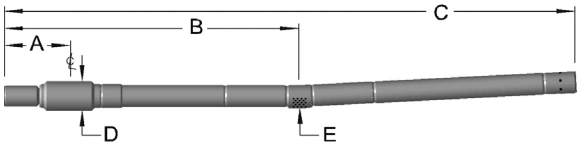
NATIONAL OILWELL VARCO



A 2.3 ft (0.7 m)
B 6.6 ft (2.01 m)
C 21.9 ft (6.68 m)
D Maximum Diameter of Motor at Upset: 7.63 in (194 mm)
E Radius of Offset Pad: 3.63 in (92 mm)

Common Top Connection:	4 1/2 REG	4 1/2 IF
	4 1/2 H-90	5 H-90
Common Bottom Connection:	4 1/2 REG	6 5/8 REG

Weight: 1860 lbs (840 kg)

Predicted Build Rates - Degrees/100ft (30m)

Bend Setting	Slick			Single Stabilizer			Two Stabilizers		
	Hole Size			Hole Size			Hole Size		
Deg	8 1/2	8 3/4	9 7/8	8 1/2	8 3/4	9 7/8	8 1/2	8 3/4	9 7/8
0.39	1.5	1.7	1.4	2.8	3.0	3.7	1.8	1.8	1.8
0.78	3.2	2.9	2.8	5.2	5.4	6.1	4.5	4.5	4.5
1.15	6.0	5.4	4.1	7.5	7.6	8.3	7.1	7.1	7.0
1.50	8.6	7.9	5.4	9.6	9.7	10.3	9.5	9.5	9.4
1.83	11.0	10.4	7.6	11.6	11.7	12.3	11.6	11.7	11.7
2.12	13.2	12.5	9.6	13.2	13.5	14.0	13.4	13.5	13.7
2.38	15.1	14.4	11.5	15.1	15.1	15.6	15.1	15.1	15.5
2.60	16.7	16.0	13.1	16.7	16.0	16.9	16.7	16.4	16.9
2.77	18.0	17.3	14.3	18.0	17.3	17.9	18.0	17.3	17.9
2.89	18.9	18.2	15.2	18.9	18.2	18.6	18.9	18.2	18.6
2.97	19.5	18.8	15.8	19.5	18.8	19.1	19.5	18.8	19.1
3.00	19.7	19.0	16.0	19.7	19.0	19.2	19.7	19.0	19.2

Maximum Adjustable Bend Setting For Rotary Drilling - Degrees

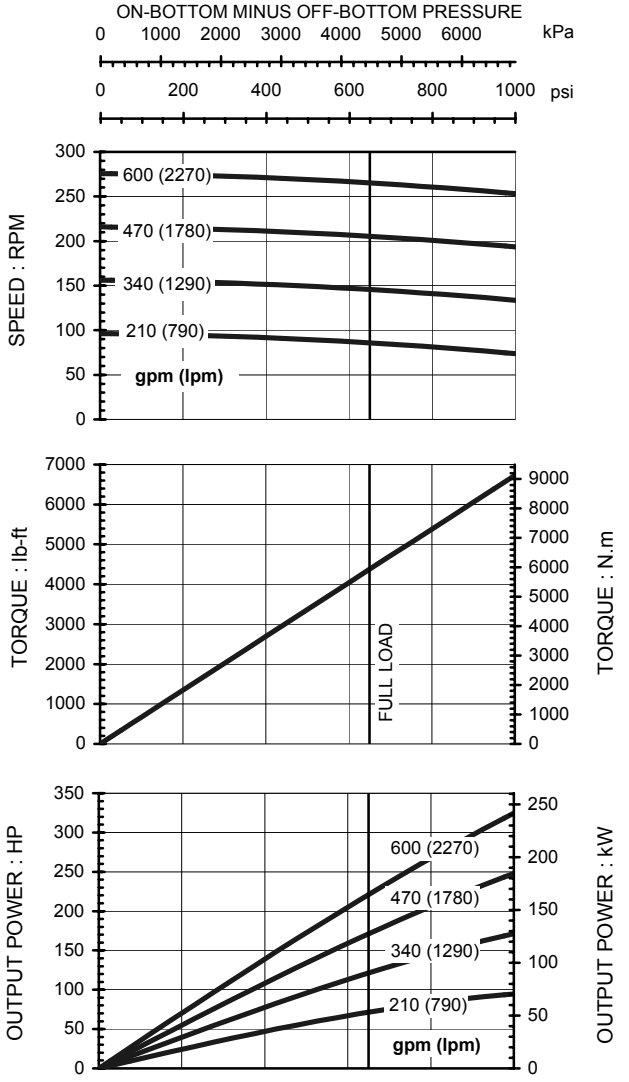
Hole Curvature	Slick			Single Stabilizer			Two Stabilizer		
	Hole Size			Hole Size			Hole Size		
Deg/100ft	8 1/2	8 3/4	9 7/8	8 1/2	8 3/4	9 7/8	8 1/2	8 3/4	9 7/8
0.0	3.00	3.00	3.00	2.60	2.77	2.60	2.38	2.38	2.12
3.5	2.77	3.00	3.00	2.12	1.83	2.12	1.83	1.50	1.50
7.0	2.38	2.60	3.00	1.50	1.50	1.50	1.15	1.15	1.15
10.5	1.83	2.12	2.89	0.78	0.78	1.15	0.39	0.39	0.39
14.0	1.50	1.50	2.38	0.39	0.39	0.39	0.00	0.00	0.00
17.5	1.15	1.15	2.12		0.00	0.00			
21.0	0.78	0.78	1.50						
24.5	0.39	0.39	1.15						
28.0	0.00	0.00	0.78						
31.5			0.39						
35.0			0.00						
38.5									
42.0									

Refer to page 11-1 for guidelines of above table.

6 3/4" 5/6 M/L 5.0 Stage

Specifications based on series 24X motor.

Maximum Pump Rate	600	gpm	2270	lpm
Revolutions per Unit Volume	0.47	rev/gal	0.124	rev/l
Pressure at Full Load	650	psi	4480	kPa
Torque at Full Load	4,380	lb-ft	5935	Nm
Maximum Weight on Bit	122,000	lbs	550	kN
Maximum Pull to Re-Run Motor	277,000	lbs	1250	kN
Pull to Yield Motor	672,000	lbs	3020	kN



1. Total pressure loss through motor with no load is approximately 200 psi (1380 kPa) @ 470 gpm (1780 lpm).
2. Charts show suppliers' data with water @ 68°F (20°C).
3. For temperatures exceeding 140°F (60°C), full load pressure decreases as per Table 5.1, page 5-8.