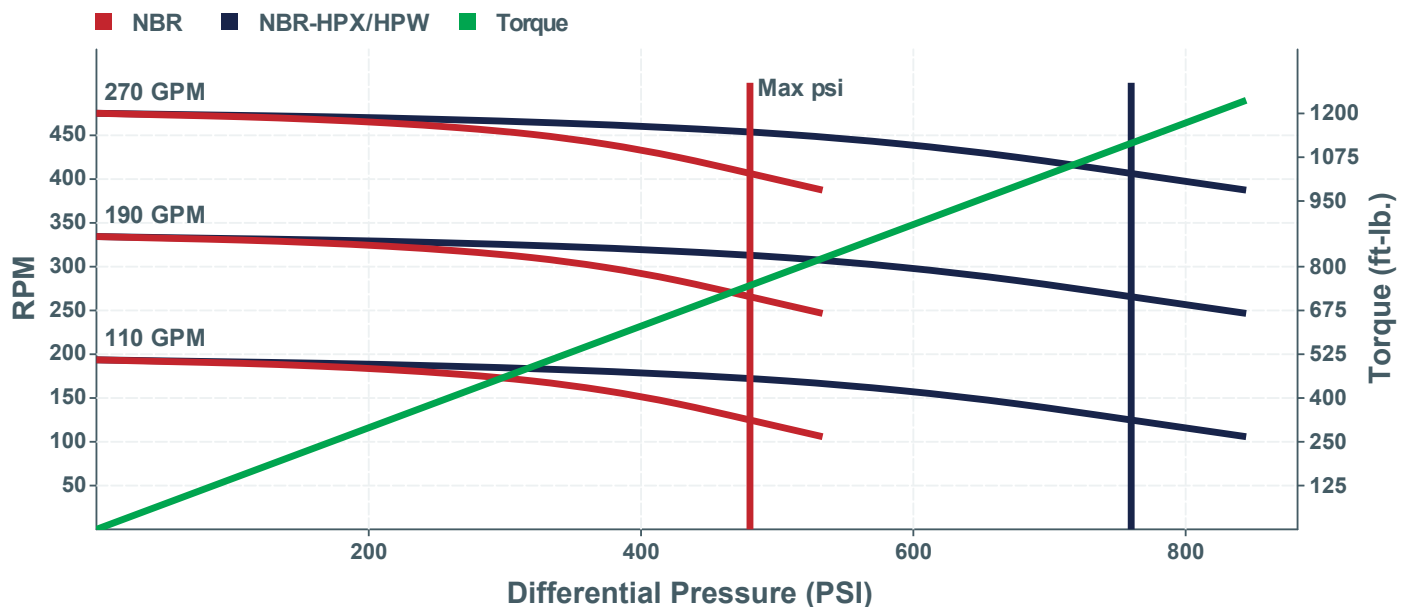
| Stator Specifications | |
|------------------------|-----------------------|
| Overall Length | 100.00 in. |
| Tube OD | 3.50 in. |
| Tube ID | 2.88 in. |
| Rubber Cutback Top/End | 6/6 in. |
| Weight | 101 lbs. |
| Number of Stages | 3.2 |
| Tube Material | 4140/4142 Alloy Steel |
| Rubber Options | NBR, NBR-HPX/HPW |

| NBR (in.) | | Fits (+Compression / -Loose) | | | | |
|-----------|--------------------|------------------------------|-------|-------|-------|--------------------|
| Size | Minor ² | 75°F | 125°F | 175°F | 250°F | 300°F ³ |
| 0.5 US | -- | -- | -- | -- | -- | -- |
| STD | 1.874 | 0.002 | 0.011 | 0.021 | 0.035 | 0.044 |
| 0.5 OS | -- | -- | -- | -- | -- | -- |
| 1 OS | 1.884 | -0.008 | 0.001 | 0.010 | 0.024 | 0.034 |
| 1.5 OS | -- | -- | -- | -- | -- | -- |
| 2 OS | -- | -- | -- | -- | -- | -- |
| 2.5 OS | -- | -- | -- | -- | -- | -- |

| NBR-HPX/HPW (in.) | | Fits (+Compression / -Loose) | | | | |
|-------------------|--------------------|------------------------------|-------|-------|-------|--------------------|
| Size | Minor ² | 75°F | 125°F | 175°F | 250°F | 300°F ³ |
| 0.5 US | -- | -- | -- | -- | -- | -- |
| STD | 1.872 | 0.004 | 0.013 | 0.023 | 0.037 | 0.046 |
| 0.5 OS | -- | -- | -- | -- | -- | -- |
| 1 OS | 1.882 | -0.006 | 0.003 | 0.012 | 0.027 | 0.036 |
| 1.5 OS | -- | -- | -- | -- | -- | -- |
| 2 OS | -- | -- | -- | -- | -- | -- |
| 2.5 OS | -- | -- | -- | -- | -- | -- |

| Performance Specifications | |
|----------------------------|-----------------|
| Flow Range | 110 - 270 GPM |
| Speed Range | 190 - 480 RPM |
| Torque Slope | 1.46 ft-lb./psi |
| Rotation | 1.760 rev/gal |
| Off Bottom Pressure | 90 psi |

| Performance Details | | |
|---------------------|-------------|-------------|
| | NBR | NBR-HPX/HPW |
| Max Diff. Press. | 480 psi | 760 psi |
| Stall Diff. Press. | 720 psi | 1190 psi |
| Max Torque | 710 ft-lb. | 1100 ft-lb. |
| Stall Torque | 1060 ft-lb. | 1730 ft-lb. |
| Max WOB | 18,000 lb. | |
| Max Pull to Re-Run | 80,000 lb. | |
| Pull to Yield | 150,000 lb. | |



¹ Coating options of chrome or tungsten carbide are available

² Vector Gauge Readings at Room Temp 75°F

³ BHCT Exceeding 275°F will void warranty for NBR (320°F for HPW/HPX)

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. The above is referenced from an Abaco® Power Section.

Model No. **350JTEC5630**

POWER SECTION 5:6 LOBES – 3.0 STAGES

Email: sales@martecsolutions.com

| Rotor Specifications | |
|----------------------|----------------------|
| Overall Length | 76.25 in. |
| Contour Length | 72.25 in. |
| Major Diameter | 2.157 in. |
| Eccentricity | 0.134 in. |
| Head Diameter | 2.000 in. |
| Thread Form | N/A |
| Weight | 62 lbs. |
| Material | 17-4 PH ¹ |

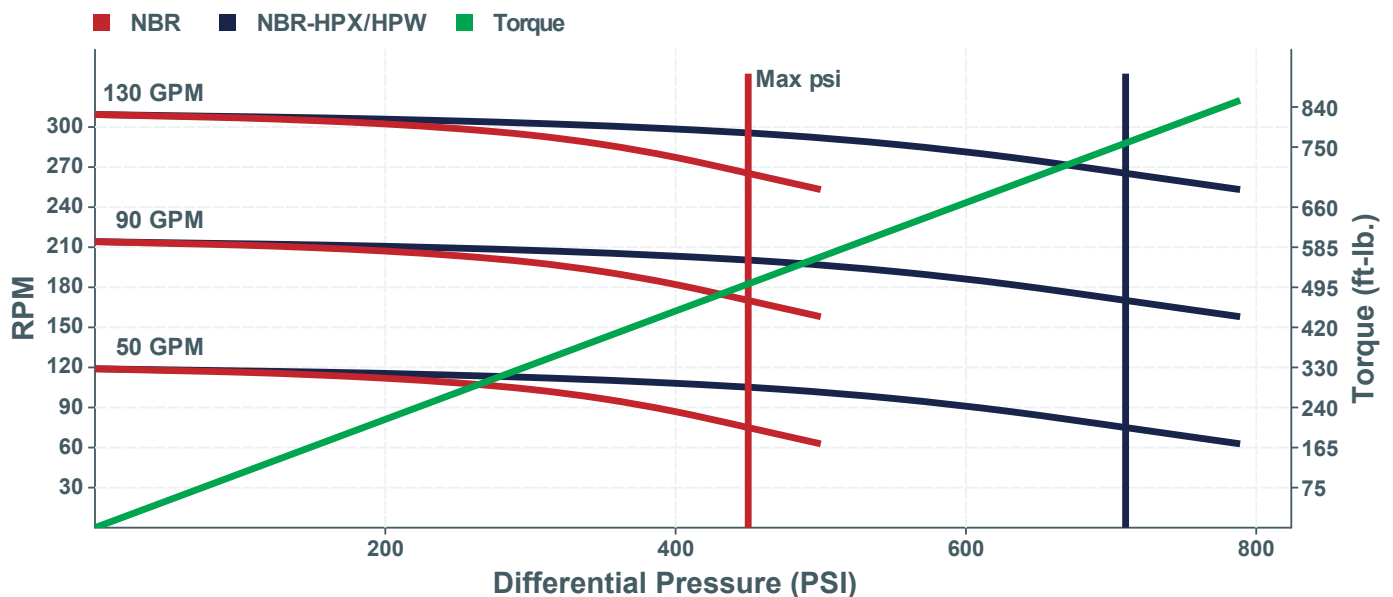
| Stator Specifications | |
|------------------------|-----------------------|
| Overall Length | 80.00 in. |
| Tube OD | 3.50 in. |
| Tube ID | 2.75 in. |
| Rubber Cutback Top/End | 6/6 in. |
| Weight | 93 lbs. |
| Number of Stages | 3.0 |
| Tube Material | 4140/4142 Alloy Steel |
| Rubber Options | NBR, NBR-HPX/HPW |

| NBR (in.) | | Fits (+Compression / -Loose) | | | | |
|-----------|--------------------|------------------------------|--------|--------|-------|--------------------|
| Size | Minor ² | 75°F | 125°F | 175°F | 250°F | 300°F ³ |
| 0.5 US | -- | -- | -- | -- | -- | -- |
| STD | 1.895 | -0.006 | 0.003 | 0.011 | 0.023 | 0.031 |
| 0.5 OS | -- | -- | -- | -- | -- | -- |
| 1 OS | 1.915 | -0.026 | -0.018 | -0.010 | 0.002 | 0.010 |
| 1.5 OS | -- | -- | -- | -- | -- | -- |
| 2 OS | -- | -- | -- | -- | -- | -- |
| 2.5 OS | -- | -- | -- | -- | -- | -- |

| NBR-HPX/HPW (in.) | | Fits (+Compression / -Loose) | | | | |
|-------------------|--------------------|------------------------------|--------|--------|-------|--------------------|
| Size | Minor ² | 75°F | 125°F | 175°F | 250°F | 300°F ³ |
| 0.5 US | -- | -- | -- | -- | -- | -- |
| STD | 1.891 | -0.002 | 0.007 | 0.015 | 0.027 | 0.035 |
| 0.5 OS | -- | -- | -- | -- | -- | -- |
| 1 OS | 1.911 | -0.022 | -0.014 | -0.006 | 0.006 | 0.014 |
| 1.5 OS | -- | -- | -- | -- | -- | -- |
| 2 OS | -- | -- | -- | -- | -- | -- |
| 2.5 OS | -- | -- | -- | -- | -- | -- |

| Performance Specifications | |
|----------------------------|-----------------|
| Flow Range | 50 - 130 GPM |
| Speed Range | 120 - 310 RPM |
| Torque Slope | 1.07 ft-lb./psi |
| Rotation | 2.380 rev/gal |
| Off Bottom Pressure | 50 psi |

| Performance Details | | |
|---------------------|-------------|-------------|
| | NBR | NBR-HPX/HPW |
| Max Diff. Press. | 450 psi | 710 psi |
| Stall Diff. Press. | 680 psi | 1120 psi |
| Max Torque | 490 ft-lb. | 760 ft-lb. |
| Stall Torque | 730 ft-lb. | 1190 ft-lb. |
| Max WOB | 18,000 lb. | |
| Max Pull to Re-Run | 80,000 lb. | |
| Pull to Yield | 150,000 lb. | |



¹ Coating options of chrome or tungsten carbide are available

² Vector Gauge Readings at Room Temp 75°F

³ BHCT Exceeding 275°F will void warranty for NBR (320°F for HPW/HPX)

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. The above is referenced from an Abaco® Power Section.



Martec Solutions

NOTES



Martec Solutions

Downhole Tools & Accessories

MARTEC SOLUTIONS _{LLC}
MAGNOLIA, TEXAS

PHONE: 281-703-9655 (English) / 281-703-1563 (Spanish)
EMAIL: sales@martecsolutions.com (English or Spanish)

Power section performance curves are based on new rotor and stator dimensions and for reference only. Actual performance may vary depending on rotor/stator fit, drilling and downhole 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. If operated above the optimal differential pressure, stator life will be reduced. Optimal load power calculation is based on maximum RPM and optimal load torque. Information contained in this document is subject to change without notice.