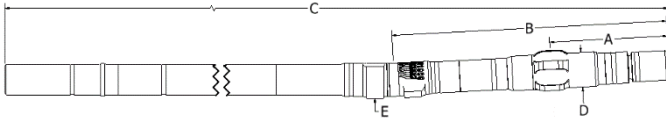


RVEN-86 : 7/8 Lobe 3.4 Stage



Dimensions

Bit to Stabilizer Center	A	NA	in
Bit to Bend, Fixed	B	76	in
Bit to Bend, ABH	B	94	in
Bit to Top Sub	C	472	in
Body OD, Slick	D	8.62	in
Pad Radius, Fixed	E	4.43	in
Pad Radius, ABH	E	4.25	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	197,000	lbf
Max Overpull, Backream	285,000	lbf
Max Overpull, Re-Run	286,000	lbf
Max Overpull, POOH	847,000	lbf

Performance Details	HR	XP	
Max Diff Pressure	770	850	psi
Max Torque	21,450	23,830	lbf-ft
Stall Torque	32,180	35,750	lbf-ft
Rotation	0.089	0.089	rev/gal
Flow Range	400-900	400-900	gpm
Speed Range	36-80	36-80	rpm

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

Bend Setting	Slick Hole Size			Stabilized Hole Size		
Deg	9 7/8	10 5/8	12 1/4	9 7/8	10 5/8	12 1/4
0.39	-	-	-	1.6	1.8	2.3
0.78	2.9	1.9	-	3.2	3.4	3.9
1.15	4.7	3.7	1.6	4.7	4.9	5.4
1.50	6.4	5.5	3.4	6.4	6.3	6.8
1.83	8.1	7.1	5.0	8.1	7.7	8.2
2.12	9.5	8.5	6.4	9.5	8.9	9.4
2.38*	10.8	9.8	7.7	10.8	9.9	10.4
2.60*	11.9	10.9	8.8	11.9	10.9	11.3
2.77*	12.7	11.7	9.6	12.7	11.7	12.0
2.90*	13.3	12.4	10.3	13.3	12.4	12.5
2.97*	13.7	12.7	10.6	13.7	12.7	12.8
3.00*	13.8	12.9	10.8	13.8	12.9	12.9

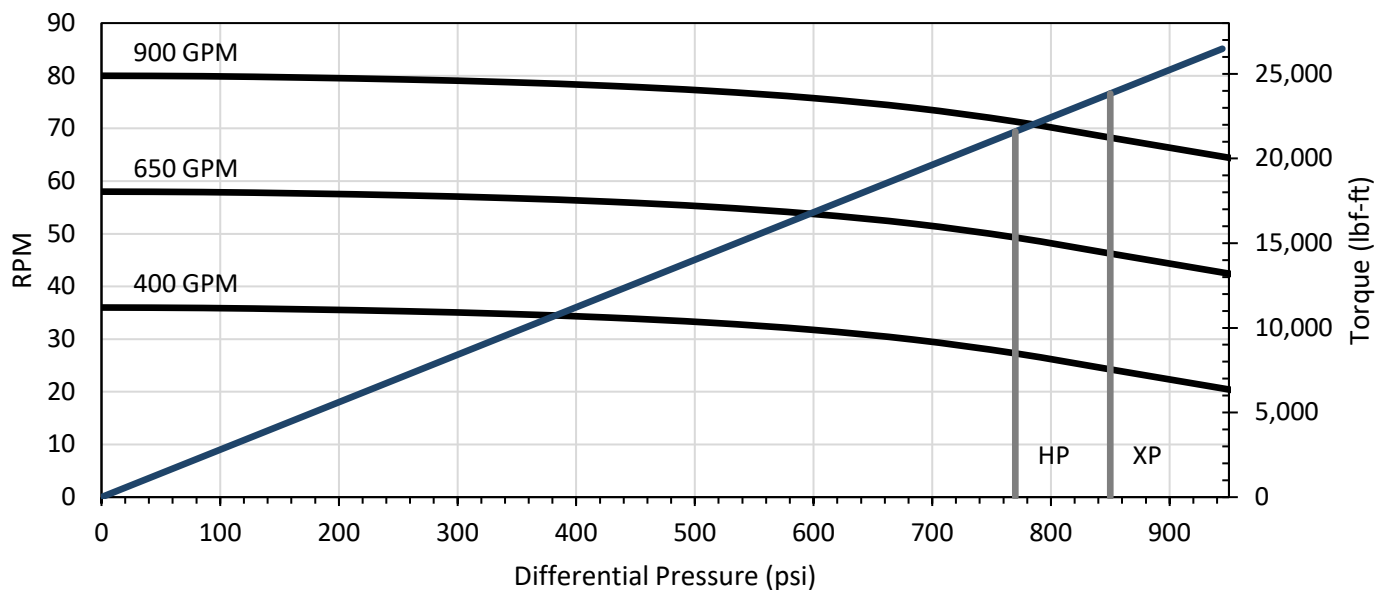
*Bend Setting not recommended for Rotary Drilling

Predicted Build Rates (Fixed) – Degrees/100ft

Bend Setting	Slick Hole Size			Stabilized Hole Size		
Deg	9 7/8	10 5/8	12 1/4	9 7/8	10 5/8	12 1/4
0.78	1.9	-	-	3.3	3.5	4.0
1.15	3.7	2.6	-	4.9	5.1	5.6
1.50	5.4	4.3	1.8	6.4	6.6	7.1
1.75	6.7	5.5	3.0	7.5	7.7	8.2
1.83	7.1	5.9	3.4	7.8	8.0	8.5
2.00	7.9	6.7	4.2	8.5	8.8	9.3
2.12	8.5	7.3	4.8	9.0	9.3	9.8
2.25*	9.1	8.0	5.5	9.6	9.8	10.3
2.38*	9.8	8.6	6.1	10.2	10.4	10.9
2.50*	10.4	9.2	6.7	10.7	10.9	11.4

*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.