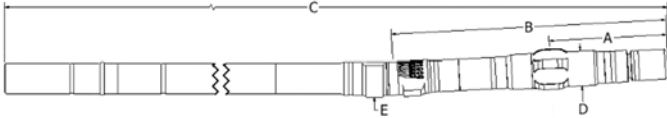


RVDF-70 : 7/8 Lobe 3.5 Stage



Dimensions

Bit to Stabilizer Center	A	30 in
Bit to Bend, ABH	B	68.4 in
Bit to Bend, Fixed	B	49 in
Bit to Top Sub	C	386 in
Body OD, Slick	D	7.25 in
Body OD, Stabilizer	D	7.25 in
Pad Radius, ABH	E	3.75 in
Pad Radius, Fixed	E	3.75 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	

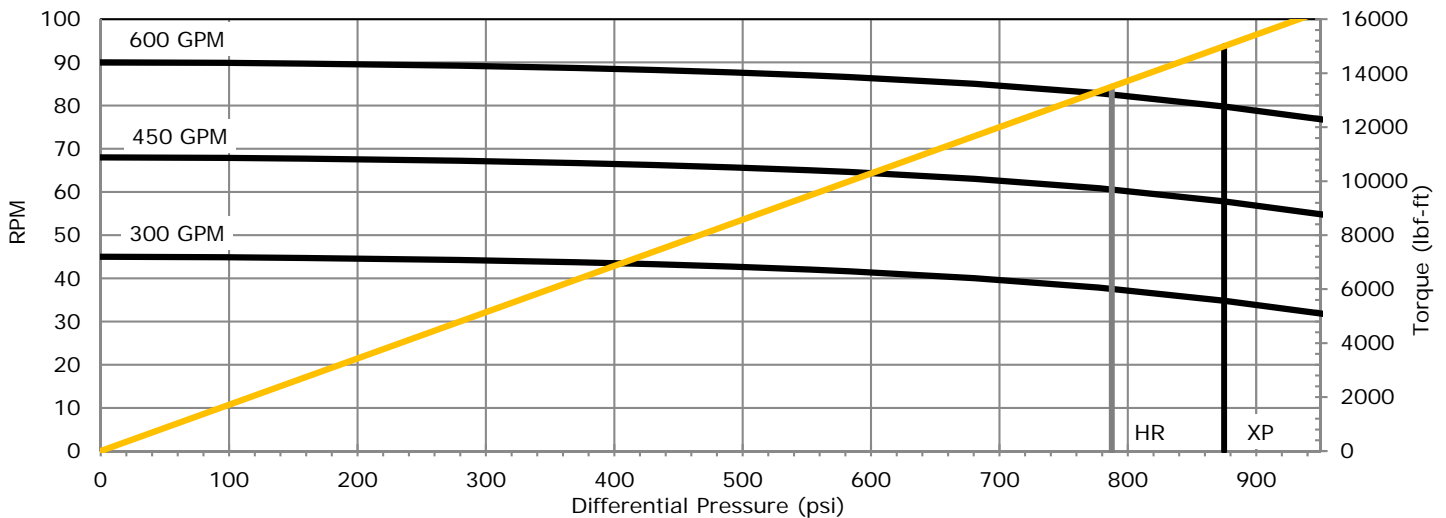
Recommended Operating Limits

Max WOB	160,000 lbf
Max Overpull, Backream	231,000 lbf
Max Overpull, Re-Run	319,000 lbf
Max Overpull, POOH	875,000 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	Slick Hole Size			Stabilized Hole Size		
	Deg	8 1/2	8 3/4	9 7/8	8 1/2	8 3/4
0.39	-	-	-	2.2	2.3	2.9
0.78	2.8	2.3	-	4.3	4.4	5.0
1.15	5.1	4.5	2.1	6.3	6.4	7.0
1.50	7.2	6.6	4.2	8.2	8.3	8.9
1.83	9.2	8.6	6.2	10.0	10.1	10.6
2.12	10.9	10.4	8.0	11.5	11.6	12.2
2.38*	12.5	12.0	9.5	12.9	13.0	13.6
2.60*	13.8	13.3	10.9	14.1	14.2	14.7
2.77*	14.9	14.3	11.9	15.0	15.1	15.7
2.90*	15.6	15.1	12.7	15.7	15.8	16.4
2.97*	16.1	15.5	13.1	16.1	16.2	16.7
3.00*	16.2	15.7	13.3	16.2	16.3	16.9

*Bend Setting not recommended for Rotary Drilling

Predicted Build Rates (Fixed) – Degrees/100ft

Bend Setting	Slick Hole Size			Stabilized Hole Size		
	Deg	8 1/2	8 3/4	9 7/8	8 1/2	8 3/4
0.75	2.0	1.2	-	4.4	4.5	5.1
1.00	3.5	2.8	-	5.8	6.0	6.5
1.25	5.0	4.3	1.1	7.3	7.4	7.9
1.50	6.5	5.8	2.6	8.7	8.8	9.3
1.63	7.3	6.6	3.4	9.4	9.5	10.1
1.75	8.0	7.3	4.1	10.1	10.2	10.8
1.88	8.8	8.1	4.9	10.8	11.0	11.5
2.00	9.5	8.8	5.6	11.5	11.6	12.2
2.25*	11.0	10.3	7.1	12.9	13.1	13.6
2.38*	11.8	11.1	7.9	13.7	13.8	14.3
2.50*	12.5	11.8	8.6	14.4	14.5	15.0

*Bend Setting not recommended for Rotary Drilling