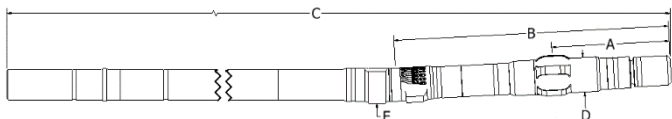


RVTF-77 : 4/5 Lobe 6.0 Stage



Dimensions

Bit to Stabilizer Center	A	28.3 in
Bit to Bend, ABH	B	79 in
Bit to Bend, Fixed	B	65 in
Bit to Top Sub	C	412 in
Body OD, Slick	D	7.75 in
Body OD, Stabilizer	D	9.25 in
Pad Radius, ABH	E	4.188 in
Pad Radius, Fixed	E	4.07 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	143,000 lbf
Max Overpull, Backream	206,000 lbf
Max Overpull, Re-Run	256,000 lbf
Max Overpull, POOH	923,000 lbf

Performance Details	HR	XP
Max Diff Pressure	1350	1490 psi
Max Torque	15,300	16,830 lbf-ft
Stall Torque	22,950	25,250 lbf-ft
Rotation	0.246	0.246 rev/gal
Flow Range	400-900	400-900 gpm
Speed Range	98-230	98-230 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	-	-	-	2.5	2.8	3.6
0.78	2.2	-	-	4.5	4.8	5.6
1.15	4.4	3.1	-	6.4	6.7	7.5
1.50	6.5	5.2	2.2	8.1	8.5	9.3
1.83	8.5	7.1	4.2	9.8	10.2	10.9
2.12	10.2	8.8	5.9	11.3	11.7	12.4
2.38*	11.7	10.4	7.4	12.6	13.0	13.8
2.60*	13.0	11.7	8.7	13.8	14.1	14.9
2.77*	14.0	12.7	9.7	14.6	15.0	15.7
2.90*	14.8	13.4	10.5	15.3	15.6	16.4
2.97*	15.2	13.8	10.9	15.7	16.0	16.8
3.00*	15.4	14.0	11.1	15.8	16.2	16.9

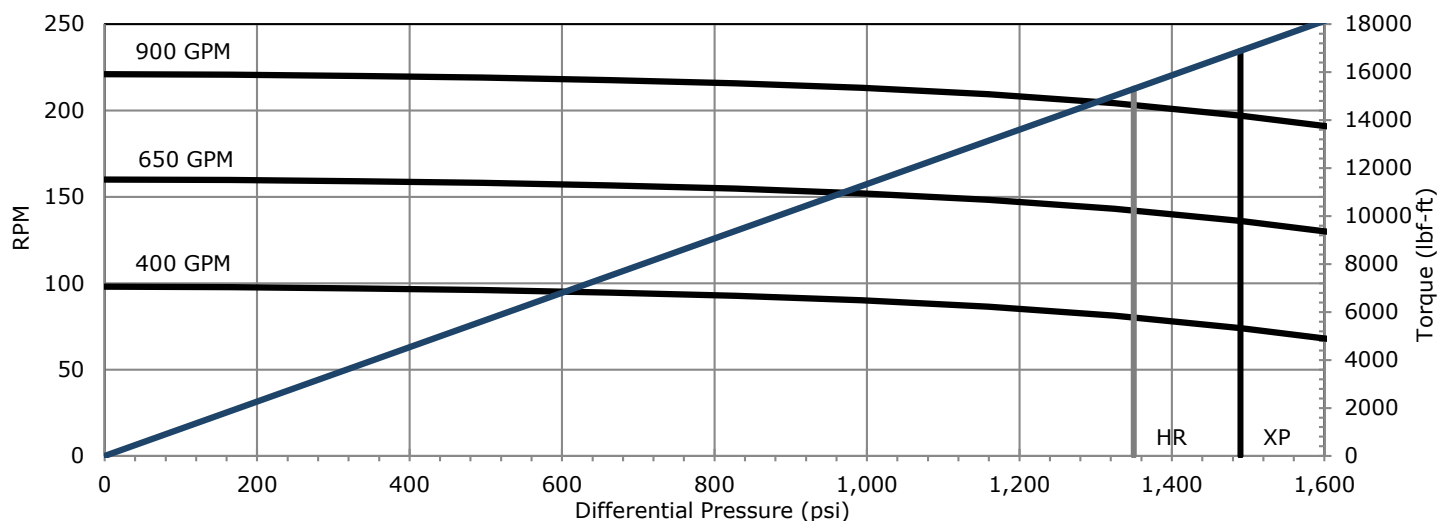
*Bend Setting not recommended for Rotary Drilling

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
0.75	-	-	-	4.5	4.8	5.6
1.00	2.4	-	-	5.8	6.2	6.9
1.25	3.9	2.3	-	7.2	7.5	8.3
1.50	5.4	3.8	-	8.5	8.8	9.6
1.63	6.2	4.6	1.1	9.2	9.5	10.3
1.75	6.9	5.3	1.8	9.8	10.2	10.9
1.88	7.3	5.7	2.3	10.3	10.6	11.4
2.00	8.3	6.8	3.3	11.2	11.5	12.3
2.25*	9.8	8.2	4.8	12.5	12.8	13.6
2.38*	10.6	9.0	5.5	13.2	13.5	14.3
2.50*	11.3	9.7	6.3	13.8	14.2	14.9

*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.