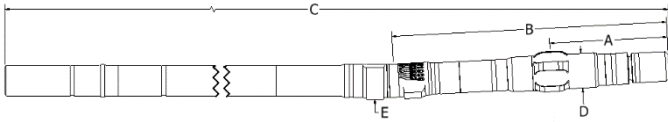


## RVEN-50 : 7/8 Lobe 5.7 Stage



### Dimensions

|                          |   |         |
|--------------------------|---|---------|
| Bit to Stabilizer Center | A | 11.1 in |
| Bit to Bend, ABH         | B | 52 in   |
| Bit to Bend, Fixed       | B | 53 in   |
| Bit to Top Sub           | C | 358 in  |
| Body OD, Slick           | D | 5.0 in  |
| Body OD, Stabilizer      | D | 5.7 in  |
| Pad Radius, Fixed & ABH  | E | 2.75 in |
| Bottom Connection        |   |         |
| 3-1/2 REG Box            |   |         |
| 3-1/2 IF Pin             |   |         |
| XT39                     |   |         |
| NC35                     |   |         |
| Top Connection           |   |         |
| 3-1/2 IF Box             |   |         |
| 4 FH Box                 |   |         |
| Top Sub Float Bore       |   |         |
| 3-1/2 IF                 |   |         |

### Recommended Operating Limits

|                        |             |
|------------------------|-------------|
| Max WOB                | 46,000 lbf  |
| Max Overpull, Backream | 67,000 lbf  |
| Max Overpull, Re-Run   | 137,000 lbf |
| Max Overpull, POOH     | 331,000 lbf |

### Performance Details

#### HPW

|                   |               |
|-------------------|---------------|
| Max Diff Pressure | 1,340 psi     |
| Max Torque        | 6,350 lbf-ft  |
| Stall Torque      | 10,010 lbf-ft |
| Rotation          | 0.516 rev/gal |
| Flow Range        | 150-350 gpm   |
| Speed Range       | 80-180 rpm    |

### Predicted Build Rates (Adj.) – Degrees/100ft

| Bend Setting | Slick Hole Size |       |       | Stabilized Hole Size |       |       |
|--------------|-----------------|-------|-------|----------------------|-------|-------|
| Deg          | 6               | 6 1/4 | 6 3/4 | 6                    | 6 1/4 | 6 3/4 |
| 0.39         | 1.3             | -     | -     | 1.5                  | 1.6   | 1.9   |
| 0.78         | 3.9             | 3.1   | 1.5   | 3.9                  | 3.8   | 4.1   |
| 1.15         | 6.3             | 5.5   | 3.9   | 6.3                  | 6.0   | 6.2   |
| 1.50         | 8.6             | 7.8   | 6.2   | 8.6                  | 8.0   | 8.3   |
| 1.83         | 10.7            | 10.0  | 8.4   | 10.7                 | 10.0  | 10.2  |
| 2.12         | 12.6            | 11.9  | 10.3  | 12.6                 | 11.9  | 11.8  |
| 2.38*        | 14.3            | 13.6  | 12.0  | 14.3                 | 13.6  | 13.3  |
| 2.60*        | 15.8            | 15.0  | 13.4  | 15.8                 | 15.0  | 14.6  |
| 2.77*        | 16.9            | 16.1  | 14.5  | 16.9                 | 16.1  | 15.6  |
| 2.90*        | 17.7            | 17.0  | 15.4  | 17.7                 | 17.0  | 16.3  |
| 2.97*        | 18.2            | 17.4  | 15.9  | 18.2                 | 17.4  | 16.7  |
| 3.00*        | 18.4            | 17.6  | 16.1  | 18.4                 | 17.6  | 16.9  |

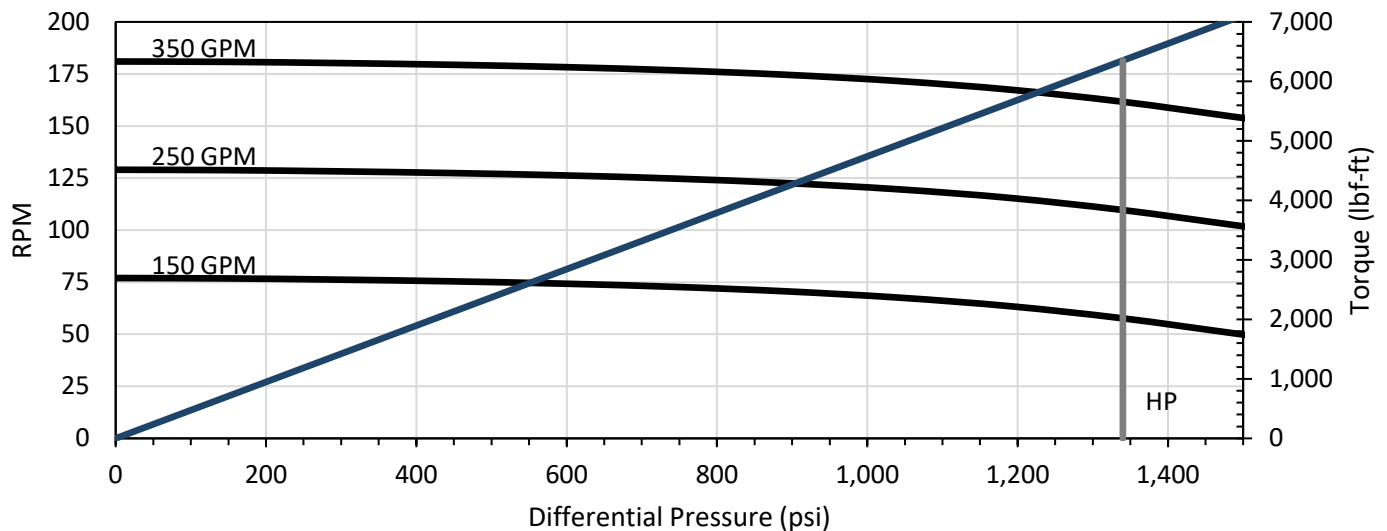
\*Bend Setting not recommended for Rotary Drilling

### Predicted Build Rates (Fixed) – Degrees/100ft

| Bend Setting | Slick Hole Size |       |       | Stabilized Hole Size |       |       |
|--------------|-----------------|-------|-------|----------------------|-------|-------|
| Deg          | 6               | 6 1/4 | 6 3/4 | 6                    | 6 1/4 | 6 3/4 |
| 0.78         | 3.9             | 3.1   | 1.6   | 3.9                  | 3.8   | 4.1   |
| 1.15         | 6.3             | 5.5   | 4.0   | 6.3                  | 6.0   | 6.2   |
| 1.50         | 8.6             | 7.8   | 6.3   | 8.6                  | 8.0   | 8.2   |
| 1.75         | 10.2            | 9.5   | 7.9   | 10.2                 | 9.5   | 9.7   |
| 1.83         | 10.8            | 10.0  | 8.4   | 10.8                 | 10.0  | 10.1  |
| 2.00         | 11.9            | 11.1  | 9.6   | 11.9                 | 11.1  | 11.1  |
| 2.12         | 12.7            | 11.9  | 10.3  | 12.7                 | 11.9  | 11.8  |
| 2.25*        | 13.5            | 12.7  | 11.2  | 13.5                 | 12.7  | 12.6  |
| 2.38*        | 14.4            | 13.6  | 12.0  | 14.4                 | 13.6  | 13.3  |
| 2.50*        | 15.1            | 14.4  | 12.8  | 15.1                 | 14.4  | 14.0  |

\*Bend Setting not recommended for Rotary Drilling

### Theoretical Performance Curve



Performance curves based on testing at 70°F. Actual field performance may vary with field operation conditions.