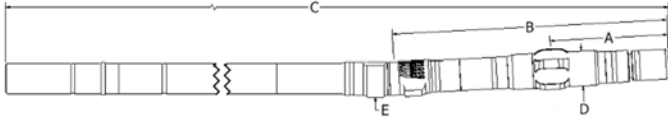


RVEN-70 : 5/6 Lobe 9.7 Stage



Dimensions

Bit to Stabilizer Center	A	27 in
Bit to Bend, Fixed	B	48 in
Bit to Top Sub	C	422 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

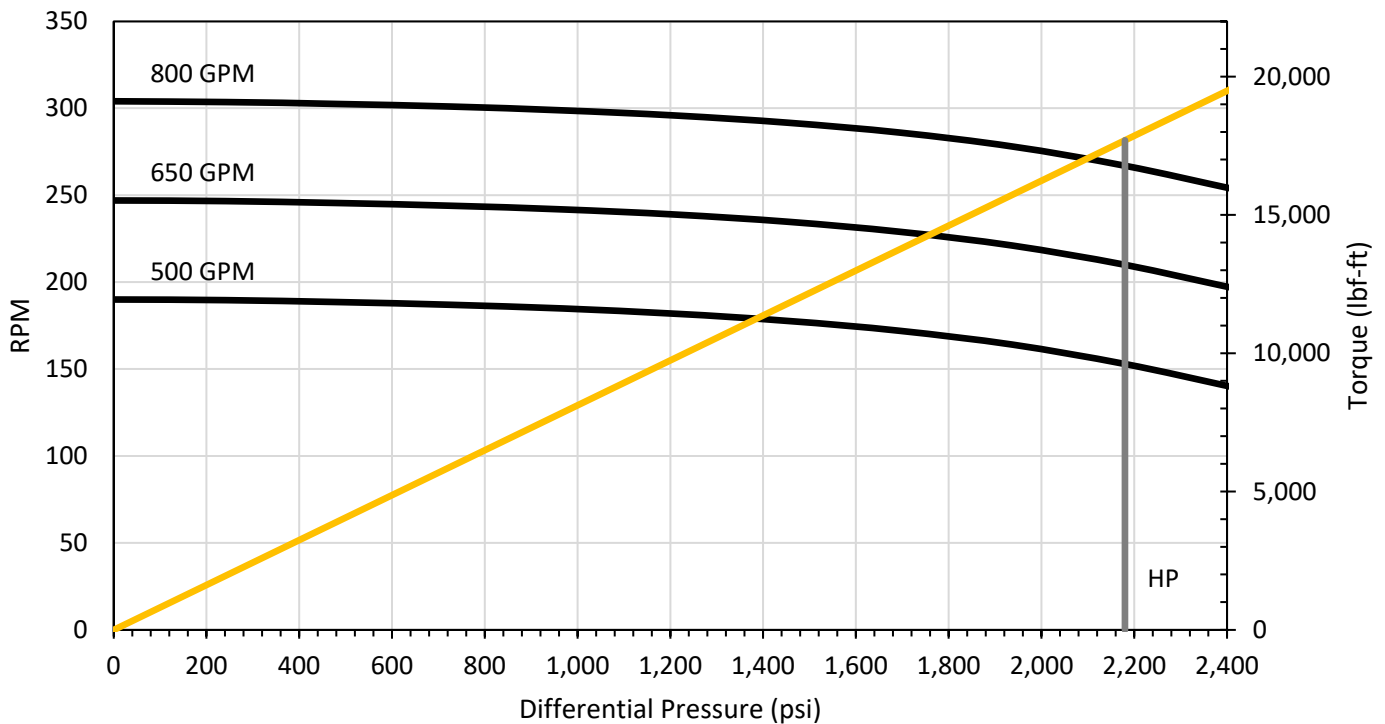
Bend Setting	Slick Hole Size			Stabilized Hole Size		
	Deg	8 1/2	8 3/4	9 7/8	8 1/2	8 3/4
0.78	1.9	1.2	1.7	4.1	4.2	4.7
1.15	3.9	3.3	0.3	6.0	6.1	6.6
1.50	5.9	5.2	2.2	7.9	8.0	8.4
1.75	7.2	6.6	3.6	9.2	9.3	9.7
1.83	7.7	7.0	4.1	9.6	9.7	10.2
2.00	8.6	8.0	5.0	10.5	10.6	11.0
2.12	9.3	8.6	5.7	11.1	11.2	11.7
2.25*	10.0	9.3	6.4	11.8	11.9	12.3
2.38*	10.7	10.1	7.1	12.5	12.6	13.0
2.50*	11.4	10.7	7.8	13.1	13.2	13.6

*Bend Setting not recommended for Rotary Drilling

Performance Details

	HP
Max Diff Pressure	2,180 psi
Max Torque	17,770 lbf-ft
Stall Torque	26,550 lbf-ft
Rotation	0.380 rev/gal
Flow Range	500-800 gpm
Speed Range	190-300 rpm

Theoretical Performance Curve



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