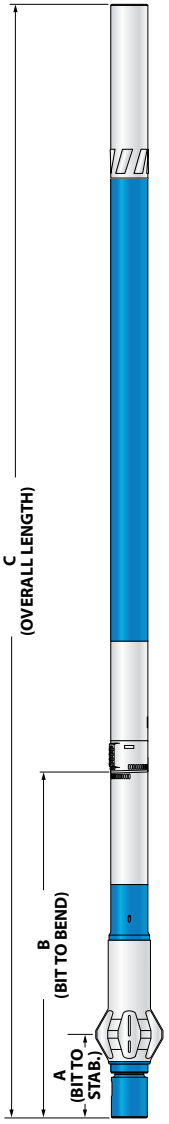
7 in (178mm) 6-7 Lobe 4.6 Stage HR MUD LUBE

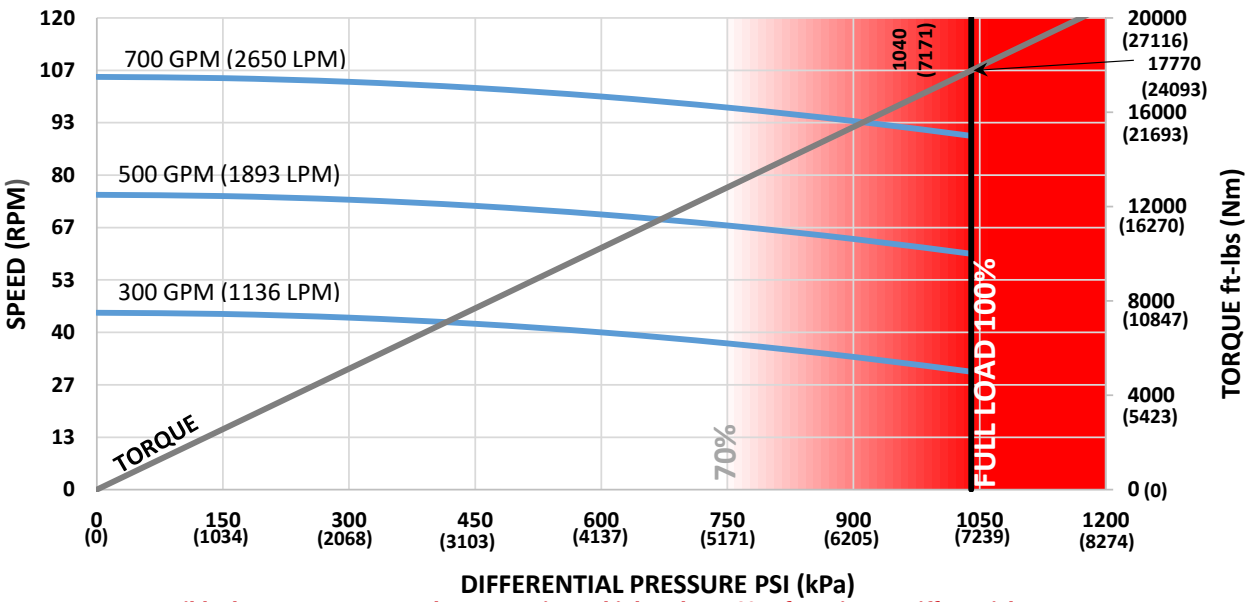


Bit Size Range		8-1/2 - 9-7/8 in	216 - 251 mm
Bit Box Connection		4-1/2 REGULAR	
Dynamic Bearing Load On/Off Bottom		100357 lbf	44600 daN
Static Bearing Load On/Off Bottom		355612 lbf	158200 daN
Max. Overpull (For Re-run)		432800 lbf	192500 daN
Absolute Overpull		721400 lbf	320900 daN
Adjustable Makeup Torque		32000 ft-lbs	43400 Nm
Stab/Thread Protector Makeup Torque		12000 ft-lbs	16300 Nm
A = Bit to Stabilizer (Centre)		20.36 in	0.52 m
B = Bit to Bend	**Adjustable**	65.8 in	1.67 m
	Fixed	54.6 in	1.39 m
C = Overall (With Dump Sub)		428.8 in	10.89 m
Weight		3312 lb	1502 kg

Lobe Configuration	6-7 Lobe 4.6 Stage HR	
Displacement (No Load)	0.15 rev/gal	0.04 rev/l
Max. Differential (Full Load)	1040 psi	7171 kPa
Max. Torque	17770 ft-lbs	24093 Nm
Max. Power	305 HP	227 kW

Flow Rate		**Speed**
GPM	**LPM**	**RPM**
300	1136	30 - 45
500	1893	60 - 75
700	2650	90 - 105

7 in (178mm) 6-7 Lobe 4.6 Stage HR



Possible damage may occur when motor is run higher than 70% of Maximum Differential Pressure.

ADJUSTABLE BUILD RATE

Hole Size	SLICK				STABILIZED			
	8-1/2 (216mm)	8-3/4 (222mm)	9-7/8 (251mm)	9-7/8 (251mm)	8-1/2 (216mm)	8-3/4 (222mm)	9-7/8 (251mm)	9-7/8 (251mm)
BEND ANGLE	Degrees per 100 Feet (30m)				Degrees per 100 Feet (30m)			
0.39	0.7	0.1	-	-	1.9	2.1	2.6	2.6
0.78	3.0	2.4	-	-	4.0	4.1	4.6	4.6
1.15	5.1	4.6	2.1	2.1	5.9	6.0	6.5	6.5
1.50	7.2	6.6	4.2	4.2	7.7	7.8	8.3	8.3
1.83	9.1	8.6	6.1	6.1	9.4	9.5	10.0	10.0
2.12	10.8	10.2	7.8	7.8	10.8	11.0	11.4	11.4
2.38	12.3	11.8	9.3	9.3	12.3	12.3	12.8	12.8
2.60	13.6	13.1	10.6	10.6	13.6	13.4	13.9	13.9
2.77	14.6	14.0	11.6	11.6	14.6	14.3	14.8	14.8
2.90	15.3	14.8	12.4	12.4	15.3	15.0	15.5	15.5
2.97	15.8	15.2	12.8	12.8	15.8	15.3	15.8	15.8
3.00	15.9	15.4	12.9	12.9	15.9	15.5	16.0	16.0

Note: Stabilizers are 1/8" undergage

FBH BUILD RATE

Hole Size	SLICK				STABILIZED			
	8-1/2 (216mm)	8-3/4 (222mm)	9-7/8 (251mm)	9-7/8 (251mm)	8-1/2 (216mm)	8-3/4 (222mm)	9-7/8 (251mm)	9-7/8 (251mm)
BEND ANGLE	Degrees per 100 Feet (30m)				Degrees per 100 Feet (30m)			
1.25	5.4	4.7	1.9	1.9	6.6	6.7	7.2	7.2
1.50	6.8	6.2	3.3	3.3	7.9	8.0	8.5	8.5
1.75	8.3	7.7	4.8	4.8	9.2	9.4	9.8	9.8
2.00	9.8	9.1	6.2	6.2	10.6	10.7	11.2	11.2
2.25	11.2	10.6	7.7	7.7	11.9	12.0	12.5	12.5
2.50	12.7	12.0	9.2	9.2	13.2	13.3	13.8	13.8

This information is for reference only. Build rates are theoretical calculations using three-point geometry and new motor builds. Actual rate predictions will depend on formation characteristics, bit profiles, and WOB.

For custom motor configurations and build rates, please contact your DYNOMAX office.

July 25, 2025

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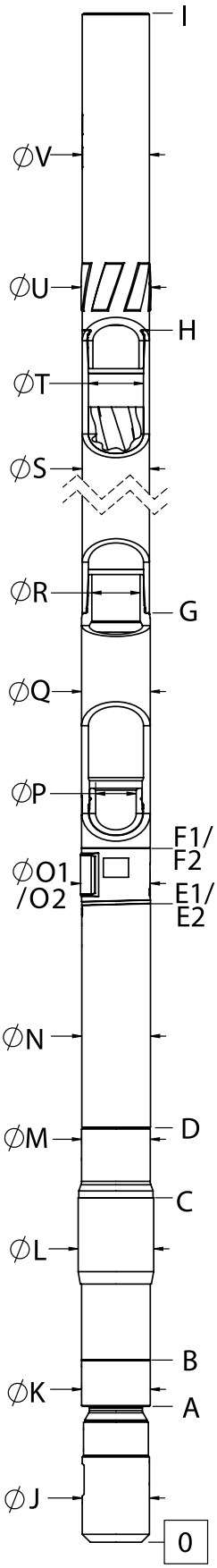
DYNOMAX DRILLING TOOLS INC

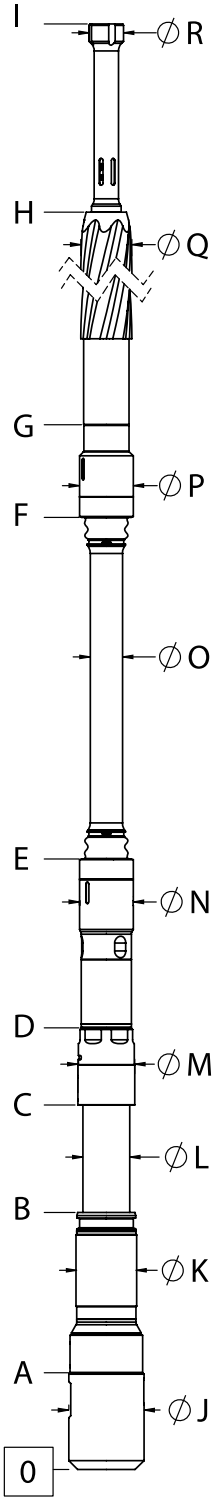
7 in (178mm) 6-7 Lobe 4.6 Stage HR MUD LUBE

FISHING DIMENSIONS

USC - IMPERIAL (Lengths, Diameters = in)
SI - METRIC (Lengths = m, Diameters = mm)



EXTERNALS		USC	SI
LOWER HSG FLOW REST.	A	14.2	0.36
BEARING HOUSING START	B	19.0	0.48
STABILIZER SHOULDER	C	35.9	0.91
BEARING HOUSING END	D	43.2	1.10
BIT TO BEND (ADJUSTABLE)	E1	65.8	1.67
ADAPTOR HOUSING (ADJUSTABLE)	F1	71.3	1.81
BIT TO BEND (FIXED)	E2	54.6	1.39
ADAPTOR HSG (FIXED)	F2	64.7	1.64
STATOR START	G	95.8	2.43
STATOR END	H	395.8	10.05
OVERALL LENGTH	I	428.8	10.89
BIT BOX Ø	J	7.00	177.8
LOWER HOUSING FLOW RESTRICTOR Ø	K	7.15	181.6
THREAD PROTECTOR Ø	L	7.85	199.4
BEARING HOUSING Ø	M	7.15	181.6
KICK OR FIXED HSG Ø	N	7.15	181.6
KICK PAD Ø (ADJUSTABLE)	O1	7.38	187.5
KICK PAD Ø (FIXED)	O2	7.38	187.5
ADJ MANDREL PIN Ø	P	4.22	107.2
ADAPTOR HOUSING Ø	Q	7.15	181.6
ADAPTOR HOUSING PIN Ø	R	5.035	127.9
STATOR TUBE OUTER Ø	S	7.00	177.8
STATOR TUBE INNER Ø	T	5.75	146.1
ROTOR CATCH SUB BLADE Ø	U	7.25	184.2
ROTOR CATCH Ø	V	7.00	177.8



INTERNALS		USC	SI
BIT BOX	A	9.0	0.23
LOWER SHAFT FLOW RESTRICTOR DIAMETER	B	23.9	0.61
COMPRESSION NUT	C	33.9	0.86
BEARING ASSEMBLY ADAPTOR	D	41.1	1.04
BAA ADAPTOR CAP	E	56.8	1.44
ROTOR ADAPTOR CAP	F	88.6	2.25
ROTOR START	G	97.2	2.47
ROTOR	H	390.2	9.91
CATCH STEM	I	407.7	10.36
BIT BOX Ø	J	7.00	177.8
FLOW RESTRICTOR Ø	K	5.50	139.7
MANDREL Ø	L	4.36	110.7
COMPRESSION NUT Ø	M	5.30	134.6
BEARING ASSEMBLY ADAPTOR Ø	N	5.00	127.0
DRIVESHAFT Ø	O	3.00	76.2
ROTOR ADAPTOR Ø	P	5.00	127.0
ROTOR MAJOR Ø	Q	4.83	122.7
ROTOR CATCH HEAD Ø	R	3.19	81.0

This information is for reference only. Assemblies are displayed in an "Adjustable Configuration"

Rotor Catch and Rotor Catch Float Sub Lengths may vary based on configuration, and use of Dump Subs or combination Rotor Catch and Float Housings.

If any additional information is required, please contact your local DYNOMAX office.

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