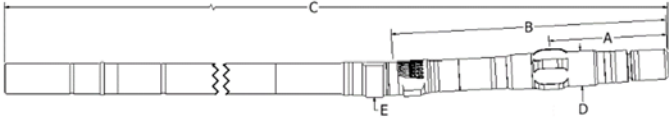


RVMA-85 : 7/8 Lobe 4.0 Stage



Dimensions

Bit to Stabilizer Center	A	39 in
Bit to Bend, ABH	B	90 in
Bit to Bend, Fixed	B	76 in
Bit to Top Sub	C	355 in
Body OD, Slick	D	8.50 in
Body OD, Stabilizer	D	9.50 in
Pad Radius, ABH	E	4.56 in
Pad Radius, Fixed	E	4.34 in
Bottom Connection	6-5/8 REG Box 6-5/8 REG Pin	
Top Connection	6-5/8 REG Box	
Top Sub Float Bore	5F-6R	

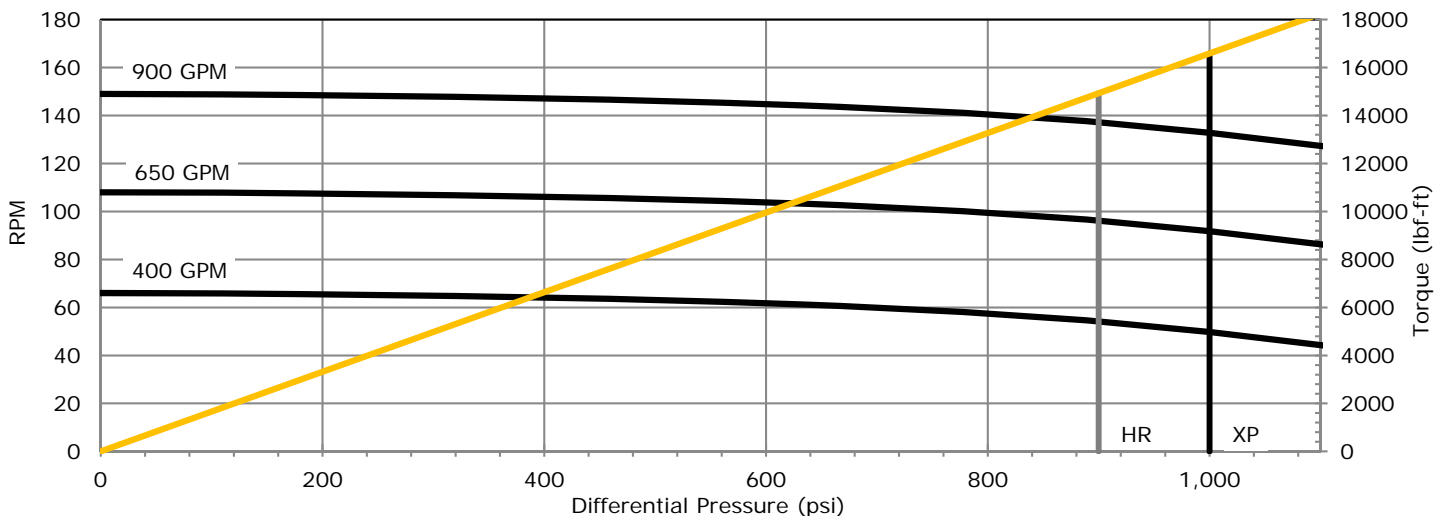
Recommended Operating Limits

Max WOB	164,000 lbf
Max Overpull, Backream	236,000 lbf
Max Overpull, Re-Run	440,000 lbf
Max Overpull, POOH	1,172,000 lbf

Performance Details

	HR	XP
Max Diff Pressure	900	990 psi
Max Torque	14,930	16,420 lbf-ft
Stall Torque	22,400	26,640 lbf-ft
Rotation	0.166	0.166 rev/gal
Flow Range	400-900	400-900 gpm
Speed Range	66-150	66-150 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		
	9 7/8	10 5/8	12 1/4	9 7/8	10 5/8	12 1/4
Deg	9 7/8	10 5/8	12 1/4	9 7/8	10 5/8	12 1/4
0.39	1.8	-	-	2.6	3.2	4.3
0.78	4.6	3.1	-	4.9	5.4	6.5
1.15	7.2	5.7	2.6	7.2	7.5	8.7
1.50	9.7	8.2	5.1	9.7	9.6	10.7
1.83	12.0	10.5	7.4	12.0	11.5	12.6
2.12	14.0	12.6	9.4	14.0	13.1	14.3
2.38*	15.9	14.4	11.3	15.9	14.6	15.8
2.60*	17.4	16.0	12.8	17.4	16.0	17.0
2.77*	18.6	17.2	14.0	18.6	17.2	18.0
2.90*	19.5	18.1	14.9	19.5	18.1	18.8
2.97*	20.0	18.6	15.4	20.0	18.6	19.2
3.00*	20.2	18.8	15.6	20.2	18.8	19.3

*Bend Setting not recommended for Rotary Drilling

Predicted Build Rates (Fixed) – Degrees/100ft

Bend Setting	Slick Hole Size			Stabilized Hole Size		
	9 7/8	10 5/8	12 1/4	9 7/8	10 5/8	12 1/4
Deg	9 7/8	10 5/8	12 1/4	9 7/8	10 5/8	12 1/4
0.78	3.0	1.3	-	5.1	5.7	6.8
1.15	5.6	3.9	-	7.4	7.9	9.1
1.50	8.1	6.4	2.8	9.5	10.1	11.2
1.75	9.8	8.2	4.6	11.1	11.6	12.7
1.83	10.4	8.7	5.1	11.5	12.1	13.2
2.00	11.6	9.9	6.3	12.6	13.1	14.2
2.12	12.4	10.8	7.2	13.3	13.8	15.0
2.25*	13.4	11.7	8.1	14.1	14.6	15.8
2.38*	14.3	12.6	9.0	14.9	15.4	16.5
2.50*	15.1	13.5	9.9	15.6	16.1	17.3

*Bend Setting not recommended for Rotary Drilling