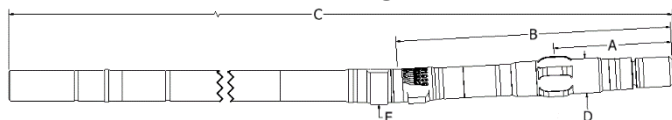


RVEN-96 : 7/8 Lobe 4.0 Stage



Dimensions

Bit to Stabilizer Center	A	50 in
Bit to Bend, ABH	B	89.5 in
Bit to Bend, Fixed	B	79.7 in
Bit to Top Sub	C	350 in
Body OD, Slick	D	9.62 in
Body OD, Stabilizer	D	10.75 in
Pad Radius, ABH	E	5.2 in
Pad Radius, Fixed	E	5.1 in
Bottom Connection	6-5/8 REG Box 7-5/8 REG Box	
Top Connection	6-5/8 REG Box	
Top Sub Float Bore	5F-6R	

Recommended Operating Limits

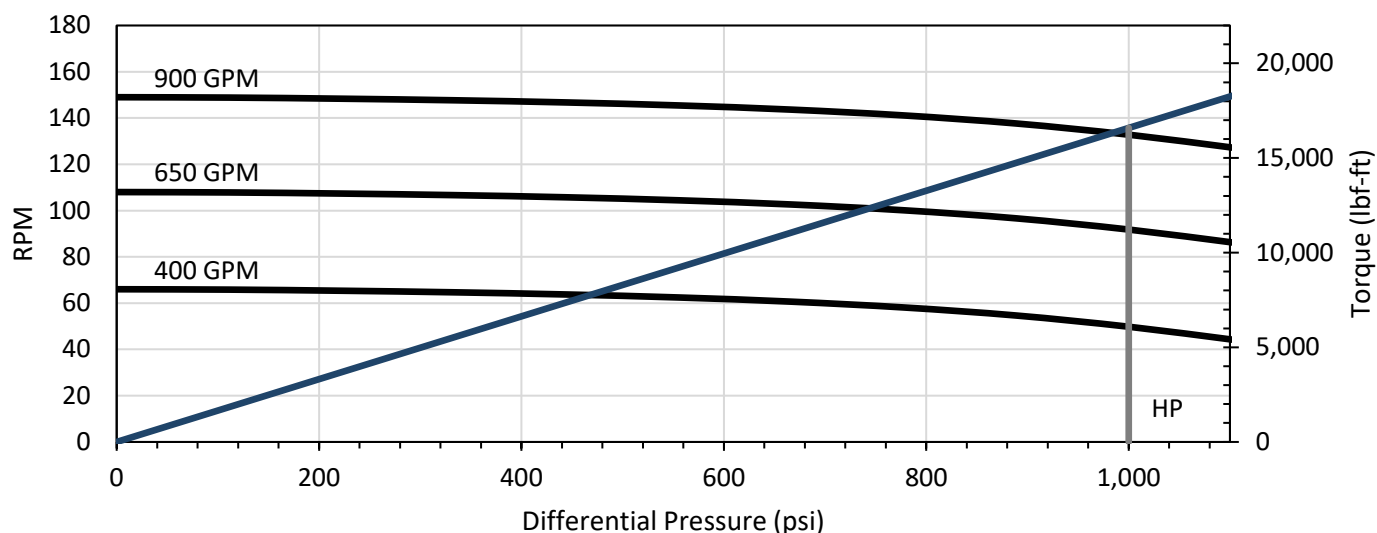
Max WOB	185,000 lbf
Max Overpull, Backream	267,000 lbf
Max Overpull, Re-Run	553,000 lbf
Max Overpull, POOH	1,172,000 lbf

Performance Details

HP

Max Diff Pressure	1,000 psi
Max Torque	16,590 lbf-ft
Stall Torque	24,880 lbf-ft
Rotation	0.166 rev/gal
Flow Range	400-900 gpm
Speed Range	66-149 rpm

Theoretical Performance Curve



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

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

Bend Setting	Slick Hole Size			Stabilized Hole Size		
	12 1/4	14 3/4	17 1/2	12 1/4	14 3/4	17 1/2
Deg						
0.39	-	-	-	4.4	6.0	7.7
0.78	3.5	-	-	6.6	8.2	9.9
1.15	5.9	1.6	-	8.7	10.3	12.0
1.50	8.2	3.9	-	10.7	12.3	14.0
1.83	10.4	6.0	1.3	12.6	14.1	15.8
2.12	12.3	7.9	3.1	14.2	15.8	17.5
2.38*	14.0	9.6	4.8	15.7	17.2	18.9
2.60*	15.4	11.1	6.3	16.9	18.5	20.2
2.77*	16.5	12.2	7.4	17.9	19.4	21.1
2.90*	17.4	13.0	8.2	18.6	20.2	21.9
2.97*	17.8	13.5	8.7	19.0	20.6	22.3
3.00*	18.0	13.7	8.9	19.2	20.7	22.4

*Bend Setting not recommended for Rotary Drilling

Predicted Build Rates (Fixed) – Degrees/100ft

Bend Setting	Slick Hole Size			Stabilized Hole Size		
	12 1/4	14 3/4	17 1/2	12 1/4	14 3/4	17 1/2
Deg						
0.78	2.5	-	-	6.8	8.4	10.1
1.15	4.9	-	-	9.0	10.5	12.2
1.50	7.2	2.4	-	11.0	12.6	14.3
1.75	8.8	4.1	-	12.5	14.0	15.7
1.83	9.4	4.6	-	13.0	14.5	16.2
2.00	10.5	5.7	-	14.0	15.5	17.2
2.12	11.3	6.5	1.2	14.7	16.2	17.9
2.25*	12.1	7.3	2.1	15.4	17.0	18.7
2.38*	12.9	8.2	2.9	16.2	17.7	19.4
2.50*	13.7	8.9	3.7	16.9	18.4	20.1

*Bend Setting not recommended for Rotary Drilling