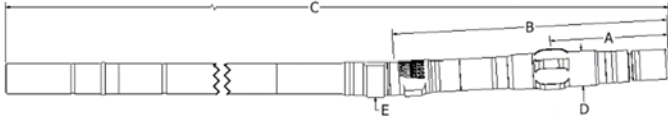


RVTF-67 : 7/8 Lobe 5.0 Stage



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	315 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	

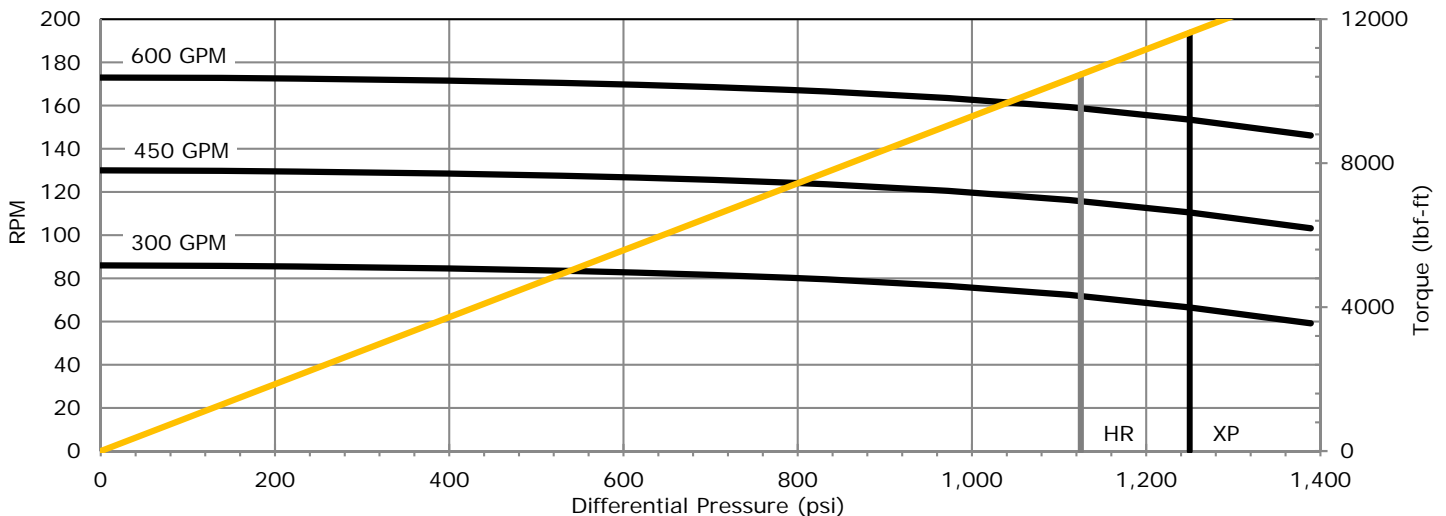
Recommended Operating Limits

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	1,130	1,240 psi
Max Torque	10,460	11,510 lbf-ft
Stall Torque	15,690	17,260 lbf-ft
Rotation	0.288	0.288 rev/gal
Flow Range	300-600	300-600 gpm
Speed Range	86-180	86-180 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	-	-	-	3.1	3.3	4.1
0.78	3.1	2.5	-	5.6	5.7	6.6
1.15	5.8	5.2	2.4	7.9	8.1	8.9
1.50	8.4	7.8	5.0	10.1	10.3	11.1
1.83	10.8	10.2	7.4	12.2	12.4	13.2
2.12	13.0	12.3	9.6	14.0	14.2	15.0
2.38*	14.9	14.3	11.5	15.6	15.8	16.7
2.60*	16.5	15.9	13.1	17.0	17.2	18.1
2.77*	17.7	17.1	14.4	18.1	18.3	19.1
2.90*	18.7	18.1	15.3	18.9	19.1	19.9
2.97*	19.2	18.6	15.8	19.4	19.5	20.4
3.00*	19.4	18.8	16.0	19.5	19.7	20.6

*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	1.8	1.1	-	5.6	5.8	6.7
1.00	3.7	3.0	-	7.3	7.5	8.3
1.25	5.5	4.8	1.5	9.0	9.1	10.0
1.50	7.4	6.6	3.4	10.6	10.8	11.7
1.63	8.3	7.6	4.3	11.5	11.7	12.5
1.75	9.2	8.5	5.2	12.3	12.5	13.3
1.88	10.2	9.4	6.2	13.1	13.3	14.2
2.00	11.0	10.3	7.0	13.9	14.1	15.0
2.25*	12.9	12.2	8.9	15.6	15.8	16.6
2.38*	13.8	13.1	9.8	16.5	16.7	17.5
2.50*	14.7	14.0	10.7	17.3	17.5	18.3

*Bend Setting not recommended for Rotary Drilling