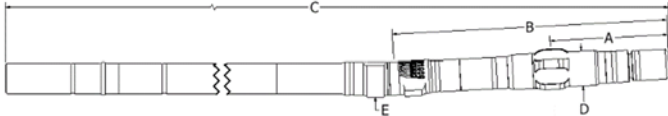


RVTF-67 : 7/8 Lobe 3.5 Stage



Dimensions

Bit to Stabilizer Center	A	33 in
Bit to Bend, ABH	B	73.6 in
Bit to Bend, Fixed	B	60.4 in
Bit to Top Sub	C	380 in
Body OD, Slick	D	6.87 in
Body OD, Stabilizer	D	6.87 in
Pad Radius, ABH	E	3.63 in
Pad Radius, Fixed	E	3.56 in
Bottom Connection	4-1/2 REG Box 4-1/2 IF Pin	
Top Connection	4-1/2 IF Box 4-1/2 XH Box	
Top Sub Float Bore	4R & 5R	

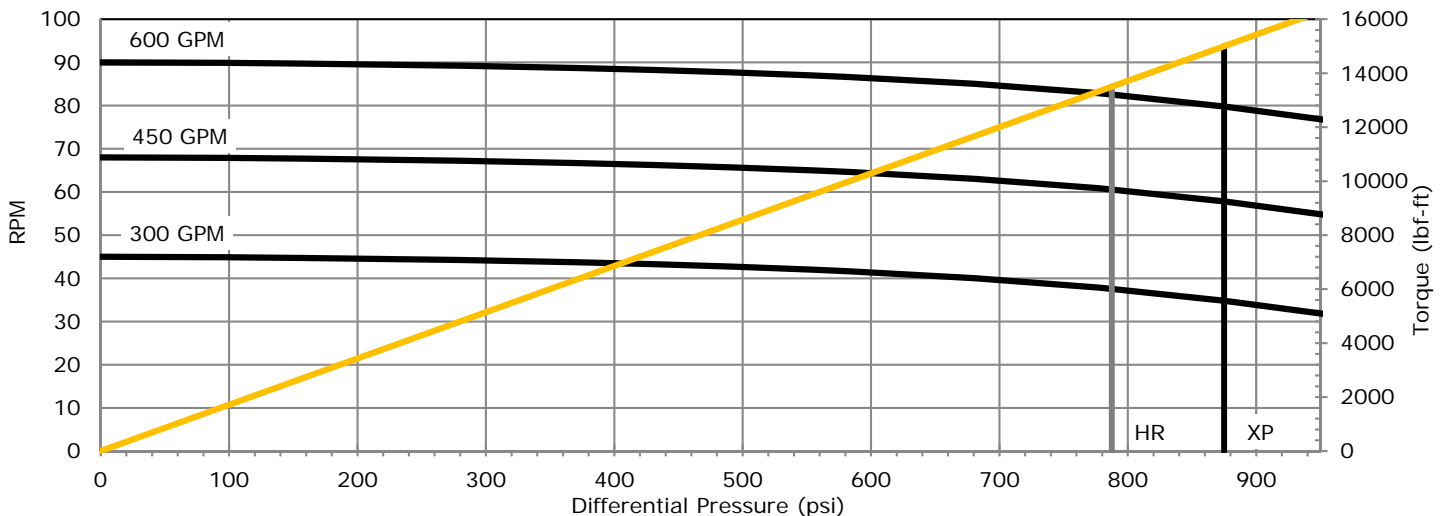
Recommended Operating Limits

Max WOB	127,000 lbf
Max Overpull, Backream	183,000 lbf
Max Overpull, Re-Run	183,000 lbf
Max Overpull, POOH	751,000 lbf

Performance Details

	HR	XP
Max Diff Pressure	790	870 psi
Max Torque	13,500	14,850 lbf-ft
Stall Torque	20,250	22,280 lbf-ft
Rotation	0.150	0.150 rev/gal
Flow Range	300-600	300-600 gpm
Speed Range	45-90	45-90 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 Deg	Slick Hole Size			Stabilized Hole Size		
	8 1/2	8 3/4	9 7/8	8 1/2	8 3/4	9 7/8
0.39	-	-	-	2.5	2.6	3.2
0.78	2.5	2.0	-	4.6	4.7	5.3
1.15	4.8	4.3	2.0	6.6	6.7	7.3
1.50	6.9	6.4	4.1	8.5	8.6	9.2
1.83	8.9	8.4	6.1	10.3	10.4	10.9
2.12	10.7	10.2	7.9	11.8	11.9	12.5
2.38*	12.3	11.8	9.5	13.2	13.4	13.9
2.60*	13.6	13.1	10.8	14.4	14.5	15.1
2.77*	14.7	14.2	11.9	15.3	15.5	16.0
2.90*	15.5	15.0	12.7	16.0	16.2	16.7
2.97*	15.9	15.4	13.1	16.4	16.5	17.1
3.00*	16.1	15.6	13.3	16.6	16.7	17.3

*Bend Setting not recommended for Rotary Drilling

Predicted Build Rates (Fixed) – Degrees/100ft

Bend Setting Deg	Slick Hole Size			Stabilized Hole Size		
	8 1/2	8 3/4	9 7/8	8 1/2	8 3/4	9 7/8
0.75	1.5	-	-	4.6	4.7	5.3
1.00	3.0	2.4	-	6.0	6.1	6.7
1.25	4.5	3.9	1.2	7.4	7.5	8.1
1.50	6.1	5.5	2.7	8.8	8.9	9.5
1.63	6.9	6.3	3.5	9.6	9.7	10.2
1.75	7.6	7.0	4.3	10.2	10.4	10.9
1.88	8.4	7.8	5.1	11.0	11.1	11.7
2.00	9.1	8.5	5.8	11.6	11.8	12.3
2.25*	10.7	10.1	7.3	13.1	13.2	13.7
2.38*	11.5	10.9	8.1	13.8	13.9	14.5
2.50*	12.2	11.6	8.9	14.5	14.6	15.2

*Bend Setting not recommended for Rotary Drilling