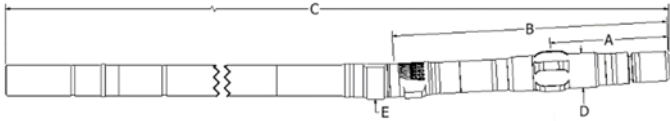


RVEN-70 : 7/8 Lobe 3.5 Stage

Dimensions

Bit to Stabilizer Center	A	27 in
Bit to Bend, Fixed	B	48 in
Bit to Top Sub	C	382 in
Body OD, Slick	D	7.0 in
Body OD, Stabilizer	D	7.5 in
Pad Radius, Fixed	E	3.75 in
Bottom Connection	4-1/2 REG Box 6-5/8 REG Box 4-1/2 IF Pin	
Top Connection	4-1/2 IF Box 4-1/2 XH Box	
Top Sub Float Bore	4R	

Recommended Operating Limits

Max WOB	49,000 lbf
Max Overpull, Backream	71,000 lbf
Max Overpull, Re-Run	325,000 lbf
Max Overpull, POOH	630,000 lbf

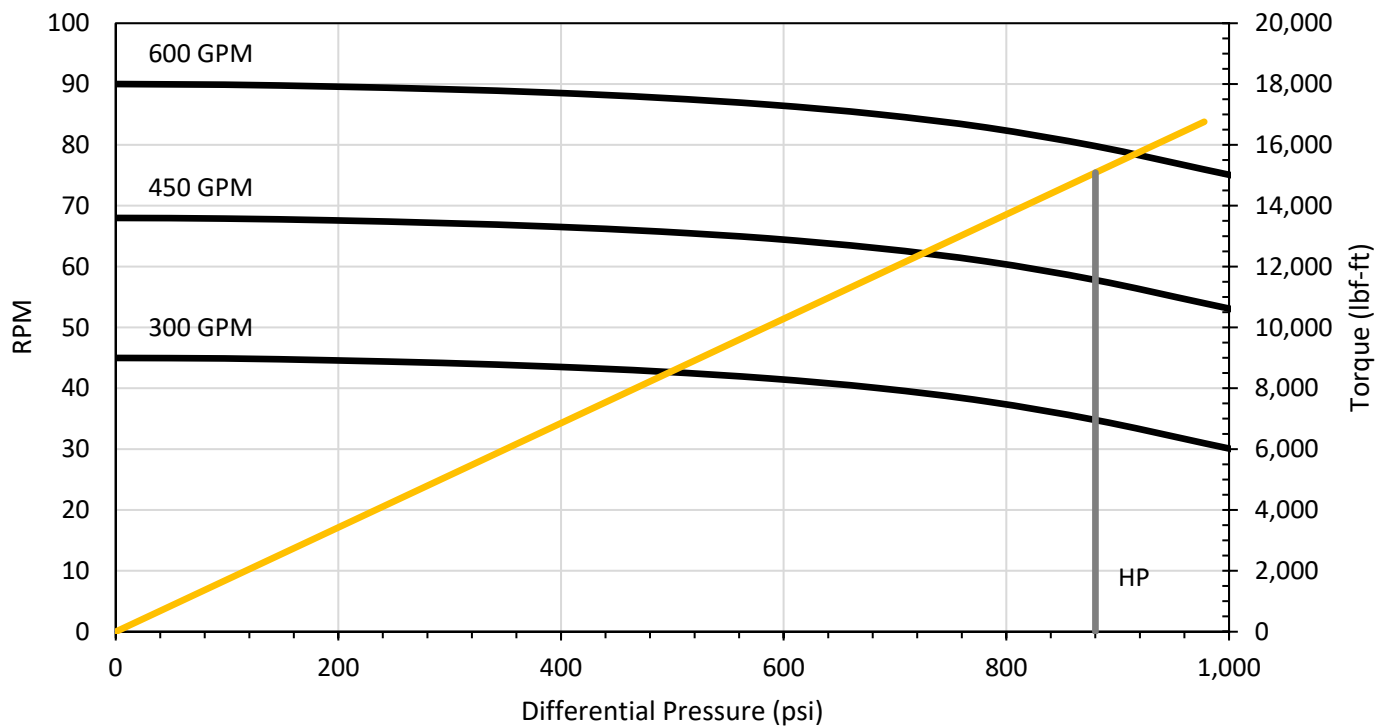
Predicted Build Rates (Fixed) – Degrees/100ft

Bend Setting	Slick Hole Size			Stabilized Hole Size		
	Deg	8 1/2	8 3/4	9 7/8	8 1/2	8 3/4
0.78	2.1	1.4	1.9	4.6	4.7	5.2
1.15	4.4	3.6	0.4	6.7	6.8	7.4
1.50	6.5	5.8	2.5	8.7	8.8	9.4
1.75	8.0	7.3	4.0	10.1	10.2	10.8
1.83	8.5	7.8	4.5	10.6	10.7	11.2
2.00	9.5	8.8	5.5	11.5	11.7	12.2
2.12	10.3	9.5	6.3	12.2	12.4	12.9
2.25*	11.1	10.3	7.1	13.0	13.1	13.6
2.38*	11.8	11.1	7.8	13.7	13.8	14.4
2.50*	12.6	11.8	8.6	14.4	14.5	15.1

*Bend Setting not recommended for Rotary Drilling

Performance Details

Performance Details	HP
Max Diff Pressure	880 psi
Max Torque	15,000 lbf-ft
Stall Torque	22,500 lbf-ft
Rotation	0.150 rev/gal
Flow Range	300-600 gpm
Speed Range	45-90 rpm

Theoretical Performance Curve


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