



DYNOMAX  
DYNOMAX  
DYNO-JAR™  
DYNOMAX  
DYNOMAX

MUD MOTORS  
SHOCK SUBS  
HYDRA-MECH  
SLIDE REAMERS  
REGULATORS

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# OPERATIONS MANUAL and TOOL SPECIFICATIONS

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***4th Edition***

Operations Manual: Revision 2026.06.24

**(BACK OF COVER)**



# OPERATIONS MANUAL *and* TOOL SPECIFICATIONS - 4th Edition

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### **Mission Statement**

***DYNOMAX*** Drilling Tools is committed to providing the highest quality of downhole tools with superior customer service to the industry.

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# INTRODUCTION

**DYNOMAX Drilling Tools Inc.** presents its 4th edition of the Operations Manual and Tool Specifications. Changes and revisions include:

- Updated and Expanded Motor Operations
- Addition of Small Diameter 2-3/8" - 3-1/2" Motors
- Addition of Mud Lubricated Motor Product Line
- Addition of Regulator Product Line
- Addition of Grease Filled End Cap Leaking Section
- Added Shock Tool Operating Charts
- Updated Motor Connection Torques
- Updated Motor Fishing Dimensions Layout
- Various Additional Power Sections Added
- Corrected Reamer Fishing Dimensions

The **DYNOMAX** Drilling Tools line of quality products includes Drilling Motors, Shock Subs, hydraulic mechanical drilling Jars, Slide Reamers and Regulator Subs. Our Goal is to supply an assortment of quality downhole drilling tools designed to withstand today's harsh drilling conditions at an economical cost to our global customers.

This handbook is designed to demonstrate our current Drilling Tool Products, and outline the basic procedures and guidelines for the operation of our downhole drilling tools.

The manual is divided into sections featuring:

- **DYNOMAX** Oil Sealed Motor
- **DYNOMAX** Mud Lubricated Motor
- **DYNOMAX** Shock Sub
- **DYNO-JAR™** Hydraulic Mechanical Drilling Jar
- **DYNOMAX** Slide Reamer
- **DYNOMAX** Regulator™

**DYNOMAX Drilling Motors** provide exceptional power, performance, durability and cost-effectiveness through the use of innovative technology, as well as premium materials, coatings, seals and bearings.

The **DYNOMAX** oil sealed bearing assembly incorporates flow restrictor technology that reduces the pressure within the bearing assembly to a near-balanced condition, reducing pressure across the rotary seals, thereby extending seal life. The flow restrictor is located above the bearing assembly and allows approximately 5% of the drilling fluid to exit the assembly into the annulus, reducing internal pressure.

The **DYNOMAX** oil sealed bearing assembly utilizes the patented Kalsi Rotary Seal - a seal that has been successfully proven in downhole drilling applications for over 30 years.

All thrust bearings in the **DYNOMAX** assembly are custom-made, allowing **DYNOMAX** to maximize load capacity while not being restricted by the availability of bearings.

Incorporating the latest in radial bearing technology allows **DYNOMAX** to increase the cross-sectional area of walls, and reduce the amount of moving parts. This in turn allows **DYNOMAX** to increase the size of the internal drive line to handle an increased torque now required in today's drilling operations (I.e. Extended, Even Wall, and Hard Rubber power sections).

The **NEW DYNOMAX** mud lubricated bearing assembly offers an additional option for directional drillers. Utilizing the same driveshaft and adjustable assemblies as the oil sealed bearing assemblies, The Mud lubricated motor offers a High Strength Mandrel, with double shoulder internal connections. Carbide bearings support the radial loads, while a custom manufactured ball stack supports the thrust load. The Bearing Section bypasses approximately 10% of the flow to allow for proper cooling and lubrication of the bearings, this can be tuned by using a removable nozzle that is installed in the bit box of the mandrel for easy installation/removal.

The DYNOMAX bearing assembly is designed to accommodate the use of various sizes and styles of screw-on stabilizers and kick pads (near bit) which may be required in some drilling applications.

The DYNOMAX splined (gear) drive assembly (universal joint) is specially designed to distribute even load over the splines to transmit balanced torque with reduced vibration.

The DYNOMAX adjustable bent housing assembly is surface-adjustable with settings from 0° to 3° in thirteen (13) increments. The optional fixed bent housings allow for higher build-up rates (BUR) due to shorter bit-to-bend (BTB) as well as increased bending strength.

All critical components of DYNOMAX motors are manufactured from high strength alloy steel. These components are delivered with mill certificates verifying the properties of the steel, which provides traceability through Quality Assurance numbers applied to the individual parts.

**DYNOMAX Shock Subs** range in size from 2 $\frac{7}{8}$ " (79 mm) through 14" (356 mm) O.D. The DYNOMAX Shock Sub contains a series of disc springs designed to cushion the axial loading and maintain a constant weight on bit. This helps reduce drill bit vibration, extends drill-string life and bit life. DYNOMAX Shock Subs have been utilized reliably with multiple friction-reduction systems, with consistent, proven results. Optional configurations are available for light-duty applications where lower compression is needed.

**DYNOMAX DYNO-JAR™** is a Hydraulic Mechanical Drilling Jar. It incorporates a mechanical latch assembly that holds the tool in a neutral position and prevents unexpected jarring during tripping or drilling operations. The **DYNO-JAR™** also features a hydraulic metering valve that creates a time delay when the jar is in operation.

All **DYNOMAX DYNO-JAR™** drilling jars feature the latest in 'performance design'. **DYNO-JARS** have been designed to maximize oil flow to the top of the tool, which will not only increase jarring impact with lighter pull on drill string, but it also increases safety as there is no need to have excessive overpull by the drilling rig. The longer stroke length compared to most drilling jars maximizes jarring impact and increases the overall drill string movement. Pressure compensation at the top and bottom of the tool increases jarring impacts because internal pressure can not buildup. This pressure compensation also increases seal life due to zero pressure differential, while also minimizes pump-open force giving a more accurate pull calculation. The high-strength latch assembly gives better jarring repeatability, and the improved **DYNO-JAR™** latch design provides better wear characteristics which provide longer life in extended jarring operations. Large oil reservoirs provide excellent lubrication during operation and help cool the jar components during use. **DYNOMAX DYNO-JAR™** drilling jars are designed to fit most mouse holes for ease of connection with drill strings.

The **DYNOMAX Slide Reamer** utilizes an integral blade design that provides 360 degree wall contact. The tool is designed to ream/condition while in a slide operation (tripping in and out of the hole) as well as rotating. The tool also helps to reduce torque & drag by eliminating formation ledges, reducing surface contact, and improving hole quality all while aiding in removing cuttings from the well. The Slide Reamer is also available in Non-Mag bodies for use next to MWD/LWD tools.

The **DYNOMAX Regulator™** employs a variable size exit orifice to actively moderate the flow that goes through the motor continuously – extra fluid is vented out the side. The extra flow in the wellbore helps escalate cuttings up the annulus. The exit orifice is controlled by a valve that measures the flow entering the motor. The valve mechanism responds in milliseconds so that flow to the motor is always regulated. This can result in optimal motor performance, less stator failures, and saved time.

The Completion Line of the **Regulator™** (2-1/8" - 3-1/8") are often used in conjunction with friction breaking tools on coil tubing strings. They allow maximum flow through the friction breaking tool which increases ROP, and protect the motor from overflow and excessive wash. Hit harder and mill faster with no complicated procedures to turn on and off your circulating sub, or the need to drop balls or darts for activation.

The Drilling Line of the **Regulator™** (4-3/4" - 8") are most commonly used when a Rig's Pressure Limit is being exceeded or when adequate hole cleaning cannot be achieved at the Motors maximum flow rate. The Regulator allows the operator to have a high annulus velocity around the drillpipe, while reducing the pressure drop across the more restrictive BHA components. Prepare to reach depths not previously thought possible!

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**DYNOMAX** Drilling Motors are designed for use in various drilling and remedial work applications in the Oil & Gas Industry, as well as the HDD Industry (Utility and River Crossing). The **DYNOMAX** Mud Motor currently ranges in size from 2 3/8" (60 mm) through 11 1/4" (286 mm) with a variety of rotor and stator configurations, allowing our clients the versatility of matching the motor to specific drilling applications.

Applications include Directional and Horizontal drilling, Performance drilling (used on Drilling Rigs as well as Coiled Tubing), Coring, Reaming, Well Servicing and Completions.

When selecting the correct motor and configurations for the application, it is important to consider hole size, drilling fluid, hole temperature, well profile and bit selection.

### **RUNNING IN THE HOLE**

When running in the hole, the traveling speed of the drillstring should be controlled to avoid contact with B.O.P.'s, wellheads, casing shoes, etc., and in open hole for any suspected tight spots, ledges or excessive dog legs.

If tight spots are encountered and reaming is required, the motor should be run at minimum specified flow rates and minimum drillstring rotation.

Reduce the rate of running in the hole when approaching bottom so the motor does not run into solid cement or the bottom of the hole. Settled solids at the bottom of the hole are common and can cause unexpected bit or motor damage.

Before tagging bottom, start the pumps and slowly raise flow rates to planned operation specifications, then slowly lower the assembly to apply Weight On Bit (WOB). Adding WOB increases pump pressure.

\*\* Always start pumps and break circulation prior to rotating drillstring and applying WOB (tagging bottom).

It is recommended to run the motor and drill bit for 10-15 minutes at reduced operating parameters, then slowly increase WOB until designed operations are achieved.

Be aware of motor specifications and parameters to avoid exceeding Maximum Differential Pressure (Full Load). By exceeding recommended parameters, one may cause the motor to stall. If motor stalling occurs, the following procedure should be applied:

- Stop all drillstring rotation immediately. Continued rotation will only increase torque in the assembly and cause severe power section (stator) damage.
- Use the brake to slowly release torque in the drillstring as back offs may occur.
- Throttle the pumps back to release pressure before lifting Off-Bottom.
- Once you have lifted the drill bit off-bottom, gradually increase your pumps to original flow rates and continue drilling.

\*\* Differential pressure is created by adding WOB. Once the pumps are started and desired flow rates are achieved, standpipe pressure will have increased. As the motor is slowly lowered (adding WOB) the pressure will increase: this is what is known as Differential Pressure. The maximum pressure allowed across the motor depends on motor size and configuration which are provided in this handbook.

# MOTOR OPERATIONS

## ROTATING THE MOTOR

Straight/Lateral Section Rotary RPM Limits												
Motor Setup	Bend Angle- Adjustable								Bend Angle- Fixed Bend			
	0	0.39	0.78	1.15	1.50	1.83	2.12	2.38 & Larger	1.25	1.50	1.75	2.00
<b>Slick</b>	100	80	80	80	70	60	30	--	75	70	60	45
<b>1 Stabilizer</b>	100	80	80	80	70	60	--	--	75	70	60	--
<b>2 Stabilizers</b>	100	80	80	80	60	--	--	--	75	70	--	--

Curved Section Rotary RPM Limits												
Motor Setup	Bend Angle- Adjustable								Bend Angle- Fixed Bend			
	0	0.39	0.78	1.15	1.50	1.83	2.12	2.38 & Larger	1.25	1.50	1.75	2.00
<b>Slick</b>	80	80	60	60	50	40	30	--	55	50	40	35
<b>1 Stabilizer</b>	80	80	60	60	50	40	--	--	55	50	40	--
<b>2 Stabilizers</b>	80	80	60	60	40	--	--	--	55	40	--	--

**Note:** Sections marked "--" are bend settings where rotation is not recommended. If the motor must be rotated at the higher bend settings the RPM should be below 30 rpm and housing failure may occur.

Rotary drilling with a bent motor can benefit drilling performance with reduce drag, improved hole cleaning, and increased ROP; however, rotating a bent motor creates high bending stress which can lead to fatigue failure of the motor. The life expectancy will exponentially decrease with increased bend settings and increased hole curvature. To mitigate bending fatigue, lower bend settings are suggested as well as limiting rotation in the curve sections. Dynamax does not recommend rotating a motor with a bend setting above  $1.83^{\circ}$ .

The charts above display the maximum theoretical allowable rotation for optimal hole conditions. The RPM limits should be reduced further when operating with high vibration, high rotary torque, poor hole quality, high WOB, stick slip, and hard stall events. Alternating between rotating and sliding can create micro doglegs which increase bending stress and should be taken into account when selecting rotary RPM. Hole size and stabilizer gauge size should also be taken into consideration, rotating bend settings above  $1.50^{\circ}$  in a tight hole is not recommended (i.e. 6 ½ motors in a 7 ⅞" hole, 9 ⅝ motors in a 12 ¼" hole). Dynamax recommends running flexed top subs (See page 248) and flex collars to reduce bending stress.

When reaming, circulating/rotating in open hole, or backreaming the maximum allowable rotation in the charts should be decreased by 50% and the flow rate should be reduced by at least 30%. Operating a motor in tension while backreaming can accelerate fatigue damage and should be avoided if possible.

Note that while in a lateral, off-bottom circulating coupled with drillstring rotation (such as a clean out cycle) can cause the bearing to shift into neutral position. This can potentially lead to premature bearing failure and should be avoided if possible. Consider running the clean out cycle while on bottom with a small amount of weight.

# MOTOR OPERATIONS

## DRILLING FLUIDS

Some drilling fluids and additives may be harmful to the stator elastomers of the power section, as well as the rotor and other components in the motor.

Care should be taken in selecting the power section best suited for drilling operations.

Factors to consider are:

- The pH of the fluid. A drilling fluid too acidic (pH < 4) or too basic (pH > 10) may result in damage to the power section, as well as some components of the lower bearing assembly.
- If using acid-based fluids, the motor should be properly flushed when tripped out and sent for service as soon as possible.
- Solids should be controlled at all times and sand content should be kept to a minimum and should not exceed 3%. Drilling fluids exceeding 3% will cause excessive erosion resulting in reduced rotor and stator life, as well as washing of internal bearing assembly components.
- In general, it is advisable to have less than 2.5 lbs of Lost Circulation Material (LCM) per barrel. Dynamax does not currently have an upper limit for High Gravity Solids (HGS). Dynamax recommends that the Low Gravity Solids (LGS) are kept below 6%.
- When drilling with fluids containing a chloride concentration over 30,000 ppm, the motor must be properly flushed and serviced as soon as possible, as acids are formed increasing the corrosion of the internal motor components.
- The average run time of a motor is not long enough to see damage caused by H<sub>2</sub>S (Hydrogen Sulfide). However, extended runs with high concentrations of H<sub>2</sub>S may cause damage to the stator elastomer and steel components. Dynamax does not recommend using drilling fluids with H<sub>2</sub>S concentrations >2%.
- If the above recommendations cannot be followed, the risk of erosion of motor components is increased. Therefore it is recommended that the length of the run be shortened to avoid early motor failure.
- Oil-based drilling fluids can be used, but will cause the elastomers in the stator to swell. It is recommended to reline after each run, as the swelling will lead to higher compression which in turn leads to a heat buildup, eventual chunking of the stator, and motor failure.

## DOWNHOLE TEMPERATURES

- Elastomers used in standard power sections are designed to operate in temperatures up to 116°C (240°F). If the operating temperature is expected to exceed these limits, then an oversized power section should be considered. 'Oversized power section' means the rotor and stator has more clearance, compensating for the elastomer to swell.

\*\*\* Note of Caution \*\*\* If for some reason the downhole temperature does not get hot, then the stator will not swell and motor will have NO operating torque.

- It is also recommended to reline the stator if run in high temperature wells for any extended period of time.
- It is recommended that you reduce your operating differential pressures when working in elevated temperature conditions.
- When running a motor in the hole on hot temperature wells, periodic stops should be considered, circulating until reduced temperature fluid passes through the motor should commence prior to reaching 100° C (212° F).
- Continuous circulation normally maintains the mud system at reduced temperatures, so periods of no circulation should be held to a minimum.

\*\*\* Note \*\*\* If running in high temperature wells on coiled tubing, flow rates should be held to a minimum.

## **PULLING OUT OF THE HOLE TO LAY DOWN MOTOR**

It is good practice to circulate off-bottom and remove cuttings prior to tripping out of the hole. Caution should be taken when retrieving a bent motor/drilling assembly through B.O.P.'s.

Once on surface, it is good practice to flush the motor with fresh water by: holding the bearing housing above the bit box, rotating the bit box clockwise, while at the same time running water through to top of the motor. After a few minutes, stop the water flow; and continue rotating driveline until fluid stops flowing though the bit box. Caution should be taken when rotating the bit box (should turn relatively easily), if bit box does not turn freely, discontinue operation as this could cause internal connections to back off.

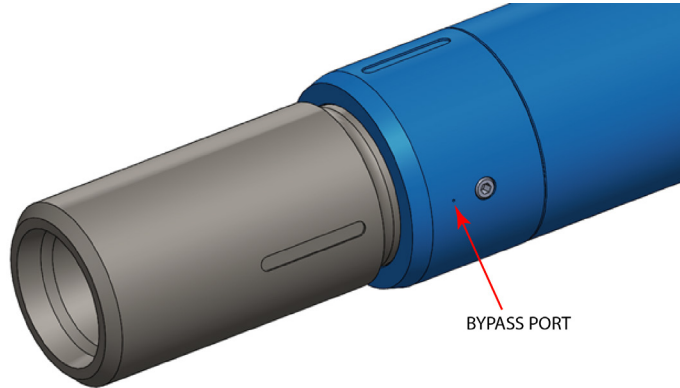
If motor is being laid down and considered for a re-run, it is essential to clean around the seal area near the bit box as well as the flow holes in the Piston Housing (Located approximately 2-3 feet [0.6 - 1.0m] above the bit box).

For rerunning in cold weather it is recommended to ensure the sealing areas are free of debris. Fluid can freeze in these areas, resulting in seal damage or stator damage if circulated through. The sealing areas and power section should be thawed prior to running in hole and circulated through.

When running in cold temperatures, common practice is to steam the motor prior to running in hole. Ensure that the resulting temperature is not hot enough to damage the seals or stator rubber.

### GREASE FILLED END CAP LEAKING

In motors that use the grease filled end cap, there is a bypass port in the End Cap that may leak when visually inspecting the tool. Prior to operation there should not be any oil leaking from the bypass port, but there may be some grease that has extruded from the opening. After the run it is common to see a small amount of oil leak from the bypass port from the Kalsi seal pumping action in operation.



## BEARING PLAY - SERIES 1/2/3

The DYNOMAX Motor is a sealed bearing system that incorporates the use of a flow restrictor to help balance the pressure across the seals. There should be minimal play in the stack when set down at surface. If checked when tripping out of the hole and prior to re-run, motors with more than the following end play as shown in the table below should be laid down and returned for service.

Motor Size and Series	Max End Play
2 3/8" S1	0.120" (3.05 mm)
2 7/8" S2	0.125" (3.18 mm)
3 1/8" S1	0.200" (5.08 mm)
3 3/8" - 3-1/2" S1	0.085" (2.16 mm)
3 3/4" S1	0.175" (4.45 mm)
5" S1	0.170" (4.32 mm)
5" S2	0.335" (8.51 mm)
5 1/2" S1	0.255" (6.48 mm)

Motor Size and Series	Max End Play
6 1/2" - 6 3/4" S1	0.220" (5.59 mm)
6 1/2" - 6 3/4" S3	0.300" (7.62 mm)
7" S1/S2	0.210" (5.33 mm)
7" S3	0.360" (9.14 mm)
8" S1/S2	0.210" (5.33 mm)
9 5/8" S1	0.235" (5.97 mm)
11 1/4" S1	0.215" (5.46 mm)

## BEARING PLAY - MUD LUBE

The DYNOMAX ML Series Motor is a Mud Lubricated bearing system that incorporates a ball style thrust stack. There should be minimal play in the stack when set down at surface. If checked when tripping out of the hole and prior to re-run, motors with more than the following end play as shown in the table below should be laid down and returned for service.

Motor Size and Series	Max End Play
4-3/4" Mud Lube	0.150" (3.81 mm)
5-1/4" Mud Lube	0.150" (3.81 mm)
6-1/2" Mud Lube	0.194" (4.93 mm)
7" Mud Lube	0.184" (4.67 mm)
8" Mud Lube	0.200" (5.08 mm)
9-5/8" Mud Lube	0.184" (4.67 mm)
11-1/4" Mud Lube	0.220" (5.59 mm)

## VIBRATIONS

Excessive vibrations will cause severe damage to the motor and other BHA components, affecting the life of all BHA components, connection strength, and reduces drilling performances.

Oftentimes, vibrations are caused by various factors such as poor drilling practices, incorrect bit and stabilizer selection, lack of BHA stabilization, reaming/back-reaming, and formation hardness. Excessive and severe vibrations may result in fatigue to body connections, leading to fatigue cracks and connections backing off, excessive wear to internal bearings. The values for vibrations are not typically published as what is acceptable as vibrations will vary based on formation, drill bit types, and BHA contact points. These values are recommended values of what is acceptable for one type of drilling operations and may not work with another.

**Torsional Vibration (Stick-Slip):** Due to the nature of Torsional Vibration, Dynamax does not have a limit on Stick Slip. Torsional Vibration is typically defined as a ratio of the change in speed divided by the average speed. As a result, normal small vibrations form the bit may register the same as a large stick slip event where the motor has a "micro-stall"

**Lateral Vibration (Bit/BHA Whirl):** Maximum peak Lateral Vibration: 50 g

**Axial Vibration (Bit Bounce):** Maximum peak Axial Vibration: 50 g

## SELECTING MUD LUBRICATED MOTOR ORIFICE

DynoMax Mud Lubricated motors are equipped with a orifice in order to ensure that adequate flow is diverted through to the bearings during flow testing and in operation. The Orifice is located in the bit box of the Mandrel, and can be removed/changed prior to bit installation without disassembling any other part of the tool.

In order to achieve optimal flow through the bit and still maintain adequate cooling and lubrication of the bearings, the proper orifice must be selected from the table on the following page. Each orifice is appropriate for a wide range of flow, allowing the driller freedom to modify flow rates mid run without having to trip to change the orifice.

Note that the ranges listed are for conventional applications, if running the motor above an RSS tool further parameters will be required in order to select an appropriate orifice. If running a unique or non-standard application, and Mud Weight, Viscosity, Flow Rates, Bit Total Flow Area, and Tool Pressure Drops are known, then DynoMax ([Engineering@Dynomax.ca](mailto:Engineering@Dynomax.ca)) can provide orifice sizing recommendations, bypass rates, and pressure drops.

Since a Mud Lubricated Bearing Pack requires flow to cool the motor, it is not recommended to rotate the motor without circulation. This could cause excessive heat to build up in the Bearing Pack.

Size	Makeup Torque [ft-lb]	Flow Range [gpm]	Oil Based Mud		Water Based Mud	
			Nozzle Size [in]	Part Number	Nozzle Size [in]	Part Number
650	1000	400-600	7/8	ML-01-650-014A	1-1/8	ML-01-650-014C
		550-700	1	ML-01-650-014B	1-1/4	ML-01-650-014D
700	1000	400-600	7/8	ML-01-700-014A	1-1/8	ML-01-700-014C
		550-750	1	ML-01-700-014B	1-1/4	ML-01-700-014D
800	1000	600-850	1	ML-01-800-014A	1-1/4	ML-01-800-014B
		700-1000	1-1/4	ML-01-800-014B	1-1/2	ML-01-800-014C
962	2000	1000-1400	1-1/4	ML-01-962-014A	1-3/4	ML-01-962-014C
		1200-1600	1-1/2	ML-01-962-014B	2	ML-01-962-014D
1125	2000	1200-1600	1-3/4	ML-01-1125-014A	2	ML-01-1125-014B
		1400-1800	2	ML-01-1125-014B	2-1/4	ML-01-1125-014C

# MOTOR OPERATIONS

## READING POWER SECTION CHARTS

The following values define the recommended operating parameters and relationships:

**No Load:** When the motor is in the off-bottom position, with no weight on bit.

**Full Load:** When the motor is in the on-bottom position, and weight on bit is applied.

**Differential Pressure:** The difference in system pressure between No Load and Full Load positions. (*Horizontal axis at bottom*)

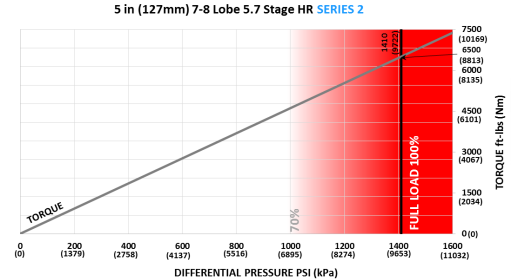
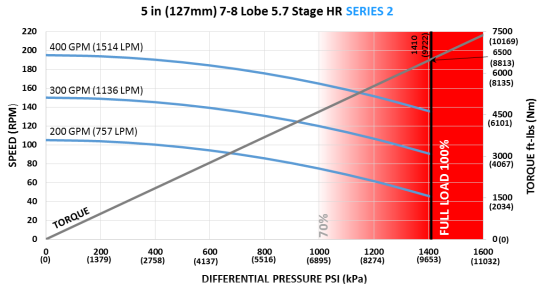
**Max Differential Pressure:** The maximum operating differential pressure including pressure losses across the tool. The value indicated in the chart and table is based on water at 70°F (21°C) and optimum power section fit. Deviations in fluid density, operating temperatures, and operating conditions should be considered and the maximum differential pressure value should be scaled accordingly. (*Vertical black line indicated by the FULL LOAD 100%*)

**Displacement:** The number of rotor revolutions per unit of volume when no load is applied.

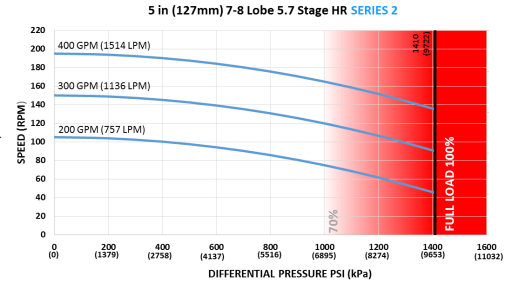
**Power:** The power output of the power section is determined by the torque output and speed parameters that the motor is operating at and can be determined by the calculation below.

$$HP = \frac{RPM \times Torque}{5250} = \frac{178 \text{ RPM} \times 3688 \text{ ft-lb}}{5250} = 125 \text{ HP}$$

The power section charts given are made up of two separate charts: a Torque Chart and a Speed Chart.



Torque Chart (See page 28)



Speed Chart (See page 29)

## READING POWER SECTION CHARTS - TORQUE

### Torque:

The torque output of the power section has a linearly increasing relationship with the differential pressure applied. An increase in differential pressure will increase the torque up to the MAXIMUM DIFFERENTIAL PRESSURE line. *(Grey sloped line with designation 'TORQUE')*

### Max Torque:

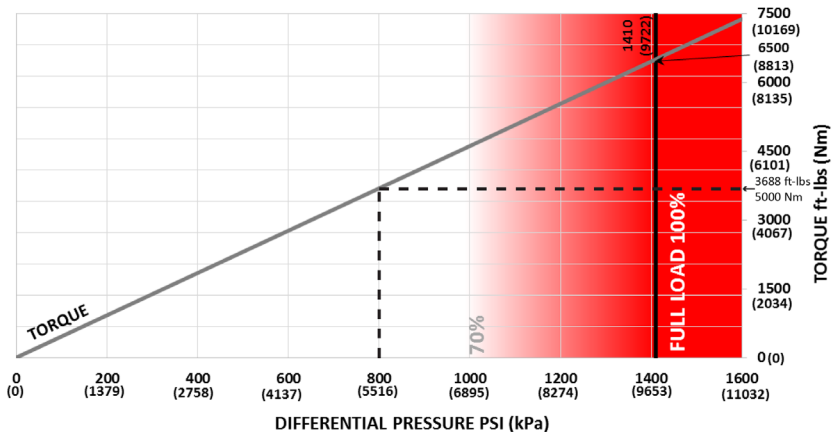
The maximum torque that can be achieved when MAXIMUM DIFFERENTIAL PRESSURE is applied. *(Grey line intersects the black line – read to the right vertical axis)*

### How to Read Chart:

Determine the differential pressure of the system and determine the torque value at this differential pressure

(Ex. 800 psi = 3688 ft-lbs)

5 in (127mm) 7-8 Lobe 5.7 Stage HR **SERIES 2**



## READING POWER SECTION CHARTS - SPEED

### Flow Rate:

The charts and tables indicates the minimum, middle and maximum recommended flow rates for the power section. (*Blue curved lines*)

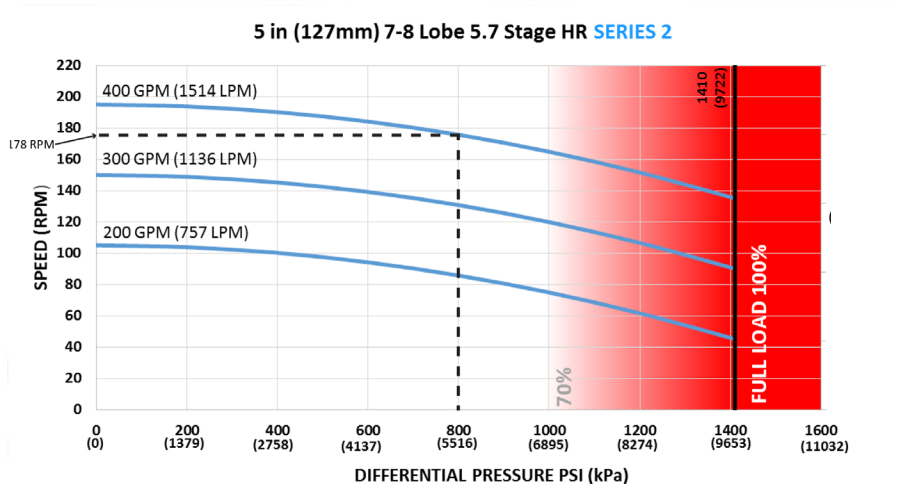
### Speed:

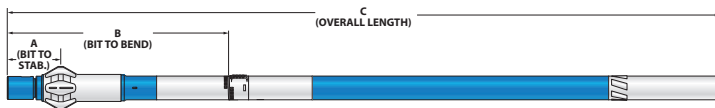
The charts and tables demonstrate the relationship between speed and differential pressure. For each flow rate, the curve displays how the speed is reduced as the differential pressure is increased. (*Left vertical axis*)

### How to Read Chart:

Determine the differential pressure of the system and the flow rates. Use these values to determine the speed output

(Ex. 800 psi and 400 GPM = 178 RPM)

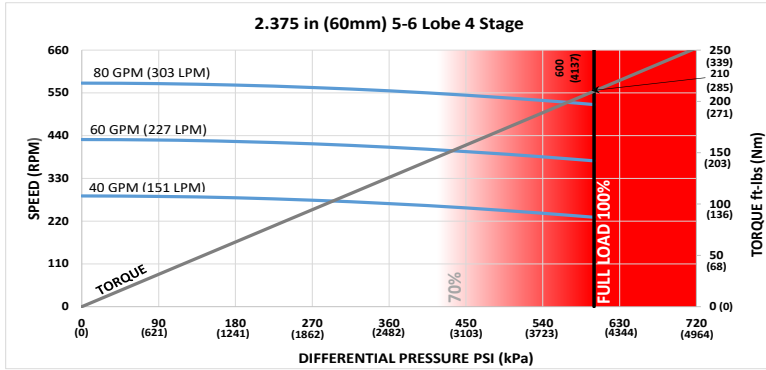




<b>Bit Size Range</b>	3 - 3-1/2 in	76 - 89 mm
<b>Bit Box Connection</b>	1-1/2 REGULAR	
<b>Dynamic Bearing Load On/Off Bottom</b>	8800 lbf	3900 daN
<b>Static Bearing Load On/Off Bottom</b>	21300 lbf	9500 daN
<b>Max.Overpull for Re-run</b>	20000 lbf	8900 daN
<b>Absolute Overpull</b>	118000 lbf	52500 daN
<b>Adjustable Make Up Torque</b>	1600 ft-lbs	2200 Nm
<b>A = Bit to Stabilizer (center)</b>	--	--
<b>B = Bit to Bend</b>	<b>Adjustable</b>	35 in / 889 mm
	<b>Fixed</b>	--

2-3/8 in (60 mm) 5-6 Lobe 4.0 Stage SERIES 1	31
2-3/8 in (60 mm) 5-6 Lobe 4.0 Stage HR SERIES 1	32
2-3/8 in (60 mm) 7-8 Lobe 4.0 Stage SERIES 1	33
2-3/8 in (60 mm) 7-8 Lobe 4.0 Stage HR SERIES 1	34

# 2-3/8 in (60 mm) 5-6 Lobe 4.0 Stage SERIES 1



<b>Lobe Configuration</b>	5-6 Lobe 4.0 Stage	
<b>Displacement</b>	7.18 rev/gal	1.9 rev/l
<b>Max Differential @ No Load</b>	600 psi	4137 kPa
<b>Max Torque @ No Load</b>	210 ft-lbs	285 Nm
<b>Max Power</b>	21 HP	16 kW
<b>C = Overall Length</b>	130.4 in	3312 mm
<b>Weight</b>	172 lbs	78 kg

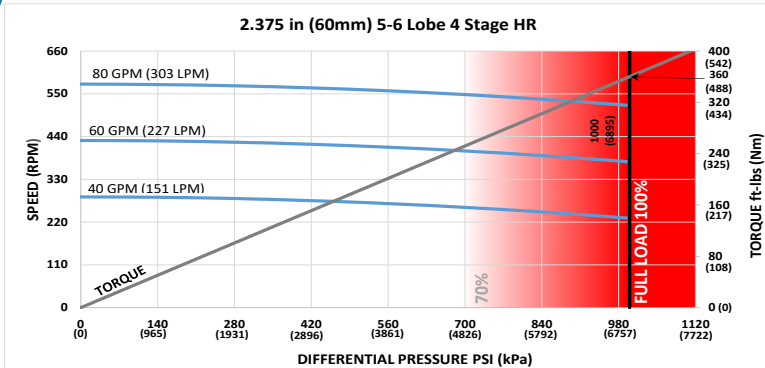
Flow Rate		Speed
GPM	LPM	RPM
40	151	230 - 285
60	227	375 - 430
80	303	520 - 575

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK		
	3 (76mm)	3-1/8 (79mm)	3-1/2 (89mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)		
<b>0.39</b>	2.7	1.1	-
<b>0.78</b>	10.0	8.3	3.4
<b>1.15</b>	16.9	15.3	10.4
<b>1.50</b>	23.4	21.8	16.9
<b>1.83</b>	29.6	28.0	23.1
<b>2.12</b>	35.0	33.4	28.5
<b>2.38</b>	39.9	38.3	33.4
<b>2.60</b>	44.0	42.4	37.5
<b>2.77</b>	47.2	45.5	40.6
<b>2.90</b>	49.6	48.0	43.1
<b>2.97</b>	50.9	49.3	44.4
<b>3.00</b>	51.5	49.8	44.9

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.



<b>Lobe Configuration</b>	5-6 Lobe 4.0 Stage HR	
<b>Displacement</b>	7.18 rev/gal	1.9 rev/l
<b>Max Differential @ No Load</b>	1000 psi	6895 kPa
<b>Max Torque @ No Load</b>	360 ft-lbs	488 Nm
<b>Max Power</b>	36 HP	27 kW
<b>C = Overall Length</b>	130.4 in	3312 mm
<b>Weight</b>	172 lbs	78 kg

Flow Rate		Speed
GPM	LPM	RPM
40	151	230 - 285
60	227	375 - 430
80	303	520 - 575

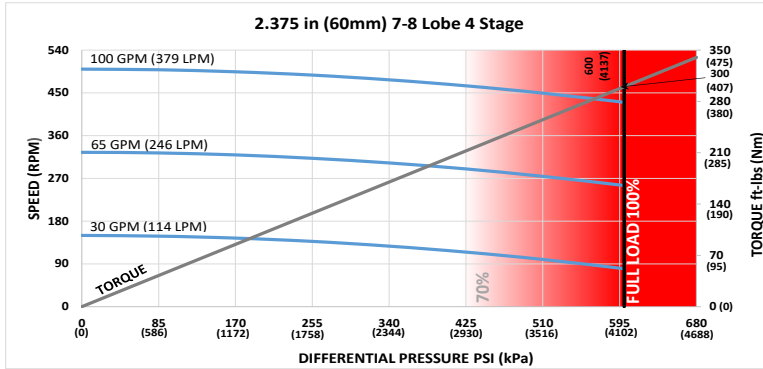
**Possible damage may occur when motor is run higher than 70% of Maximum Differential Pressure.**

### ADJUSTABLE BUILD RATE:

Hole Size	SLICK		
	3 (76mm)	3-1/8 (79mm)	3-1/2 (89mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)		
<b>0.39</b>	2.7	1.1	-
<b>0.78</b>	10.0	8.3	3.4
<b>1.15</b>	16.9	15.3	10.4
<b>1.50</b>	23.4	21.8	16.9
<b>1.83</b>	29.6	28.0	23.1
<b>2.12</b>	35.0	33.4	28.5
<b>2.38</b>	39.9	38.3	33.4
<b>2.60</b>	44.0	42.4	37.5
<b>2.77</b>	47.2	45.5	40.6
<b>2.90</b>	49.6	48.0	43.1
<b>2.97</b>	50.9	49.3	44.4
<b>3.00</b>	51.5	49.8	44.9

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.

## 2-3/8 in (60 mm) 7-8 Lobe 4.0 Stage SERIES 1



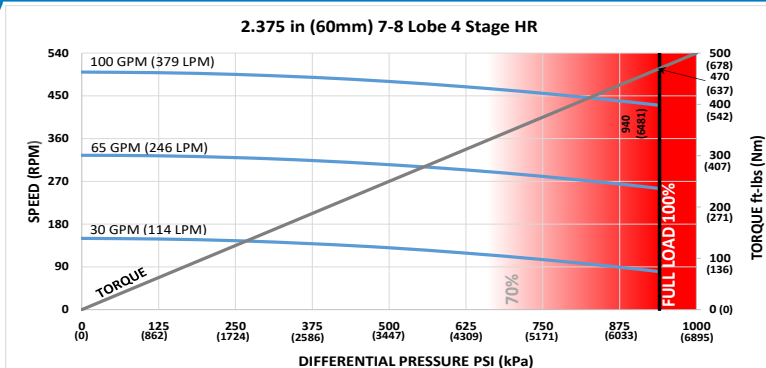
Lobe Configuration	7-8 Lobe 4.0 Stage		Flow Rate		Speed
Displacement	5.03 rev/gal	1.33 rev/l	<b>GPM</b>	<b>LPM</b>	<b>RPM</b>
Max Differential @ No Load	600 psi	4137 kPa	30	114	80 - 150
Max Torque @ No Load	300 ft-lbs	407 Nm	65	246	255 - 325
Max Power	25 HP	18 kW	100	379	430 - 500
C = Overall Length	140.8 in	3576 mm			
Weight	186 lbs	84 kg			

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

### ADJUSTABLE BUILD RATE:

Hole Size	SLICK		
	3 (76mm)	3-1/8 (79mm)	3-1/2 (89mm)
BEND ANGLE	Degrees per 100 Feet (30 m)		
0.39	2.5	1.0	-
0.78	9.2	7.7	3.2
1.15	15.6	14.1	9.6
1.50	21.4	20.2	15.6
1.83	27.4	25.9	21.3
2.12	32.4	30.9	26.4
2.38	36.9	35.4	30.8
2.60	40.7	39.2	34.7
2.77	43.6	42.1	37.6
2.90	45.9	44.4	39.8
2.97	47.1	45.6	41.1
3.00	47.6	46.1	41.6

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.



Lobe Configuration	7-8 Lobe 4.0 Stage HR		Flow Rate		Speed
Displacement	5.03 rev/gal	1.33 rev/l	GPM	LPM	RPM
Max Differential @ No Load	940 psi	6481 kPa	30	114	80 - 150
Max Torque @ No Load	470 ft-lbs	637 Nm	65	246	255 - 325
Max Power	38 HP	29 kW	100	379	430 - 500
C = Overall Length	140.8 in	3576 mm			
Weight	186 lbs	84 kg			

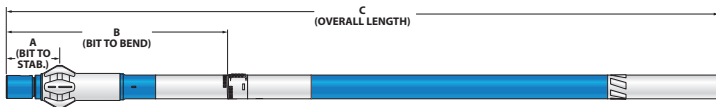
**Possible damage may occur when motor is run higher than 70% of Maximum Differential Pressure.**

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK		
	3 (76mm)	3-1/8 (79mm)	3-1/2 (89mm)
BEND ANGLE	Degrees per 100 Feet (30 m)		
<b>0.39</b>	2.5	1.0	-
<b>0.78</b>	9.2	7.7	3.2
<b>1.15</b>	15.6	14.1	9.6
<b>1.50</b>	21.4	20.2	15.6
<b>1.83</b>	27.4	25.9	21.3
<b>2.12</b>	32.4	30.9	26.4
<b>2.38</b>	36.9	35.4	30.8
<b>2.60</b>	40.7	39.2	34.7
<b>2.77</b>	43.6	42.1	37.6
<b>2.90</b>	45.9	44.4	39.8
<b>2.97</b>	47.1	45.6	41.1
<b>3.00</b>	47.6	46.1	41.6

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.

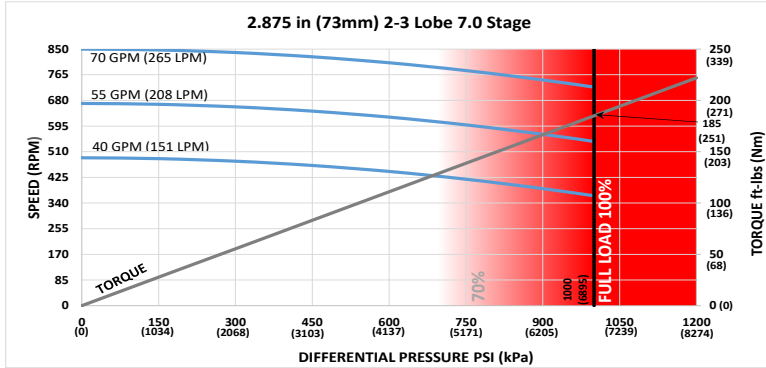
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<b>Bit Size Range</b>	3-5/8 - 3-7/8 in	92 - 98 mm
<b>Bit Box Connection</b>	2-3/8 PAC	
<b>Dynamic Bearing Load On/Off Bottom</b>	21505 lbf	9600 daN
<b>Static Bearing Load On/Off Bottom</b>	64875 lbf	28900 daN
<b>Max.Overpull for Re-run</b>	49100 lbf	21800 daN
<b>Absolute Overpull</b>	81800 lbf	36400 daN
<b>Adjustable Make Up Torque</b>	2500 ft-lbs	3400 Nm
<b>A = Bit to Stabilizer (center)</b>	--	--
<b>B = Bit to Bend</b>	<b>Adjustable</b>	40.2 in / 1021 mm
	<b>Fixed</b>	--

2-7/8 in (73 mm) 2-3 Lobe 7.0 Stage SERIES 2	37
2-7/8 in (73 mm) 5-6 Lobe 3.5 Stage SERIES 2	38
2-7/8 in (73 mm) 5-6 Lobe 3.5 Stage HR SERIES 2	39
2-7/8 in (73 mm) 5-6 Lobe 4.7 Stage SERIES 2	40
2-7/8 in (73 mm) 5-6 Lobe 4.7 Stage HR SERIES 2	41

## 2-7/8 in (73 mm) 2-3 Lobe 7.0 Stage **SERIES 2**



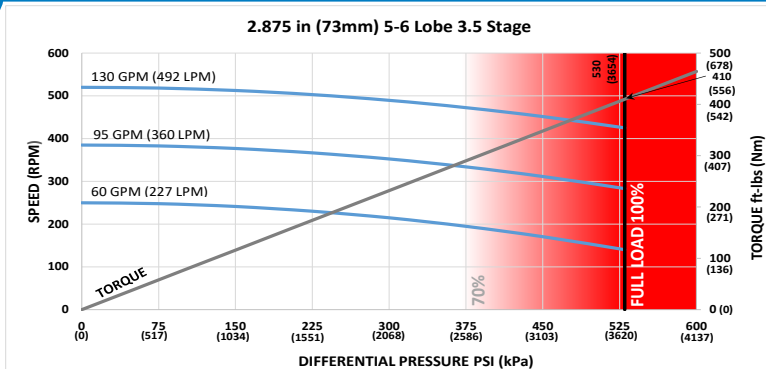
Lobe Configuration	2-3 Lobe 7.0 Stage		Flow Rate		Speed
Displacement	9.78 rev/gal	2.58 rev/l	<b>GPM</b>	<b>LPM</b>	<b>RPM</b>
Max Differential @ No Load	1000 psi	6895 kPa	40	151	364 - 490
Max Torque @ No Load	185 ft-lbs	251 Nm	55	208	544 - 670
Max Power	26 HP	19 kW	70	265	724 - 850
C = Overall Length	126.9 in	3223 mm			
Weight	183 lbs	83 kg			

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

### ADJUSTABLE BUILD RATE:

Hole Size	SLICK		
	3-5/8 (92mm)	3-3/4 (95mm)	3-7/8 (98mm)
BEND ANGLE	Degrees per 100 Feet (30 m)		
<b>0.39</b>	4.02	2.39	0.76
<b>0.78</b>	12.24	10.61	8.98
<b>1.15</b>	20.04	18.41	16.77
<b>1.50</b>	27.42	25.78	24.15
<b>1.83</b>	34.37	32.74	31.11
<b>2.12</b>	40.48	38.85	37.22
<b>2.38</b>	45.96	44.33	42.70
<b>2.60</b>	50.60	48.97	47.34
<b>2.77</b>	54.18	52.55	50.92
<b>2.90</b>	56.92	55.29	53.66
<b>2.97</b>	58.39	56.76	55.13
<b>3.00</b>	59.03	57.40	55.77

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.



<b>Lobe Configuration</b>	5-6 Lobe 3.5 Stage	
<b>Displacement</b>	4.11 rev/gal	1.09 rev/l
<b>Max Differential @ No Load</b>	530 psi	3654 kPa
<b>Max Torque @ No Load</b>	410 ft-lbs	556 Nm
<b>Max Power</b>	33 HP	25 kW
<b>C = Overall Length</b>	181 in	4597 mm
<b>Weight</b>	221 lbs	100 kg

Flow Rate		Speed
GPM	LPM	RPM
60	227	140 - 250
95	360	283 - 385
130	492	425 - 520

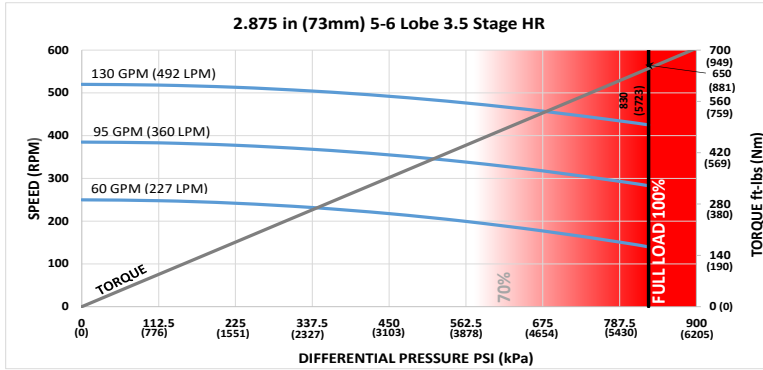
**Possible damage may occur when motor is run higher than 70% of Maximum Differential Pressure.**

### ADJUSTABLE BUILD RATE:

Hole Size	SLICK		
	3-5/8 (92mm)	3-3/4 (95mm)	3-7/8 (98mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)		
<b>0.39</b>	2.04	0.94	-
<b>0.78</b>	7.62	6.51	5.40
<b>1.15</b>	12.90	11.79	10.69
<b>1.50</b>	17.90	16.79	15.69
<b>1.83</b>	22.62	21.51	20.40
<b>2.12</b>	26.76	25.65	24.55
<b>2.38</b>	30.47	29.37	28.26
<b>2.60</b>	33.61	32.51	31.40
<b>2.77</b>	36.04	34.94	33.83
<b>2.90</b>	37.90	36.79	35.69
<b>2.97</b>	38.90	37.79	36.69
<b>3.00</b>	39.33	38.22	37.12

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.

## 2-7/8 in (73 mm) 5-6 Lobe 3.5 Stage HR **SERIES 2**



<b>Lobe Configuration</b>	5-6 Lobe 3.5 Stage HR	
<b>Displacement</b>	4.11 rev/gal	1.09 rev/l
<b>Max Differential @ No Load</b>	830 psi	5723 kPa
<b>Max Torque @ No Load</b>	650 ft-lbs	881 Nm
<b>Max Power</b>	53 HP	39 kW
<b>C = Overall Length</b>	181 in	4597 mm
<b>Weight</b>	221 lbs	100 kg

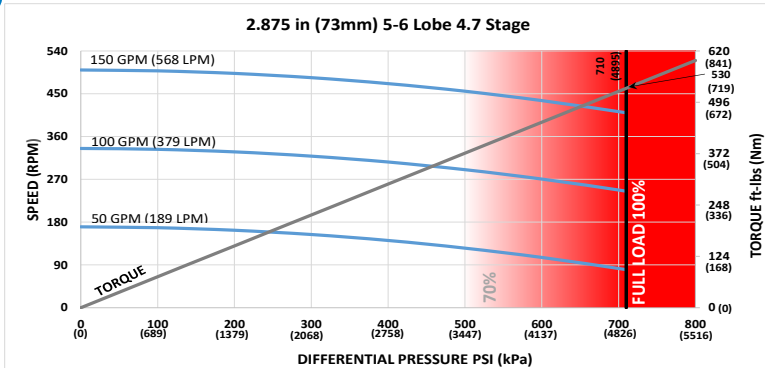
Flow Rate		Speed
GPM	LPM	RPM
60	227	140 - 250
95	360	283 - 385
130	492	425 - 520

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

### ADJUSTABLE BUILD RATE:

Hole Size	SLICK		
	3-5/8 (92mm)	3-3/4 (95mm)	3-7/8 (98mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)		
<b>0.39</b>	2.04	0.94	-
<b>0.78</b>	7.62	6.51	5.40
<b>1.15</b>	12.90	11.79	10.69
<b>1.50</b>	17.90	16.79	15.69
<b>1.83</b>	22.62	21.51	20.40
<b>2.12</b>	26.76	25.65	24.55
<b>2.38</b>	30.47	29.37	28.26
<b>2.60</b>	33.61	32.51	31.40
<b>2.77</b>	36.04	34.94	33.83
<b>2.90</b>	37.90	36.79	35.69
<b>2.97</b>	38.90	37.79	36.69
<b>3.00</b>	39.33	38.22	37.12

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.



Lobe Configuration	5-6 Lobe 4.7 Stage	
Displacement	3.32 rev/gal	0.88 rev/l
Max Differential @ No Load	710 psi	4895 kPa
Max Torque @ No Load	530 ft-lbs	719 Nm
Max Power	41 HP	31 kW
C = Overall Length	188 in	4775 mm
Weight	238 lbs	108 kg

Flow Rate		Speed
GPM	LPM	RPM
50	189	80 - 170
100	379	245 - 335
150	568	410 - 500

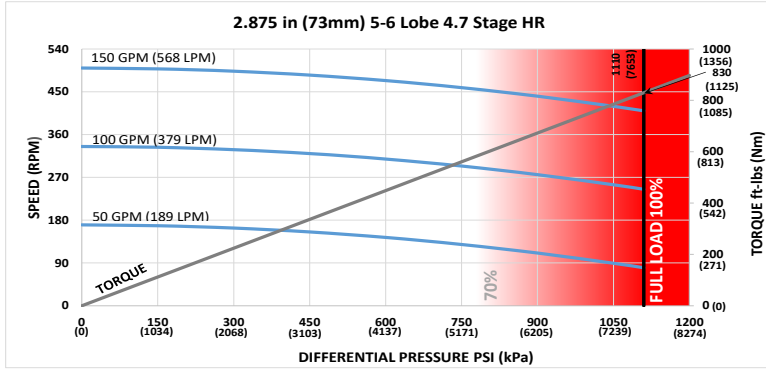
**Possible damage may occur when motor is run higher than 70% of Maximum Differential Pressure.**

**ADJUSTABLE BUILD RATE:**

Hole Size	SLICK		
	3-5/8 (92mm)	3-3/4 (95mm)	3-7/8 (98mm)
BEND ANGLE	Degrees per 100 Feet (30 m)		
0.39	1.92	0.85	-
0.78	7.27	6.20	5.14
1.15	12.34	11.28	10.21
1.50	17.14	16.08	15.02
1.83	21.67	20.60	19.54
2.12	25.64	24.58	23.52
2.38	29.21	28.15	27.08
2.60	32.23	31.16	30.10
2.77	34.56	33.49	32.43
2.90	36.34	35.28	34.22
2.97	37.30	36.24	35.18
3.00	37.71	36.65	35.59

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.

## 2-7/8 in (73 mm) 5-6 Lobe 4.7 Stage HR **SERIES 2**



<b>Lobe Configuration</b>	5-6 Lobe 4.7 Stage HR	
<b>Displacement</b>	3.32 rev/gal	0.88 rev/l
<b>Max Differential @ No Load</b>	1110 psi	7653 kPa
<b>Max Torque @ No Load</b>	830 ft-lbs	1125 Nm
<b>Max Power</b>	65 HP	48 kW
<b>C = Overall Length</b>	188 in	4775 mm
<b>Weight</b>	238 lbs	108 kg

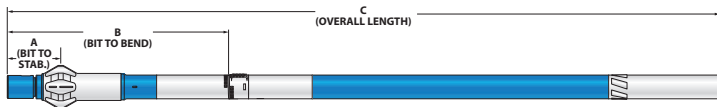
Flow Rate		Speed
GPM	LPM	RPM
50	189	80 - 170
100	379	245 - 335
150	568	410 - 500

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

### ADJUSTABLE BUILD RATE:

Hole Size	SLICK		
	3-5/8 (92mm)	3-3/4 (95mm)	3-7/8 (98mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)		
<b>0.39</b>	1.92	0.85	-
<b>0.78</b>	7.27	6.20	5.14
<b>1.15</b>	12.34	11.28	10.21
<b>1.50</b>	17.14	16.08	15.02
<b>1.83</b>	21.67	20.60	19.54
<b>2.12</b>	25.64	24.58	23.52
<b>2.38</b>	29.21	28.15	27.08
<b>2.60</b>	32.23	31.16	30.10
<b>2.77</b>	34.56	33.49	32.43
<b>2.90</b>	36.34	35.28	34.22
<b>2.97</b>	37.30	36.24	35.18
<b>3.00</b>	37.71	36.65	35.59

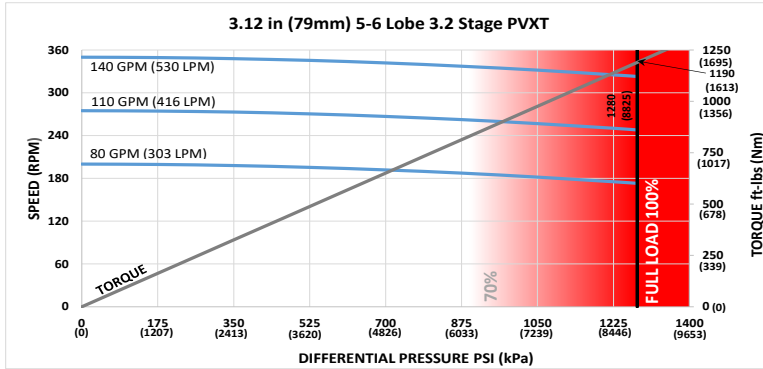
This information is for reference only. Build rates are theoretical calculations using three-point geometry and new motor builds. Actual rate predictions will depend on formation characteristics, bit profiles, and WOB. For custom motor configurations and build rates, please contact your DYNOMAX office.



<b>Bit Size Range</b>	3-7/8 - 4-1/2 in	98 - 114 mm
<b>Bit Box Connection</b>	2-3/8 REGULAR	
<b>Dynamic Bearing Load On/Off Bottom</b>	28230 lbf	12600 daN
<b>Static Bearing Load On/Off Bottom</b>	83280 lbf	37000 daN
<b>Max.Overpull for Re-run</b>	78100 lbf	34700 daN
<b>Absolute Overpull</b>	130200 lbf	57900 daN
<b>Adjustable Make Up Torque</b>	2500 ft-lbs	3400 Nm
<b>A = Bit to Stabilizer (center)</b>	--	--
<b>B = Bit to Bend</b>	<b>Adjustable</b>	42.9 in / 1090 mm
	<b>Fixed</b>	34 in / 864 mm

3-1/8 in (79 mm) 5-6 Lobe 3.2 Stage PVXT SERIES 1	43
3-1/8 in (79 mm) 5-6 Lobe 3.5 Stage HR SERIES 1	44
3-1/8 in (79 mm) 7-8 Lobe 3.0 Stage SERIES 1	45
3-1/8 in (79 mm) 7-8 Lobe 3.0 Stage HR SERIES 1	46
3-1/8 in (79 mm) 7-8 Lobe 4.0 Stage SERIES 1	47

# 3-1/8 in (79 mm) 5-6 Lobe 3.2 Stage PVXT SERIES 1



<b>Lobe Configuration</b>	5-6 Lobe 3.2 Stage PVXT		<b>Flow Rate</b>		<b>Speed</b>
<b>Displacement</b>	2.24 rev/gal	0.59 rev/l	<b>GPM</b>		<b>RPM</b>
<b>Max Differential @ No Load</b>	1280 psi	8825 kPa	80	303	173 - 200
<b>Max Torque @ No Load</b>	1190 ft-lbs	1613 Nm	110	416	248 - 275
<b>Max Power</b>	73 HP	55 kW	140	530	323 - 350
<b>C = Overall Length</b>	164.7 in	4183 mm			
<b>Weight</b>	291 lbs	132 kg			

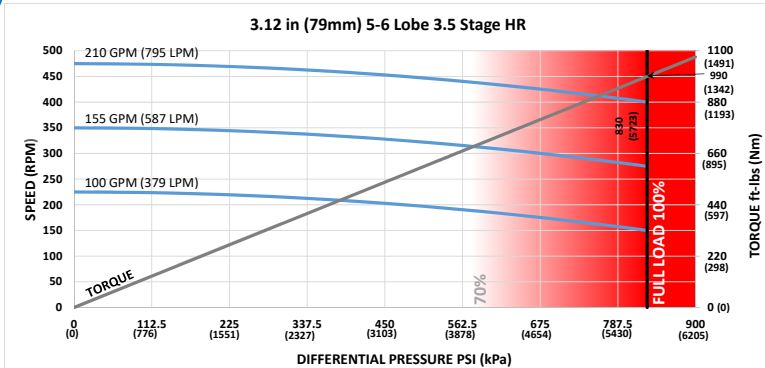
**Possible damage may occur when motor is run higher than 70% of Maximum Differential Pressure.**

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK		
	3-7/8 (98mm)	4-1/8 (105mm)	4-1/2 (114mm)
<b>BEND ANGLE</b>	<b>Degrees per 100 Feet (30 m)</b>		
<b>0.39</b>	2.59	0.22	-
<b>0.78</b>	8.78	6.41	2.85
<b>1.15</b>	14.66	12.28	8.72
<b>1.50</b>	20.21	17.84	14.28
<b>1.83</b>	25.45	23.08	19.52
<b>2.12</b>	30.05	27.68	24.12
<b>2.38</b>	34.18	31.81	28.25
<b>2.60</b>	37.67	35.30	31.75
<b>2.77</b>	40.37	38.00	34.45
<b>2.90</b>	42.43	40.06	36.51
<b>2.97</b>	43.54	41.18	37.62
<b>3.00</b>	44.02	41.65	38.10
<b>FBH BUILD RATE**:</b>			
<b>1.25</b>	15.08	12.17	7.80
<b>1.50</b>	19.05	16.14	11.77
<b>1.75</b>	23.02	20.11	15.74
<b>2.00</b>	26.99	24.08	19.71
<b>2.25</b>	30.96	28.04	23.67
<b>2.50</b>	34.92	32.01	27.64

\*\*Additional FBH Angles Available

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.



<b>Lobe Configuration</b>	5-6 Lobe 3.5 Stage HR	
<b>Displacement</b>	2.25 rev/gal	0.59 rev/l
<b>Max Differential @ No Load</b>	830 psi	5723 kPa
<b>Max Torque @ No Load</b>	990 ft-lbs	1342 Nm
<b>Max Power</b>	75 HP	56 kW
<b>C = Overall Length</b>	170.3 in	4326 mm
<b>Weight</b>	273 lbs	124 kg

Flow Rate		Speed
GPM	LPM	RPM
100	379	150 - 225
155	587	275 - 350
210	795	400 - 475

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

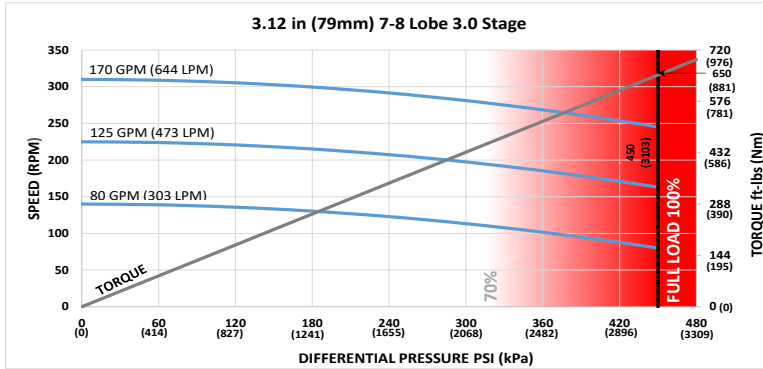
**ADJUSTABLE BUILD RATE:**

Hole Size	SLICK		
	3-7/8 (98mm)	4-1/8 (105mm)	4-1/2 (114mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)		
<b>0.39</b>	2.44	0.16	-
<b>0.78</b>	8.41	6.13	2.69
<b>1.15</b>	14.08	11.79	8.36
<b>1.50</b>	19.44	17.15	13.72
<b>1.83</b>	24.49	22.20	18.77
<b>2.12</b>	28.93	26.64	23.21
<b>2.38</b>	32.90	30.62	27.19
<b>2.60</b>	36.27	33.99	30.56
<b>2.77</b>	38.87	36.59	33.16
<b>2.90</b>	40.86	38.58	35.15
<b>2.97</b>	41.93	39.65	36.22
<b>3.00</b>	42.39	40.11	36.68
	<b>FBH BUILD RATE**:</b>		
<b>1.25</b>	14.50	11.69	7.47
<b>1.50</b>	18.33	15.52	11.30
<b>1.75</b>	22.15	19.34	15.13
<b>2.00</b>	25.98	23.17	18.96
<b>2.25</b>	29.80	27.00	22.78
<b>2.50</b>	33.63	30.82	26.61

\*\*Additional FBH Angles Available

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# 3-1/8 in (79 mm) 7-8 Lobe 3.0 Stage SERIES 1



Lobe Configuration	7-8 Lobe 3.0 Stage		Flow Rate		Speed
Displacement	1.8 rev/gal	0.48 rev/l			
Max Differential @ No Load	450 psi	3103 kPa	<b>GPM</b>	<b>LPM</b>	<b>RPM</b>
Max Torque @ No Load	650 ft-lbs	881 Nm	80	303	80 - 140
Max Power	30 HP	23 kW	125	473	163 - 225
C = Overall Length	188.3 in	4783 mm	170	644	245 - 310
Weight	291 lbs	132 kg			

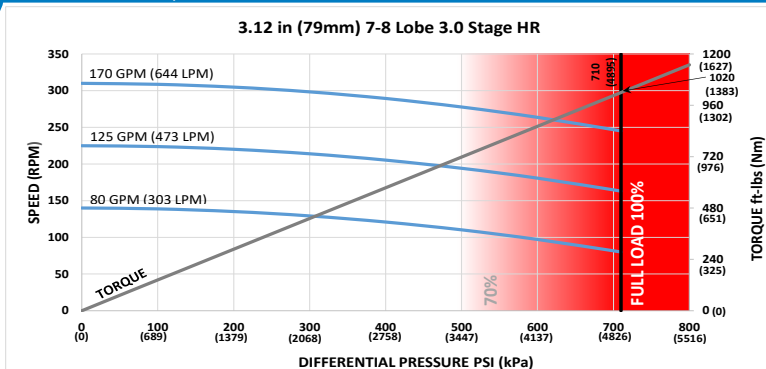
**Possible damage may occur when motor is run higher than 70% of Maximum Differential Pressure.**

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK		
	3-7/8 (98mm)	4-1/8 (105mm)	4-1/2 (114mm)
<b>BEND ANGLE</b>	<b>Degrees per 100 Feet (30 m)</b>		
<b>0.39</b>	2.06	0.01	-
<b>0.78</b>	7.42	5.37	2.29
<b>1.15</b>	12.50	10.45	7.37
<b>1.50</b>	17.31	15.25	12.18
<b>1.83</b>	21.84	19.78	16.71
<b>2.12</b>	25.82	23.77	20.69
<b>2.38</b>	29.39	27.34	24.26
<b>2.60</b>	32.41	30.36	27.28
<b>2.77</b>	34.74	32.69	29.62
<b>2.90</b>	36.53	34.48	31.40
<b>2.97</b>	37.49	35.44	32.36
<b>3.00</b>	37.90	35.85	32.77
<b>FBH BUILD RATE**:</b>			
<b>1.25</b>	12.89	10.37	6.59
<b>1.50</b>	16.33	13.81	10.03
<b>1.75</b>	19.76	17.24	13.46
<b>2.00</b>	23.19	20.67	16.89
<b>2.25</b>	26.62	24.10	20.33
<b>2.50</b>	30.06	27.54	23.76

\*\*Additional FBH Angles Available

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.



Lobe Configuration	7-8 Lobe 3.0 Stage HR		Flow Rate		Speed
Displacement	1.8 rev/gal	0.48 rev/l	GPM	LPM	RPM
Max Differential @ No Load	710 psi	4895 kPa	80	303	80 - 140
Max Torque @ No Load	1020 ft-lbs	1383 Nm	125	473	163 - 225
Max Power	48 HP	35 kW	170	644	245 - 310
C = Overall Length	188.3 in	4783 mm			
Weight	291 lbs	132 kg			

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

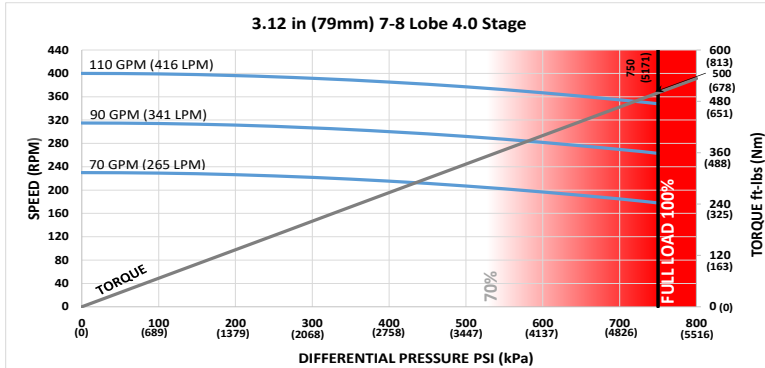
## ADJUSTABLE BUILD RATE:

Hole Size	SLICK		
	3-7/8 (98mm)	4-1/8 (105mm)	4-1/2 (114mm)
BEND ANGLE	Degrees per 100 Feet (30 m)		
<b>0.39</b>	2.06	0.01	-
<b>0.78</b>	7.42	5.37	2.29
<b>1.15</b>	12.50	10.45	7.37
<b>1.50</b>	17.31	15.25	12.18
<b>1.83</b>	21.84	19.78	16.71
<b>2.12</b>	25.82	23.77	20.69
<b>2.38</b>	29.39	27.34	24.26
<b>2.60</b>	32.41	30.36	27.28
<b>2.77</b>	34.74	32.69	29.62
<b>2.90</b>	36.53	34.48	31.40
<b>2.97</b>	37.49	35.44	32.36
<b>3.00</b>	37.90	35.85	32.77
	FBH BUILD RATE**:		
<b>1.25</b>	12.89	10.37	6.59
<b>1.50</b>	16.33	13.81	10.03
<b>1.75</b>	19.76	17.24	13.46
<b>2.00</b>	23.19	20.67	16.89
<b>2.25</b>	26.62	24.10	20.33
<b>2.50</b>	30.06	27.54	23.76

\*\*Additional FBH Angles Available

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.

# 3-1/8 in (79 mm) 7-8 Lobe 4.0 Stage SERIES 1



<b>Lobe Configuration</b>	7-8 Lobe 4.0 Stage		<b>Flow Rate</b>		<b>Speed</b>
<b>Displacement</b>	2.91 rev/gal	0.77 rev/l	<b>GPM</b>	<b>LPM</b>	<b>RPM</b>
<b>Max Differential @ No Load</b>	750 psi	5171 kPa	70	265	178 - 230
<b>Max Torque @ No Load</b>	500 ft-lbs	678 Nm	90	341	263 - 315
<b>Max Power</b>	33 HP	25 kW	110	416	348 - 400
<b>C = Overall Length</b>	151.2 in	3840 mm			
<b>Weight</b>	272 lbs	123 kg			

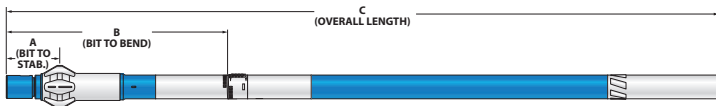
**Possible damage may occur when motor is run higher than 70% of Maximum Differential Pressure.**

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK		
	3-7/8 (98mm)	4-1/8 (105mm)	4-1/2 (114mm)
<b>BEND ANGLE</b>	<b>Degrees per 100 Feet (30 m)</b>		
<b>0.39</b>	3.03	0.42	-
<b>0.78</b>	9.83	7.22	3.31
<b>1.15</b>	16.27	13.67	9.76
<b>1.50</b>	22.38	19.77	15.86
<b>1.83</b>	28.13	25.52	21.62
<b>2.12</b>	33.18	30.58	26.67
<b>2.38</b>	37.71	35.11	31.21
<b>2.60</b>	41.55	38.95	35.04
<b>2.77</b>	44.51	41.91	38.01
<b>2.90</b>	46.78	44.18	40.27
<b>2.97</b>	48.00	45.40	41.49
<b>3.00</b>	48.52	45.92	42.02
	<b>FBH BUILD RATE**:</b>		
<b>1.25</b>	16.71	13.51	8.72
<b>1.50</b>	21.07	17.87	13.07
<b>1.75</b>	25.43	22.23	17.43
<b>2.00</b>	29.79	26.59	21.79
<b>2.25</b>	34.14	30.95	26.15
<b>2.50</b>	38.50	35.30	30.51

\*\*Additional FBH Angles Available

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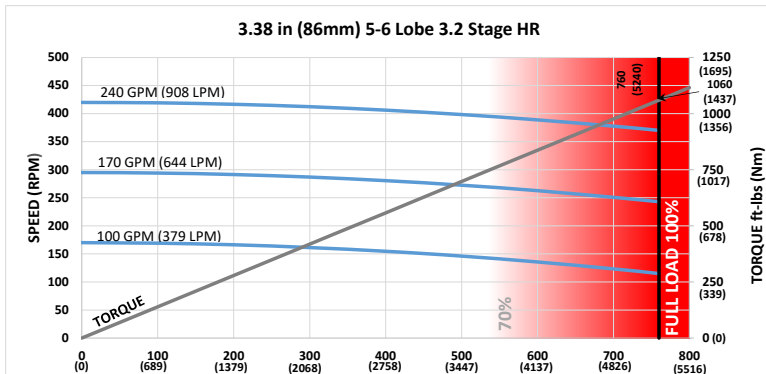


3-3/8 & 3-1/2 in (86 & 89 mm) 5-6 Lobe 3.2 Stage HR SERIES 1

49

<b>Bit Size Range</b>	4 - 4-3/4 in	102 - 121 mm
<b>Bit Box Connection</b>	2-3/8 REGULAR	
<b>Dynamic Bearing Load On/Off Bottom</b>	20527 lbf	9100 daN
<b>Static Bearing Load On/Off Bottom</b>	86786 lbf	38600 daN
<b>Max.Overpull for Re-run</b>	92400 lbf	41100 daN
<b>Absolute Overpull</b>	154000 lbf	68500 daN
<b>Adjustable Make Up Torque</b>	2000 ft-lbs	2700 Nm
<b>A = Bit to Stabilizer (center)</b>	--	--
<b>B = Bit to Bend</b>	<b>Adjustable</b>	41.3 in / 1049 mm
	<b>Fixed</b>	--

# 3-3/8 & 3-1/2 in (86 & 89 mm) 5-6 Lobe 3.2 Stage HR SERIES 1



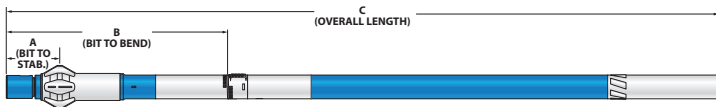
<b>Lobe Configuration</b>	5-6 Lobe 3.2 Stage HR		<b>Flow Rate</b>	<b>Speed</b>
<b>Displacement</b>	1.8 rev/gal	0.48 rev/l	<b>GPM</b>	<b>RPM</b>
<b>Max Differential @ No Load</b>	760 psi	5240 kPa	100	115 - 170
<b>Max Torque @ No Load</b>	1060 ft-lbs	1437 Nm	170	243 - 295
<b>Max Power</b>	75 HP	56 kW	240	370 - 420
<b>C = Overall Length</b>	166 in	4216 mm		
<b>Weight</b>	242 lbs	110 kg		

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK		
	4 (102mm)	4-1/4 (108mm)	4-3/4 (121mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)		
<b>0.39</b>	3.32	1.08	-
<b>0.78</b>	9.10	6.85	2.37
<b>1.15</b>	14.58	12.34	7.85
<b>1.50</b>	19.76	17.52	13.04
<b>1.83</b>	24.65	22.41	17.93
<b>2.12</b>	28.95	26.71	22.22
<b>2.38</b>	32.80	30.56	26.08
<b>2.60</b>	36.06	33.82	29.34
<b>2.77</b>	38.58	36.34	31.86
<b>2.90</b>	40.50	38.26	33.78
<b>2.97</b>	41.54	39.30	34.82
<b>3.00</b>	41.98	39.74	35.26

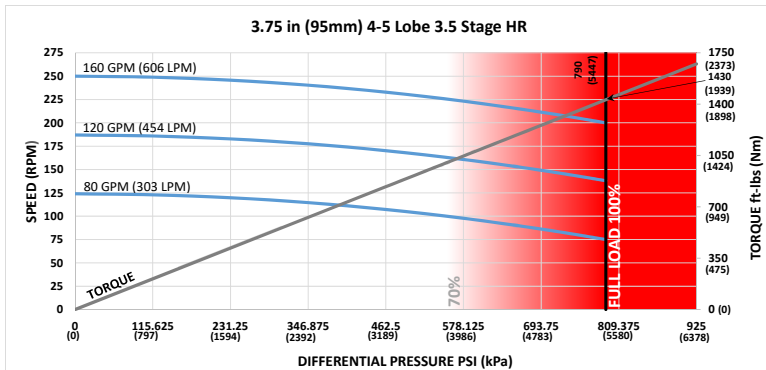
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3-3/4 in (95 mm) 4-5 Lobe 3.5 Stage HR SERIES 1	51
3-3/4 in (95 mm) 6-7 Lobe 1.7 Stage HR SERIES 1	52
3-3/4 in (95 mm) 6-7 Lobe 3.0 Stage SERIES 1	53
3-3/4 in (95 mm) 7-8 Lobe 2.3 Stage SERIES 1	54
3-3/4 in (95 mm) 7-8 Lobe 2.3 Stage HR SERIES 1	55

<b>Bit Size Range</b>	4-3/4 - 5-7/8 in	121 - 149 mm
<b>Bit Box Connection</b>	2-7/8 REGULAR	
<b>Dynamic Bearing Load On/Off Bottom</b>	31850 lbf	14200 daN
<b>Static Bearing Load On/Off Bottom</b>	104100 lbf	46300 daN
<b>Max. Overpull for Re-run</b>	154100 lbf	68500 daN
<b>Absolute Overpull</b>	256800 lbf	114200 daN
<b>Adjustable Make Up Torque</b>	3500 ft-lbs	4700 Nm
<b>A = Bit to Stabilizer (center)</b>	10 in	254 mm
<b>B = Bit to Bend</b>	<b>Adjustable</b>	50.6 in / 1285 mm
	<b>Fixed</b>	41.5 in / 1054 mm

# 3-3/4 in (95 mm) 4-5 Lobe 3.5 Stage HR SERIES 1



<b>Lobe Configuration</b>	4-5 Lobe 3.5 Stage HR	
<b>Displacement</b>	1.55 rev/gal	0.41 rev/l
<b>Max Differential @ No Load</b>	790 psi	5447 kPa
<b>Max Torque @ No Load</b>	1430 ft-lbs	1939 Nm
<b>Max Power</b>	54 HP	41 kW
<b>C = Overall Length</b>	228.7 in	5809 mm
<b>Weight</b>	422 lbs	191 kg

Flow Rate		Speed
GPM	LPM	RPM
80	303	75 - 124
120	454	138 - 187
160	606	200 - 250

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	4-3/4 (121mm)	5 (127mm)	5-7/8 (149mm)	4-3/4 (121mm)	5 (127mm)	5-7/8 (149mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	0.71	-	-	2.53	2.93	-
<b>0.78</b>	5.03	3.65	-	5.97	6.37	7.76
<b>1.15</b>	9.13	7.75	2.95	9.24	9.64	11.03
<b>1.50</b>	13.00	11.63	6.83	13.00	12.72	14.12
<b>1.83</b>	16.66	15.29	10.49	16.66	15.64	17.03
<b>2.12</b>	19.87	18.50	13.70	19.87	18.50	19.59
<b>2.38</b>	22.75	21.38	16.58	22.75	21.38	21.88
<b>2.60</b>	25.19	23.82	19.02	25.19	23.82	23.82
<b>2.77</b>	27.07	25.70	20.91	27.07	25.70	25.32
<b>2.90</b>	28.51	27.14	22.35	28.51	27.14	26.47
<b>2.97</b>	29.29	27.92	23.12	29.29	27.92	27.09
<b>3.00</b>	29.62	28.25	23.46	29.62	28.25	27.35

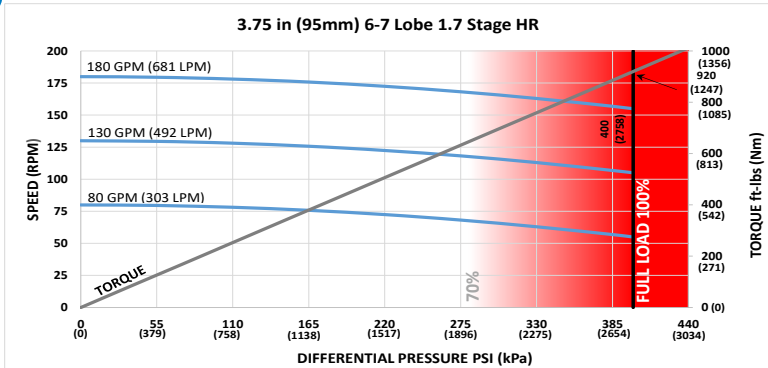
## FBH BUILD RATE\*\*:

<b>1.25</b>	9.44	7.81	2.12	10.75	11.15	12.54
<b>1.50</b>	12.21	10.58	4.89	13.08	13.48	14.88
<b>1.75</b>	14.98	13.35	7.66	15.42	15.81	17.21
<b>2.00</b>	17.75	16.12	10.43	17.75	18.15	19.54
<b>2.25</b>	20.52	18.89	13.20	20.52	20.48	21.87
<b>2.50</b>	23.29	21.66	15.97	23.29	22.81	24.20

\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.



<b>Lobe Configuration</b>	6-7 Lobe 1.7 Stage HR	
<b>Displacement</b>	1 rev/gal	0.26 rev/l
<b>Max Differential @ No Load</b>	400 psi	2758 kPa
<b>Max Torque @ No Load</b>	920 ft-lbs	1247 Nm
<b>Max Power</b>	27 HP	20 kW
<b>C = Overall Length</b>	170.7 in	4336 mm
<b>Weight</b>	307 lbs	139 kg

Flow Rate		Speed
GPM	LPM	RPM
80	303	55 - 80
130	492	105 - 130
180	681	155 - 180

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

**ADJUSTABLE BUILD RATE:**

Hole Size	SLICK			STABILIZED*		
	4-3/4 (121mm)	5 (127mm)	5-7/8 (149mm)	4-3/4 (121mm)	5 (127mm)	5-7/8 (149mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	1.4	-	-	3.8	4.5	7.2
<b>0.78</b>	7.3	5.4	-	8.0	8.7	11.4
<b>1.15</b>	12.9	11.0	4.4	12.9	12.7	15.4
<b>1.50</b>	18.2	16.3	9.7	18.2	16.5	19.2
<b>1.83</b>	23.1	21.3	14.7	23.1	21.3	22.7
<b>2.12</b>	27.5	25.7	19.1	27.5	25.7	25.9
<b>2.38</b>	31.5	29.6	23.0	31.5	29.6	28.7
<b>2.60</b>	34.8	32.9	26.4	34.8	32.9	31.0
<b>2.77</b>	37.4	35.5	29.0	37.4	35.5	32.9
<b>2.90</b>	39.3	37.5	30.9	39.3	37.5	34.3
<b>2.97</b>	40.4	38.5	32.0	40.4	38.5	35.0
<b>3.00</b>	40.8	39.0	32.4	40.8	39.0	35.4

**FBH BUILD RATE\*\*:**

<b>1.25</b>	13.2	11.0	3.2	14.2	15.0	17.7
<b>1.50</b>	17.0	14.8	7.0	17.2	18.0	20.6
<b>1.75</b>	20.8	18.6	10.8	20.8	20.9	23.6
<b>2.00</b>	24.6	22.4	14.6	24.6	23.8	26.5
<b>2.25</b>	28.4	26.1	18.4	28.4	26.8	29.5
<b>2.50</b>	32.1	29.9	22.2	32.1	29.9	32.4

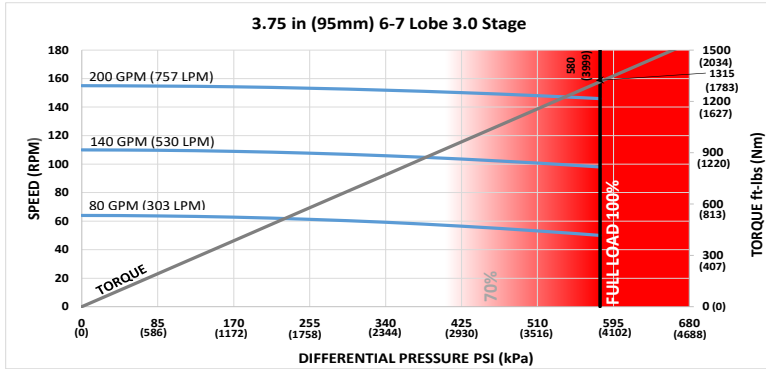
\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.

# 3-3/4 in (95 mm) 6-7 Lobe 3.0 Stage SERIES 1



<b>Lobe Configuration</b>	6-7 Lobe 3.0 Stage		<b>Flow Rate</b>		<b>Speed</b>
<b>Displacement</b>	0.69 rev/gal	0.18 rev/l	<b>GPM</b>	<b>LPM</b>	<b>RPM</b>
<b>Max Differential @ No Load</b>	580 psi	3999 kPa	80	303	50 - 64
<b>Max Torque @ No Load</b>	1315 ft-lbs	1783 Nm	140	530	98 - 110
<b>Max Power</b>	37 HP	27 kW	200	757	146 - 155
<b>C = Overall Length</b>	253.7 in	6444 mm			
<b>Weight</b>	461 lbs	209 kg			

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	4-3/4 (121mm)	5 (127mm)	5-7/8 (149mm)	4-3/4 (121mm)	5 (127mm)	5-7/8 (149mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	0.57	-	-	2.22	2.54	-
<b>0.78</b>	4.45	3.22	-	5.39	5.71	6.82
<b>1.15</b>	8.12	6.89	2.59	8.40	8.72	9.83
<b>1.50</b>	11.60	10.37	6.07	11.60	11.57	12.68
<b>1.83</b>	14.87	13.64	9.34	14.87	14.25	15.36
<b>2.12</b>	17.75	16.53	12.22	17.75	16.61	17.72
<b>2.38</b>	20.34	19.11	14.81	20.34	19.11	19.84
<b>2.60</b>	22.52	21.29	16.99	22.52	21.29	21.63
<b>2.77</b>	24.21	22.98	18.68	24.21	22.98	23.01
<b>2.90</b>	25.50	24.27	19.97	25.50	24.27	24.07
<b>2.97</b>	26.19	24.97	20.67	26.19	24.97	24.64
<b>3.00</b>	26.49	25.26	20.97	26.49	25.26	24.88

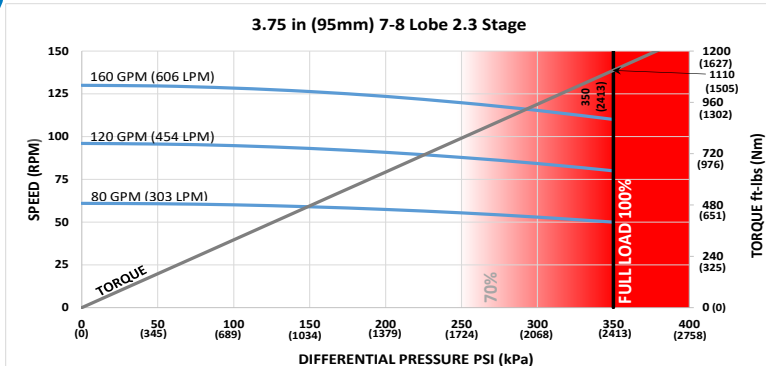
## FBH BUILD RATE\*\*:

<b>1.25</b>	8.41	6.95	1.84	9.72	10.04	11.15
<b>1.50</b>	10.89	9.43	4.33	11.85	12.17	13.28
<b>1.75</b>	13.37	11.91	6.81	13.99	14.31	15.41
<b>2.00</b>	15.86	14.40	9.29	16.12	16.44	17.55
<b>2.25</b>	18.34	16.88	11.78	18.34	18.57	19.68
<b>2.50</b>	20.82	19.36	14.26	20.82	20.71	21.82

\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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 DYNAMAX office.



Lobe Configuration	7-8 Lobe 2.3 Stage		Flow Rate		Speed
Displacement	0.77 rev/gal	0.2 rev/l	GPM	LPM	RPM
Max Differential @ No Load	350 psi	2413 kPa	80	303	50 - 61
Max Torque @ No Load	1110 ft-lbs	1505 Nm	120	454	80 - 96
Max Power	23 HP	17 kW	160	606	110 - 130
C = Overall Length	234.7 in	5961 mm			
Weight	438 lbs	199 kg			

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	4-3/4 (121mm)	5 (127mm)	5-7/8 (149mm)	4-3/4 (121mm)	5 (127mm)	5-7/8 (149mm)
BEND ANGLE	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	0.67	-	-	2.45	2.83	-
<b>0.78</b>	4.87	3.54	-	5.82	6.20	7.52
<b>1.15</b>	8.86	7.53	2.86	9.02	9.40	10.72
<b>1.50</b>	12.63	11.30	6.63	12.63	12.43	13.74
<b>1.83</b>	16.19	14.86	10.19	16.19	15.28	16.60
<b>2.12</b>	19.32	17.98	13.32	19.32	17.98	19.11
<b>2.38</b>	22.12	20.79	16.12	22.12	20.79	21.35
<b>2.60</b>	24.49	23.16	18.49	24.49	23.16	23.26
<b>2.77</b>	26.32	24.99	20.33	26.32	24.99	24.73
<b>2.90</b>	27.72	26.39	21.73	27.72	26.39	25.85
<b>2.97</b>	28.48	27.15	22.48	28.48	27.15	26.46
<b>3.00</b>	28.80	27.47	22.81	28.80	27.47	26.72

## FBH BUILD RATE\*\*:

<b>1.25</b>	9.17	7.58	2.04	10.49	10.86	12.18
<b>1.50</b>	11.86	10.28	4.74	12.77	13.14	14.46
<b>1.75</b>	14.56	12.97	7.43	15.05	15.42	16.74
<b>2.00</b>	17.25	15.67	10.13	17.33	17.71	19.02
<b>2.25</b>	19.95	18.36	12.83	19.95	19.99	21.30
<b>2.50</b>	22.64	21.06	15.52	22.64	22.27	23.58

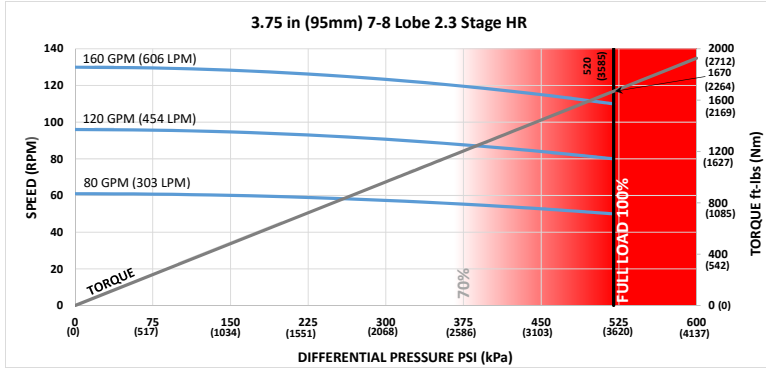
\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.

# 3-3/4 in (95 mm) 7-8 Lobe 2.3 Stage HR SERIES 1



<b>Lobe Configuration</b>	7-8 Lobe 2.3 Stage HR		<b>Flow Rate</b>		<b>Speed</b>
<b>Displacement</b>	0.77 rev/gal	0.2 rev/l	<b>GPM</b>	<b>LPM</b>	<b>RPM</b>
<b>Max Differential @ No Load</b>	520 psi	3585 kPa	80	303	50 - 61
<b>Max Torque @ No Load</b>	1670 ft-lbs	2264 Nm	120	454	80 - 96
<b>Max Power</b>	35 HP	26 kW	160	606	110 - 130
<b>C = Overall Length</b>	234.7 in	5961 mm			
<b>Weight</b>	438 lbs	199 kg			

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	4-3/4 (121mm)	5 (127mm)	5-7/8 (149mm)	4-3/4 (121mm)	5 (127mm)	5-7/8 (149mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	0.67	-	-	2.45	2.83	-
<b>0.78</b>	4.87	3.54	-	5.82	6.20	7.52
<b>1.15</b>	8.86	7.53	2.86	9.02	9.40	10.72
<b>1.50</b>	12.63	11.30	6.63	12.63	12.43	13.74
<b>1.83</b>	16.19	14.86	10.19	16.19	15.28	16.60
<b>2.12</b>	19.32	17.98	13.32	19.32	17.98	19.11
<b>2.38</b>	22.12	20.79	16.12	22.12	20.79	21.35
<b>2.60</b>	24.49	23.16	18.49	24.49	23.16	23.26
<b>2.77</b>	26.32	24.99	20.33	26.32	24.99	24.73
<b>2.90</b>	27.72	26.39	21.73	27.72	26.39	25.85
<b>2.97</b>	28.48	27.15	22.48	28.48	27.15	26.46
<b>3.00</b>	28.80	27.47	22.81	28.80	27.47	26.72

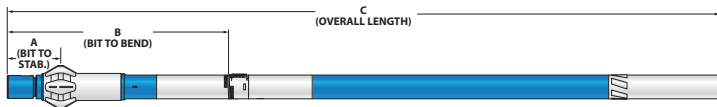
## FBH BUILD RATE\*\*:

<b>1.25</b>	9.17	7.58	2.04	10.49	10.86	12.18
<b>1.50</b>	11.86	10.28	4.74	12.77	13.14	14.46
<b>1.75</b>	14.56	12.97	7.43	15.05	15.42	16.74
<b>2.00</b>	17.25	15.67	10.13	17.33	17.71	19.02
<b>2.25</b>	19.95	18.36	12.83	19.95	19.99	21.30
<b>2.50</b>	22.64	21.06	15.52	22.64	22.27	23.58

\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

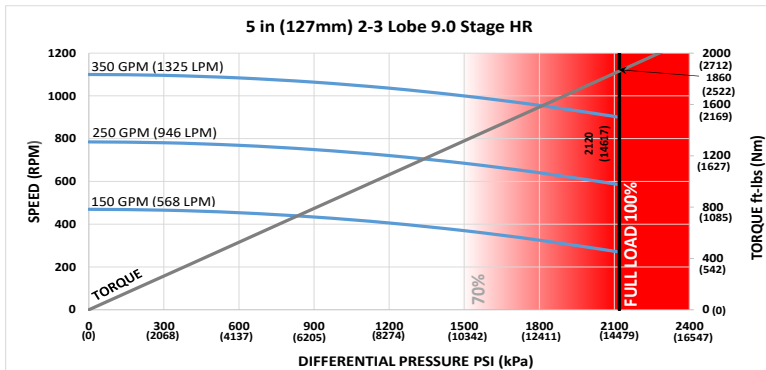
This information is for reference only. Build rates are theoretical calculations using three-point geometry and new motor builds. Actual rate predictions will depend on formation characteristics, bit profiles, and WOB. For custom motor configurations and build rates, please contact your DYNOMAX office.



4-3/4 in (121mm) Bottom w/ 5 in (127mm) 2-3 Lobe 9.0 Stage HR MUD LUBE	57
4-3/4 in (121mm) Bottom w/ 5 in (127mm) 5-6 Lobe 4.0 Stage HR MUD LUBE	58
4-3/4 in (121mm) 2-3 Lobe 9.0 Stage HR MUD LUBE	59
4-3/4 in (121mm) 7-8 Lobe 3.8 Stage HR MUD LUBE	60

<b>Bit Size Range</b>	5-5/8 - 6-3/4 in	143 - 171 mm
<b>Bit Box Connection</b>	3-1/2 REGULAR	
<b>Dynamic Bearing Load On/Off Bottom</b>	47300 lbf	21000 daN
<b>Static Bearing Load On/Off Bottom</b>	103500 lbf	46000 daN
<b>Max. Overpull (For Re-run)</b>	184700 lbf	82200 daN
<b>Absolute Overpull</b>	369300 lbf	164300 daN
<b>Adjustable Makeup Torque</b>	10000 ft-lbs	13600 Nm
<b>A = Bit to Stabilizer (Centre)</b>	14.74 in	370 mm
<b>B = Bit to Bend</b>	<b>Adjustable</b>	55.6 in / 1410 mm
	<b>Fixed</b>	46.8 in / 1190 mm

# 4-3/4 in (121mm) Bottom w/ 5 in (127mm) 2-3 Lobe 9.0 Stage HR MUD LUBE



<b>Lobe Configuration</b>	2-3 Lobe 9.0 Stage HR	
<b>Displacement</b>	3.16 rev/gal	0.83 rev/l
<b>Max Differential @ No Load</b>	2120 psi	14617 kPa
<b>Max Torque @ No Load</b>	1860 ft-lbs	2522 Nm
<b>Max Power</b>	319 HP	238 kW
<b>C = Overall Length</b>	307.3 in	7.81 m
<b>Weight</b>	1142 lb	518 kg

Flow Rate		Speed
GPM	LPM	RPM
150	568	270 - 470
250	946	585 - 785
350	1325	900 - 1100

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	5-7/8 (149mm)	6 (152mm)	6-1/8 (156mm)	5-7/8 (149mm)	6 (152mm)	6-1/4 (159mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	0.31	-	-	1.84	1.96	2.07
<b>0.78</b>	3.56	3.09	2.63	4.59	4.70	4.81
<b>1.15</b>	6.64	6.17	5.70	7.19	7.31	7.42
<b>1.50</b>	9.55	9.08	8.62	9.66	9.77	9.88
<b>1.83</b>	12.29	11.83	11.36	12.29	12.09	12.20
<b>2.12</b>	14.71	14.24	13.77	14.71	14.24	14.25
<b>2.38</b>	16.87	16.40	15.94	16.87	16.40	16.08
<b>2.60</b>	18.70	18.23	17.77	18.70	18.23	17.77
<b>2.77</b>	20.11	19.65	19.18	20.11	19.65	19.18
<b>2.90</b>	21.19	20.73	20.26	21.19	20.73	20.26
<b>2.97</b>	21.78	21.31	20.84	21.78	21.31	20.84
<b>3.00</b>	22.03	21.56	21.09	22.03	21.56	21.09

## FBH BUILD RATE\*\*:

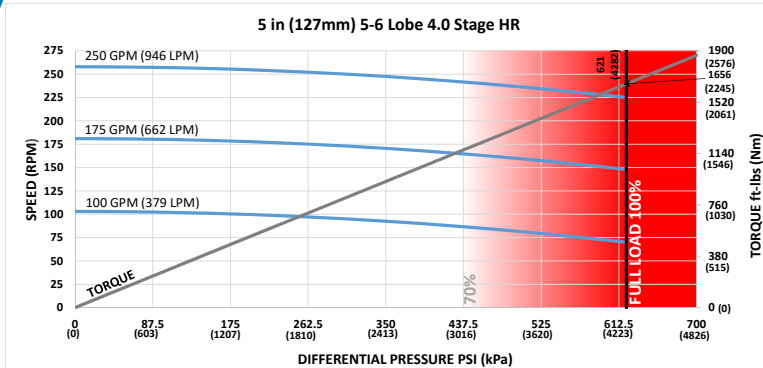
<b>1.25</b>	7.03	6.49	5.95	8.24	8.35	8.47
<b>1.50</b>	9.11	8.57	8.03	10.07	10.18	10.30
<b>1.75</b>	11.19	10.65	10.11	11.90	12.01	12.12
<b>2.00</b>	13.27	12.73	12.19	13.73	13.84	13.95
<b>2.25</b>	15.35	14.81	14.27	15.56	15.67	15.78
<b>2.50</b>	17.43	16.89	16.34	17.43	17.50	17.61

\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.

# MUD MOTORS



Lobe Configuration	5-6 Lobe 4.0 Stage HR		Flow Rate		Speed
Displacement	1.03 rev/gal	0.27 rev/l	<b>GPM</b>	<b>LPM</b>	<b>RPM</b>
Max Differential @ No Load	621 psi	4282 kPa	100	379	70 - 103
Max Torque @ No Load	1656 ft-lbs	2245 Nm	175	662	148 - 181
Max Power	71 HP	53 kW	250	946	225 - 258
C = Overall Length	247.3 in	6.28 m			
Weight	946 lb	429 kg			

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

**ADJUSTABLE BUILD RATE:**

Hole Size	SLICK			STABILIZED*		
	5-7/8 (149mm)	6 (152mm)	6-1/8 (156mm)	5-7/8 (149mm)	6 (152mm)	6-1/8 (156mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	0.34	-	-	2.31	2.49	2.67
<b>0.78</b>	4.43	3.84	3.26	5.59	5.77	5.96
<b>1.15</b>	8.32	7.73	7.14	8.70	8.89	9.07
<b>1.50</b>	12.00	11.41	10.82	12.00	11.83	12.02
<b>1.83</b>	15.46	14.87	14.28	15.46	14.87	14.79
<b>2.12</b>	18.51	17.92	17.33	18.51	17.92	17.33
<b>2.38</b>	21.24	20.65	20.06	21.24	20.65	20.06
<b>2.60</b>	23.55	22.96	22.37	23.55	22.96	22.37
<b>2.77</b>	25.33	24.75	24.16	25.33	24.75	24.16
<b>2.90</b>	26.70	26.11	25.52	26.70	26.11	25.52
<b>2.97</b>	27.43	26.85	26.26	27.43	26.85	26.26
<b>3.00</b>	27.75	27.16	26.57	27.75	27.16	26.57

**FBH BUILD RATE\*\*:**

<b>1.25</b>	8.82	8.13	7.45	10.11	10.29	10.47
<b>1.50</b>	11.44	10.76	10.08	12.32	12.51	12.69
<b>1.75</b>	14.07	13.39	12.70	14.54	14.72	14.91
<b>2.00</b>	16.69	16.01	15.33	16.76	16.94	17.12
<b>2.25</b>	19.32	18.64	17.96	19.32	19.16	19.34
<b>2.50</b>	21.95	21.26	20.58	21.95	21.37	21.55

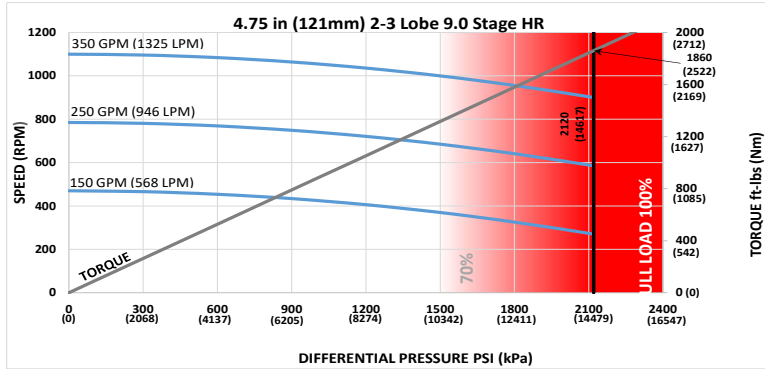
\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.

# 4-3/4 in (121mm) 2-3 Lobe 9.0 Stage HR MUD LUBE



Lobe Configuration	2-3 Lobe 9.0 Stage HR		Flow Rate		Speed
Displacement	3.16 rev/gal	0.83 rev/l	GPM	LPM	RPM
Max Differential @ No Load	2120 psi	14617 kPa	150	568	270 - 470
Max Torque @ No Load	1860 ft-lbs	2522 Nm	250	946	585 - 785
Max Power	319 HP	238 kW	350	1325	900 - 1100
C = Overall Length	307.3 in	7.81 m			
Weight	983 lb	446 kg			

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	5-7/8 (149mm)	6 (152mm)	6-1/8 (156mm)	5-7/8 (149mm)	6 (152mm)	6-1/8 (156mm)
BEND ANGLE	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	0.78	0.32	-	2.24	2.35	2.46
<b>0.78</b>	4.03	3.56	3.09	4.98	5.10	5.21
<b>1.15</b>	7.10	6.64	6.17	7.59	7.70	7.81
<b>1.50</b>	10.02	9.55	9.08	10.05	10.16	10.28
<b>1.83</b>	12.76	12.29	11.83	12.76	12.49	12.60
<b>2.12</b>	15.17	14.71	14.24	15.17	14.71	14.64
<b>2.38</b>	17.34	16.87	16.40	17.34	16.87	16.47
<b>2.60</b>	19.17	18.70	18.23	19.17	18.70	18.23
<b>2.77</b>	20.58	20.11	19.65	20.58	20.11	19.65
<b>2.90</b>	21.66	21.20	20.73	21.66	21.20	20.73
<b>2.97</b>	22.24	21.78	21.31	22.24	21.78	21.31
<b>3.00</b>	22.49	22.03	21.56	22.49	22.03	21.56

## FBH BUILD RATE\*\*:

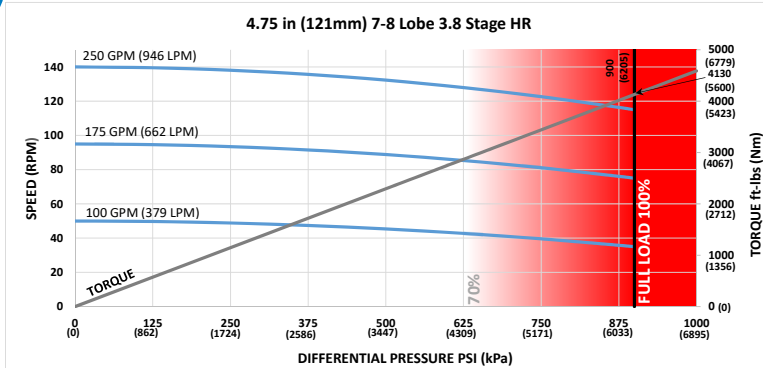
<b>1.25</b>	7.48	6.94	6.40	8.64	8.75	8.86
<b>1.50</b>	9.56	9.02	8.48	10.47	10.58	10.69
<b>1.75</b>	11.64	11.10	10.56	12.29	12.41	12.52
<b>2.00</b>	13.72	13.18	12.63	14.12	14.24	14.35
<b>2.25</b>	15.80	15.25	14.71	15.95	16.06	16.18
<b>2.50</b>	17.87	17.33	16.79	17.87	17.89	18.00

\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.

# 4-3/4 in (121mm) 7-8 Lobe 3.8 Stage HR MUD LUBE



Lobe Configuration	7-8 Lobe 3.8 Stage HR		Flow Rate		Speed
Displacement	0.54 rev/gal	0.14 rev/l	<b>GPM</b>	<b>LPM</b>	<b>RPM</b>
Max Differential @ No Load	900 psi	6205 kPa	100	379	35 - 50
Max Torque @ No Load	4130 ft-lbs	5600 Nm	175	662	75 - 95
Max Power	90 HP	67 kW	250	946	115 - 140
C = Overall Length	294.3 in	7.48 m			
Weight	1095 lb	497 kg			

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	5-7/8 (149mm)	6 (152mm)	6-1/8 (156mm)	5-7/8 (149mm)	6 (152mm)	6-1/8 (156mm)
<b>BEND ANGLE</b>	<b>Degrees per 100 Feet (30 m)</b>			<b>Degrees per 100 Feet (30 m)</b>		
<b>0.39</b>	0.84	0.35	-	2.36	2.49	2.61
<b>0.78</b>	4.24	3.75	3.26	5.21	5.33	5.46
<b>1.15</b>	7.46	6.97	6.48	7.91	8.04	8.16
<b>1.50</b>	10.51	10.02	9.53	10.51	10.59	10.72
<b>1.83</b>	13.38	12.90	12.41	13.38	13.00	13.13
<b>2.12</b>	15.91	15.42	14.93	15.91	15.42	15.24
<b>2.38</b>	18.18	17.69	17.20	18.18	17.69	17.20
<b>2.60</b>	20.09	19.60	19.12	20.09	19.60	19.12
<b>2.77</b>	21.57	21.08	20.60	21.57	21.08	20.60
<b>2.90</b>	22.70	22.22	21.73	22.70	22.22	21.73
<b>2.97</b>	23.31	22.83	22.34	23.31	22.83	22.34
<b>3.00</b>	23.58	23.09	22.60	23.58	23.09	22.60

## FBH BUILD RATE\*\*:

<b>1.25</b>	5.30	3.72	-	6.85	7.11	7.76
<b>1.50</b>	6.89	5.32	1.39	8.30	8.56	9.21
<b>1.75</b>	8.48	6.91	2.98	9.75	10.01	10.66
<b>2.00</b>	10.07	8.50	4.57	11.20	11.46	12.11
<b>2.25</b>	11.66	10.09	6.16	12.65	12.91	13.56
<b>2.50</b>	13.25	11.68	7.75	14.10	14.36	15.01

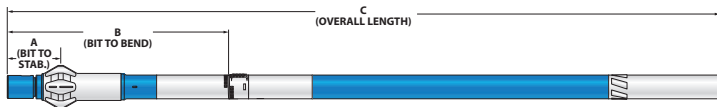
\*Stabilizers assumed as 1/8" undergage

\*\*Additional FBH Angles Available

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.

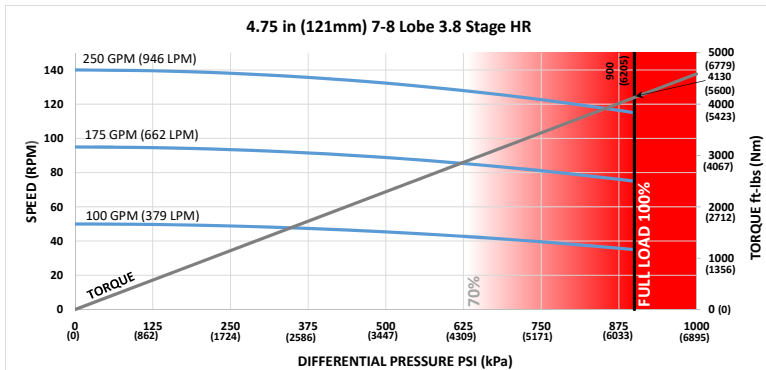
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<b>Bit Size Range</b>	5-5/8 - 6-3/4 in	143 - 171 mm
<b>Bit Box Connection</b>	3-1/2 REGULAR	
<b>Dynamic Bearing Load On/Off Bottom</b>	71500 lbf	31800 daN
<b>Static Bearing Load On/Off Bottom</b>	229350 lbf	102000 daN
<b>Max. Overpull for Re-run</b>	328000 lbf	145900 daN
<b>Absolute Overpull</b>	546000 lbf	242900 daN
<b>Adjustable Make Up Torque</b>	12000 ft-lbs	16300 Nm
<b>A = Bit to Stabilizer (center)</b>	16.7 in	424 mm
<b>B = Bit to Bend</b>	<b>Adjustable</b>	56.3 in / 1430 mm
	<b>Fixed</b>	45.7 in / 1161 mm

5 in (127 mm) Bottom w/ 4.75 in (121 mm) 7-8 Lobe 3.8 Stage HR	<a href="#">SERIES 2</a>	63
5 in (127 mm) 4-5 Lobe 6.0 Stage HR	<a href="#">SERIES 2</a>	64
5 in (127 mm) 5-6 Lobe 4.0 Stage	<a href="#">SERIES 2</a>	65
5 in (127 mm) 5-6 Lobe 4.0 Stage HR	<a href="#">SERIES 2</a>	66
5 in (127 mm) 5-6 Lobe 6.7 Stage HR	<a href="#">SERIES 2</a>	67
5 in (127 mm) 5-6 Lobe 8.3 Stage HR	<a href="#">SERIES 2</a>	68
5 in (127 mm) 6-7 Lobe 6.0 Stage HR	<a href="#">SERIES 2</a>	69
5 in (127 mm) 6-7 Lobe 8.0 Stage HR	<a href="#">SERIES 2</a>	70
5 in (127 mm) 6-7 Lobe 8.8 Stage	<a href="#">SERIES 2</a>	71
5 in (127 mm) 7-8 Lobe 2.6 Stage HR NP	<a href="#">SERIES 2</a>	72
5 in (127 mm) 7-8 Lobe 2.6 Stage HR	<a href="#">SERIES 2</a>	73
5 in (127 mm) 7-8 Lobe 3.7 Stage HR	<a href="#">SERIES 2</a>	74
5 in (127 mm) 7-8 Lobe 3.8 Stage HR	<a href="#">SERIES 2</a>	75
5 in (127 mm) 7-8 Lobe 4.5 Stage HR	<a href="#">SERIES 2</a>	76
5 in (127 mm) 7-8 Lobe 5.0 Stage HR	<a href="#">SERIES 2</a>	77
5 in (127 mm) 8-9 Lobe 6.0 Stage HR	<a href="#">SERIES 2</a>	78

# 5 in (127 mm) Bottom w/ 4.75 in (121 mm) 7-8 Lobe 3.8 Stage HR **SERIES 2**



<b>Lobe Configuration</b>	7-8 Lobe 3.8 Stage HR		<b>Flow Rate</b>		<b>Speed</b>
<b>Displacement</b>	0.54 rev/gal	0.14 rev/l	<b>GPM</b>	<b>LPM</b>	<b>RPM</b>
<b>Max Differential @ No Load</b>	900 psi	6205 kPa	100	379	35 - 50
<b>Max Torque @ No Load</b>	4130 ft-lbs	5600 Nm	175	662	75 - 95
<b>Max Power</b>	90 HP	67 kW	250	946	115 - 140
<b>C = Overall Length</b>	295.5 in	7506 mm			
<b>Weight</b>	1156 lbs	524 kg			

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	5-7/8 (149mm)	6 (152mm)	6-1/4 (159mm)	5-7/8 (149mm)	6 (152mm)	6-1/4 (159mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	3.33	2.85	1.89	3.33	2.85	2.72
<b>0.78</b>	6.72	6.24	5.27	6.72	6.24	5.57
<b>1.15</b>	9.93	9.45	8.49	9.93	9.45	8.49
<b>1.50</b>	12.97	12.49	11.52	12.97	12.49	11.52
<b>1.83</b>	15.83	15.35	14.39	15.83	15.35	14.39
<b>2.12</b>	18.35	17.87	16.91	18.35	17.87	16.91
<b>2.38</b>	20.61	20.12	19.16	20.61	20.12	19.16
<b>2.60</b>	22.52	22.03	21.07	22.52	22.03	21.07
<b>2.77</b>	23.99	23.51	22.55	23.99	23.51	22.55
<b>2.90</b>	25.12	24.64	23.68	25.12	24.64	23.68
<b>2.97</b>	25.73	25.25	24.28	25.73	25.25	24.28
<b>3.00</b>	25.99	25.51	24.54	25.99	25.51	24.54

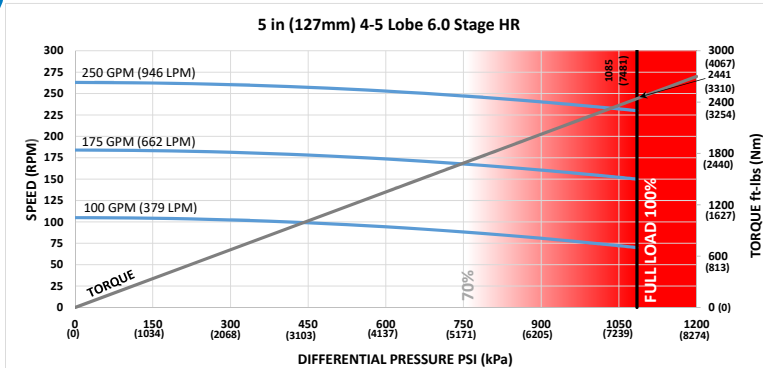
## FBH BUILD RATE\*\*:

<b>1.25</b>	10.60	10.02	8.87	10.60	10.02	9.47
<b>1.50</b>	12.77	12.19	11.04	12.77	12.19	11.39
<b>1.75</b>	14.94	14.36	13.21	14.94	14.36	13.31
<b>2.00</b>	17.11	16.53	15.38	17.11	16.53	15.38
<b>2.25</b>	19.28	18.70	17.55	19.28	18.70	17.55
<b>2.50</b>	21.45	20.87	19.72	21.45	20.87	19.72

\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.



Lobe Configuration	4-5 Lobe 6.0 Stage HR		Flow Rate		Speed
Displacement	1.05 rev/gal	0.28 rev/l	GPM	LPM	RPM
Max Differential @ No Load	1085 psi	7481 kPa	100	379	70 - 105
Max Torque @ No Load	2441 ft-lbs	3310 Nm	175	662	150 - 184
Max Power	107 HP	80 kW	250	946	230 - 263
C = Overall Length	295.5 in	7506 mm			
Weight	1059 lbs	480 kg			

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

### ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	5-7/8 (149mm)	6 (152mm)	6-1/4 (159mm)	5-7/8 (149mm)	6 (152mm)	6-1/4 (159mm)
BEND ANGLE	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
0.39	3.04	2.56	1.59	3.04	2.56	2.47
0.78	6.42	5.94	4.98	6.42	5.94	5.32
1.15	9.64	9.15	8.19	9.64	9.15	8.19
1.50	12.67	12.19	11.23	12.67	12.19	11.23
1.83	15.54	15.06	14.10	15.54	15.06	14.10
2.12	18.06	17.57	16.61	18.06	17.57	16.61
2.38	20.31	19.83	18.87	20.31	19.83	18.87
2.60	22.22	21.74	20.78	22.22	21.74	20.78
2.77	23.70	23.22	22.25	23.70	23.22	22.25
2.90	24.83	24.34	23.38	24.83	24.34	23.38
2.97	25.43	24.95	23.99	25.43	24.95	23.99
3.00	25.69	25.21	24.25	25.69	25.21	24.25

### FBH BUILD RATE\*\*:

1.25	10.32	9.74	8.59	10.32	9.74	9.22
1.50	12.49	11.91	10.76	12.49	11.91	11.14
1.75	14.66	14.08	12.93	14.66	14.08	13.06
2.00	16.83	16.25	15.10	16.83	16.25	15.10
2.25	19.00	18.42	17.27	19.00	18.42	17.27
2.50	21.17	20.59	19.44	21.17	20.59	19.44

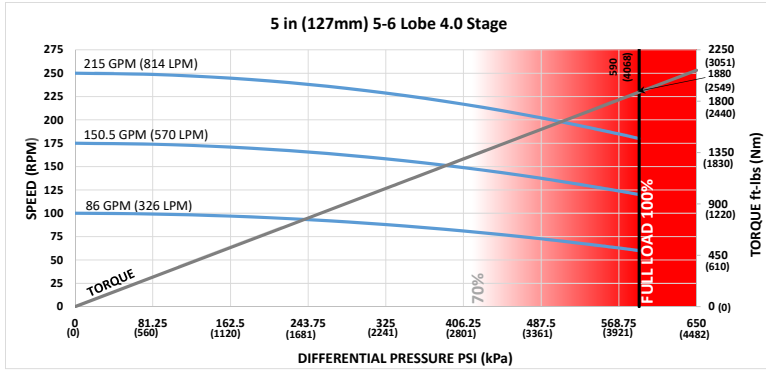
\*Stabilizers assumed as 1/8" undergage

\*\*Additional FBH Angles Available

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.

# 5 in (127 mm) 5-6 Lobe 4.0 Stage **SERIES 2**



<b>Lobe Configuration</b>	5-6 Lobe 4.0 Stage		<b>Flow Rate</b>		<b>Speed</b>
<b>Displacement</b>	0.86 rev/gal	0.23 rev/l	<b>GPM</b>	<b>LPM</b>	<b>RPM</b>
<b>Max Differential @ No Load</b>	590 psi	4068 kPa	86	326	60 - 100
<b>Max Torque @ No Load</b>	1880 ft-lbs	2549 Nm	150.5	570	120 - 175
<b>Max Power</b>	64 HP	48 kW	215	814	180 - 250
<b>C = Overall Length</b>	248.5 in	6312 mm			
<b>Weight</b>	1019 lbs	462 kg			

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	5-7/8 (149mm)	6 (152mm)	6-1/4 (159mm)	5-7/8 (149mm)	6 (152mm)	6-1/4 (159mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	3.83	3.25	2.09	3.83	3.25	3.07
<b>0.78</b>	7.91	7.33	6.16	7.91	7.33	6.36
<b>1.15</b>	11.78	11.20	10.04	11.78	11.20	10.04
<b>1.50</b>	15.44	14.86	13.70	15.44	14.86	13.70
<b>1.83</b>	18.89	18.31	17.15	18.89	18.31	17.15
<b>2.12</b>	21.92	21.34	20.18	21.92	21.34	20.18
<b>2.38</b>	24.64	24.06	22.90	24.64	24.06	22.90
<b>2.60</b>	26.94	26.36	25.20	26.94	26.36	25.20
<b>2.77</b>	28.72	28.14	26.98	28.72	28.14	26.98
<b>2.90</b>	30.08	29.50	28.34	30.08	29.50	28.34
<b>2.97</b>	30.81	30.23	29.07	30.81	30.23	29.07
<b>3.00</b>	31.12	30.54	29.38	31.12	30.54	29.38

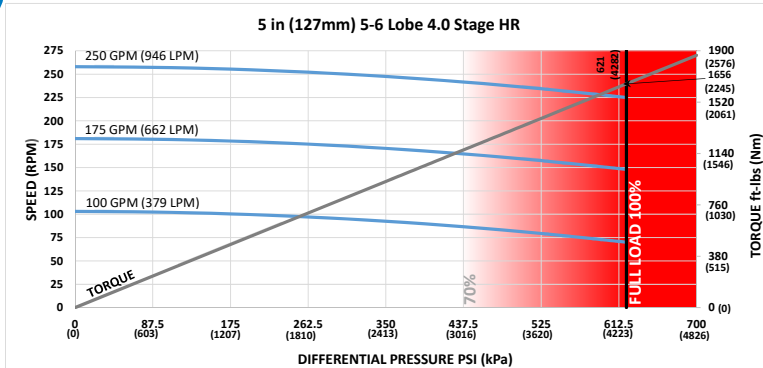
## FBH BUILD RATE\*\*:

<b>1.25</b>	12.58	11.89	10.50	12.58	11.89	11.00
<b>1.50</b>	15.20	14.50	13.11	15.20	14.50	13.25
<b>1.75</b>	17.81	17.12	15.73	17.81	17.12	15.73
<b>2.00</b>	20.42	19.73	18.34	20.42	19.73	18.34
<b>2.25</b>	23.04	22.34	20.96	23.04	22.34	20.96
<b>2.50</b>	25.65	24.96	23.57	25.65	24.96	23.57

\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.



Lobe Configuration	5-6 Lobe 4.0 Stage HR		Flow Rate		Speed
Displacement	1.03 rev/gal	0.27 rev/l	<b>GPM</b>	<b>LPM</b>	<b>RPM</b>
Max Differential @ No Load	621 psi	4282 kPa	100	379	70 - 103
Max Torque @ No Load	1656 ft-lbs	2245 Nm	175	662	148 - 181
Max Power	71 HP	53 kW	250	946	225 - 258
C = Overall Length	248.5 in	6312 mm			
Weight	993 lbs	450 kg			

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

### ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	5-7/8 (149mm)	6 (152mm)	6-1/4 (159mm)	5-7/8 (149mm)	6 (152mm)	6-1/4 (159mm)
<b>BEND ANGLE</b>	<b>Degrees per 100 Feet (30 m)</b>			<b>Degrees per 100 Feet (30 m)</b>		
<b>0.39</b>	3.83	3.25	2.09	3.83	3.25	3.07
<b>0.78</b>	7.91	7.33	6.16	7.91	7.33	6.36
<b>1.15</b>	11.78	11.20	10.04	11.78	11.20	10.04
<b>1.50</b>	15.44	14.86	13.70	15.44	14.86	13.70
<b>1.83</b>	18.89	18.31	17.15	18.89	18.31	17.15
<b>2.12</b>	21.92	21.34	20.18	21.92	21.34	20.18
<b>2.38</b>	24.64	24.06	22.90	24.64	24.06	22.90
<b>2.60</b>	26.94	26.36	25.20	26.94	26.36	25.20
<b>2.77</b>	28.72	28.14	26.98	28.72	28.14	26.98
<b>2.90</b>	30.08	29.50	28.34	30.08	29.50	28.34
<b>2.97</b>	30.81	30.23	29.07	30.81	30.23	29.07
<b>3.00</b>	31.12	30.54	29.38	31.12	30.54	29.38

### FBH BUILD RATE\*\*:

<b>1.25</b>	12.58	11.89	10.50	12.58	11.89	11.00
<b>1.50</b>	15.20	14.50	13.11	15.20	14.50	13.25
<b>1.75</b>	17.81	17.12	15.73	17.81	17.12	15.73
<b>2.00</b>	20.42	19.73	18.34	20.42	19.73	18.34
<b>2.25</b>	23.04	22.34	20.96	23.04	22.34	20.96
<b>2.50</b>	25.65	24.96	23.57	25.65	24.96	23.57

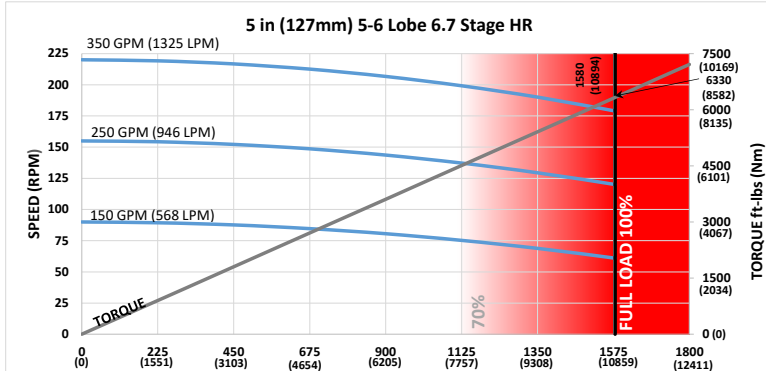
\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.

# 5 in (127 mm) 5-6 Lobe 6.7 Stage HR **SERIES 2**



<b>Lobe Configuration</b>	5-6 Lobe 6.7 Stage HR	
<b>Displacement</b>	0.63 rev/gal	0.17 rev/l
<b>Max Differential @ No Load</b>	1580 psi	10894 kPa
<b>Max Torque @ No Load</b>	6330 ft-lbs	8582 Nm
<b>Max Power</b>	229 HP	171 kW
<b>C = Overall Length</b>	358.5 in	9106 mm
<b>Weight</b>	1355 lbs	615 kg

Flow Rate		Speed
GPM	LPM	RPM
150	568	61 - 90
250	946	126 - 155
350	1325	190 - 220

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	5-7/8 (149mm)	6 (152mm)	6-1/4 (159mm)	5-7/8 (149mm)	6 (152mm)	6-1/4 (159mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	2.38	1.99	1.21	2.38	1.99	1.96
<b>0.78</b>	5.14	4.75	3.97	5.14	4.75	4.37
<b>1.15</b>	7.76	7.37	6.58	7.76	7.37	6.66
<b>1.50</b>	10.23	9.84	9.06	10.23	9.84	9.06
<b>1.83</b>	12.57	12.17	11.39	12.57	12.17	11.39
<b>2.12</b>	14.61	14.22	13.44	14.61	14.22	13.44
<b>2.38</b>	16.45	16.06	15.28	16.45	16.06	15.28
<b>2.60</b>	18.01	17.62	16.83	18.01	17.62	16.83
<b>2.77</b>	19.21	18.82	18.03	19.21	18.82	18.03
<b>2.90</b>	20.13	19.74	18.95	20.13	19.74	18.95
<b>2.97</b>	20.62	20.23	19.45	20.62	20.23	19.45
<b>3.00</b>	20.83	20.44	19.66	20.83	20.44	19.66

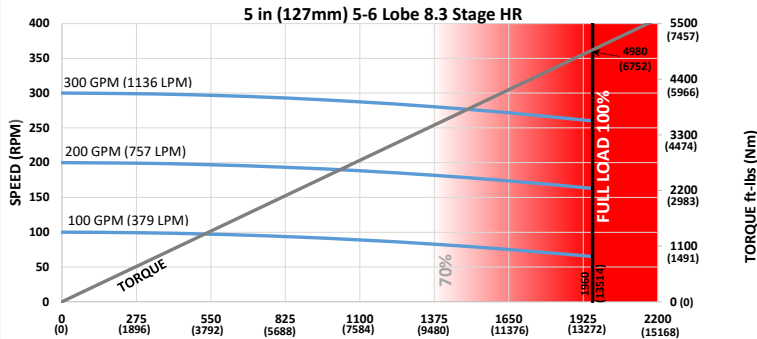
## FBH BUILD RATE\*\*:

<b>1.25</b>	8.32	7.85	6.91	8.32	7.85	7.57
<b>1.50</b>	10.09	9.62	8.68	10.09	9.62	9.18
<b>1.75</b>	11.86	11.39	10.45	11.86	11.39	10.78
<b>2.00</b>	13.62	13.15	12.22	13.62	13.15	12.38
<b>2.25</b>	15.39	14.92	13.98	15.39	14.92	13.99
<b>2.50</b>	17.16	16.69	15.75	17.16	16.69	15.75

\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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 DYNAMAX office.



<b>Lobe Configuration</b>	5-6 Lobe 8.3 Stage HR	
<b>Displacement</b>	1 rev/gal	0.26 rev/l
<b>Max Differential @ No Load</b>	1960 psi	13514 kPa
<b>Max Torque @ No Load</b>	4980 ft.-lbs	6752 Nm
<b>Max Power</b>	247 HP	184 kW
<b>C = Overall Length</b>	351 in	8915 mm
<b>Weight</b>	1446 lbs	656 kg

Flow Rate		Speed
GPM	LPM	RPM
100	379	65 - 100
200	757	163 - 200
300	1136	260 - 300

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

### ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	5-7/8 (149mm)	6 (152mm)	6-1/4 (159mm)	5-7/8 (149mm)	6 (152mm)	6-1/4 (159mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	2.45	2.05	1.24	2.45	2.05	2.01
<b>0.78</b>	5.27	4.87	4.06	5.27	4.87	4.46
<b>1.15</b>	7.94	7.54	6.74	7.94	7.54	6.79
<b>1.50</b>	10.47	10.07	9.27	10.47	10.07	9.27
<b>1.83</b>	12.86	12.46	11.66	12.86	12.46	11.66
<b>2.12</b>	14.95	14.55	13.75	14.95	14.55	13.75
<b>2.38</b>	16.83	16.43	15.63	16.83	16.43	15.63
<b>2.60</b>	18.42	18.02	17.22	18.42	18.02	17.22
<b>2.77</b>	19.65	19.25	18.45	19.65	19.25	18.45
<b>2.90</b>	20.59	20.19	19.39	20.59	20.19	19.39
<b>2.97</b>	21.10	20.70	19.89	21.10	20.70	19.89
<b>3.00</b>	21.31	20.91	20.11	21.31	20.91	20.11

### FBH BUILD RATE\*\*:

<b>1.25</b>	8.52	8.04	7.08	8.52	8.04	7.74
<b>1.50</b>	10.32	9.84	8.89	10.32	9.84	9.37
<b>1.75</b>	12.13	11.65	10.69	12.13	11.65	11.01
<b>2.00</b>	13.94	13.46	12.50	13.94	13.46	12.65
<b>2.25</b>	15.75	15.27	14.31	15.75	15.27	14.31
<b>2.50</b>	17.55	17.07	16.11	17.55	17.07	16.11

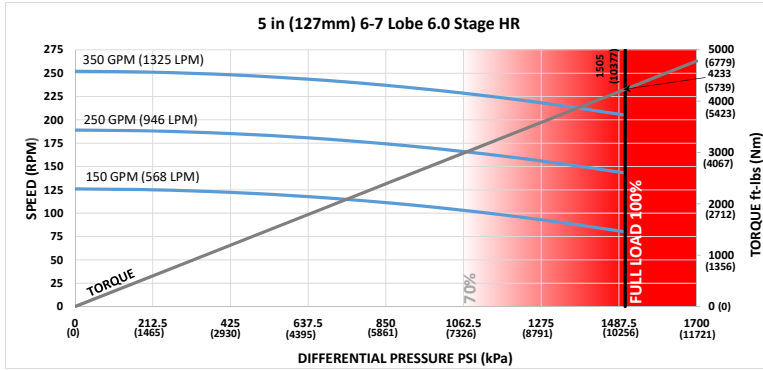
\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.

# 5 in (127 mm) 6-7 Lobe 6.0 Stage HR **SERIES 2**



<b>Lobe Configuration</b>	6-7 Lobe 6.0 Stage HR	
<b>Displacement</b>	0.84 rev/gal	0.22 rev/l
<b>Max Differential @ No Load</b>	1505 psi	10377 kPa
<b>Max Torque @ No Load</b>	4233 ft-lbs	5739 Nm
<b>Max Power</b>	165 HP	123 kW
<b>C = Overall Length</b>	293.5 in	7455 mm
<b>Weight</b>	1127 lbs	511 kg

Flow Rate		Speed
GPM	LPM	RPM
150	568	80 - 126
250	946	143 - 189
350	1325	205 - 252

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	5-7/8 (149mm)	6 (152mm)	6-1/4 (159mm)	5-7/8 (149mm)	6 (152mm)	6-1/4 (159mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	3.07	2.58	1.61	3.07	2.58	2.49
<b>0.78</b>	6.48	5.99	5.02	6.48	5.99	5.36
<b>1.15</b>	9.71	9.23	8.26	9.71	9.23	8.26
<b>1.50</b>	12.77	12.29	11.32	12.77	12.29	11.32
<b>1.83</b>	15.66	15.17	14.20	15.66	15.17	14.20
<b>2.12</b>	18.19	17.71	16.74	18.19	17.71	16.74
<b>2.38</b>	20.47	19.98	19.01	20.47	19.98	19.01
<b>2.60</b>	22.39	21.90	20.93	22.39	21.90	20.93
<b>2.77</b>	23.87	23.39	22.42	23.87	23.39	22.42
<b>2.90</b>	25.01	24.53	23.56	25.01	24.53	23.56
<b>2.97</b>	25.62	25.14	24.17	25.62	25.14	24.17
<b>3.00</b>	25.88	25.40	24.43	25.88	25.40	24.43

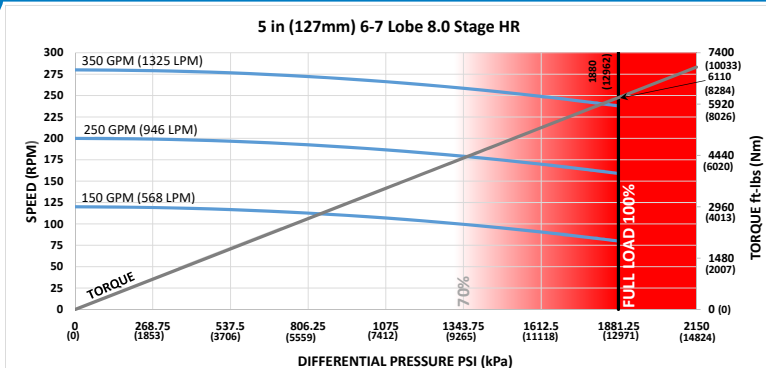
## FBH BUILD RATE\*\*:

<b>1.25</b>	10.40	9.82	8.66	10.40	9.82	9.28
<b>1.50</b>	12.58	12.00	10.84	12.58	12.00	11.22
<b>1.75</b>	14.77	14.19	13.03	14.77	14.19	13.15
<b>2.00</b>	16.96	16.38	15.22	16.96	16.38	15.22
<b>2.25</b>	19.14	18.56	17.40	19.14	18.56	17.40
<b>2.50</b>	21.33	20.75	19.59	21.33	20.75	19.59

\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.



<b>Lobe Configuration</b>	6-7 Lobe 8.0 Stage HR	
<b>Displacement</b>	0.79 rev/gal	0.21 rev/l
<b>Max Differential @ No Load</b>	1880 psi	12962 kPa
<b>Max Torque @ No Load</b>	6110 ft-lbs	8284 Nm
<b>Max Power</b>	277 HP	206 kW
<b>C = Overall Length</b>	358.5 in	9106 mm
<b>Weight</b>	1434 lbs	650 kg

Flow Rate		Speed
GPM	LPM	RPM
150	568	80 - 120
250	946	159 - 200
350	1325	238 - 280

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

### ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	5-7/8 (149mm)	6 (152mm)	6-1/4 (159mm)	5-7/8 (149mm)	6 (152mm)	6-1/4 (159mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	2.38	1.99	1.21	2.38	1.99	1.96
<b>0.78</b>	5.14	4.75	3.97	5.14	4.75	4.37
<b>1.15</b>	7.76	7.37	6.58	7.76	7.37	6.66
<b>1.50</b>	10.23	9.84	9.06	10.23	9.84	9.06
<b>1.83</b>	12.57	12.17	11.39	12.57	12.17	11.39
<b>2.12</b>	14.61	14.22	13.44	14.61	14.22	13.44
<b>2.38</b>	16.45	16.06	15.28	16.45	16.06	15.28
<b>2.60</b>	18.01	17.62	16.83	18.01	17.62	16.83
<b>2.77</b>	19.21	18.82	18.03	19.21	18.82	18.03
<b>2.90</b>	20.13	19.74	18.95	20.13	19.74	18.95
<b>2.97</b>	20.62	20.23	19.45	20.62	20.23	19.45
<b>3.00</b>	20.83	20.44	19.66	20.83	20.44	19.66

### FBH BUILD RATE\*\*:

<b>1.25</b>	8.32	7.85	6.91	8.32	7.85	7.57
<b>1.50</b>	10.09	9.62	8.68	10.09	9.62	9.18
<b>1.75</b>	11.86	11.39	10.45	11.86	11.39	10.78
<b>2.00</b>	13.62	13.15	12.22	13.62	13.15	12.38
<b>2.25</b>	15.39	14.92	13.98	15.39	14.92	13.99
<b>2.50</b>	17.16	16.69	15.75	17.16	16.69	15.75

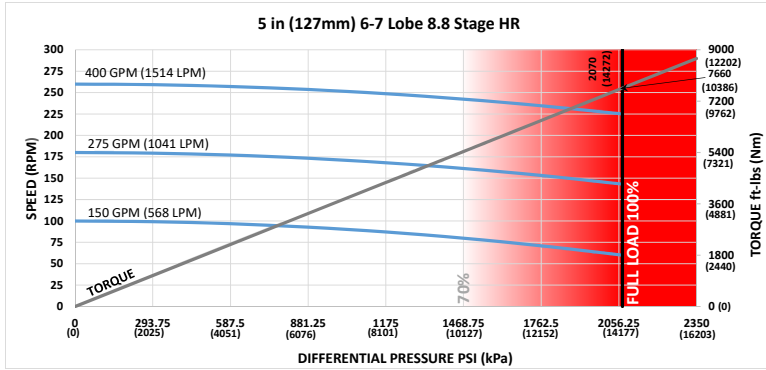
\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.

# 5 in (127 mm) 6-7 Lobe 8.8 Stage SERIES 2



<b>Lobe Configuration</b>	6-7 Lobe 8.8 Stage HR	
<b>Displacement</b>	0.66 rev/gal	0.17 rev/l
<b>Max Differential @ No Load</b>	2070 psi	14272 kPa
<b>Max Torque @ No Load</b>	7660 ft-lbs	10386 Nm
<b>Max Power</b>	328 HP	245 kW
<b>C = Overall Length</b>	383.5 in	9741 mm
<b>Weight</b>	1491 lbs	676 kg

Flow Rate		Speed
GPM	LPM	RPM
150	568	60 - 100
275	1041	143 - 180
400	1514	225 - 260

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	5-7/8 (149mm)	6 (152mm)	6-1/4 (159mm)	5-7/8 (149mm)	6 (152mm)	6-1/4 (159mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	2.19	1.83	1.09	2.19	1.83	1.77
<b>0.78</b>	4.76	4.40	3.66	4.76	4.40	4.03
<b>1.15</b>	7.20	6.83	6.10	7.20	6.83	6.18
<b>1.50</b>	9.51	9.14	8.40	9.51	9.14	8.40
<b>1.83</b>	11.68	11.31	10.58	11.68	11.31	10.58
<b>2.12</b>	13.59	13.22	12.49	13.59	13.22	12.49
<b>2.38</b>	15.30	14.94	14.20	15.30	14.94	14.20
<b>2.60</b>	16.75	16.38	15.65	16.75	16.38	15.65
<b>2.77</b>	17.87	17.50	16.77	17.87	17.50	16.77
<b>2.90</b>	18.73	18.36	17.62	18.73	18.36	17.62
<b>2.97</b>	19.19	18.82	18.09	19.19	18.82	18.09
<b>3.00</b>	19.39	19.02	18.28	19.39	19.02	18.28

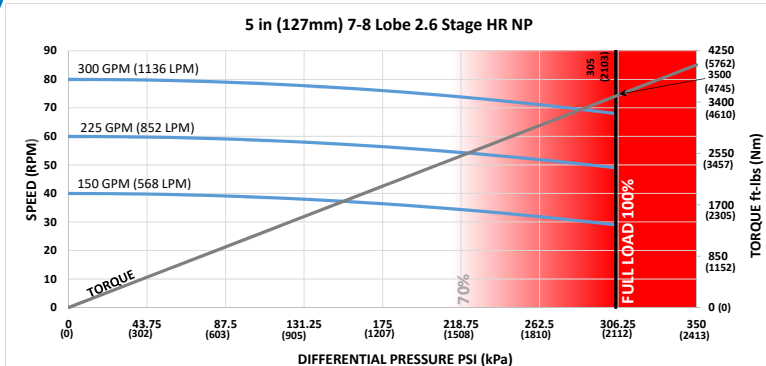
## FBH BUILD RATE\*\*:

<b>1.25</b>	7.73	7.29	6.42	7.73	7.29	7.01
<b>1.50</b>	9.38	8.94	8.06	9.38	8.94	8.51
<b>1.75</b>	11.03	10.59	9.71	11.03	10.59	10.02
<b>2.00</b>	12.67	12.23	11.36	12.67	12.23	11.52
<b>2.25</b>	14.32	13.88	13.01	14.32	13.88	13.02
<b>2.50</b>	15.97	15.53	14.65	15.97	15.53	14.65

\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.



<b>Lobe Configuration</b>	7-8 Lobe 2.6 Stage HR NP		<b>Flow Rate</b>		<b>Speed</b>
<b>Displacement</b>	0.27 rev/gal	0.07 rev/l	<b>GPM</b>	<b>LPM</b>	<b>RPM</b>
<b>Max Differential @ No Load</b>	305 psi	2103 kPa	150	568	29 - 40
<b>Max Torque @ No Load</b>	3500 ft-lbs	4745 Nm	225	852	49 - 60
<b>Max Power</b>	45 HP	34 kW	300	1136	68 - 80
<b>C = Overall Length</b>	302.2 in	7676 mm			
<b>Weight</b>	1165 lbs	528 kg			

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

**ADJUSTABLE BUILD RATE:**

Hole Size	SLICK			STABILIZED*		
	5-7/8 (149mm)	6 (152mm)	6-1/4 (159mm)	5-7/8 (149mm)	6 (152mm)	6-1/4 (159mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	2.95	2.48	1.54	2.95	2.48	2.41
<b>0.78</b>	6.26	5.79	4.85	6.26	5.79	5.20
<b>1.15</b>	9.39	8.92	7.98	9.39	8.92	7.98
<b>1.50</b>	12.36	11.89	10.95	12.36	11.89	10.95
<b>1.83</b>	15.16	14.69	13.75	15.16	14.69	13.75
<b>2.12</b>	17.61	17.14	16.20	17.61	17.14	16.20
<b>2.38</b>	19.82	19.35	18.41	19.82	19.35	18.41
<b>2.60</b>	21.68	21.21	20.27	21.68	21.21	20.27
<b>2.77</b>	23.12	22.65	21.71	23.12	22.65	21.71
<b>2.90</b>	24.22	23.75	22.81	24.22	23.75	22.81
<b>2.97</b>	24.82	24.35	23.41	24.82	24.35	23.41
<b>3.00</b>	25.07	24.60	23.66	25.07	24.60	23.66

**FBH BUILD RATE\*\*:**

<b>1.25</b>	10.06	9.50	8.37	10.06	9.50	9.01
<b>1.50</b>	12.18	11.62	10.49	12.18	11.62	10.89
<b>1.75</b>	14.30	13.74	12.61	14.30	13.74	12.77
<b>2.00</b>	16.42	15.86	14.73	16.42	15.86	14.73
<b>2.25</b>	18.54	17.97	16.85	18.54	17.97	16.85
<b>2.50</b>	20.65	20.09	18.97	20.65	20.09	18.97

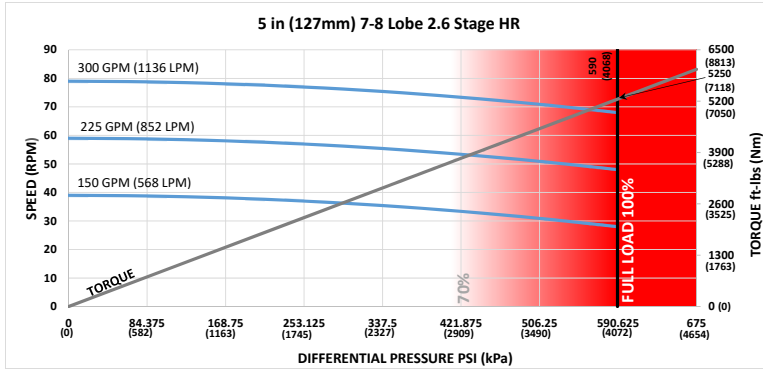
\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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

# 5 in (127 mm) 7-8 Lobe 2.6 Stage HR **SERIES 2**



Lobe Configuration	7-8 Lobe 2.6 Stage HR		Flow Rate		Speed
Displacement	0.26 rev/gal	0.07 rev/l	<b>GPM</b>	<b>LPM</b>	<b>RPM</b>
Max Differential @ No Load	590 psi	4068 kPa	150	568	28 - 39
Max Torque @ No Load	5250 ft-lbs	7118 Nm	225	852	48 - 59
Max Power	68 HP	51 kW	300	1136	68 - 79
C = Overall Length	337.8 in	8580 mm			
Weight	1319 lbs	598 kg			

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

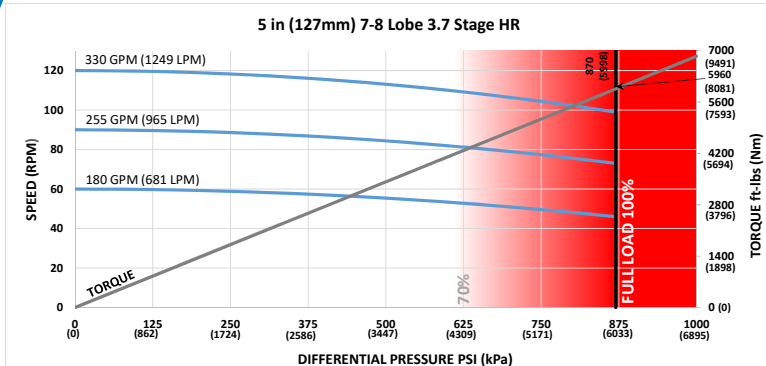
## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	5-7/8 (149mm)	6 (152mm)	6-1/4 (159mm)	5-7/8 (149mm)	6 (152mm)	6-1/4 (159mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	2.57	2.15	1.31	2.57	2.15	2.10
<b>0.78</b>	5.50	5.08	4.25	5.50	5.08	4.64
<b>1.15</b>	8.29	7.87	7.04	8.29	7.87	7.05
<b>1.50</b>	10.92	10.51	9.67	10.92	10.51	9.67
<b>1.83</b>	13.41	12.99	12.15	13.41	12.99	12.15
<b>2.12</b>	15.59	15.17	14.34	15.59	15.17	14.34
<b>2.38</b>	17.55	17.13	16.30	17.55	17.13	16.30
<b>2.60</b>	19.20	18.79	17.95	19.20	18.79	17.95
<b>2.77</b>	20.48	20.07	19.23	20.48	20.07	19.23
<b>2.90</b>	21.46	21.04	20.21	21.46	21.04	20.21
<b>2.97</b>	21.99	21.57	20.74	21.99	21.57	20.74
<b>3.00</b>	22.21	21.80	20.96	22.21	21.80	20.96
	<b>FBH BUILD RATE**:</b>					
<b>1.25</b>	8.89	8.39	7.39	8.89	8.39	8.04
<b>1.50</b>	10.77	10.27	9.27	10.77	10.27	9.74
<b>1.75</b>	12.65	12.15	11.15	12.65	12.15	11.44
<b>2.00</b>	14.53	14.03	13.03	14.53	14.03	13.13
<b>2.25</b>	16.41	15.91	14.92	16.41	15.91	14.92
<b>2.50</b>	18.30	17.80	16.80	18.30	17.80	16.80

\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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 DYNAMAX office.



<b>Lobe Configuration</b>	7-8 Lobe 3.7 Stage HR	
<b>Displacement</b>	0.36 rev/gal	0.1 rev/l
<b>Max Differential @ No Load</b>	870 psi	5998 kPa
<b>Max Torque @ No Load</b>	5960 ft-lbs	8081 Nm
<b>Max Power</b>	112 HP	84 kW
<b>C = Overall Length</b>	343.5 in	8725 mm
<b>Weight</b>	1408 lbs	639 kg

<b>Flow Rate</b>		<b>Speed</b>
<b>GPM</b>	<b>LPM</b>	<b>RPM</b>
180	681	46 - 60
255	965	73 - 90
330	1249	99 - 120

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

**ADJUSTABLE BUILD RATE:**

Hole Size	SLICK			STABILIZED*		
	5-7/8 (149mm)	6 (152mm)	6-1/4 (159mm)	5-7/8 (149mm)	6 (152mm)	6-1/4 (159mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	2.51	2.10	1.28	2.51	2.10	2.06
<b>0.78</b>	5.40	4.99	4.17	5.40	4.99	4.56
<b>1.15</b>	8.14	7.72	6.90	8.14	7.72	6.94
<b>1.50</b>	10.72	10.31	9.49	10.72	10.31	9.49
<b>1.83</b>	13.16	12.75	11.93	13.16	12.75	11.93
<b>2.12</b>	15.31	14.90	14.08	15.31	14.90	14.08
<b>2.38</b>	17.23	16.82	16.00	17.23	16.82	16.00
<b>2.60</b>	18.86	18.45	17.63	18.86	18.45	17.63
<b>2.77</b>	20.12	19.71	18.89	20.12	19.71	18.89
<b>2.90</b>	21.08	20.67	19.85	21.08	20.67	19.85
<b>2.97</b>	21.59	21.18	20.36	21.59	21.18	20.36
<b>3.00</b>	21.82	21.41	20.59	21.82	21.41	20.59

**FBH BUILD RATE\*\*:**

<b>1.25</b>	8.72	8.23	7.25	8.72	8.23	7.91
<b>1.50</b>	10.57	10.08	9.10	10.57	10.08	9.58
<b>1.75</b>	12.42	11.93	10.95	12.42	11.93	11.25
<b>2.00</b>	14.27	13.78	12.80	14.27	13.78	12.92
<b>2.25</b>	16.12	15.63	14.65	16.12	15.63	14.65
<b>2.50</b>	17.97	17.48	16.50	17.97	17.48	16.50

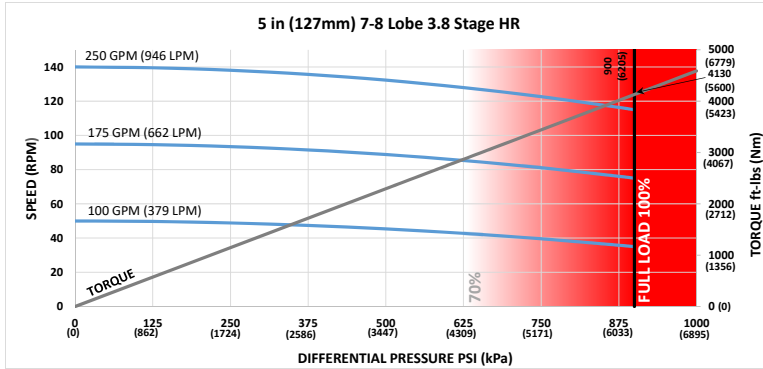
\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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

# 5 in (127 mm) 7-8 Lobe 3.8 Stage HR **SERIES 2**



<b>Lobe Configuration</b>	7-8 Lobe 3.8 Stage HR		<b>Flow Rate</b>		<b>Speed</b>
<b>Displacement</b>	0.54 rev/gal	0.14 rev/l	<b>GPM</b>	<b>LPM</b>	<b>RPM</b>
<b>Max Differential @ No Load</b>	900 psi	6205 kPa	100	379	35 - 50
<b>Max Torque @ No Load</b>	4130 ft-lbs	5600 Nm	175	662	75 - 95
<b>Max Power</b>	90 HP	67 kW	250	946	115 - 140
<b>C = Overall Length</b>	295.5 in	7506 mm			
<b>Weight</b>	1248 lbs	566 kg			

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	5-7/8 (149mm)	6 (152mm)	6-1/4 (159mm)	5-7/8 (149mm)	6 (152mm)	6-1/4 (159mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	3.04	2.56	1.59	3.04	2.56	2.47
<b>0.78</b>	6.42	5.94	4.98	6.42	5.94	5.32
<b>1.15</b>	9.64	9.15	8.19	9.64	9.15	8.19
<b>1.50</b>	12.67	12.19	11.23	12.67	12.19	11.23
<b>1.83</b>	15.54	15.06	14.10	15.54	15.06	14.10
<b>2.12</b>	18.06	17.57	16.61	18.06	17.57	16.61
<b>2.38</b>	20.31	19.83	18.87	20.31	19.83	18.87
<b>2.60</b>	22.22	21.74	20.78	22.22	21.74	20.78
<b>2.77</b>	23.70	23.22	22.25	23.70	23.22	22.25
<b>2.90</b>	24.83	24.34	23.38	24.83	24.34	23.38
<b>2.97</b>	25.43	24.95	23.99	25.43	24.95	23.99
<b>3.00</b>	25.69	25.21	24.25	25.69	25.21	24.25

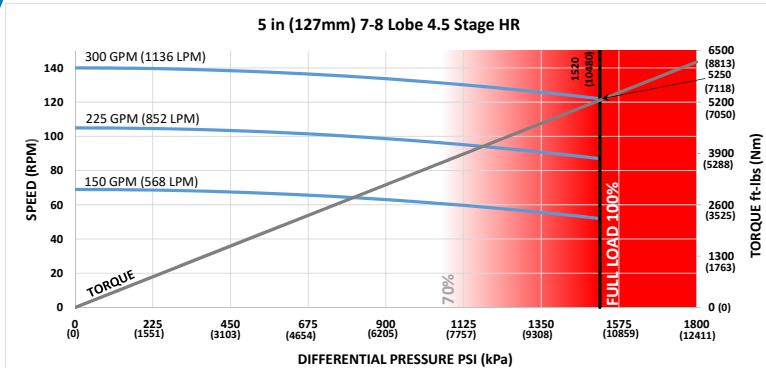
## FBH BUILD RATE\*\*:

<b>1.25</b>	10.32	9.74	8.59	10.32	9.74	9.22
<b>1.50</b>	12.49	11.91	10.76	12.49	11.91	11.14
<b>1.75</b>	14.66	14.08	12.93	14.66	14.08	13.06
<b>2.00</b>	16.83	16.25	15.10	16.83	16.25	15.10
<b>2.25</b>	19.00	18.42	17.27	19.00	18.42	17.27
<b>2.50</b>	21.17	20.59	19.44	21.17	20.59	19.44

\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.



<b>Lobe Configuration</b>	7-8 Lobe 4.5 Stage HR	
<b>Displacement</b>	0.46 rev/gal	0.12 rev/l
<b>Max Differential @ No Load</b>	1520 psi	10480 kPa
<b>Max Torque @ No Load</b>	5250 ft-lbs	7118 Nm
<b>Max Power</b>	122 HP	91 kW
<b>C = Overall Length</b>	337.8 in	8580 mm
<b>Weight</b>	1326 lbs	601 kg

Flow Rate		Speed
GPM	LPM	RPM
150	568	52 - 69
225	852	87 - 105
300	1136	122 - 140

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

**ADJUSTABLE BUILD RATE:**

Hole Size	SLICK			STABILIZED*		
	5-7/8 (149mm)	6 (152mm)	6-1/4 (159mm)	5-7/8 (149mm)	6 (152mm)	6-1/4 (159mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	2.57	2.15	1.31	2.57	2.15	2.10
<b>0.78</b>	5.50	5.08	4.25	5.50	5.08	4.64
<b>1.15</b>	8.29	7.87	7.04	8.29	7.87	7.05
<b>1.50</b>	10.92	10.51	9.67	10.92	10.51	9.67
<b>1.83</b>	13.41	12.99	12.15	13.41	12.99	12.15
<b>2.12</b>	15.59	15.17	14.34	15.59	15.17	14.34
<b>2.38</b>	17.55	17.13	16.30	17.55	17.13	16.30
<b>2.60</b>	19.20	18.79	17.95	19.20	18.79	17.95
<b>2.77</b>	20.48	20.07	19.23	20.48	20.07	19.23
<b>2.90</b>	21.46	21.04	20.21	21.46	21.04	20.21
<b>2.97</b>	21.99	21.57	20.74	21.99	21.57	20.74
<b>3.00</b>	22.21	21.80	20.96	22.21	21.80	20.96

**FBH BUILD RATE\*\*:**

<b>1.25</b>	8.89	8.39	7.39	8.89	8.39	8.04
<b>1.50</b>	10.77	10.27	9.27	10.77	10.27	9.74
<b>1.75</b>	12.65	12.15	11.15	12.65	12.15	11.44
<b>2.00</b>	14.53	14.03	13.03	14.53	14.03	13.13
<b>2.25</b>	16.41	15.91	14.92	16.41	15.91	14.92
<b>2.50</b>	18.30	17.80	16.80	18.30	17.80	16.80

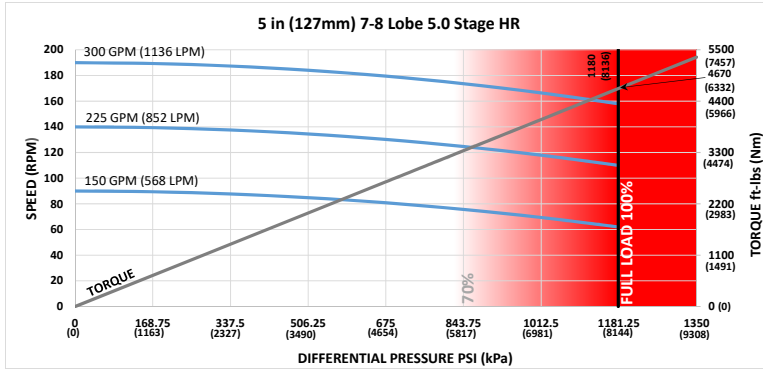
\*Stabilizers assumed as 1/8" undergage

\*\*Additional FBH Angles Available

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.

# 5 in (127 mm) 7-8 Lobe 5.0 Stage HR **SERIES 2**



<b>Lobe Configuration</b>	7-8 Lobe 5.0 Stage HR	
<b>Displacement</b>	0.62 rev/gal	0.16 rev/l
<b>Max Differential @ No Load</b>	1180 psi	8136 kPa
<b>Max Torque @ No Load</b>	4670 ft-lbs	6332 Nm
<b>Max Power</b>	140 HP	105 kW
<b>C = Overall Length</b>	306.5 in	7785 mm
<b>Weight</b>	1283 lbs	582 kg

Flow Rate		Speed
GPM	LPM	RPM
150	568	62 - 90
225	852	110 - 140
300	1136	158 - 190

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	5-7/8 (149mm)	6 (152mm)	6-1/4 (159mm)	5-7/8 (149mm)	6 (152mm)	6-1/4 (159mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	2.90	2.44	1.51	2.90	2.44	2.36
<b>0.78</b>	6.16	5.69	4.77	6.16	5.69	5.13
<b>1.15</b>	9.24	8.78	7.86	9.24	8.78	7.86
<b>1.50</b>	12.17	11.70	10.78	12.17	11.70	10.78
<b>1.83</b>	14.92	14.46	13.53	14.92	14.46	13.53
<b>2.12</b>	17.34	16.88	15.95	17.34	16.88	15.95
<b>2.38</b>	19.51	19.05	18.12	19.51	19.05	18.12
<b>2.60</b>	21.35	20.89	19.96	21.35	20.89	19.96
<b>2.77</b>	22.77	22.30	21.38	22.77	22.30	21.38
<b>2.90</b>	23.85	23.39	22.46	23.85	23.39	22.46
<b>2.97</b>	24.44	23.97	23.05	24.44	23.97	23.05
<b>3.00</b>	24.69	24.22	23.30	24.69	24.22	23.30

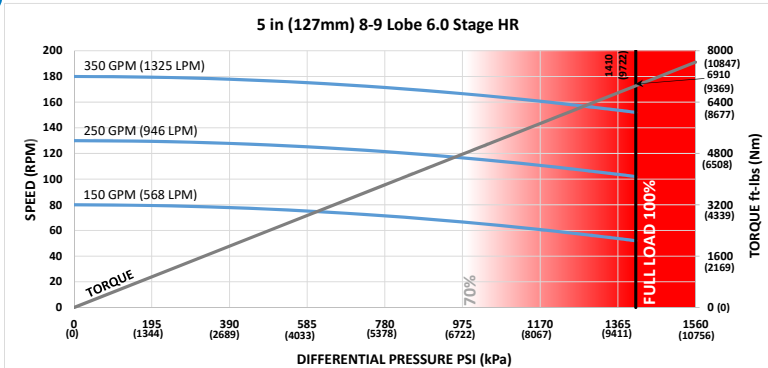
## FBH BUILD RATE\*\*:

<b>1.25</b>	9.90	9.35	8.24	9.90	9.35	8.88
<b>1.50</b>	11.99	11.44	10.33	11.99	11.44	10.74
<b>1.75</b>	14.08	13.52	12.42	14.08	13.52	12.60
<b>2.00</b>	16.16	15.61	14.50	16.16	15.61	14.50
<b>2.25</b>	18.25	17.70	16.59	18.25	17.70	16.59
<b>2.50</b>	20.34	19.78	18.68	20.34	19.78	18.68

\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.



<b>Lobe Configuration</b>	8-9 Lobe 6.0 Stage HR	
<b>Displacement</b>	0.51 rev/gal	0.13 rev/l
<b>Max Differential @ No Load</b>	1410 psi	9722 kPa
<b>Max Torque @ No Load</b>	6910 ft-lbs	9369 Nm
<b>Max Power</b>	200 HP	149 kW
<b>C = Overall Length</b>	358.5 in	9106 mm
<b>Weight</b>	1485 lbs	674 kg

Flow Rate		Speed
GPM	LPM	RPM
150	568	52 - 80
250	946	102 - 130
350	1325	152 - 180

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

**ADJUSTABLE BUILD RATE:**

Hole Size	SLICK			STABILIZED*		
	5-7/8 (149mm)	6 (152mm)	6-1/4 (159mm)	5-7/8 (149mm)	6 (152mm)	6-1/4 (159mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	2.38	1.99	1.21	2.38	1.99	1.96
<b>0.78</b>	5.14	4.75	3.97	5.14	4.75	4.37
<b>1.15</b>	7.76	7.37	6.58	7.76	7.37	6.66
<b>1.50</b>	10.23	9.84	9.06	10.23	9.84	9.06
<b>1.83</b>	12.57	12.17	11.39	12.57	12.17	11.39
<b>2.12</b>	14.61	14.22	13.44	14.61	14.22	13.44
<b>2.38</b>	16.45	16.06	15.28	16.45	16.06	15.28
<b>2.60</b>	18.01	17.62	16.83	18.01	17.62	16.83
<b>2.77</b>	19.21	18.82	18.03	19.21	18.82	18.03
<b>2.90</b>	20.13	19.74	18.95	20.13	19.74	18.95
<b>2.97</b>	20.62	20.23	19.45	20.62	20.23	19.45
<b>3.00</b>	20.83	20.44	19.66	20.83	20.44	19.66

**FBH BUILD RATE\*\*:**

<b>1.25</b>	8.32	7.85	6.91	8.32	7.85	7.57
<b>1.50</b>	10.09	9.62	8.68	10.09	9.62	9.18
<b>1.75</b>	11.86	11.39	10.45	11.86	11.39	10.78
<b>2.00</b>	13.62	13.15	12.22	13.62	13.15	12.38
<b>2.25</b>	15.39	14.92	13.98	15.39	14.92	13.99
<b>2.50</b>	17.16	16.69	15.75	17.16	16.69	15.75

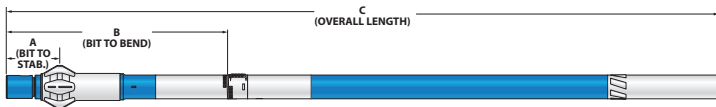
\*Stabilizers assumed as 1/8" undergage

\*\*Additional FBH Angles Available

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

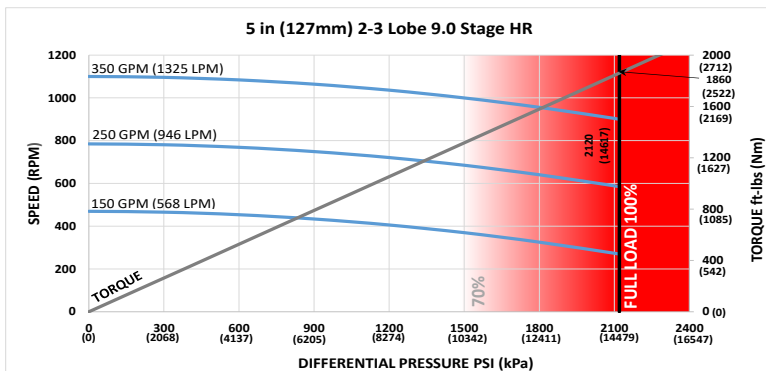
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<b>Bit Size Range</b>	6-1/4 - 7-7/8 in	159 - 200 mm
<b>Bit Box Connection</b>	3-1/2 REGULAR	
<b>Dynamic Bearing Load On/Off Bottom</b>	60730 lbf	27000 daN
<b>Static Bearing Load On/Off Bottom</b>	124336 lbf	55300 daN
<b>Max. Overpull for Re-run</b>	231000 lbf	102800 daN
<b>Absolute Overpull</b>	462000 lbf	205500 daN
<b>Adjustable Make Up Torque</b>	12500 ft-lbs	16900 Nm
<b>A = Bit to Stabilizer (center)</b>	15.74 in	400 mm
<b>B = Bit to Bend</b>	<b>Adjustable</b>	57.5 in / 1460 mm
	<b>Fixed</b>	46.6 in / 1180 mm

5-1/4 in (133 mm) Bottom w/ 5 in (127 mm) 2-3 Lobe 9.0 Stage HR MUD LUBE	81
5-1/4 in (133 mm) Bottom w/ 5 in (127 mm) 5-6 Lobe 6.7 Stage HR MUD LUBE	82
5-1/4 in (133 mm) Bottom w/ 5 in (127 mm) 5-6 Lobe 8.3 Stage HR MUD LUBE	83
5-1/4 in (133 mm) Bottom w/ 5 in (127 mm) 5-6 Lobe 8.4 Stage HR MUD LUBE	84
5-1/4 in (133 mm) Bottom w/ 5 in (127 mm) 6-7 Lobe 8.0 Stage HR MUD LUBE	85
5-1/4 in (133 mm) Bottom w/ 5 in (127 mm) 6-7 Lobe 8.8 Stage HR MUD LUBE	86
5-1/4 in (133 mm) Bottom w/ 5 in (127 mm) 7-8 Lobe 2.6 Stage HR MUD LUBE	87
5-1/4 in (133 mm) Bottom w/ 5 in (127 mm) 7-8 Lobe 3.0 Stage HR MUD LUBE	88
5-1/4 in (133 mm) Bottom w/ 5 in (127 mm) 7-8 Lobe 3.1 Stage HR MUD LUBE	89
5-1/4 in (133 mm) Bottom w/ 5 in (127 mm) 7-8 Lobe 3.7 Stage HR MUD LUBE	90
5-1/4 in (133 mm) Bottom w/ 5 in (127 mm) 7-8 Lobe 3.8 Stage HR MUD LUBE	91
5-1/4 in (133 mm) Bottom w/ 5 in (127 mm) 7-8 Lobe 5.0 Stage HR MUD LUBE	92
5-1/4 in (133 mm) Bottom w/ 5 in (127 mm) 7-8 Lobe 5.7 Stage HR MUD LUBE	93
5-1/4 in (133 mm) Bottom w/ 5 in (127 mm) 7-8 Lobe 6.4 Stage HR MUD LUBE	94
5-1/4 in (133 mm) Bottom w/ 5 in (127 mm) 8-9 Lobe 6.0 Stage HR MUD LUBE	95

# 5-1/4 in (133 mm) Bottom w/ 5 in (127 mm) 2-3 Lobe 9.0 Stage HR MUD LUBE



Lobe Configuration	2-3 Lobe 9.0 Stage HR		Flow Rate		Speed
Displacement	3.16 rev/gal	0.83 rev/l	<b>GPM</b>	<b>LPM</b>	<b>RPM</b>
Max Differential @ No Load	2120 psi	14617 kPa	150	568	270 - 470
Max Torque @ No Load	1860 ft-lbs	2522 Nm	250	946	585 - 785
Max Power	319 HP	238 kW	350	1325	900 - 1100
C = Overall Length	317 in	8.05 m			
Weight	1257 lb	570 kg			

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	6-1/4 (159mm)	6-3/4 (171mm)	7-1/4 (184mm)	6-1/4 (159mm)	6-3/4 (171mm)	7-1/4 (184mm)
<b>BEND ANGLE</b>	<b>Degrees per 100 Feet (30 m)</b>			<b>Degrees per 100 Feet (30 m)</b>		
<b>0.39</b>	1.11	-	-	2.20	2.61	3.03
<b>0.78</b>	4.24	2.52	0.81	4.85	5.26	5.68
<b>1.15</b>	7.20	5.49	3.78	7.36	7.78	8.20
<b>1.50</b>	10.01	8.30	6.58	10.01	10.16	10.58
<b>1.83</b>	12.65	10.94	9.23	12.65	12.40	12.82
<b>2.12</b>	14.98	13.27	11.55	14.98	14.37	14.79
<b>2.38</b>	17.06	15.35	13.64	17.06	16.14	16.56
<b>2.60</b>	18.83	17.11	15.40	18.83	17.63	18.05
<b>2.77</b>	20.19	18.48	16.76	20.19	18.79	19.21
<b>2.90</b>	21.23	19.52	17.81	21.23	19.67	20.09
<b>2.97</b>	21.79	20.08	18.37	21.79	20.15	20.56
<b>3.00</b>	22.03	20.32	18.61	22.03	20.35	20.77

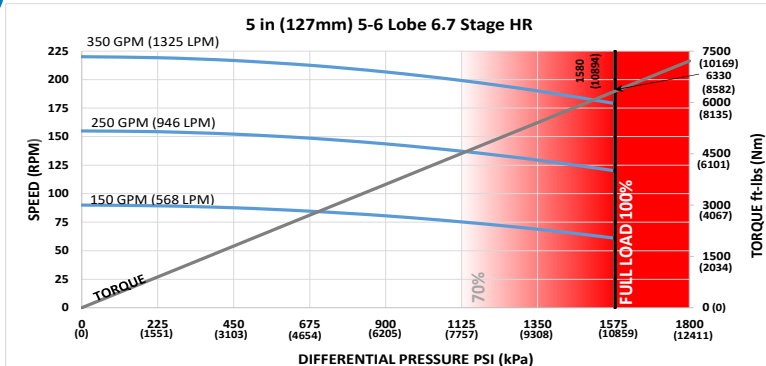
## FBH BUILD RATE\*\*:

<b>1.25</b>	7.54	5.49	3.45	8.44	8.86	9.28
<b>1.50</b>	9.54	7.50	5.45	10.22	10.64	11.05
<b>1.75</b>	11.55	9.50	7.45	11.99	12.41	12.83
<b>2.00</b>	13.55	11.50	9.46	13.77	14.19	14.61
<b>2.25</b>	15.55	13.51	11.46	15.55	15.97	16.39
<b>2.50</b>	17.56	15.51	13.47	17.56	17.75	18.17

\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.



Lobe Configuration	5-6 Lobe 6.7 Stage HR		Flow Rate		Speed
Displacement	0.63 rev/gal	0.17 rev/l	<b>GPM</b>	<b>LPM</b>	<b>RPM</b>
Max Differential @ No Load	1580 psi	10894 kPa	150	568	61 - 90
Max Torque @ No Load	6330 ft-lbs	8582 Nm	250	946	120 - 155
Max Power	216 HP	161 kW	350	1325	179 - 220
C = Overall Length	367 in	9.32 m			
Weight	1423 lb	645 kg			

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

**ADJUSTABLE BUILD RATE:**

Hole Size	SLICK			STABILIZED*		
	6-1/4 (159mm)	6-3/4 (171mm)	7-1/4 (184mm)	6-1/4 (159mm)	6-3/4 (171mm)	7-1/4 (184mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	0.90	-	-	1.85	2.15	2.46
<b>0.78</b>	3.58	2.12	0.65	4.18	4.49	4.79
<b>1.15</b>	6.13	4.66	3.19	6.40	6.70	7.00
<b>1.50</b>	8.53	7.06	5.59	8.53	8.79	9.10
<b>1.83</b>	10.80	9.33	7.86	10.80	10.77	11.07
<b>2.12</b>	12.79	11.32	9.85	12.79	12.50	12.81
<b>2.38</b>	14.57	13.11	11.64	14.57	14.06	14.36
<b>2.60</b>	16.08	14.62	13.15	16.08	15.38	15.68
<b>2.77</b>	17.25	15.78	14.32	17.25	16.39	16.70
<b>2.90</b>	18.14	16.68	15.21	18.14	17.17	17.47
<b>2.97</b>	18.62	17.16	15.69	18.62	17.59	17.89
<b>3.00</b>	18.83	17.36	15.90	18.83	17.77	18.07

**FBH BUILD RATE\*\*:**

<b>1.25</b>	6.42	4.66	2.91	7.28	7.59	7.89
<b>1.50</b>	8.13	6.38	4.63	8.84	9.14	9.44
<b>1.75</b>	9.85	8.10	6.34	10.39	10.69	11.00
<b>2.00</b>	11.57	9.81	8.06	11.94	12.25	12.55
<b>2.25</b>	13.28	11.53	9.78	13.50	13.80	14.10
<b>2.50</b>	15.00	13.25	11.50	15.05	15.35	15.66

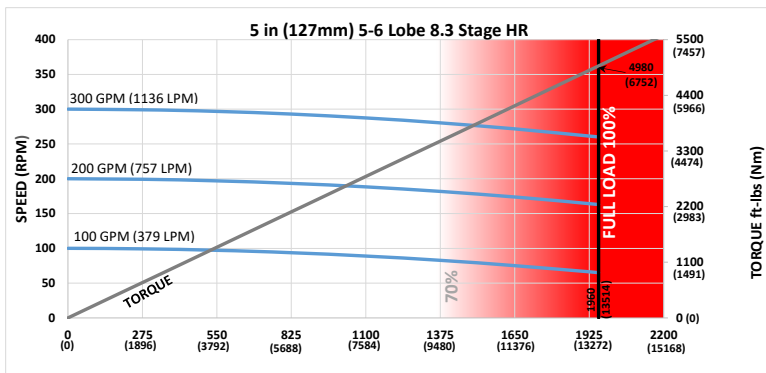
\*Stabilizers assumed as 1/8" undergage

\*\*Additional FBH Angles Available

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.

# 5-1/4 in (133 mm) Bottom w/ 5 in (127 mm) 5-6 Lobe 8.3 Stage HR MUD LUBE



<b>Lobe Configuration</b>	5-6 Lobe 8.3 Stage HR	
<b>Displacement</b>	1 rev/gal	0.26 rev/l
<b>Max Differential @ No Load</b>	1960 psi	13514 kPa
<b>Max Torque @ No Load</b>	4980 ft-lbs	6752 Nm
<b>Max Power</b>	247 HP	184 kW
<b>C = Overall Length</b>	359.5 in	9.13 m
<b>Weight</b>	1514 lb	687 kg

Flow Rate		Speed
GPM	LPM	RPM
100	379	65 - 100
200	757	163 - 200
300	1136	260 - 300

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	6-1/4 (159mm)	6-3/4 (171mm)	7-1/4 (184mm)	6-1/4 (159mm)	6-3/4 (171mm)	7-1/4 (184mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	0.93	-	-	1.89	2.21	2.53
<b>0.78</b>	3.67	2.17	0.67	4.27	4.59	4.91
<b>1.15</b>	6.27	4.77	3.26	6.52	6.84	7.16
<b>1.50</b>	8.72	7.22	5.72	8.72	8.98	9.29
<b>1.83</b>	11.04	9.54	8.04	11.04	10.99	11.30
<b>2.12</b>	13.07	11.57	10.07	13.07	12.75	13.07
<b>2.38</b>	14.90	13.40	11.90	14.90	14.34	14.65
<b>2.60</b>	16.44	14.94	13.44	16.44	15.68	16.00
<b>2.77</b>	17.64	16.14	14.64	17.64	16.71	17.03
<b>2.90</b>	18.55	17.05	15.55	18.55	17.51	17.82
<b>2.97</b>	19.04	17.54	16.04	19.04	17.93	18.25
<b>3.00</b>	19.25	17.75	16.25	19.25	18.12	18.43

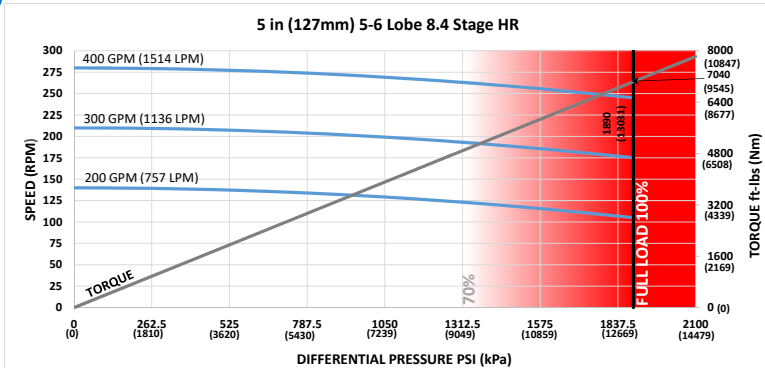
## FBH BUILD RATE\*\*:

<b>1.25</b>	6.56	4.77	2.98	7.44	7.75	8.07
<b>1.50</b>	8.32	6.53	4.73	9.02	9.34	9.65
<b>1.75</b>	10.07	8.28	6.49	10.60	10.92	11.24
<b>2.00</b>	11.83	10.04	8.24	12.19	12.50	12.82
<b>2.25</b>	13.58	11.79	10.00	13.77	14.09	14.41
<b>2.50</b>	15.34	13.54	11.75	15.35	15.67	15.99

\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.



<b>Lobe Configuration</b>	5-6 Lobe 8.4 Stage HR	
<b>Displacement</b>	0.7 rev/gal	0.18 rev/l
<b>Max Differential @ No Load</b>	1890 psi	13031 kPa
<b>Max Torque @ No Load</b>	7040 ft-lbs	9545 Nm
<b>Max Power</b>	328 HP	245 kW
<b>C = Overall Length</b>	397 in	10.08 m
<b>Weight</b>	1561 lb	708 kg

Flow Rate		Speed
GPM	LPM	RPM
200	757	105 - 140
300	1136	175 - 210
400	1514	245 - 280

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

**ADJUSTABLE BUILD RATE:**

Hole Size	SLICK			STABILIZED*		
	6-1/4 (159mm)	6-3/4 (171mm)	7-1/4 (184mm)	6-1/4 (159mm)	6-3/4 (171mm)	7-1/4 (184mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	0.81	-	-	1.69	1.94	2.20
<b>0.78</b>	3.28	1.93	0.58	3.86	4.12	4.38
<b>1.15</b>	5.62	4.27	2.92	5.93	6.18	6.44
<b>1.50</b>	7.84	6.48	5.13	7.88	8.14	8.39
<b>1.83</b>	9.92	8.57	7.22	9.92	9.98	10.23
<b>2.12</b>	11.76	10.40	9.05	11.76	11.60	11.85
<b>2.38</b>	13.40	12.05	10.70	13.40	13.05	13.30
<b>2.60</b>	14.79	13.44	12.09	14.79	14.27	14.53
<b>2.77</b>	15.87	14.52	13.16	15.87	15.22	15.48
<b>2.90</b>	16.69	15.34	13.99	16.69	15.95	16.20
<b>2.97</b>	17.13	15.78	14.43	17.13	16.34	16.59
<b>3.00</b>	17.32	15.97	14.62	17.32	16.51	16.76

**FBH BUILD RATE\*\*:**

<b>1.25</b>	5.89	4.28	2.66	6.73	6.99	7.24
<b>1.50</b>	7.47	5.86	4.24	8.17	8.43	8.69
<b>1.75</b>	9.05	7.44	5.82	9.62	9.87	10.13
<b>2.00</b>	10.63	9.02	7.41	11.06	11.32	11.57
<b>2.25</b>	12.22	10.60	8.99	12.50	12.76	13.02
<b>2.50</b>	13.80	12.18	10.57	13.95	14.20	14.46

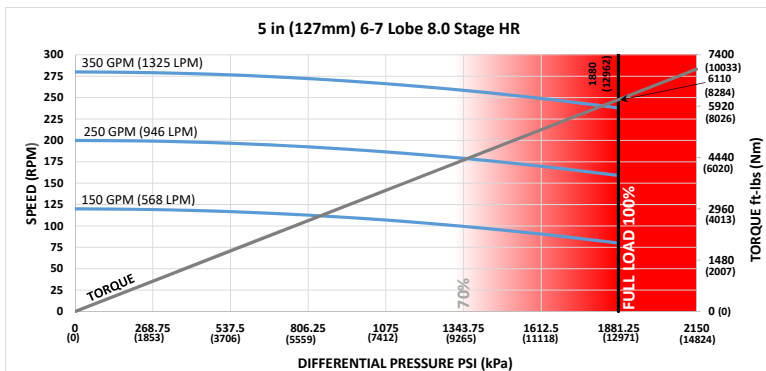
\*Stabilizers assumed as 1/8" undergage

\*\*Additional FBH Angles Available

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.

# 5-1/4 in (133 mm) Bottom w/ 5 in (127 mm) 6-7 Lobe 8.0 Stage HR MUD LUBE



Lobe Configuration	6-7 Lobe 8.0 Stage HR		Flow Rate		Speed
Displacement	0.79 rev/gal	0.21 rev/l	<b>GPM</b>	<b>LPM</b>	<b>RPM</b>
Max Differential @ No Load	1880 psi	12962 kPa	150	568	80 - 120
Max Torque @ No Load	6110 ft-lbs	8284 Nm	250	946	159 - 200
Max Power	277 HP	206 kW	350	1325	238 - 280
C = Overall Length	367 in	9.32 m			
Weight	1502 lb	681 kg			

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	6-1/4 (159mm)	6-3/4 (171mm)	7-1/4 (184mm)	6-1/4 (159mm)	6-3/4 (171mm)	7-1/4 (184mm)
BEND ANGLE	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	0.90	-	-	1.85	2.15	2.46
<b>0.78</b>	3.58	2.12	0.65	4.18	4.49	4.79
<b>1.15</b>	6.13	4.66	3.19	6.40	6.70	7.00
<b>1.50</b>	8.53	7.06	5.59	8.53	8.79	9.10
<b>1.83</b>	10.80	9.33	7.86	10.80	10.77	11.07
<b>2.12</b>	12.79	11.32	9.85	12.79	12.50	12.81
<b>2.38</b>	14.57	13.11	11.64	14.57	14.06	14.36
<b>2.60</b>	16.08	14.62	13.15	16.08	15.38	15.68
<b>2.77</b>	17.25	15.78	14.32	17.25	16.39	16.70
<b>2.90</b>	18.14	16.68	15.21	18.14	17.17	17.47
<b>2.97</b>	18.62	17.16	15.69	18.62	17.59	17.89
<b>3.00</b>	18.83	17.36	15.90	18.83	17.77	18.07

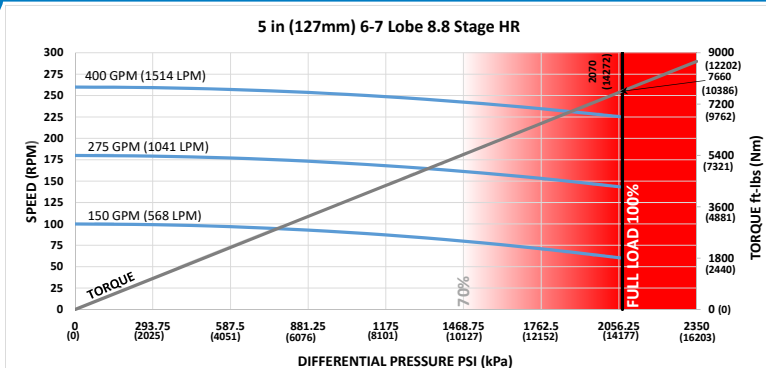
## FBH BUILD RATE\*\*:

<b>1.25</b>	6.42	4.66	2.91	7.28	7.59	7.89
<b>1.50</b>	8.13	6.38	4.63	8.84	9.14	9.44
<b>1.75</b>	9.85	8.10	6.34	10.39	10.69	11.00
<b>2.00</b>	11.57	9.81	8.06	11.94	12.25	12.55
<b>2.25</b>	13.28	11.53	9.78	13.50	13.80	14.10
<b>2.50</b>	15.00	13.25	11.50	15.05	15.35	15.66

\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.



Lobe Configuration	6-7 Lobe 8.8 Stage HR		Flow Rate		Speed
Displacement	0.66 rev/gal	0.17 rev/l	<b>GPM</b>	<b>LPM</b>	<b>RPM</b>
Max Differential @ No Load	2070 psi	14272 kPa	150	568	60 - 100
Max Torque @ No Load	7660 ft.-lbs	10386 Nm	275	1041	143 - 180
Max Power	328 HP	245 kW	400	1514	225 - 260
C = Overall Length	392 in	9.96 m			
Weight	1559 lb	707 kg			

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	6-1/4 (159mm)	6-3/4 (171mm)	7-1/4 (184mm)	6-1/4 (159mm)	6-3/4 (171mm)	7-1/4 (184mm)
<b>BEND ANGLE</b>	<b>Degrees per 100 Feet (30 m)</b>			<b>Degrees per 100 Feet (30 m)</b>		
<b>0.39</b>	0.83	-	-	1.71	1.98	2.24
<b>0.78</b>	3.33	1.96	0.59	3.91	4.18	4.44
<b>1.15</b>	5.70	4.33	2.96	6.00	6.26	6.53
<b>1.50</b>	7.94	6.57	5.20	7.98	8.24	8.50
<b>1.83</b>	10.06	8.69	7.32	10.06	10.10	10.37
<b>2.12</b>	11.92	10.55	9.18	11.92	11.74	12.00
<b>2.38</b>	13.58	12.21	10.84	13.58	13.21	13.47
<b>2.60</b>	14.99	13.62	12.25	14.99	14.45	14.71
<b>2.77</b>	16.08	14.71	13.34	16.08	15.41	15.67
<b>2.90</b>	16.92	15.55	14.18	16.92	16.14	16.40
<b>2.97</b>	17.36	15.99	14.63	17.36	16.53	16.80
<b>3.00</b>	17.56	16.19	14.82	17.56	16.70	16.97

## FBH BUILD RATE\*\*:

<b>1.25</b>	5.97	4.34	2.70	6.82	7.08	7.34
<b>1.50</b>	7.57	5.94	4.30	8.28	8.54	8.80
<b>1.75</b>	9.18	7.54	5.90	9.74	10.00	10.26
<b>2.00</b>	10.78	9.14	7.51	11.20	11.46	11.72
<b>2.25</b>	12.38	10.75	9.11	12.66	12.92	13.18
<b>2.50</b>	13.98	12.35	10.71	14.12	14.38	14.65

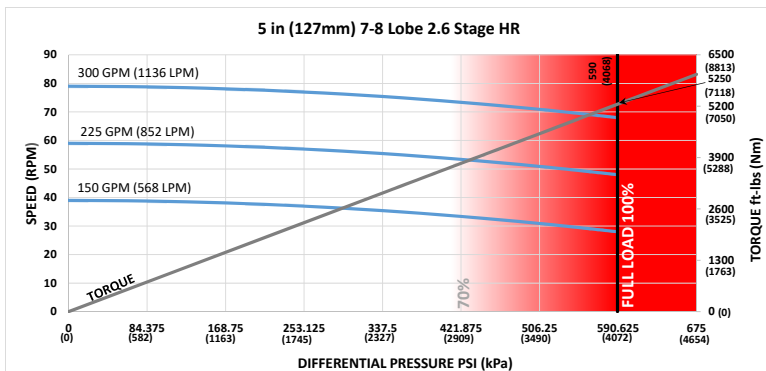
\*Stabilizers assumed as 1/8" undergage

\*\*Additional FBH Angles Available

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.

# 5-1/4 in (133 mm) Bottom w/ 5 in (127 mm) 7-8 Lobe 2.6 Stage HR MUD LUBE



Lobe Configuration	7-8 Lobe 2.6 Stage HR		Flow Rate		Speed
Displacement	0.263 rev/gal	0.07 rev/l	<b>GPM</b>	<b>LPM</b>	<b>RPM</b>
Max Differential @ No Load	590 psi	4068 kPa	150	568	28 - 39
Max Torque @ No Load	5250 ft-lbs	7118 Nm	225	852	48 - 59
Max Power	68 HP	51 kW	300	1136	68 - 79
C = Overall Length	346.3 in	8.8 m			
Weight	1387 lb	629 kg			

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	6-1/4 (159mm)	6-3/4 (171mm)	7-1/4 (184mm)	6-1/4 (159mm)	6-3/4 (171mm)	7-1/4 (184mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	0.98	-	-	1.98	2.32	2.67
<b>0.78</b>	3.83	2.27	0.71	4.43	4.78	5.12
<b>1.15</b>	6.53	4.97	3.41	6.76	7.11	7.45
<b>1.50</b>	9.09	7.52	5.96	9.09	9.31	9.66
<b>1.83</b>	11.49	9.93	8.37	11.49	11.39	11.73
<b>2.12</b>	13.61	12.05	10.49	13.61	13.22	13.56
<b>2.38</b>	15.51	13.95	12.39	15.51	14.85	15.20
<b>2.60</b>	17.12	15.56	14.00	17.12	16.24	16.58
<b>2.77</b>	18.36	16.80	15.24	18.36	17.31	17.65
<b>2.90</b>	19.31	17.75	16.19	19.31	18.13	18.47
<b>2.97</b>	19.82	18.26	16.70	19.82	18.57	18.91
<b>3.00</b>	20.04	18.48	16.92	20.04	18.76	19.10

## FBH BUILD RATE\*\*:

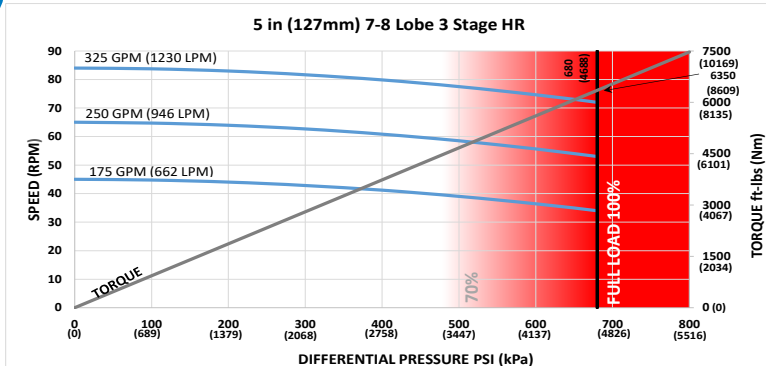
<b>1.25</b>	6.84	4.97	3.11	7.72	8.07	8.41
<b>1.50</b>	8.66	6.80	4.93	9.36	9.71	10.05
<b>1.75</b>	10.49	8.62	6.76	11.00	11.34	11.69
<b>2.00</b>	12.31	10.45	8.59	12.64	12.98	13.33
<b>2.25</b>	14.14	12.27	10.41	14.28	14.62	14.97
<b>2.50</b>	15.96	14.10	12.24	15.96	16.26	16.61

\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.

# MUD MOTORS



Lobe Configuration	7-8 Lobe 3.0 Stage HR		Flow Rate		Speed
Displacement	0.258 rev/gal	0.07 rev/l	<b>GPM</b>	<b>LPM</b>	<b>RPM</b>
Max Differential @ No Load	680 psi	4688 kPa	175	662	34 - 45
Max Torque @ No Load	6350 ft-lbs	8609 Nm	250	946	53 - 65
Max Power	87 HP	65 kW	325	1230	72 - 84
C = Overall Length	367 in	9.32 m			
Weight	1403 lb	636 kg			

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

**ADJUSTABLE BUILD RATE:**

Hole Size	SLICK			STABILIZED*		
	6-1/4 (159mm)	6-3/4 (171mm)	7-1/4 (184mm)	6-1/4 (159mm)	6-3/4 (171mm)	7-1/4 (184mm)
<b>BEND ANGLE</b>	<b>Degrees per 100 Feet (30 m)</b>			<b>Degrees per 100 Feet (30 m)</b>		
<b>0.39</b>	0.90	-	-	1.85	2.15	2.46
<b>0.78</b>	3.58	2.12	0.65	4.18	4.49	4.79
<b>1.15</b>	6.13	4.66	3.19	6.40	6.70	7.00
<b>1.50</b>	8.53	7.06	5.59	8.53	8.79	9.10
<b>1.83</b>	10.80	9.33	7.86	10.80	10.77	11.07
<b>2.12</b>	12.79	11.32	9.85	12.79	12.50	12.81
<b>2.38</b>	14.57	13.11	11.64	14.57	14.06	14.36
<b>2.60</b>	16.08	14.62	13.15	16.08	15.38	15.68
<b>2.77</b>	17.25	15.78	14.32	17.25	16.39	16.70
<b>2.90</b>	18.14	16.68	15.21	18.14	17.17	17.47
<b>2.97</b>	18.62	17.16	15.69	18.62	17.59	17.89
<b>3.00</b>	18.83	17.36	15.90	18.83	17.77	18.07

**FBH BUILD RATE\*\*:**

<b>1.25</b>	6.42	4.66	2.91	7.28	7.59	7.89
<b>1.50</b>	8.13	6.38	4.63	8.84	9.14	9.44
<b>1.75</b>	9.85	8.10	6.34	10.39	10.69	11.00
<b>2.00</b>	11.57	9.81	8.06	11.94	12.25	12.55
<b>2.25</b>	13.28	11.53	9.78	13.50	13.80	14.10
<b>2.50</b>	15.00	13.25	11.50	15.05	15.35	15.66

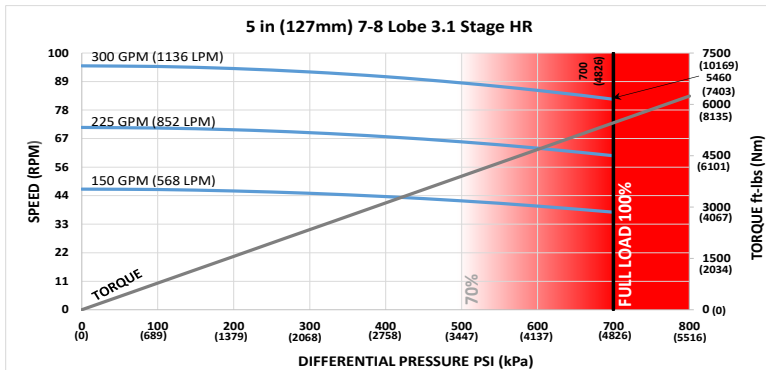
\*Stabilizers assumed as 1/8" undergage

\*\*Additional FBH Angles Available

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.

# 5-1/4 in (133 mm) Bottom w/ 5 in (127 mm) 7-8 Lobe 3.1 Stage HR MUD LUBE



Lobe Configuration	7-8 Lobe 3.1 Stage HR		Flow Rate		Speed
Displacement	0.316 rev/gal	0.08 rev/l	<b>GPM</b>	<b>LPM</b>	<b>RPM</b>
Max Differential @ No Load	700 psi	4826 kPa	150	568	38 - 47
Max Torque @ No Load	5460 ft-lbs	7403 Nm	225	852	60 - 71
Max Power	85 HP	64 kW	300	1136	82 - 95
C = Overall Length	355 in	9.02 m			
Weight	1526 lb	692 kg			

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	6-1/4 (159mm)	6-3/4 (171mm)	7-1/4 (184mm)	6-1/4 (159mm)	6-3/4 (171mm)	7-1/4 (184mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	0.95	-	-	1.92	2.25	2.57
<b>0.78</b>	3.72	2.20	0.68	4.32	4.65	4.98
<b>1.15</b>	6.35	4.83	3.31	6.60	6.93	7.26
<b>1.50</b>	8.84	7.32	5.80	8.84	9.09	9.41
<b>1.83</b>	11.19	9.67	8.15	11.19	11.12	11.45
<b>2.12</b>	13.25	11.73	10.21	13.25	12.91	13.23
<b>2.38</b>	15.10	13.58	12.06	15.10	14.51	14.84
<b>2.60</b>	16.67	15.15	13.63	16.67	15.86	16.19
<b>2.77</b>	17.88	16.36	14.84	17.88	16.91	17.24
<b>2.90</b>	18.80	17.28	15.76	18.80	17.71	18.04
<b>2.97</b>	19.30	17.78	16.26	19.30	18.14	18.47
<b>3.00</b>	19.51	17.99	16.47	19.51	18.33	18.66

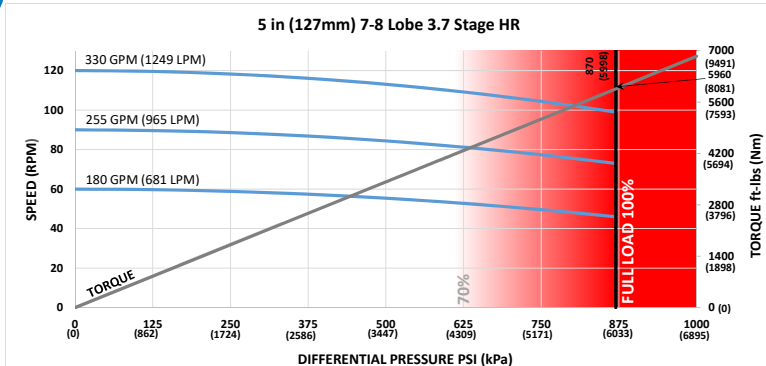
## FBH BUILD RATE\*\*:

<b>1.25</b>	6.65	4.84	3.02	7.53	7.86	8.18
<b>1.50</b>	8.43	6.62	4.80	9.13	9.46	9.79
<b>1.75</b>	10.21	8.39	6.58	10.74	11.06	11.39
<b>2.00</b>	11.99	10.17	8.36	12.34	12.66	12.99
<b>2.25</b>	13.77	11.95	10.14	13.94	14.27	14.59
<b>2.50</b>	15.54	13.73	11.91	15.54	15.87	16.19

\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.



Lobe Configuration	7-8 Lobe 3.7 Stage HR		Flow Rate		Speed
Displacement	0.36 rev/gal	0.1 rev/l	<b>GPM</b>	<b>LPM</b>	<b>RPM</b>
Max Differential @ No Load	870 psi	5998 kPa	180	681	46 - 60
Max Torque @ No Load	5960 ft-lbs	8081 Nm	255	965	73 - 90
Max Power	112 HP	84 kW	330	1249	99 - 120
C = Overall Length	352 in	8.94 m			
Weight	1476 lb	670 kg			

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

**ADJUSTABLE BUILD RATE:**

Hole Size	SLICK			STABILIZED*		
	6-1/4 (159mm)	6-3/4 (171mm)	7-1/4 (184mm)	6-1/4 (159mm)	6-3/4 (171mm)	7-1/4 (184mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	0.96	-	-	1.94	2.27	2.61
<b>0.78</b>	3.76	2.22	0.69	4.36	4.69	5.03
<b>1.15</b>	6.41	4.88	3.34	6.66	6.99	7.32
<b>1.50</b>	8.92	7.39	5.86	8.92	9.16	9.50
<b>1.83</b>	11.29	9.76	8.23	11.29	11.21	11.54
<b>2.12</b>	13.37	11.84	10.31	13.37	13.01	13.34
<b>2.38</b>	15.24	13.71	12.17	15.24	14.63	14.96
<b>2.60</b>	16.82	15.29	13.75	16.82	15.99	16.32
<b>2.77</b>	18.04	16.51	14.97	18.04	17.05	17.38
<b>2.90</b>	18.97	17.44	15.91	18.97	17.85	18.19
<b>2.97</b>	19.47	17.94	16.41	19.47	18.29	18.62
<b>3.00</b>	19.69	18.16	16.62	19.69	18.47	18.81

**FBH BUILD RATE\*\*:**

<b>1.25</b>	6.72	4.88	3.05	7.60	7.93	8.26
<b>1.50</b>	8.51	6.68	4.85	9.21	9.54	9.88
<b>1.75</b>	10.30	8.47	6.64	10.83	11.16	11.49
<b>2.00</b>	12.10	10.27	8.43	12.44	12.77	13.11
<b>2.25</b>	13.89	12.06	10.23	14.06	14.39	14.72
<b>2.50</b>	15.69	13.85	12.02	15.69	16.00	16.33

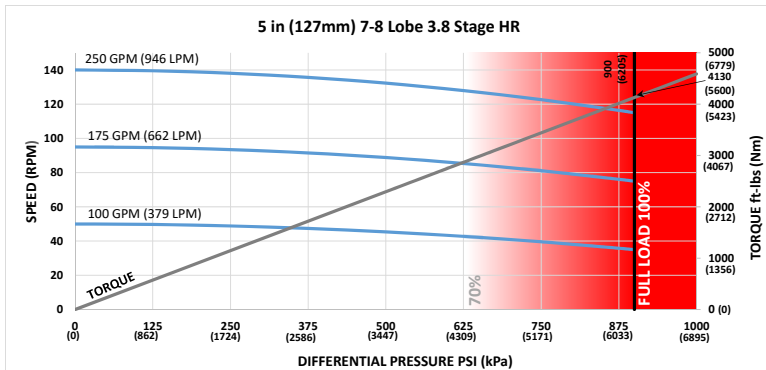
\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.

# 5-1/4 in (133 mm) Bottom w/ 5 in (127 mm) 7-8 Lobe 3.8 Stage HR MUD LUBE



Lobe Configuration	7-8 Lobe 3.8 Stage HR		Flow Rate		Speed
Displacement	0.54 rev/gal	0.14 rev/l	<b>GPM</b>	<b>LPM</b>	<b>RPM</b>
Max Differential @ No Load	900 psi	6205 kPa	100	379	35 - 50
Max Torque @ No Load	4130 ft-lbs	5600 Nm	175	662	75 - 95
Max Power	90 HP	67 kW	250	946	115 - 140
C = Overall Length	304 in	7.72 m			
Weight	1316 lb	597 kg			

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	6-1/4 (159mm)	6-3/4 (171mm)	7-1/4 (184mm)	6-1/4 (159mm)	6-3/4 (171mm)	7-1/4 (184mm)
BEND ANGLE	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	1.18	-	-	2.31	2.77	3.23
<b>0.78</b>	4.45	2.66	0.87	5.05	5.51	5.97
<b>1.15</b>	7.55	5.76	3.97	7.66	8.12	8.58
<b>1.50</b>	10.48	8.69	6.90	10.48	10.58	11.04
<b>1.83</b>	13.25	11.46	9.67	13.25	12.91	13.37
<b>2.12</b>	15.68	13.89	12.10	15.68	14.95	15.41
<b>2.38</b>	17.86	16.07	14.28	17.86	16.78	17.24
<b>2.60</b>	19.70	17.91	16.12	19.70	18.33	18.79
<b>2.77</b>	21.12	19.34	17.55	21.12	19.52	19.98
<b>2.90</b>	22.21	20.42	18.64	22.21	20.44	20.90
<b>2.97</b>	22.80	21.01	19.22	22.80	21.01	21.39
<b>3.00</b>	23.05	21.26	19.47	23.05	21.26	21.60

## FBH BUILD RATE\*\*:

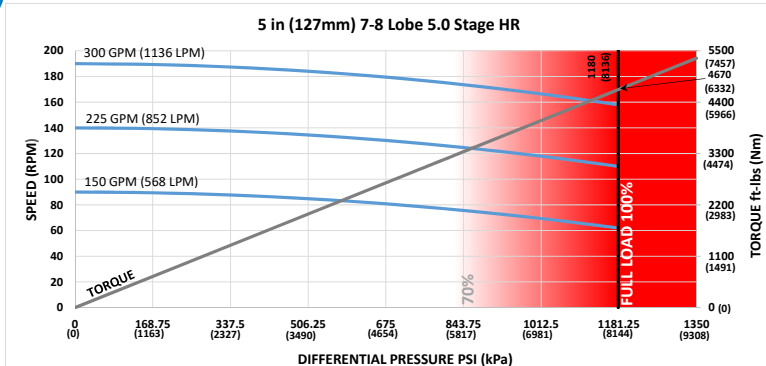
<b>1.25</b>	7.90	5.76	3.62	8.80	9.26	9.72
<b>1.50</b>	9.99	7.85	5.72	10.65	11.11	11.57
<b>1.75</b>	12.09	9.95	7.81	12.50	12.95	13.41
<b>2.00</b>	14.18	12.04	9.91	14.34	14.80	15.26
<b>2.25</b>	16.28	14.14	12.00	16.28	16.65	17.11
<b>2.50</b>	18.37	16.23	14.10	18.37	18.50	18.96

\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.

# MUD MOTORS



Lobe Configuration	7-8 Lobe 5.0 Stage HR		Flow Rate		Speed
Displacement	0.62 rev/gal	0.16 rev/l	<b>GPM</b>	<b>LPM</b>	<b>RPM</b>
Max Differential @ No Load	1180 psi	8136 kPa	150	568	62 - 90
Max Torque @ No Load	4670 ft-lbs	6332 Nm	225	852	110 - 140
Max Power	140 HP	105 kW	300	1136	158 - 190
C = Overall Length	315 in	8 m			
Weight	1351 lb	613 kg			

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

**ADJUSTABLE BUILD RATE:**

Hole Size	SLICK			STABILIZED*		
	6-1/4 (159mm)	6-3/4 (171mm)	7-1/4 (184mm)	6-1/4 (159mm)	6-3/4 (171mm)	7-1/4 (184mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	1.12	-	-	2.21	2.64	3.06
<b>0.78</b>	4.27	2.54	0.82	4.88	5.30	5.73
<b>1.15</b>	7.26	5.53	3.81	7.40	7.83	8.25
<b>1.50</b>	10.08	8.36	6.63	10.08	10.22	10.65
<b>1.83</b>	12.74	11.02	9.29	12.74	12.48	12.90
<b>2.12</b>	15.08	13.36	11.63	15.08	14.46	14.88
<b>2.38</b>	17.18	15.46	13.73	17.18	16.23	16.66
<b>2.60</b>	18.96	17.23	15.51	18.96	17.74	18.16
<b>2.77</b>	20.33	18.60	16.88	20.33	18.90	19.32
<b>2.90</b>	21.38	19.65	17.93	21.38	19.79	20.21
<b>2.97</b>	21.94	20.22	18.49	21.94	20.26	20.69
<b>3.00</b>	22.18	20.46	18.74	22.18	20.47	20.89

**FBH BUILD RATE\*\*:**

<b>1.25</b>	7.59	5.53	3.47	8.49	8.92	9.34
<b>1.50</b>	9.61	7.55	5.49	10.28	10.71	11.13
<b>1.75</b>	11.63	9.57	7.51	12.07	12.49	12.92
<b>2.00</b>	13.64	11.58	9.53	13.86	14.28	14.71
<b>2.25</b>	15.66	13.60	11.54	15.66	16.07	16.50
<b>2.50</b>	17.68	15.62	13.56	17.68	17.86	18.28

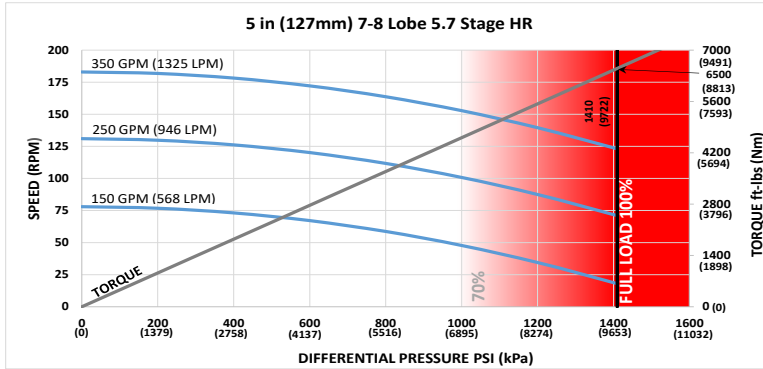
\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.

# 5-1/4 in (133 mm) Bottom w/ 5 in (127 mm) 7-8 Lobe 5.7 Stage HR MUD LUBE



Lobe Configuration	7-8 Lobe 5.7 Stage HR		Flow Rate		Speed
Displacement	0.522 rev/gal	0.14 rev/l	<b>GPM</b>	<b>LPM</b>	<b>RPM</b>
Max Differential @ No Load	1410 psi	9722 kPa	150	568	18 - 78
Max Torque @ No Load	6500 ft-lbs	8813 Nm	250	946	71 - 131
Max Power	152 HP	114 kW	350	1325	123 - 183
C = Overall Length	367 in	9.32 m			
Weight	1522 lb	690 kg			

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	5-7/8 (149mm)	6 (152mm)	6-1/4 (159mm)	5-7/8 (149mm)	6 (152mm)	6-1/4 (159mm)
<b>BEND ANGLE</b>	<b>Degrees per 100 Feet (30 m)</b>			<b>Degrees per 100 Feet (30 m)</b>		
<b>0.39</b>	0.90	-	-	1.85	2.15	2.46
<b>0.78</b>	3.58	2.12	0.65	4.18	4.49	4.79
<b>1.15</b>	6.13	4.66	3.19	6.40	6.70	7.00
<b>1.50</b>	8.53	7.06	5.59	8.53	8.79	9.10
<b>1.83</b>	10.80	9.33	7.86	10.80	10.77	11.07
<b>2.12</b>	12.79	11.32	9.85	12.79	12.50	12.81
<b>2.38</b>	14.57	13.11	11.64	14.57	14.06	14.36
<b>2.60</b>	16.08	14.62	13.15	16.08	15.38	15.68
<b>2.77</b>	17.25	15.78	14.32	17.25	16.39	16.70
<b>2.90</b>	18.14	16.68	15.21	18.14	17.17	17.47
<b>2.97</b>	18.62	17.16	15.69	18.62	17.59	17.89
<b>3.00</b>	18.83	17.36	15.90	18.83	17.77	18.07

## FBH BUILD RATE\*\*:

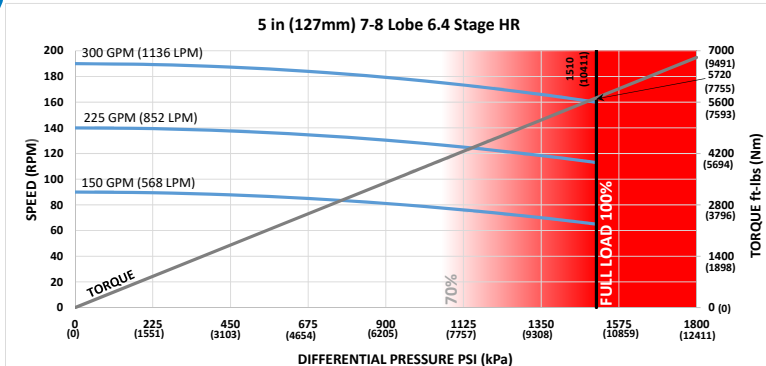
<b>1.25</b>	6.42	4.66	2.91	7.28	7.59	7.89
<b>1.50</b>	8.13	6.38	4.63	8.84	9.14	9.44
<b>1.75</b>	9.85	8.10	6.34	10.39	10.69	11.00
<b>2.00</b>	11.57	9.81	8.06	11.94	12.25	12.55
<b>2.25</b>	13.28	11.53	9.78	13.50	13.80	14.10
<b>2.50</b>	15.00	13.25	11.50	15.05	15.35	15.66

\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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# MUD MOTORS



Lobe Configuration	7-8 Lobe 6.4 Stage HR		Flow Rate		Speed
Displacement	0.63 rev/gal	0.17 rev/l	<b>GPM</b>	<b>LPM</b>	<b>RPM</b>
Max Differential @ No Load	1510 psi	10411 kPa	150	568	65 - 90
Max Torque @ No Load	5720 ft.-lbs	7755 Nm	225	852	113 - 140
Max Power	174 HP	130 kW	300	1136	160 - 190
C = Overall Length	352 in	8.94 m			
Weight	1466 lb	665 kg			

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

**ADJUSTABLE BUILD RATE:**

Hole Size	SLICK			STABILIZED*		
	6-1/4 (159mm)	6-3/4 (171mm)	7-1/4 (184mm)	6-1/4 (159mm)	6-3/4 (171mm)	7-1/4 (184mm)
<b>BEND ANGLE</b>	<b>Degrees per 100 Feet (30 m)</b>			<b>Degrees per 100 Feet (30 m)</b>		
<b>0.39</b>	0.96	-	-	1.94	2.27	2.61
<b>0.78</b>	3.76	2.22	0.69	4.36	4.69	5.03
<b>1.15</b>	6.41	4.88	3.34	6.66	6.99	7.32
<b>1.50</b>	8.92	7.39	5.86	8.92	9.16	9.50
<b>1.83</b>	11.29	9.76	8.23	11.29	11.21	11.54
<b>2.12</b>	13.37	11.84	10.31	13.37	13.01	13.34
<b>2.38</b>	15.24	13.71	12.17	15.24	14.63	14.96
<b>2.60</b>	16.82	15.29	13.75	16.82	15.99	16.32
<b>2.77</b>	18.04	16.51	14.97	18.04	17.05	17.38
<b>2.90</b>	18.97	17.44	15.91	18.97	17.85	18.19
<b>2.97</b>	19.47	17.94	16.41	19.47	18.29	18.62
<b>3.00</b>	19.69	18.16	16.62	19.69	18.47	18.81

**FBH BUILD RATE\*\*:**

<b>1.25</b>	6.72	4.88	3.05	7.60	7.93	8.26
<b>1.50</b>	8.51	6.68	4.85	9.21	9.54	9.88
<b>1.75</b>	10.30	8.47	6.64	10.83	11.16	11.49
<b>2.00</b>	12.10	10.27	8.43	12.44	12.77	13.11
<b>2.25</b>	13.89	12.06	10.23	14.06	14.39	14.72
<b>2.50</b>	15.69	13.85	12.02	15.69	16.00	16.33

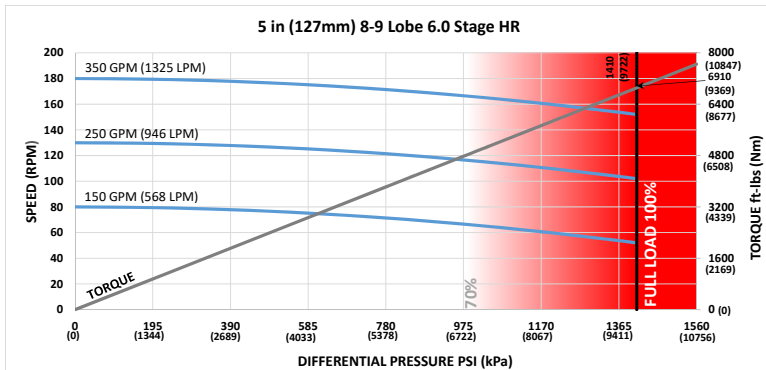
\*Stabilizers assumed as 1/8" undergage

\*\*Additional FBH Angles Available

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

# 5-1/4 in (133 mm) Bottom w/ 5 in (127 mm) 8-9 Lobe 6.0 Stage HR MUD LUBE



Lobe Configuration	8-9 Lobe 6.0 Stage HR		Flow Rate		Speed
Displacement	0.51 rev/gal	0.13 rev/l	<b>GPM</b>	<b>LPM</b>	<b>RPM</b>
Max Differential @ No Load	1410 psi	9722 kPa	150	568	52 - 80
Max Torque @ No Load	6910 ft-lbs	9369 Nm	250	946	102 - 130
Max Power	200 HP	149 kW	350	1325	152 - 180
C = Overall Length	367 in	9.32 m			
Weight	1553 lb	704 kg			

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	6-1/4 (159mm)	6-3/4 (171mm)	7-1/4 (184mm)	6-1/4 (159mm)	6-3/4 (171mm)	7-1/4 (184mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	0.90	-	-	1.85	2.15	2.46
<b>0.78</b>	3.58	2.12	0.65	4.18	4.49	4.79
<b>1.15</b>	6.13	4.66	3.19	6.40	6.70	7.00
<b>1.50</b>	8.53	7.06	5.59	8.53	8.79	9.10
<b>1.83</b>	10.80	9.33	7.86	10.80	10.77	11.07
<b>2.12</b>	12.79	11.32	9.85	12.79	12.50	12.81
<b>2.38</b>	14.57	13.11	11.64	14.57	14.06	14.36
<b>2.60</b>	16.08	14.62	13.15	16.08	15.38	15.68
<b>2.77</b>	17.25	15.78	14.32	17.25	16.39	16.70
<b>2.90</b>	18.14	16.68	15.21	18.14	17.17	17.47
<b>2.97</b>	18.62	17.16	15.69	18.62	17.59	17.89
<b>3.00</b>	18.83	17.36	15.90	18.83	17.77	18.07

## FBH BUILD RATE\*\*:

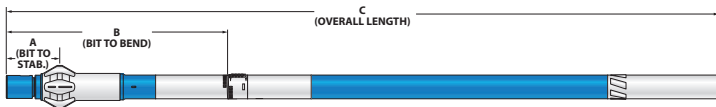
<b>1.25</b>	6.42	4.66	2.91	7.28	7.59	7.89
<b>1.50</b>	8.13	6.38	4.63	8.84	9.14	9.44
<b>1.75</b>	9.85	8.10	6.34	10.39	10.69	11.00
<b>2.00</b>	11.57	9.81	8.06	11.94	12.25	12.55
<b>2.25</b>	13.28	11.53	9.78	13.50	13.80	14.10
<b>2.50</b>	15.00	13.25	11.50	15.05	15.35	15.66

\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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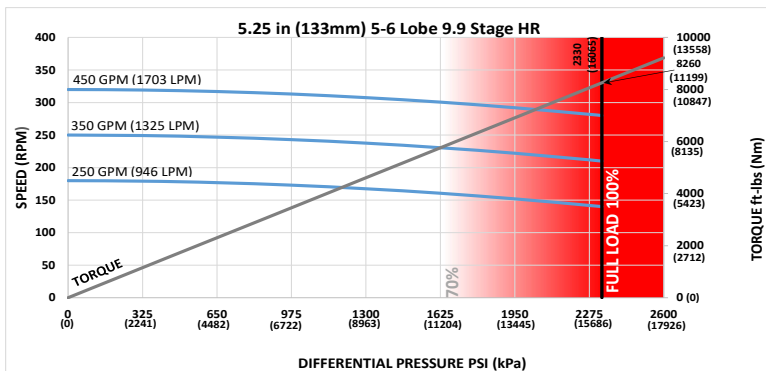
# MUD MOTORS



5-1/4 in (133 mm) 5-6 Lobe 9.9 Stage HR MUD LUBE	97
5-1/4 in (133mm) 6-7 Lobe 10.9 Stage HR MUD LUBE	98
5-1/4 in (133 mm) 7-8 Lobe 8.3 Stage HR MUD LUBE	99
5-1/4 in (133mm) 7-8 Lobe 8.5 Stage HR MUD LUBE	100

<b>Bit Size Range</b>	6-1/4 - 7-7/8 in	159 - 200 mm
<b>Bit Box Connection</b>	3-1/2 REGULAR	
<b>Dynamic Bearing Load On/Off Bottom</b>	60730 lbf	27000 daN
<b>Static Bearing Load On/Off Bottom</b>	124336 lbf	55300 daN
<b>Max. Overpull for Re-run</b>	231000 lbf	102800 daN
<b>Absolute Overpull</b>	462000 lbf	205500 daN
<b>Adjustable Make Up Torque</b>	12500 ft-lbs	16900 Nm
<b>A = Bit to Stabilizer (center)</b>	15.74 in	400 mm
<b>B = Bit to Bend</b>	<b>Adjustable</b>	57.5 in 1460 mm
	<b>Fixed</b>	46.6 in 1180 mm

# 5-1/4 in (133 mm) 5-6 Lobe 9.9 Stage HR MUD LUBE



<b>Lobe Configuration</b>	5-6 Lobe 9.9 Stage HR	
<b>Displacement</b>	0.7 rev/gal	0.18 rev/l
<b>Max Differential @ No Load</b>	2330 psi	16065 kPa
<b>Max Torque @ No Load</b>	8260 ft-lbs	11199 Nm
<b>Max Power</b>	440 HP	328 kW
<b>C = Overall Length</b>	392 in	9.96 m
<b>Weight</b>	1624 lb	737 kg

Flow Rate		Speed
GPM	LPM	RPM
250	946	140 - 180
350	1325	210 - 250
450	1703	280 - 320

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	6-1/4 (159mm)	6-3/4 (171mm)	7-1/4 (184mm)	6-1/4 (159mm)	6-3/4 (171mm)	7-1/4 (184mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	0.68	-	-	1.58	1.84	2.11
<b>0.78</b>	3.18	1.81	0.44	3.78	4.05	4.31
<b>1.15</b>	5.55	4.18	2.81	5.87	6.13	6.40
<b>1.50</b>	7.79	6.42	5.05	7.85	8.11	8.37
<b>1.83</b>	9.91	8.54	7.17	9.91	9.97	10.23
<b>2.12</b>	11.77	10.40	9.03	11.77	11.61	11.87
<b>2.38</b>	13.43	12.06	10.69	13.43	13.07	13.34
<b>2.60</b>	14.84	13.47	12.10	14.84	14.32	14.58
<b>2.77</b>	15.93	14.56	13.19	15.93	15.28	15.54
<b>2.90</b>	16.77	15.40	14.03	16.77	16.01	16.27
<b>2.97</b>	17.21	15.85	14.48	17.21	16.40	16.67
<b>3.00</b>	17.41	16.04	14.67	17.41	16.57	16.84

## FBH BUILD RATE\*\*:

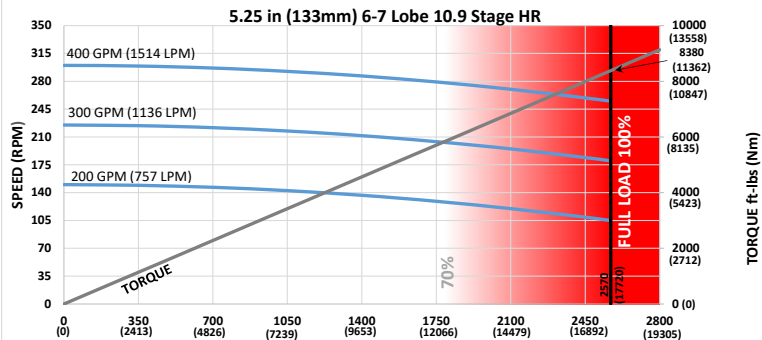
<b>1.25</b>	5.83	4.19	2.55	6.68	6.95	7.21
<b>1.50</b>	7.43	5.79	4.16	8.15	8.41	8.67
<b>1.75</b>	9.03	7.40	5.76	9.61	9.87	10.13
<b>2.00</b>	10.63	9.00	7.36	11.07	11.33	11.59
<b>2.25</b>	12.24	10.60	8.97	12.53	12.79	13.05
<b>2.50</b>	13.84	12.20	10.57	13.99	14.25	14.51

\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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# MUD MOTORS



<b>Lobe Configuration</b>	6-7 Lobe 10.9 Stage HR	
<b>Displacement</b>	0.75 rev/gal	0.2 rev/l
<b>Max Differential @ No Load</b>	2570 psi	17720 kPa
<b>Max Torque @ No Load</b>	8380 ft-lbs	11362 Nm
<b>Max Power</b>	407 HP	303 kW
<b>C = Overall Length</b>	392 in	9.96 m
<b>Weight</b>	2119 lb	961 kg

Flow Rate		Speed
GPM	LPM	RPM
200	757	105 - 150
300	1136	180 - 225
400	1514	255 - 300

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	6-1/4 (159mm)	6-3/4 (171mm)	7-1/4 (184mm)	6-1/4 (159mm)	6-3/4 (171mm)	7-1/4 (184mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	0.68	-	-	1.58	1.84	2.11
<b>0.78</b>	3.18	1.81	0.44	3.78	4.05	4.31
<b>1.15</b>	5.55	4.18	2.81	5.87	6.13	6.40
<b>1.50</b>	7.79	6.42	5.05	7.85	8.11	8.37
<b>1.83</b>	9.91	8.54	7.17	9.91	9.97	10.23
<b>2.12</b>	11.77	10.40	9.03	11.77	11.61	11.87
<b>2.38</b>	13.43	12.06	10.69	13.43	13.07	13.34
<b>2.60</b>	14.84	13.47	12.10	14.84	14.32	14.58
<b>2.77</b>	15.93	14.56	13.19	15.93	15.28	15.54
<b>2.90</b>	16.77	15.40	14.03	16.77	16.01	16.27
<b>2.97</b>	17.21	15.85	14.48	17.21	16.40	16.67
<b>3.00</b>	17.41	16.04	14.67	17.41	16.57	16.84

## FBH BUILD RATE\*\*:

<b>1.25</b>	5.83	4.19	2.55	6.68	6.95	7.21
<b>1.50</b>	7.43	5.79	4.16	8.15	8.41	8.67
<b>1.75</b>	9.03	7.40	5.76	9.61	9.87	10.13
<b>2.00</b>	10.63	9.00	7.36	11.07	11.33	11.59
<b>2.25</b>	12.24	10.60	8.97	12.53	12.79	13.05
<b>2.50</b>	13.84	12.20	10.57	13.99	14.25	14.51

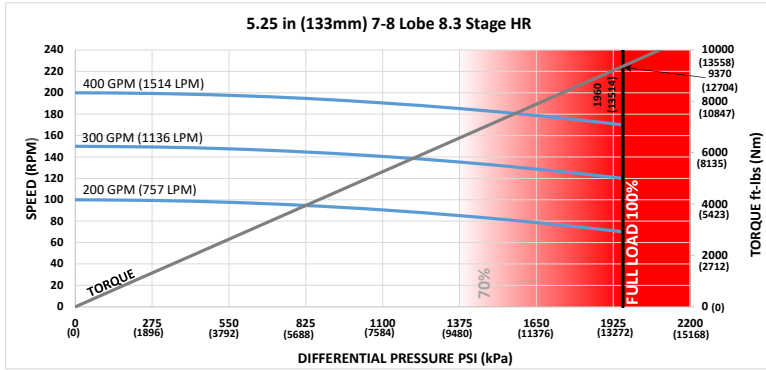
\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.

# 5-1/4 in (133 mm) 7-8 Lobe 8.3 Stage HR MUD LUBE



<b>Lobe Configuration</b>	7-8 Lobe 8.3 Stage HR	
<b>Displacement</b>	0.48 rev/gal	0.13 rev/l
<b>Max Differential @ No Load</b>	1960 psi	13514 kPa
<b>Max Torque @ No Load</b>	9370 ft-lbs	12704 Nm
<b>Max Power</b>	303 HP	226 kW
<b>C = Overall Length</b>	392 in	9.96 m
<b>Weight</b>	1656 lb	751 kg

Flow Rate		Speed
GPM	LPM	RPM
200	757	75 - 96
300	1136	123 - 144
400	1514	170 - 192

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	6-1/4 (159mm)	6-3/4 (171mm)	7-1/4 (184mm)	6-1/4 (159mm)	6-3/4 (171mm)	7-1/4 (184mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	0.68	-	-	1.58	1.84	2.11
<b>0.78</b>	3.18	1.81	0.44	3.78	4.05	4.31
<b>1.15</b>	5.55	4.18	2.81	5.87	6.13	6.40
<b>1.50</b>	7.79	6.42	5.05	7.85	8.11	8.37
<b>1.83</b>	9.91	8.54	7.17	9.91	9.97	10.23
<b>2.12</b>	11.77	10.40	9.03	11.77	11.61	11.87
<b>2.38</b>	13.43	12.06	10.69	13.43	13.07	13.34
<b>2.60</b>	14.84	13.47	12.10	14.84	14.32	14.58
<b>2.77</b>	15.93	14.56	13.19	15.93	15.28	15.54
<b>2.90</b>	16.77	15.40	14.03	16.77	16.01	16.27
<b>2.97</b>	17.21	15.85	14.48	17.21	16.40	16.67
<b>3.00</b>	17.41	16.04	14.67	17.41	16.57	16.84

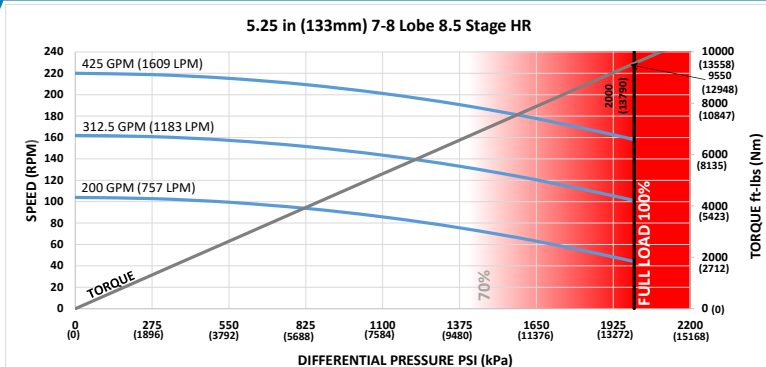
## FBH BUILD RATE\*\*:

<b>1.25</b>	5.83	4.19	2.55	6.68	6.95	7.21
<b>1.50</b>	7.43	5.79	4.16	8.15	8.41	8.67
<b>1.75</b>	9.03	7.40	5.76	9.61	9.87	10.13
<b>2.00</b>	10.63	9.00	7.36	11.07	11.33	11.59
<b>2.25</b>	12.24	10.60	8.97	12.53	12.79	13.05
<b>2.50</b>	13.84	12.20	10.57	13.99	14.25	14.51

\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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Lobe Configuration	7-8 Lobe 8.5 Stage HR		Flow Rate		Speed
Displacement	0.518 rev/gal	0.14 rev/l			
Max Differential @ No Load	2000 psi	13790 kPa	<b>GPM</b>	<b>LPM</b>	<b>RPM</b>
Max Torque @ No Load	9550 ft-lbs	12948 Nm	200	757	44 - 103.6
Max Power	287 HP	214 kW	312.5	1183	101 - 162
C = Overall Length	392 in	9.96 m	425	1609	158 - 220
Weight	1707 lb	774 kg			

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

### ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	6-1/4 (159mm)	6-3/4 (171mm)	7-1/4 (184mm)	6-1/4 (159mm)	6-3/4 (171mm)	7-1/4 (184mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	0.68	-	-	1.58	1.84	2.11
<b>0.78</b>	3.18	1.81	0.44	3.78	4.05	4.31
<b>1.15</b>	5.55	4.18	2.81	5.87	6.13	6.40
<b>1.50</b>	7.79	6.42	5.05	7.85	8.11	8.37
<b>1.83</b>	9.91	8.54	7.17	9.91	9.97	10.23
<b>2.12</b>	11.77	10.40	9.03	11.77	11.61	11.87
<b>2.38</b>	13.43	12.06	10.69	13.43	13.07	13.34
<b>2.60</b>	14.84	13.47	12.10	14.84	14.32	14.58
<b>2.77</b>	15.93	14.56	13.19	15.93	15.28	15.54
<b>2.90</b>	16.77	15.40	14.03	16.77	16.01	16.27
<b>2.97</b>	17.21	15.85	14.48	17.21	16.40	16.67
<b>3.00</b>	17.41	16.04	14.67	17.41	16.57	16.84

### FBH BUILD RATE\*\*:

<b>1.25</b>	5.83	4.19	2.55	6.68	6.95	7.21
<b>1.50</b>	7.43	5.79	4.16	8.15	8.41	8.67
<b>1.75</b>	9.03	7.40	5.76	9.61	9.87	10.13
<b>2.00</b>	10.63	9.00	7.36	11.07	11.33	11.59
<b>2.25</b>	12.24	10.60	8.97	12.53	12.79	13.05
<b>2.50</b>	13.84	12.20	10.57	13.99	14.25	14.51

\*Stabilizers assumed as 1/8" undergage

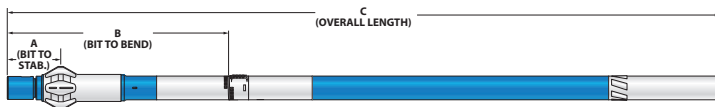
\*\*Additional FBH Angles Available

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

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## 5-1/2 in (140 mm) SERIES 1



5-1/2 in (140 mm) 6-7 Lobe 10.9 Stage HR SERIES 1

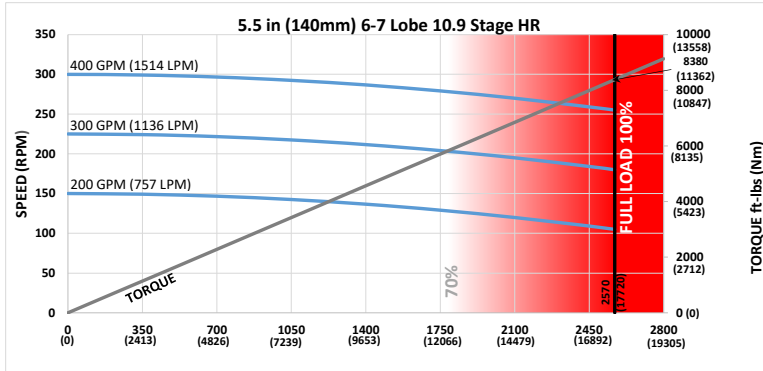
103

5-1/2 in (140 mm) 7-8 Lobe 8.3 Stage HR SERIES 1

104

<b>Bit Size Range</b>	6-3/4 - 8-1/2 in	171 - 216 mm
<b>Bit Box Connection</b>	3-1/2 REGULAR	
<b>Dynamic Bearing Load On/Off Bottom</b>	82090 lbf	36500 daN
<b>Static Bearing Load On/Off Bottom</b>	289185 lbf	128600 daN
<b>Max. Overpull for Re-run</b>	243000 lbf	108100 daN
<b>Absolute Overpull</b>	405000 lbf	180200 daN
<b>Adjustable Make Up Torque</b>	13000 ft-lbs	17600 Nm
<b>A = Bit to Stabilizer (center)</b>	15.75 in	400 mm
<b>B = Bit to Bend</b>	<b>Adjustable</b>	57.4 in 1458 mm
	<b>Fixed</b>	47 in 1194 mm

# 5-1/2 in (140 mm) 6-7 Lobe 10.9 Stage HR SERIES 1



<b>Lobe Configuration</b>	6-7 Lobe 10.9 Stage HR	
<b>Displacement</b>	0.75 rev/gal	0.2 rev/l
<b>Max Differential @ No Load</b>	2570 psi	17720 kPa
<b>Max Torque @ No Load</b>	8380 ft-lbs	11362 Nm
<b>Max Power</b>	407 HP	303 kW
<b>C = Overall Length</b>	393 in	9982 mm
<b>Weight</b>	1482 lbs	672 kg

Flow Rate		Speed
GPM	LPM	RPM
200	757	105 - 150
300	1136	180 - 225
400	1514	255 - 300

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	6-3/4 (171mm)	7-1/4 (184mm)	8-1/2 (216mm)	6-3/4 (171mm)	7-1/4 (184mm)	8-1/2 (216mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	0.24	-	-	1.79	2.05	-
<b>0.78</b>	2.72	1.39	-	3.98	4.24	4.89
<b>1.15</b>	5.08	3.75	0.41	6.05	6.31	6.96
<b>1.50</b>	7.31	5.97	2.64	8.02	8.28	8.93
<b>1.83</b>	9.41	8.07	4.74	9.87	10.13	10.78
<b>2.12</b>	11.25	9.92	6.59	11.49	11.75	12.41
<b>2.38</b>	12.91	11.58	8.25	12.95	13.21	13.86
<b>2.60</b>	14.31	12.98	9.65	14.31	14.45	15.10
<b>2.77</b>	15.39	14.06	10.73	15.39	15.40	16.05
<b>2.90</b>	16.22	14.89	11.56	16.22	16.13	16.78
<b>2.97</b>	16.66	15.33	12.00	16.66	16.52	17.17
<b>3.00</b>	16.85	15.52	12.19	16.85	16.69	17.34

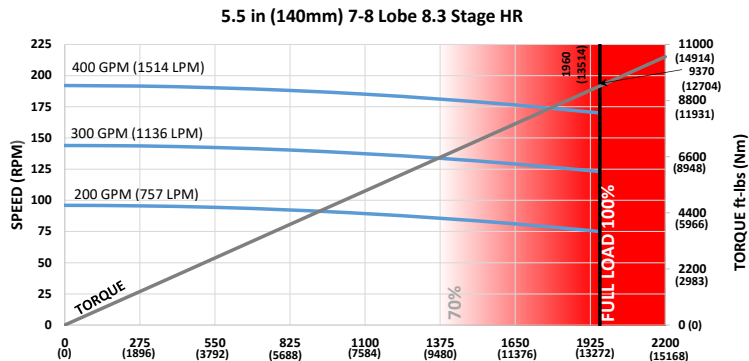
## FBH BUILD RATE\*\*:

<b>1.25</b>	5.30	3.72	-	6.85	7.11	7.76
<b>1.50</b>	6.89	5.32	1.39	8.30	8.56	9.21
<b>1.75</b>	8.48	6.91	2.98	9.75	10.01	10.66
<b>2.00</b>	10.07	8.50	4.57	11.20	11.46	12.11
<b>2.25</b>	11.66	10.09	6.16	12.65	12.91	13.56
<b>2.50</b>	13.25	11.68	7.75	14.10	14.36	15.01

\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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<b>Lobe Configuration</b>	7-8 Lobe 8.3 Stage HR	
<b>Displacement</b>	0.48 rev/gal	0.13 rev/l
<b>Max Differential @ No Load</b>	1960 psi	13514 kPa
<b>Max Torque @ No Load</b>	9370 ft-lbs	12704 Nm
<b>Max Power</b>	303 HP	226 kW
<b>C = Overall Length</b>	393 in	9982 mm
<b>Weight</b>	1973 lbs	895 kg

Flow Rate		Speed
GPM	LPM	RPM
200	757	75 - 96
300	1136	123 - 144
400	1514	170 - 192

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	6-3/4 (171mm)	7-1/4 (184mm)	8-1/2 (216mm)	6-3/4 (171mm)	7-1/4 (184mm)	8-1/2 (216mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	0.24	-	-	1.79	2.05	-
<b>0.78</b>	2.72	1.39	-	3.98	4.24	4.89
<b>1.15</b>	5.08	3.75	0.41	6.05	6.31	6.96
<b>1.50</b>	7.31	5.97	2.64	8.02	8.28	8.93
<b>1.83</b>	9.41	8.07	4.74	9.87	10.13	10.78
<b>2.12</b>	11.25	9.92	6.59	11.49	11.75	12.41
<b>2.38</b>	12.91	11.58	8.25	12.95	13.21	13.86
<b>2.60</b>	14.31	12.98	9.65	14.31	14.45	15.10
<b>2.77</b>	15.39	14.06	10.73	15.39	15.40	16.05
<b>2.90</b>	16.22	14.89	11.56	16.22	16.13	16.78
<b>2.97</b>	16.66	15.33	12.00	16.66	16.52	17.17
<b>3.00</b>	16.85	15.52	12.19	16.85	16.69	17.34

## FBH BUILD RATE\*\*:

<b>1.25</b>	5.30	3.72	-	6.85	7.11	7.76
<b>1.50</b>	6.89	5.32	1.39	8.30	8.56	9.21
<b>1.75</b>	8.48	6.91	2.98	9.75	10.01	10.66
<b>2.00</b>	10.07	8.50	4.57	11.20	11.46	12.11
<b>2.25</b>	11.66	10.09	6.16	12.65	12.91	13.56
<b>2.50</b>	13.25	11.68	7.75	14.10	14.36	15.01

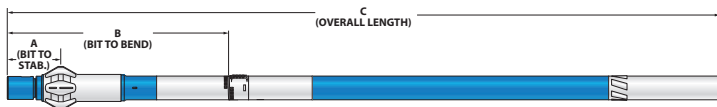
\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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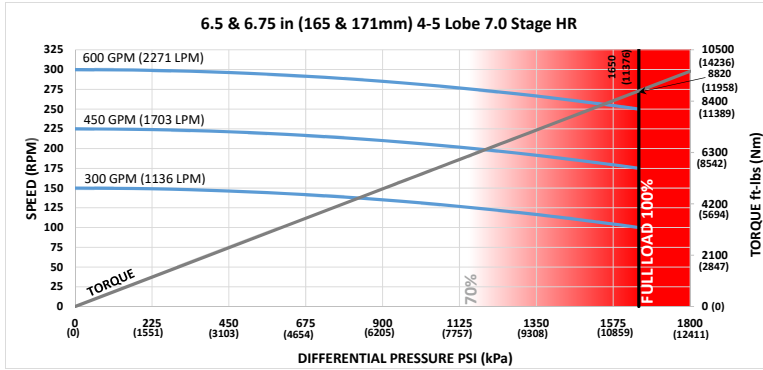
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<b>Bit Size Range</b>	7-7/8 - 9-7/8 in	200 - 251 mm
<b>Bit Box Connection</b>	4-1/2 REGULAR	
<b>Dynamic Bearing Load On/Off Bottom</b>	128500 lbf	57200 daN
<b>Static Bearing Load On/Off Bottom</b>	404500 lbf	179900 daN
<b>Max. Overpull for Re-run</b>	406900 lbf	181000 daN
<b>Absolute Overpull</b>	678200 lbf	301700 daN
<b>Adjustable Make Up Torque</b>	25000 ft-lbs	33900 Nm
<b>A = Bit to Stabilizer (center)</b>	16.3 in	414 mm
<b>B = Bit to Bend</b>	<b>Adjustable</b>	73 in / 1854 mm
	<b>Fixed</b>	61.1 in / 1552 mm

6-1/2 & 6-3/4 in (165 & 171 mm) 4-5 Lobe 7.0 Stage HR SERIES 1	107
6-1/2 & 6-3/4 in (165 & 171 mm) 6-7 Lobe 5.0 Stage HR SERIES 1	108
6-1/2 & 6-3/4 in (165 & 171 mm) 7-8 Lobe 2.0 Stage HR SERIES 1	109
6-1/2 & 6-3/4 in (165 & 171 mm) 7-8 Lobe 2.9 Stage HR SERIES 1	110
6-1/2 & 6-3/4 in (165 & 171 mm) 7-8 Lobe 3.0 Stage SERIES 1	111
6-1/2 & 6-3/4 in (165 & 171 mm) 7-8 Lobe 3.0 Stage HR SERIES 1	112
6-1/2 & 6-3/4 in (165 & 171 mm) 7-8 Lobe 3.0 Stage HR SLOW SERIES 1	113
6-1/2 & 6-3/4 in (165 & 171 mm) 7-8 Lobe 3.3 Stage HR SERIES 1	114
6-1/2 & 6-3/4 in (165 & 171 mm) 7-8 Lobe 3.5 Stage HR SERIES 1	115
6-1/2 & 6-3/4 in (165 & 171 mm) 7-8 Lobe 4.8 Stage HR SERIES 1	116
6-1/2 & 6-3/4 in (165 & 171 mm) 7-8 Lobe 5.0 Stage HR SERIES 1	117
6-1/2 & 6-3/4 in (165 & 171 mm) 7-8 Lobe 5.7 Stage HR SERIES 1	118

# 6-1/2 & 6-3/4 in (165 & 171 mm) 4-5 Lobe 7.0 Stage HR SERIES 1



<b>Lobe Configuration</b>	4-5 Lobe 7.0 Stage HR	
<b>Displacement</b>	0.49 rev/gal	0.13 rev/l
<b>Max Differential @ No Load</b>	1650 psi	11376 kPa
<b>Max Torque @ No Load</b>	8820 ft-lbs	11958 Nm
<b>Max Power</b>	420 HP	313 kW
<b>C = Overall Length</b>	341.1 in	8664 mm
<b>Weight</b>	2507 lbs	1137 kg

Flow Rate		Speed
GPM	LPM	RPM
300	1136	100 - 150
450	1703	175 - 225
600	2271	250 - 300

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	1.35	-	-	2.09	2.54	-
<b>0.78</b>	4.24	2.66	-	4.43	4.88	5.87
<b>1.15</b>	6.99	5.41	1.93	6.99	7.10	8.09
<b>1.50</b>	9.59	8.01	4.53	9.59	9.20	10.19
<b>1.83</b>	12.04	10.46	6.98	12.04	11.18	12.17
<b>2.12</b>	14.20	12.62	9.13	14.20	12.92	13.91
<b>2.38</b>	16.13	14.55	11.07	16.13	14.55	15.47
<b>2.60</b>	17.76	16.18	12.70	17.76	16.18	16.80
<b>2.77</b>	19.03	17.44	13.96	19.03	17.44	17.82
<b>2.90</b>	19.99	18.41	14.93	19.99	18.41	18.60
<b>2.97</b>	20.51	18.93	15.45	20.51	18.93	19.02
<b>3.00</b>	20.73	19.15	15.67	20.73	19.15	19.20

## FBH BUILD RATE\*\*:

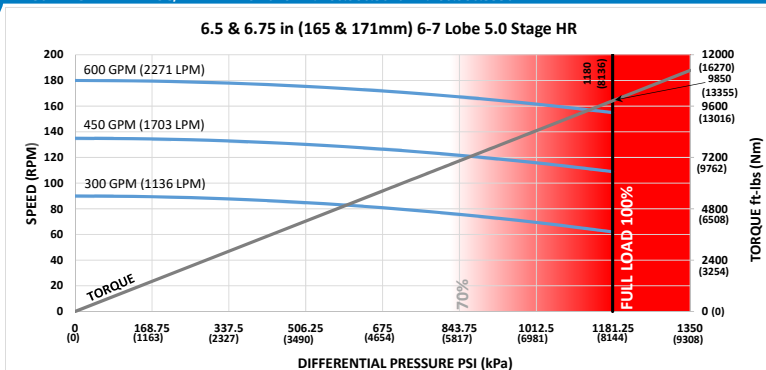
<b>1.25</b>	7.41	5.56	1.51	7.62	8.07	9.06
<b>1.50</b>	9.27	7.42	3.36	9.27	9.65	10.64
<b>1.75</b>	11.12	9.28	5.22	11.12	11.23	12.21
<b>2.00</b>	12.98	11.14	7.08	12.98	12.80	13.79
<b>2.25</b>	14.84	12.99	8.94	14.84	14.38	15.37
<b>2.50</b>	16.69	14.85	10.79	16.69	15.95	16.94

\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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# 6-1/2 & 6-3/4 in (165 & 171 mm) 6-7 Lobe 5.0 Stage HR SERIES 1



Lobe Configuration	6-7 Lobe 5.0 Stage HR		Flow Rate		Speed
Displacement	0.3 rev/gal	0.08 rev/l	GPM	LPM	RPM
Max Differential @ No Load	1180 psi	8136 kPa	300	1136	62 - 90
Max Torque @ No Load	9850 ft-lbs	13355 Nm	450	1703	109 - 135
Max Power	291 HP	217 kW	600	2271	155 - 180
C = Overall Length	331.1 in	8410 mm			
Weight	2477 lbs	1124 kg			

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)
BEND ANGLE	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
0.39	1.41	-	-	2.16	2.64	-
0.78	4.40	2.76	-	4.56	5.04	6.09
1.15	7.23	5.60	2.00	7.23	7.31	8.37
1.50	9.91	8.28	4.69	9.91	9.46	10.52
1.83	12.44	10.81	7.22	12.44	11.49	12.54
2.12	14.67	13.03	9.44	14.67	13.27	14.33
2.38	16.66	15.03	11.44	16.66	15.03	15.92
2.60	18.35	16.71	13.12	18.35	16.71	17.28
2.77	19.65	18.02	14.43	19.65	18.02	18.32
2.90	20.64	19.01	15.42	20.64	19.01	19.12
2.97	21.18	19.55	15.96	21.18	19.55	19.55
3.00	21.41	19.78	16.19	21.41	19.78	19.73

## FBH BUILD RATE\*\*:

1.25	7.66	5.76	1.57	7.84	8.32	9.38
1.50	9.58	7.67	3.49	9.58	9.94	11.00
1.75	11.49	9.59	5.40	11.49	11.55	12.61
2.00	13.41	11.51	7.32	13.41	13.17	14.23
2.25	15.32	13.42	9.24	15.32	14.79	15.84
2.50	17.24	15.34	11.15	17.24	16.40	17.46

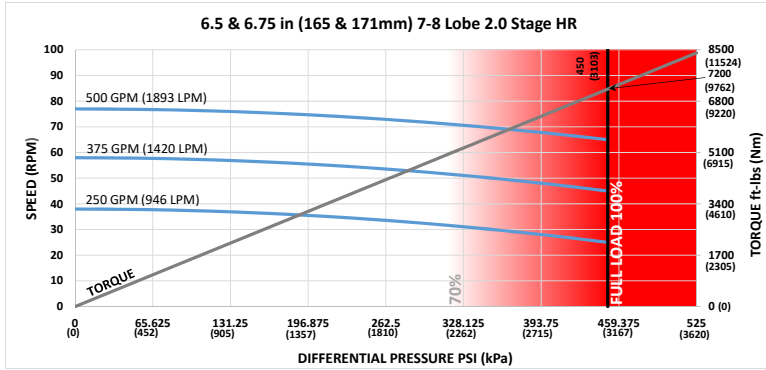
\*Stabilizers assumed as 1/8" undergage

\*\*Additional FBH Angles Available

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.

# 6-1/2 & 6-3/4 in (165 & 171 mm) 7-8 Lobe 2.0 Stage HR SERIES 1



<b>Lobe Configuration</b>	7-8 Lobe 2.0 Stage HR	
<b>Displacement</b>	0.15 rev/gal	0.04 rev/l
<b>Max Differential @ No Load</b>	450 psi	3103 kPa
<b>Max Torque @ No Load</b>	7200 ft-lbs	9762 Nm
<b>Max Power</b>	89 HP	66 kW
<b>C = Overall Length</b>	284.6 in	7229 mm
<b>Weight</b>	2233 lbs	1013 kg

Flow Rate		Speed
GPM	LPM	RPM
250	946	25 - 38
375	1420	45 - 58
500	1893	65 - 77

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	1.76	-	-	2.58	3.25	4.73
<b>0.78</b>	5.27	3.35	-	5.27	5.93	7.41
<b>1.15</b>	8.60	6.68	2.46	8.60	8.47	9.95
<b>1.50</b>	11.75	9.84	5.62	11.75	10.87	12.36
<b>1.83</b>	14.72	12.81	8.59	14.72	13.14	14.62
<b>2.12</b>	17.33	15.42	11.20	17.33	15.42	16.62
<b>2.38</b>	19.68	17.76	13.54	19.68	17.76	18.40
<b>2.60</b>	21.66	19.74	15.52	21.66	19.74	19.91
<b>2.77</b>	23.19	21.27	17.05	23.19	21.27	21.08
<b>2.90</b>	24.36	22.44	18.22	24.36	22.44	21.98
<b>2.97</b>	24.99	23.07	18.85	24.99	23.07	22.46
<b>3.00</b>	25.26	23.34	19.12	25.26	23.34	22.66

## FBH BUILD RATE\*\*:

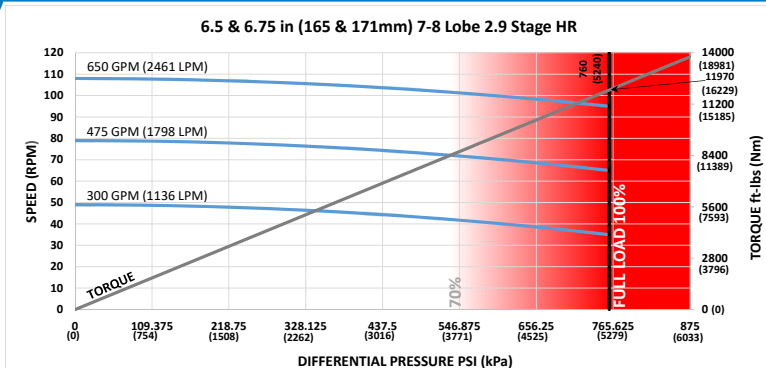
<b>1.25</b>	9.09	6.86	1.94	9.09	9.72	11.20
<b>1.50</b>	11.34	9.11	4.19	11.34	11.55	13.03
<b>1.75</b>	13.59	11.36	6.44	13.59	13.38	14.86
<b>2.00</b>	15.84	13.61	8.69	15.84	15.20	16.69
<b>2.25</b>	18.09	15.86	10.95	18.09	17.03	18.52
<b>2.50</b>	20.34	18.11	13.20	20.34	18.86	20.35

\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.

# 6-1/2 & 6-3/4 in (165 & 171 mm) 7-8 Lobe 2.9 Stage HR SERIES 1



Lobe Configuration	7-8 Lobe 2.9 Stage HR		Flow Rate		Speed
Displacement	0.17 rev/gal	0.04 rev/l	GPM	LPM	RPM
Max Differential @ No Load	760 psi	5240 kPa	300	1136	35 - 49
Max Torque @ No Load	11970 ft-lbs	16229 Nm	475	1798	65 - 79
Max Power	217 HP	161 kW	650	2461	95 - 108
C = Overall Length	351.1 in	8918 mm			
Weight	2593 lbs	1176 kg			

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)
BEND ANGLE	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	1.29	-	-	2.02	2.44	-
<b>0.78</b>	4.10	2.57	-	4.31	4.73	5.66
<b>1.15</b>	6.77	5.23	1.86	6.77	6.90	7.83
<b>1.50</b>	9.29	7.76	4.38	9.29	8.96	9.88
<b>1.83</b>	11.67	10.13	6.76	11.67	10.89	11.82
<b>2.12</b>	13.76	12.22	8.85	13.76	12.59	13.52
<b>2.38</b>	15.63	14.10	10.72	15.63	14.12	15.05
<b>2.60</b>	17.22	15.68	12.31	17.22	15.68	16.34
<b>2.77</b>	18.44	16.91	13.53	18.44	16.91	17.34
<b>2.90</b>	19.38	17.84	14.47	19.38	17.84	18.10
<b>2.97</b>	19.88	18.35	14.97	19.88	18.35	18.51
<b>3.00</b>	20.10	18.56	15.19	20.10	18.56	18.69

## FBH BUILD RATE\*\*:

<b>1.25</b>	7.17	5.39	1.45	7.42	7.84	8.77
<b>1.50</b>	8.98	7.19	3.25	8.98	9.38	10.30
<b>1.75</b>	10.78	8.99	5.05	10.78	10.91	11.84
<b>2.00</b>	12.58	10.79	6.86	12.58	12.45	13.38
<b>2.25</b>	14.38	12.59	8.66	14.38	13.99	14.92
<b>2.50</b>	16.18	14.39	10.46	16.18	15.53	16.45

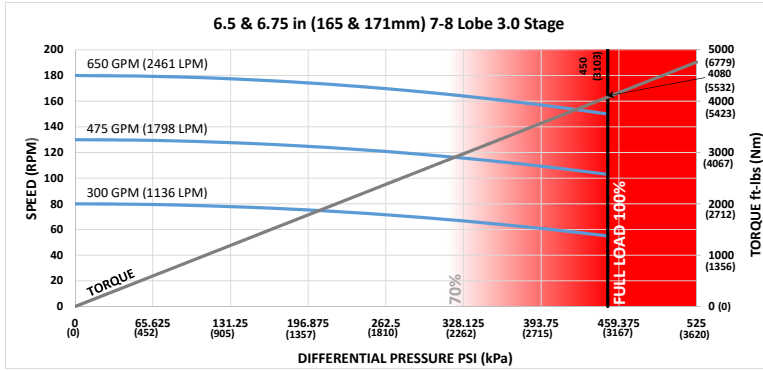
\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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

# 6-1/2 & 6-3/4 in (165 & 171 mm) 7-8 Lobe 3.0 Stage SERIES 1



Lobe Configuration	7-8 Lobe 3.0 Stage		Flow Rate		Speed
Displacement	0.27 rev/gal	0.07 rev/l	GPM	LPM	RPM
Max Differential @ No Load	450 psi	3103 kPa	300	1136	55 - 80
Max Torque @ No Load	4080 ft-lbs	5532 Nm	475	1798	103 - 130
Max Power	117 HP	87 kW	650	2461	150 - 180
C = Overall Length	256.1 in	6505 mm			
Weight	2005 lbs	909 kg			

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)
BEND ANGLE	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	2.08	-	-	2.92	3.78	5.66
<b>0.78</b>	6.01	3.87	-	6.01	6.65	8.53
<b>1.15</b>	9.74	7.60	2.87	9.74	9.38	11.26
<b>1.50</b>	13.27	11.12	6.40	13.27	11.96	13.84
<b>1.83</b>	16.60	14.45	9.73	16.60	14.45	16.27
<b>2.12</b>	19.52	17.37	12.65	19.52	17.37	18.41
<b>2.38</b>	22.14	20.00	15.27	22.14	20.00	20.33
<b>2.60</b>	24.36	22.21	17.49	24.36	22.21	21.95
<b>2.77</b>	26.07	23.93	19.21	26.07	23.93	23.20
<b>2.90</b>	27.38	25.24	20.52	27.38	25.24	24.16
<b>2.97</b>	28.09	25.94	21.22	28.09	25.94	24.68
<b>3.00</b>	28.39	26.25	21.53	28.39	26.25	24.90

## FBH BUILD RATE\*\*:

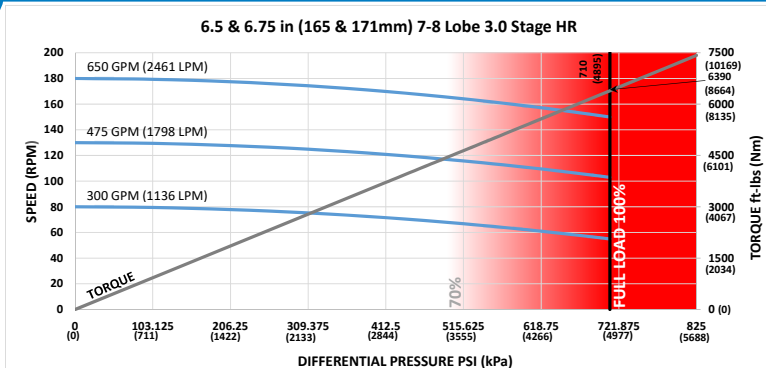
<b>1.25</b>	10.28	7.77	2.27	10.28	10.83	12.71
<b>1.50</b>	12.80	10.30	4.79	12.80	12.81	14.69
<b>1.75</b>	15.32	12.82	7.31	15.32	14.80	16.68
<b>2.00</b>	17.84	15.34	9.83	17.84	16.78	18.66
<b>2.25</b>	20.36	17.86	12.35	20.36	18.76	20.65
<b>2.50</b>	22.88	20.38	14.88	22.88	20.75	22.63

\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.

# 6-1/2 & 6-3/4 in (165 & 171 mm) 7-8 Lobe 3.0 Stage HR SERIES 1



<b>Lobe Configuration</b>	7-8 Lobe 3.0 Stage HR	
<b>Displacement</b>	0.16 rev/gal	0.04 rev/l
<b>Max Differential @ No Load</b>	710 psi	4895 kPa
<b>Max Torque @ No Load</b>	7090 ft-lbs	9613 Nm
<b>Max Power</b>	109 HP	82 kW
<b>C = Overall Length</b>	335.1 in	8512 mm
<b>Weight</b>	2623 lbs	1190 kg

<b>Flow Rate</b>		<b>Speed</b>
<b>GPM</b>	<b>LPM</b>	<b>RPM</b>
300	1136	29 - 50
450	1703	55 - 75
600	2271	81 - 100

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	1.38	-	-	2.13	2.60	-
<b>0.78</b>	4.33	2.72	-	4.50	4.97	6.00
<b>1.15</b>	7.13	5.52	1.97	7.13	7.22	8.25
<b>1.50</b>	9.78	8.17	4.62	9.78	9.35	10.38
<b>1.83</b>	12.28	10.67	7.12	12.28	11.36	12.39
<b>2.12</b>	14.48	12.86	9.32	14.48	13.13	14.16
<b>2.38</b>	16.44	14.83	11.29	16.44	14.83	15.74
<b>2.60</b>	18.11	16.50	12.95	18.11	16.50	17.08
<b>2.77</b>	19.39	17.78	14.24	19.39	17.78	18.12
<b>2.90</b>	20.38	18.77	15.22	20.38	18.77	18.91
<b>2.97</b>	20.91	19.30	15.75	20.91	19.30	19.33
<b>3.00</b>	21.13	19.52	15.98	21.13	19.52	19.52

## FBH BUILD RATE\*\*:

<b>1.25</b>	7.56	5.68	1.54	7.75	8.22	9.25
<b>1.50</b>	9.45	7.57	3.44	9.45	9.82	10.85
<b>1.75</b>	11.34	9.46	5.33	11.34	11.42	12.45
<b>2.00</b>	13.23	11.35	7.22	13.23	13.02	14.05
<b>2.25</b>	15.12	13.25	9.11	15.12	14.62	15.65
<b>2.50</b>	17.02	15.14	11.01	17.02	16.22	17.25

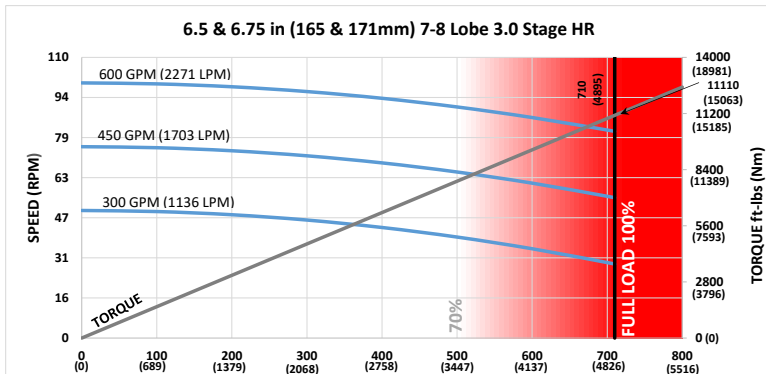
\*Stabilizers assumed as 1/8" undergage

\*\*Additional FBH Angles Available

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

# 6-1/2 & 6-3/4 in (165 & 171 mm) 7-8 Lobe 3.0 Stage HR SLOW SERIES 1



Lobe Configuration		7-8 Lobe 3.0 Stage HR	
Displacement	0.16 rev/gal	0.04 rev/l	
Max Differential @ No Load	710 psi	4895 kPa	
Max Torque @ No Load	7090 ft-lbs	9613 Nm	
Max Power	109 HP	82 kW	
C = Overall Length	335.1 in	8512 mm	
Weight	2623 lbs	1190 kg	

Flow Rate		Speed
GPM	LPM	RPM
300	1136	29 - 50
450	1703	55 - 75
600	2271	81 - 100

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)
BEND ANGLE	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	1.38	-	-	2.13	2.60	-
<b>0.78</b>	4.33	2.72	-	4.50	4.97	6.00
<b>1.15</b>	7.13	5.52	1.97	7.13	7.22	8.25
<b>1.50</b>	9.78	8.17	4.62	9.78	9.35	10.38
<b>1.83</b>	12.28	10.67	7.12	12.28	11.36	12.39
<b>2.12</b>	14.48	12.86	9.32	14.48	13.13	14.16
<b>2.38</b>	16.44	14.83	11.29	16.44	14.83	15.74
<b>2.60</b>	18.11	16.50	12.95	18.11	16.50	17.08
<b>2.77</b>	19.39	17.78	14.24	19.39	17.78	18.12
<b>2.90</b>	20.38	18.77	15.22	20.38	18.77	18.91
<b>2.97</b>	20.91	19.30	15.75	20.91	19.30	19.33
<b>3.00</b>	21.13	19.52	15.98	21.13	19.52	19.52

## FBH BUILD RATE\*\*:

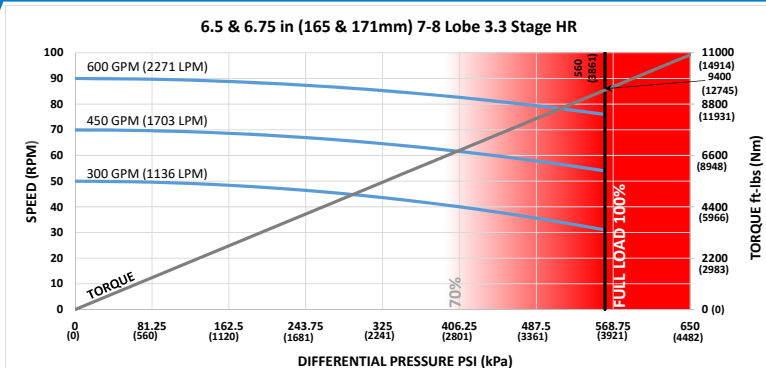
<b>1.25</b>	7.56	5.68	1.54	7.75	8.22	9.25
<b>1.50</b>	9.45	7.57	3.44	9.45	9.82	10.85
<b>1.75</b>	11.34	9.46	5.33	11.34	11.42	12.45
<b>2.00</b>	13.23	11.35	7.22	13.23	13.02	14.05
<b>2.25</b>	15.12	13.25	9.11	15.12	14.62	15.65
<b>2.50</b>	17.02	15.14	11.01	17.02	16.22	17.25

\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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# 6-1/2 & 6-3/4 in (165 & 171 mm) 7-8 Lobe 3.3 Stage HR SERIES 1



<b>Lobe Configuration</b>	7-8 Lobe 3.3 Stage HR	
<b>Displacement</b>	0.15 rev/gal	0.04 rev/l
<b>Max Differential @ No Load</b>	560 psi	3861 kPa
<b>Max Torque @ No Load</b>	9400 ft.-lbs	12745 Nm
<b>Max Power</b>	136 HP	101 kW
<b>C = Overall Length</b>	376.1 in	9553 mm
<b>Weight</b>	2900 lbs	1315 kg

<b>Flow Rate</b>		<b>Speed</b>
<b>GPM</b>	<b>LPM</b>	<b>RPM</b>
300	1136	31 - 50
450	1703	54 - 70
600	2271	76 - 90

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	1.18	-	-	1.87	2.23	-
<b>0.78</b>	3.79	2.36	-	4.03	4.40	5.19
<b>1.15</b>	6.27	4.84	1.70	6.27	6.45	7.25
<b>1.50</b>	8.62	7.19	4.05	8.62	8.39	9.19
<b>1.83</b>	10.83	9.40	6.26	10.83	10.23	11.02
<b>2.12</b>	12.77	11.34	8.20	12.77	11.84	12.64
<b>2.38</b>	14.51	13.09	9.95	14.51	13.28	14.08
<b>2.60</b>	15.99	14.56	11.42	15.99	14.56	15.30
<b>2.77</b>	17.13	15.70	12.56	17.13	15.70	16.24
<b>2.90</b>	18.00	16.57	13.43	18.00	16.57	16.97
<b>2.97</b>	18.47	17.04	13.90	18.47	17.04	17.36
<b>3.00</b>	18.67	17.24	14.10	18.67	17.24	17.52

## FBH BUILD RATE\*\*:

<b>1.25</b>	6.65	4.98	1.32	6.94	7.31	8.11
<b>1.50</b>	8.32	6.66	3.00	8.39	8.76	9.55
<b>1.75</b>	10.00	8.34	4.68	10.00	10.20	11.00
<b>2.00</b>	11.68	10.01	6.35	11.68	11.65	12.45
<b>2.25</b>	13.35	11.69	8.03	13.35	13.10	13.90
<b>2.50</b>	15.03	13.36	9.70	15.03	14.55	15.35

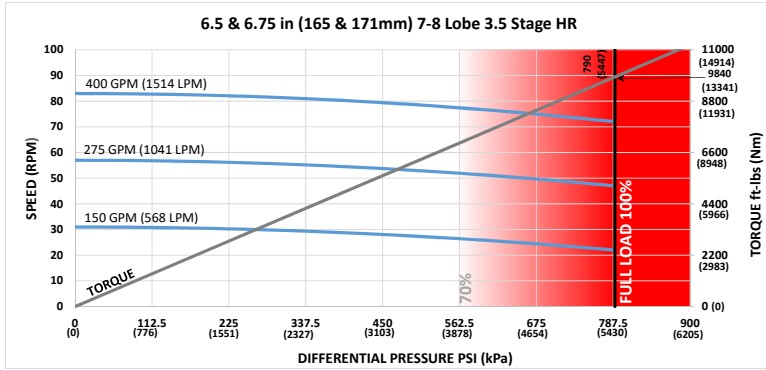
\*Stabilizers assumed as 1/8" undergage

\*\*Additional FBH Angles Available

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# 6-1/2 & 6-3/4 in (165 & 171 mm) 7-8 Lobe 3.5 Stage HR SERIES 1



<b>Lobe Configuration</b>	7-8 Lobe 3.5 Stage HR	
<b>Displacement</b>	0.21 rev/gal	0.05 rev/l
<b>Max Differential @ No Load</b>	790 psi	5447 kPa
<b>Max Torque @ No Load</b>	9840 ft-lbs	13341 Nm
<b>Max Power</b>	135 HP	101 kW
<b>C = Overall Length</b>	362.4 in	9205 mm
<b>Weight</b>	2654 lbs	1204 kg

Flow Rate		Speed
GPM	LPM	RPM
150	568	22 - 31
275	1041	47 - 57
400	1514	72 - 83

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	1.24	-	-	1.95	2.34	-
<b>0.78</b>	3.96	2.47	-	4.18	4.57	5.44
<b>1.15</b>	6.53	5.05	1.78	6.53	6.69	7.56
<b>1.50</b>	8.97	7.49	4.22	8.97	8.69	9.56
<b>1.83</b>	11.27	9.79	6.52	11.27	10.58	11.45
<b>2.12</b>	13.29	11.81	8.54	13.29	12.24	13.11
<b>2.38</b>	15.11	13.62	10.36	15.11	13.73	14.59
<b>2.60</b>	16.64	15.15	11.89	16.64	15.15	15.85
<b>2.77</b>	17.82	16.34	13.07	17.82	16.34	16.83
<b>2.90</b>	18.73	17.25	13.98	18.73	17.25	17.57
<b>2.97</b>	19.22	17.73	14.47	19.22	17.73	17.97
<b>3.00</b>	19.43	17.94	14.68	19.43	17.94	18.14

## FBH BUILD RATE\*\*:

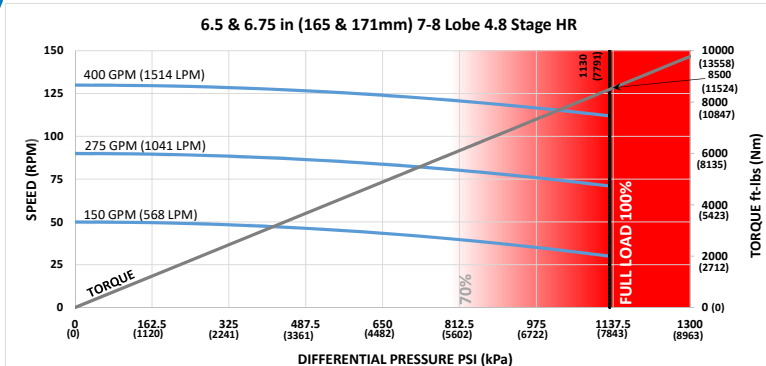
<b>1.25</b>	6.93	5.20	1.39	7.20	7.59	8.45
<b>1.50</b>	8.67	6.94	3.13	8.69	9.09	9.95
<b>1.75</b>	10.41	8.68	4.88	10.41	10.58	11.45
<b>2.00</b>	12.15	10.42	6.62	12.15	12.08	12.94
<b>2.25</b>	13.89	12.17	8.36	13.89	13.57	14.44
<b>2.50</b>	15.64	13.91	10.10	15.64	15.07	15.93

\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.

# 6-1/2 & 6-3/4 in (165 & 171 mm) 7-8 Lobe 4.8 Stage HR SERIES 1



Lobe Configuration	7-8 Lobe 4.8 Stage HR		Flow Rate		Speed
Displacement	0.33 rev/gal	0.09 rev/l	<b>GPM</b>	<b>LPM</b>	<b>RPM</b>
Max Differential @ No Load	1130 psi	7791 kPa	150	568	30 - 50
Max Torque @ No Load	8500 ft-lbs	11524 Nm	275	1041	71 - 90
Max Power	181 HP	135 kW	400	1514	112 - 130
C = Overall Length	334.6 in	8499 mm			
Weight	2503 lbs	1135 kg			

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)
<b>BEND ANGLE</b>	<b>Degrees per 100 Feet (30 m)</b>			<b>Degrees per 100 Feet (30 m)</b>		
<b>0.39</b>	1.39	-	-	2.13	2.60	-
<b>0.78</b>	4.34	2.73	-	4.51	4.98	6.01
<b>1.15</b>	7.15	5.53	1.98	7.15	7.23	8.27
<b>1.50</b>	9.80	8.18	4.63	9.80	9.37	10.40
<b>1.83</b>	12.30	10.69	7.13	12.30	11.38	12.41
<b>2.12</b>	14.50	12.88	9.33	14.50	13.15	14.18
<b>2.38</b>	16.47	14.86	11.30	16.47	14.86	15.76
<b>2.60</b>	18.14	16.52	12.97	18.14	16.52	17.11
<b>2.77</b>	19.43	17.81	14.26	19.43	17.81	18.14
<b>2.90</b>	20.41	18.80	15.25	20.41	18.80	18.93
<b>2.97</b>	20.94	19.33	15.78	20.94	19.33	19.36
<b>3.00</b>	21.17	19.56	16.01	21.17	19.56	19.54

## FBH BUILD RATE\*\*:

<b>1.25</b>	7.57	5.69	1.55	7.76	8.23	9.27
<b>1.50</b>	9.46	7.58	3.44	9.46	9.84	10.87
<b>1.75</b>	11.36	9.48	5.34	11.36	11.44	12.47
<b>2.00</b>	13.25	11.37	7.23	13.25	13.04	14.07
<b>2.25</b>	15.15	13.27	9.13	15.15	14.64	15.67
<b>2.50</b>	17.04	15.16	11.03	17.04	16.24	17.27

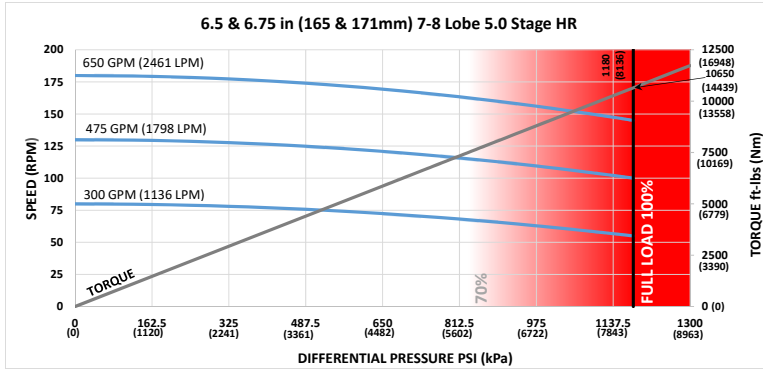
\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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

# 6-1/2 & 6-3/4 in (165 & 171 mm) 7-8 Lobe 5.0 Stage HR SERIES 1



Lobe Configuration	7-8 Lobe 5.0 Stage HR		Flow Rate		Speed
Displacement	0.27 rev/gal	0.07 rev/l	GPM	LPM	RPM
Max Differential @ No Load	1180 psi	8136 kPa	300	1136	55 - 80
Max Torque @ No Load	10650 ft-lbs	14439 Nm	475	1798	100 - 130
Max Power	294 HP	219 kW	650	2461	145 - 180
C = Overall Length	325.6 in	8270 mm			
Weight	2545 lbs	1154 kg			

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)
BEND ANGLE	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	1.44	-	-	2.20	2.70	-
<b>0.78</b>	4.48	2.82	-	4.63	5.13	6.22
<b>1.15</b>	7.37	5.71	2.05	7.37	7.43	8.53
<b>1.50</b>	10.10	8.44	4.78	10.10	9.61	10.71
<b>1.83</b>	12.68	11.01	7.36	12.68	11.66	12.76
<b>2.12</b>	14.94	13.28	9.62	14.94	13.47	14.56
<b>2.38</b>	16.97	15.31	11.65	16.97	15.31	16.18
<b>2.60</b>	18.68	17.02	13.37	18.68	17.02	17.55
<b>2.77</b>	20.01	18.35	14.69	20.01	18.35	18.61
<b>2.90</b>	21.02	19.36	15.71	21.02	19.36	19.42
<b>2.97</b>	21.57	19.91	16.25	21.57	19.91	19.86
<b>3.00</b>	21.80	20.14	16.49	21.80	20.14	20.04

## FBH BUILD RATE\*\*:

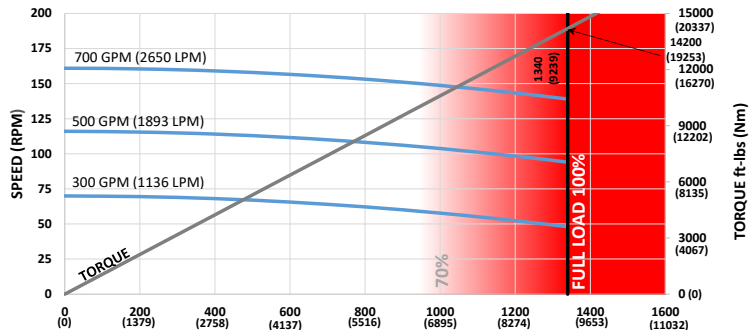
<b>1.25</b>	7.80	5.87	1.61	7.97	8.47	9.56
<b>1.50</b>	9.75	7.82	3.56	9.75	10.11	11.20
<b>1.75</b>	11.71	9.77	5.51	11.71	11.74	12.84
<b>2.00</b>	13.66	11.72	7.46	13.66	13.38	14.48
<b>2.25</b>	15.61	13.67	9.41	15.61	15.02	16.12
<b>2.50</b>	17.56	15.62	11.36	17.56	16.66	17.76

\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.

# 6-1/2 & 6-3/4 in (165 & 171 mm) 7-8 Lobe 5.7 Stage HR SERIES 1

**6.5 & 6.75 in (165 & 171mm) 7-8 Lobe 5.7 Stage HR**


<b>Lobe Configuration</b>	7-8 Lobe 5.7 Stage HR	
<b>Displacement</b>	0.23 rev/gal	0.06 rev/l
<b>Max Differential @ No Load</b>	1340 psi	9239 kPa
<b>Max Torque @ No Load</b>	14200 ft-lbs	19253 Nm
<b>Max Power</b>	376 HP	280 kW
<b>C = Overall Length</b>	391.1 in	9934 mm
<b>Weight</b>	2963 lbs	1344 kg

<b>Flow Rate</b>		<b>Speed</b>
<b>GPM</b>	<b>LPM</b>	<b>RPM</b>
300	1136	48 - 70
500	1893	94 - 116
700	2650	139 - 161

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

**ADJUSTABLE BUILD RATE:**

Hole Size	SLICK			STABILIZED*		
	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	1.12	-	-	1.79	2.12	-
<b>0.78</b>	3.63	2.25	-	3.88	4.22	4.95
<b>1.15</b>	6.01	4.63	1.62	6.01	6.21	6.94
<b>1.50</b>	8.26	6.89	3.87	8.26	8.09	8.82
<b>1.83</b>	10.38	9.01	5.99	10.38	9.86	10.60
<b>2.12</b>	12.24	10.87	7.86	12.24	11.42	12.16
<b>2.38</b>	13.92	12.55	9.53	13.92	12.82	13.55
<b>2.60</b>	15.33	13.96	10.95	15.33	14.00	14.74
<b>2.77</b>	16.42	15.06	12.04	16.42	15.06	15.65
<b>2.90</b>	17.26	15.89	12.88	17.26	15.89	16.35
<b>2.97</b>	17.71	16.34	13.33	17.71	16.34	16.73
<b>3.00</b>	17.90	16.53	13.52	17.90	16.53	16.89

**FBH BUILD RATE\*\*:**

<b>1.25</b>	6.37	4.77	1.26	6.69	7.02	7.75
<b>1.50</b>	7.98	6.38	2.87	8.09	8.42	9.15
<b>1.75</b>	9.59	7.99	4.48	9.59	9.82	10.55
<b>2.00</b>	11.19	9.60	6.08	11.19	11.22	11.95
<b>2.25</b>	12.80	11.20	7.69	12.80	12.62	13.35
<b>2.50</b>	14.41	12.81	9.30	14.41	14.02	14.75

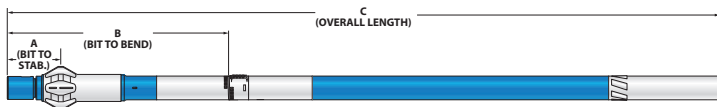
\*Stabilizers assumed as 1/8" undergage

\*\*Additional FBH Angles Available

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

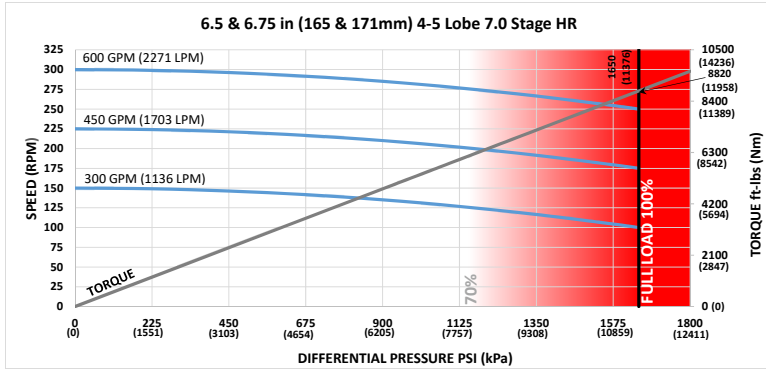
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<b>Bit Size Range</b>	7-7/8 - 9-7/8 in	200 - 251 mm
<b>Bit Box Connection</b>	4-1/2 REGULAR	
<b>Dynamic Bearing Load On/Off Bottom</b>	131700 lbf	58600 daN
<b>Static Bearing Load On/Off Bottom</b>	420400 lbf	187000 daN
<b>Max. Overpull for Re-run</b>	328000 lbf	145900 daN
<b>Absolute Overpull</b>	546000 lbf	242900 daN
<b>Adjustable Make Up Torque</b>	25000 ft-lbs	33900 Nm
<b>A = Bit to Stabilizer (center)</b>	16.45 in	418 mm
<b>B = Bit to Bend</b>	<b>Adjustable</b>	67.87 in / 1724 mm
	<b>Fixed</b>	52.97 in / 1345 mm

6-1/2 & 6-3/4 in (165 & 171 mm) 4-5 Lobe 7.0 Stage HR SERIES 3	121
6-1/2 & 6-3/4 in (165 & 171 mm) 6-7 Lobe 5.0 Stage HR SERIES 3	122
6-1/2 & 6-3/4 in (165 & 171 mm) 7-8 Lobe 2.0 Stage HR SERIES 3	123
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6-1/2 & 6-3/4 in (165 & 171 mm) 7-8 Lobe 3.0 Stage SERIES 3	125
6-1/2 & 6-3/4 in (165 & 171 mm) 7-8 Lobe 3.0 Stage HR SERIES 3	126
6-1/2 & 6-3/4 in (165 & 171 mm) 7-8 Lobe 3.0 Stage HR SLOW SERIES 3	127
6-1/2 & 6-3/4 in (165 & 171 mm) 7-8 Lobe 3.3 Stage HR SERIES 3	128
6-1/2 & 6-3/4 in (165 & 171 mm) 7-8 Lobe 3.5 Stage HR SERIES 3	129
6-1/2 & 6-3/4 in (165 & 171 mm) 7-8 Lobe 4.8 Stage HR SERIES 3	130
6-1/2 & 6-3/4 in (165 & 171 mm) 7-8 Lobe 5.0 Stage HR SERIES 3	131
6-1/2 & 6-3/4 in (165 & 171 mm) 7-8 Lobe 5.7 Stage HR SERIES 3	132

# 6-1/2 & 6-3/4 in (165 & 171 mm) 4-5 Lobe 7.0 Stage HR **SERIES 3**



<b>Lobe Configuration</b>	4-5 Lobe 7.0 Stage HR		<b>Flow Rate</b>		<b>Speed</b>
<b>Displacement</b>	0.49 rev/gal	0.13 rev/l	<b>GPM</b>	<b>LPM</b>	<b>RPM</b>
<b>Max Differential @ No Load</b>	1650 psi	11376 kPa	300	1136	100 - 150
<b>Max Torque @ No Load</b>	8820 ft-lbs	11958 Nm	450	1703	175 - 225
<b>Max Power</b>	420 HP	313 kW	600	2271	250 - 300
<b>C = Overall Length</b>	332.7 in	8451 mm			
<b>Weight</b>	2439 lbs	1106 kg			

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	0.45	-	-	2.24	2.71	-
<b>0.78</b>	3.43	1.63	-	4.71	5.19	6.23
<b>1.15</b>	6.25	4.45	0.50	7.06	7.53	8.58
<b>1.50</b>	8.92	7.12	3.17	9.27	9.75	10.80
<b>1.83</b>	11.44	9.64	5.69	11.44	11.84	12.89
<b>2.12</b>	13.65	11.85	7.90	13.65	13.68	14.73
<b>2.38</b>	15.63	13.83	9.88	15.63	15.33	16.37
<b>2.60</b>	17.31	15.51	11.56	17.31	16.72	17.77
<b>2.77</b>	18.60	16.81	12.86	18.60	17.80	18.85
<b>2.90</b>	19.60	17.80	13.85	19.60	18.62	19.67
<b>2.97</b>	20.13	18.33	14.38	20.13	19.07	20.11
<b>3.00</b>	20.36	18.56	14.61	20.36	19.26	20.30

## FBH BUILD RATE\*\*:

<b>1.25</b>	6.50	4.36	-	8.09	8.56	9.61
<b>1.50</b>	8.40	6.27	1.58	9.75	10.23	11.27
<b>1.75</b>	10.31	8.18	3.48	11.42	11.89	12.94
<b>2.00</b>	12.22	10.08	5.39	13.08	13.56	14.60
<b>2.25</b>	14.12	11.99	7.30	14.74	15.22	16.27
<b>2.50</b>	16.03	13.90	9.20	16.41	16.88	17.93

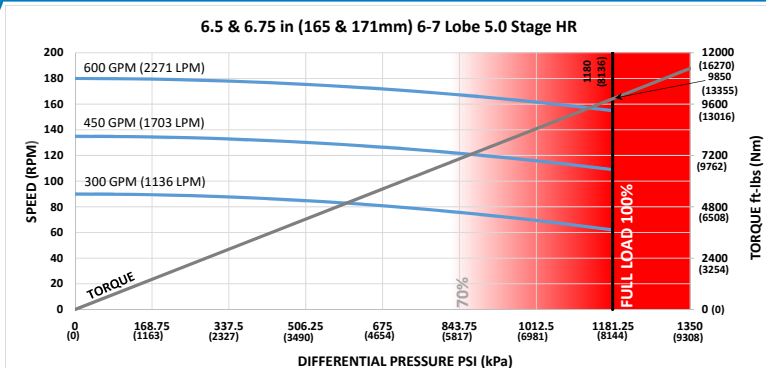
\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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# MUD MOTORS

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<b>Lobe Configuration</b>	6-7 Lobe 5.0 Stage HR	
<b>Displacement</b>	0.3 rev/gal	0.08 rev/l
<b>Max Differential @ No Load</b>	1180 psi	8136 kPa
<b>Max Torque @ No Load</b>	9850 ft.-lbs	13355 Nm
<b>Max Power</b>	291 HP	217 kW
<b>C = Overall Length</b>	322.7 in	8197 mm
<b>Weight</b>	2409 lbs	1093 kg

<b>Flow Rate</b>		<b>Speed</b>
<b>GPM</b>	<b>LPM</b>	<b>RPM</b>
300	1136	62 - 90
450	1703	109 - 135
600	2271	155 - 180

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	0.47	-	-	2.32	2.83	-
<b>0.78</b>	3.55	1.69	-	4.86	5.36	6.48
<b>1.15</b>	6.46	4.61	0.52	7.26	7.77	8.89
<b>1.50</b>	9.22	7.36	3.28	9.53	10.04	11.16
<b>1.83</b>	11.82	9.96	5.88	11.82	12.19	13.31
<b>2.12</b>	14.10	12.25	8.17	14.10	14.07	15.19
<b>2.38</b>	16.15	14.30	10.21	16.15	15.76	16.88
<b>2.60</b>	17.88	16.03	11.95	17.88	17.19	18.31
<b>2.77</b>	19.22	17.37	13.29	19.22	18.30	19.42
<b>2.90</b>	20.25	18.39	14.31	20.25	19.14	20.26
<b>2.97</b>	20.80	18.94	14.86	20.80	19.60	20.72
<b>3.00</b>	21.03	19.18	15.10	21.03	19.79	20.91

## FBH BUILD RATE\*\*:

<b>1.25</b>	6.72	4.51	-	8.34	8.84	9.96
<b>1.50</b>	8.69	6.48	1.63	10.05	10.55	11.67
<b>1.75</b>	10.66	8.45	3.60	11.76	12.26	13.38
<b>2.00</b>	12.63	10.42	5.57	13.47	13.97	15.09
<b>2.25</b>	14.60	12.39	7.54	15.18	15.68	16.80
<b>2.50</b>	16.56	14.36	9.51	16.89	17.39	18.51

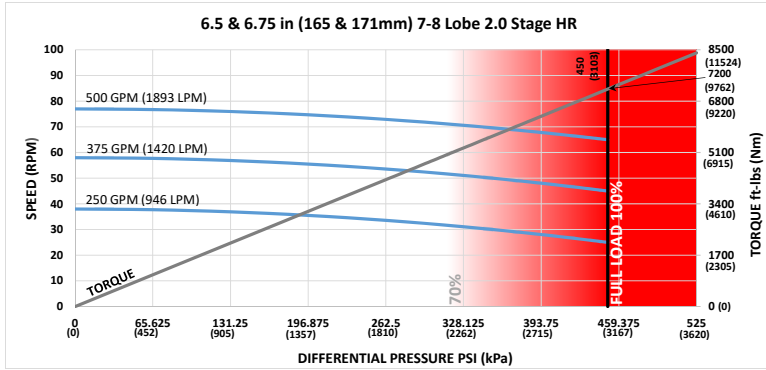
\*Stabilizers assumed as 1/8" undergage

\*\*Additional FBH Angles Available

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

# 6-1/2 & 6-3/4 in (165 & 171 mm) 7-8 Lobe 2.0 Stage HR **SERIES 3**



<b>Lobe Configuration</b>	7-8 Lobe 2.0 Stage HR	
<b>Displacement</b>	0.15 rev/gal	0.04 rev/l
<b>Max Differential @ No Load</b>	450 psi	3103 kPa
<b>Max Torque @ No Load</b>	7200 ft-lbs	9762 Nm
<b>Max Power</b>	89 HP	66 kW
<b>C = Overall Length</b>	276.2 in	7015 mm
<b>Weight</b>	2165 lbs	982 kg

Flow Rate		Speed
GPM	LPM	RPM
250	946	25 - 38
375	1420	45 - 58
500	1893	65 - 77

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	0.62	-	-	2.80	3.53	-
<b>0.78</b>	4.24	2.05	-	5.67	6.39	7.98
<b>1.15</b>	7.68	5.49	0.67	8.38	9.11	10.69
<b>1.50</b>	10.94	8.74	3.93	10.95	11.68	13.26
<b>1.83</b>	14.00	11.81	7.00	14.00	14.10	15.69
<b>2.12</b>	16.70	14.51	9.69	16.70	16.23	17.81
<b>2.38</b>	19.12	16.93	12.11	19.12	18.14	19.72
<b>2.60</b>	21.16	18.97	14.16	21.16	19.75	21.34
<b>2.77</b>	22.74	20.55	15.74	22.74	21.00	22.59
<b>2.90</b>	23.95	21.76	16.95	23.95	21.95	23.54
<b>2.97</b>	24.60	22.41	17.60	24.60	22.47	24.06
<b>3.00</b>	24.88	22.69	17.88	24.88	22.69	24.28

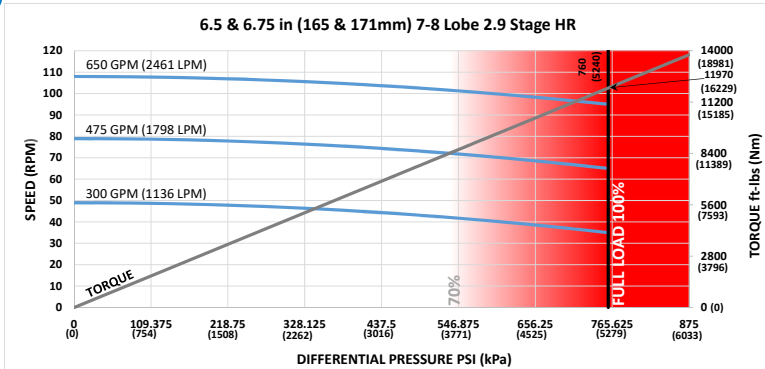
## FBH BUILD RATE\*\*:

<b>1.25</b>	7.98	5.38	-	9.72	10.44	12.03
<b>1.50</b>	10.30	7.70	1.98	11.68	12.40	13.99
<b>1.75</b>	12.63	10.03	4.30	13.64	14.36	15.94
<b>2.00</b>	14.95	12.35	6.63	15.59	16.31	17.90
<b>2.25</b>	17.27	14.67	8.95	17.55	18.27	19.86
<b>2.50</b>	19.60	17.00	11.28	19.60	20.23	21.81

\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.



<b>Lobe Configuration</b>	7-8 Lobe 2.9 Stage HR		<b>Flow Rate</b>		<b>Speed</b>
<b>Displacement</b>	0.17 rev/gal	0.04 rev/l	<b>GPM</b>	<b>LPM</b>	<b>RPM</b>
<b>Max Differential @ No Load</b>	760 psi	5240 kPa	300	1136	35 - 49
<b>Max Torque @ No Load</b>	11970 ft-lbs	16229 Nm	475	1798	65 - 79
<b>Max Power</b>	217 HP	161 kW	650	2461	95 - 108
<b>C = Overall Length</b>	342.7 in	8705 mm			
<b>Weight</b>	2525 lbs	1145 kg			

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

**ADJUSTABLE BUILD RATE:**

Hole Size	SLICK			STABILIZED*		
	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	0.43	-	-	2.16	2.61	-
<b>0.78</b>	3.31	1.57	-	4.57	5.02	6.00
<b>1.15</b>	6.05	4.31	0.48	6.86	7.31	8.29
<b>1.50</b>	8.64	6.89	3.06	9.03	9.47	10.45
<b>1.83</b>	11.08	9.33	5.50	11.08	11.51	12.49
<b>2.12</b>	13.22	11.48	7.65	13.22	13.31	14.29
<b>2.38</b>	15.14	13.40	9.57	15.14	14.91	15.89
<b>2.60</b>	16.77	15.03	11.20	16.77	16.28	17.26
<b>2.77</b>	18.02	16.28	12.45	18.02	17.33	18.31
<b>2.90</b>	18.98	17.24	13.42	18.98	18.13	19.11
<b>2.97</b>	19.50	17.76	13.93	19.50	18.56	19.54
<b>3.00</b>	19.72	17.98	14.16	19.72	18.75	19.73

**FBH BUILD RATE\*\*:**

<b>1.25</b>	6.29	4.22	-	7.85	8.30	9.28
<b>1.50</b>	8.14	6.07	1.52	9.47	9.92	10.90
<b>1.75</b>	9.99	7.92	3.37	11.09	11.54	12.52
<b>2.00</b>	11.84	9.77	5.22	12.72	13.16	14.14
<b>2.25</b>	13.68	11.62	7.07	14.34	14.78	15.76
<b>2.50</b>	15.53	13.46	8.92	15.96	16.40	17.38

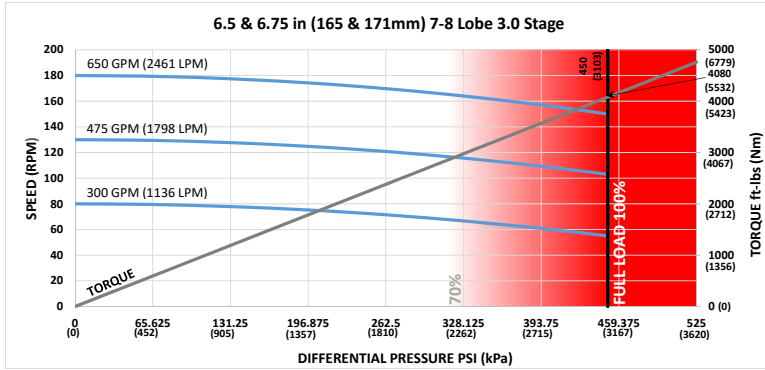
\*Stabilizers assumed as 1/8" undergage

\*\*Additional FBH Angles Available

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.

# 6-1/2 & 6-3/4 in (165 & 171 mm) 7-8 Lobe 3.0 Stage **SERIES 3**



Lobe Configuration	7-8 Lobe 3.0 Stage		Flow Rate		Speed
Displacement	0.27 rev/gal	0.07 rev/l	GPM	LPM	RPM
Max Differential @ No Load	450 psi	3103 kPa	300	1136	55 - 80
Max Torque @ No Load	4080 ft-lbs	5532 Nm	475	1798	103 - 130
Max Power	117 HP	87 kW	650	2461	150 - 180
C = Overall Length	247.7 in	6292 mm			
Weight	1937 lbs	879 kg			

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)
BEND ANGLE	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	0.75	-	-	3.21	4.14	-
<b>0.78</b>	4.83	2.36	-	6.31	7.24	9.27
<b>1.15</b>	8.69	6.23	0.81	9.25	10.18	12.21
<b>1.50</b>	12.35	9.89	4.47	12.35	12.96	14.99
<b>1.83</b>	15.80	13.34	7.92	15.80	15.58	17.61
<b>2.12</b>	18.83	16.37	10.95	18.83	17.88	19.92
<b>2.38</b>	21.55	19.09	13.67	21.55	19.95	21.98
<b>2.60</b>	23.85	21.39	15.97	23.85	21.70	23.73
<b>2.77</b>	25.62	23.16	17.75	25.62	23.16	25.08
<b>2.90</b>	26.98	24.52	19.11	26.98	24.52	26.12
<b>2.97</b>	27.71	25.25	19.84	27.71	25.25	26.67
<b>3.00</b>	28.03	25.57	20.16	28.03	25.57	26.91

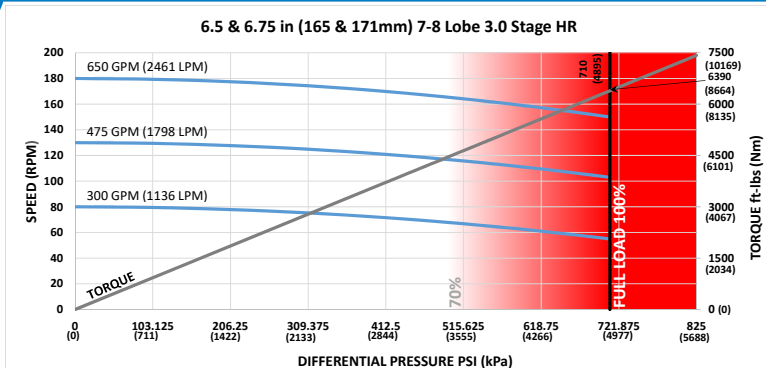
## FBH BUILD RATE\*\*:

<b>1.25</b>	9.02	6.09	-	10.82	11.75	13.78
<b>1.50</b>	11.63	8.71	2.27	12.96	13.89	15.92
<b>1.75</b>	14.24	11.32	4.89	15.10	16.03	18.06
<b>2.00</b>	16.86	13.93	7.50	17.24	18.17	20.20
<b>2.25</b>	19.47	16.55	10.12	19.47	20.31	22.34
<b>2.50</b>	22.08	19.16	12.73	22.08	22.45	24.49

\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.



Lobe Configuration	7-8 Lobe 3.0 Stage HR		Flow Rate		Speed
Displacement	0.27 rev/gal	0.07 rev/l	GPM	LPM	RPM
Max Differential @ No Load	710 psi	4895 kPa	300	1136	55 - 80
Max Torque @ No Load	6390 ft-lbs	8664 Nm	475	1798	103 - 130
Max Power	183 HP	136 kW	650	2461	150 - 180
C = Overall Length	247.7 in	6292 mm			
Weight	1937 lbs	879 kg			

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

### ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)
<b>BEND ANGLE</b>	<b>Degrees per 100 Feet (30 m)</b>			<b>Degrees per 100 Feet (30 m)</b>		
<b>0.39</b>	0.75	-	-	3.21	4.14	-
<b>0.78</b>	4.83	2.36	-	6.31	7.24	9.27
<b>1.15</b>	8.69	6.23	0.81	9.25	10.18	12.21
<b>1.50</b>	12.35	9.89	4.47	12.35	12.96	14.99
<b>1.83</b>	15.80	13.34	7.92	15.80	15.58	17.61
<b>2.12</b>	18.83	16.37	10.95	18.83	17.88	19.92
<b>2.38</b>	21.55	19.09	13.67	21.55	19.95	21.98
<b>2.60</b>	23.85	21.39	15.97	23.85	21.70	23.73
<b>2.77</b>	25.62	23.16	17.75	25.62	23.16	25.08
<b>2.90</b>	26.98	24.52	19.11	26.98	24.52	26.12
<b>2.97</b>	27.71	25.25	19.84	27.71	25.25	26.67
<b>3.00</b>	28.03	25.57	20.16	28.03	25.57	26.91

### FBH BUILD RATE\*\*:

<b>1.25</b>	9.02	6.09	-	10.82	11.75	13.78
<b>1.50</b>	11.63	8.71	2.27	12.96	13.89	15.92
<b>1.75</b>	14.24	11.32	4.89	15.10	16.03	18.06
<b>2.00</b>	16.86	13.93	7.50	17.24	18.17	20.20
<b>2.25</b>	19.47	16.55	10.12	19.47	20.31	22.34
<b>2.50</b>	22.08	19.16	12.73	22.08	22.45	24.49

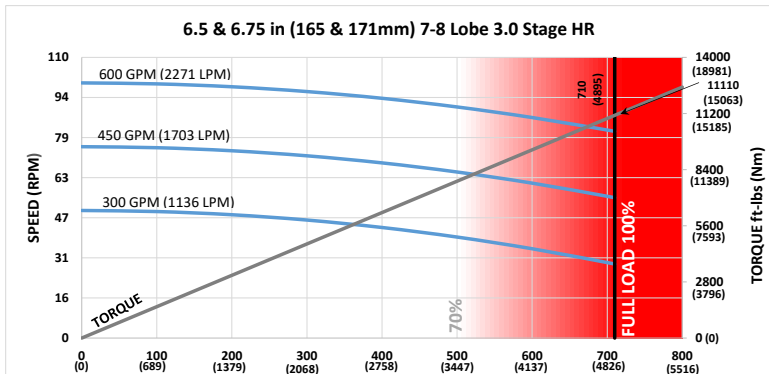
\*Stabilizers assumed as 1/8" undergage

\*\*Additional FBH Angles Available

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.

# 6-1/2 & 6-3/4 in (165 & 171 mm) 7-8 Lobe 3.0 Stage HR SLOW SERIES 3



Lobe Configuration	7-8 Lobe 3.0 Stage HR	
Displacement	0.16 rev/gal	0.04 rev/l
Max Differential @ No Load	710 psi	4895 kPa
Max Torque @ No Load	7090 ft-lbs	9613 Nm
Max Power	109 HP	82 kW
C = Overall Length	326.7 in	8298 mm
Weight	2555 lbs	1159 kg

Flow Rate		Speed
GPM	LPM	RPM
300	1136	29 - 50
450	1703	55 - 75
600	2271	81 - 100

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)
BEND ANGLE	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	0.47	-	-	2.29	2.78	-
<b>0.78</b>	3.50	1.67	-	4.80	5.29	6.38
<b>1.15</b>	6.37	4.54	0.51	7.18	7.67	8.76
<b>1.50</b>	9.10	7.26	3.23	9.43	9.92	11.01
<b>1.83</b>	11.66	9.83	5.80	11.66	12.05	13.14
<b>2.12</b>	13.92	12.09	8.06	13.92	13.91	15.00
<b>2.38</b>	15.94	14.11	10.08	15.94	15.59	16.67
<b>2.60</b>	17.65	15.82	11.79	17.65	17.00	18.09
<b>2.77</b>	18.97	17.14	13.11	18.97	18.09	19.18
<b>2.90</b>	19.98	18.15	14.12	19.98	18.93	20.02
<b>2.97</b>	20.52	18.69	14.67	20.52	19.38	20.47
<b>3.00</b>	20.76	18.93	14.90	20.76	19.57	20.66

## FBH BUILD RATE\*\*:

<b>1.25</b>	6.63	4.45	-	8.23	8.73	9.82
<b>1.50</b>	8.57	6.40	1.61	9.93	10.42	11.51
<b>1.75</b>	10.52	8.34	3.55	11.62	12.11	13.20
<b>2.00</b>	12.46	10.28	5.50	13.31	13.80	14.89
<b>2.25</b>	14.40	12.23	7.44	15.00	15.50	16.58
<b>2.50</b>	16.35	14.17	9.39	16.69	17.19	18.28

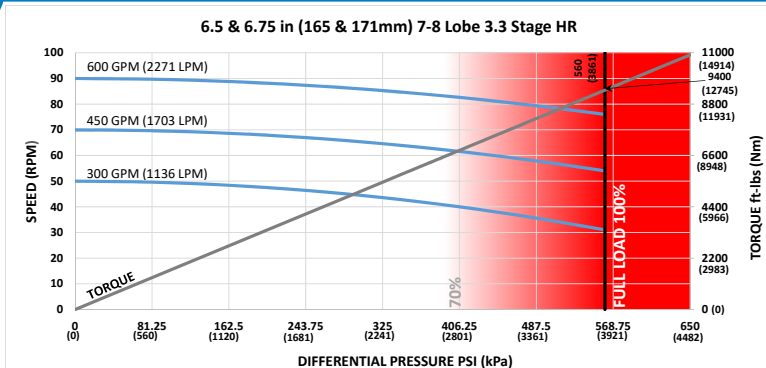
\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.

# MUD MOTORS

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Lobe Configuration	7-8 Lobe 3.3 Stage HR		Flow Rate		Speed
Displacement	0.15 rev/gal	0.04 rev/l	GPM	LPM	RPM
Max Differential @ No Load	560 psi	3861 kPa	300	1136	31 - 50
Max Torque @ No Load	9400 ft-lbs	12745 Nm	450	1703	54 - 70
Max Power	136 HP	101 kW	600	2271	76 - 90
C = Overall Length	367.7 in	9340 mm			
Weight	2832 lbs	1285 kg			

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

### ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)
BEND ANGLE	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	0.39	-	-	1.99	2.37	-
<b>0.78</b>	3.06	1.45	-	4.26	4.64	5.48
<b>1.15</b>	5.60	3.99	0.43	6.42	6.80	7.64
<b>1.50</b>	8.01	6.39	2.83	8.46	8.84	9.68
<b>1.83</b>	10.27	8.65	5.10	10.38	10.77	11.60
<b>2.12</b>	12.26	10.64	7.09	12.26	12.46	13.29
<b>2.38</b>	14.05	12.43	8.87	14.05	13.97	14.81
<b>2.60</b>	15.55	13.94	10.38	15.55	15.25	16.09
<b>2.77</b>	16.72	15.11	11.55	16.72	16.25	17.08
<b>2.90</b>	17.61	16.00	12.44	17.61	17.00	17.84
<b>2.97</b>	18.09	16.48	12.92	18.09	17.41	18.25
<b>3.00</b>	18.30	16.68	13.13	18.30	17.59	18.43

### FBH BUILD RATE\*\*:

<b>1.25</b>	5.83	3.91	-	7.32	7.70	8.54
<b>1.50</b>	7.54	5.62	1.40	8.84	9.22	10.06
<b>1.75</b>	9.26	7.34	3.12	10.36	10.75	11.58
<b>2.00</b>	10.98	9.06	4.83	11.89	12.27	13.11
<b>2.25</b>	12.69	10.77	6.55	13.41	13.79	14.63
<b>2.50</b>	14.41	12.49	8.27	14.93	15.31	16.15

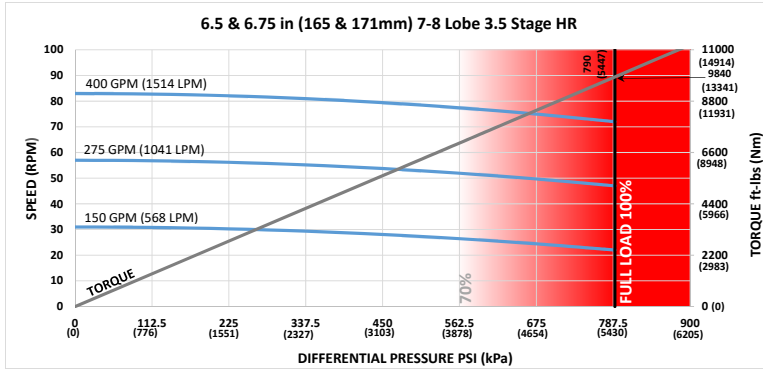
\*Stabilizers assumed as 1/8" undergage

\*\*Additional FBH Angles Available

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.

# 6-1/2 & 6-3/4 in (165 & 171 mm) 7-8 Lobe 3.5 Stage HR **SERIES 3**



<b>Lobe Configuration</b>	7-8 Lobe 3.5 Stage HR	
<b>Displacement</b>	0.21 rev/gal	0.05 rev/l
<b>Max Differential @ No Load</b>	790 psi	5447 kPa
<b>Max Torque @ No Load</b>	9840 ft-lbs	13341 Nm
<b>Max Power</b>	135 HP	101 kW
<b>C = Overall Length</b>	354 in	8992 mm
<b>Weight</b>	2586 lbs	1173 kg

Flow Rate		Speed
GPM	LPM	RPM
150	568	22 - 31
275	1041	47 - 57
400	1514	72 - 83

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	0.41	-	-	2.08	2.49	-
<b>0.78</b>	3.20	1.51	-	4.43	4.84	5.75
<b>1.15</b>	5.84	4.16	0.45	6.65	7.07	7.98
<b>1.50</b>	8.34	6.66	2.95	8.76	9.18	10.09
<b>1.83</b>	10.70	9.01	5.31	10.75	11.16	12.07
<b>2.12</b>	12.77	11.09	7.38	12.77	12.91	13.82
<b>2.38</b>	14.63	12.94	9.24	14.63	14.47	15.39
<b>2.60</b>	16.20	14.51	10.81	16.20	15.80	16.71
<b>2.77</b>	17.41	15.73	12.03	17.41	16.82	17.73
<b>2.90</b>	18.34	16.66	12.96	18.34	17.60	18.52
<b>2.97</b>	18.84	17.16	13.46	18.84	18.03	18.94
<b>3.00</b>	19.05	17.37	13.67	19.05	18.21	19.12

## FBH BUILD RATE\*\*:

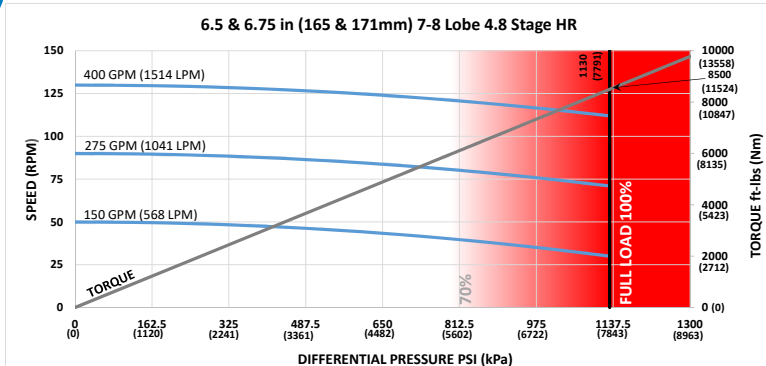
<b>1.25</b>	6.07	4.07	-	7.60	8.02	8.93
<b>1.50</b>	7.86	5.86	1.46	9.18	9.59	10.50
<b>1.75</b>	9.65	7.65	3.25	10.75	11.17	12.08
<b>2.00</b>	11.43	9.43	5.04	12.33	12.74	13.65
<b>2.25</b>	13.22	11.22	6.82	13.90	14.32	15.23
<b>2.50</b>	15.00	13.00	8.61	15.48	15.89	16.80

\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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# MUD MOTORS



Lobe Configuration	7-8 Lobe 4.8 Stage HR		Flow Rate		Speed
Displacement	0.33 rev/gal	0.09 rev/l	<b>GPM</b>	<b>LPM</b>	<b>RPM</b>
Max Differential @ No Load	1130 psi	7791 kPa	150	568	30 - 50
Max Torque @ No Load	8500 ft-lbs	11524 Nm	275	1041	71 - 90
Max Power	181 HP	135 kW	400	1514	112 - 130
C = Overall Length	326.2 in	8285 mm			
Weight	2435 lbs	1104 kg			

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

### ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)
BEND ANGLE	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	0.47	-	-	2.29	2.79	-
<b>0.78</b>	3.50	1.67	-	4.80	5.30	6.39
<b>1.15</b>	6.39	4.55	0.51	7.19	7.68	8.78
<b>1.50</b>	9.11	7.28	3.24	9.44	9.94	11.03
<b>1.83</b>	11.68	9.85	5.81	11.68	12.06	13.16
<b>2.12</b>	13.94	12.11	8.07	13.94	13.93	15.03
<b>2.38</b>	15.96	14.13	10.10	15.96	15.61	16.70
<b>2.60</b>	17.68	15.84	11.81	17.68	17.02	18.12
<b>2.77</b>	19.00	17.17	13.13	19.00	18.12	19.21
<b>2.90</b>	20.01	18.18	14.15	20.01	18.96	20.05
<b>2.97</b>	20.56	18.73	14.69	20.56	19.41	20.50
<b>3.00</b>	20.79	18.96	14.93	20.79	19.60	20.69

### FBH BUILD RATE\*\*:

<b>1.25</b>	6.64	4.46	-	8.25	8.74	9.84
<b>1.50</b>	8.59	6.41	1.61	9.94	10.44	11.53
<b>1.75</b>	10.53	8.35	3.56	11.63	12.13	13.22
<b>2.00</b>	12.48	10.30	5.51	13.33	13.82	14.92
<b>2.25</b>	14.43	12.25	7.46	15.02	15.52	16.61
<b>2.50</b>	16.37	14.20	9.40	16.72	17.21	18.30

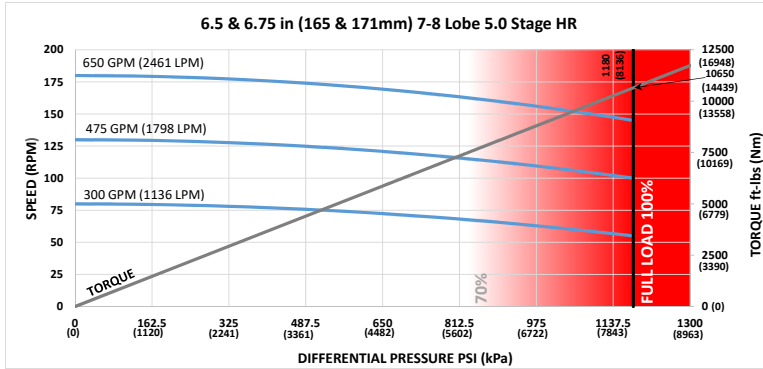
\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.

# 6-1/2 & 6-3/4 in (165 & 171 mm) 7-8 Lobe 5.0 Stage HR **SERIES 3**



<b>Lobe Configuration</b>	7-8 Lobe 5.0 Stage HR		<b>Flow Rate</b>		<b>Speed</b>
<b>Displacement</b>	0.27 rev/gal	0.07 rev/l	<b>GPM</b>	<b>LPM</b>	<b>RPM</b>
<b>Max Differential @ No Load</b>	1180 psi	8136 kPa	300	1136	55 - 80
<b>Max Torque @ No Load</b>	10650 ft-lbs	14439 Nm	475	1798	100 - 130
<b>Max Power</b>	294 HP	219 kW	650	2461	145 - 180
<b>C = Overall Length</b>	317.2 in	8057 mm			
<b>Weight</b>	2477 lbs	1124 kg			

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	0.49	-	-	2.37	2.90	-
<b>0.78</b>	3.62	1.73	-	4.94	5.47	6.63
<b>1.15</b>	6.58	4.69	0.54	7.38	7.91	9.07
<b>1.50</b>	9.39	7.50	3.34	9.68	10.21	11.38
<b>1.83</b>	12.04	10.15	5.99	12.04	12.39	13.55
<b>2.12</b>	14.37	12.48	8.32	14.37	14.30	15.46
<b>2.38</b>	16.45	14.56	10.41	16.45	16.01	17.17
<b>2.60</b>	18.22	16.33	12.17	18.22	17.46	18.62
<b>2.77</b>	19.58	17.69	13.54	19.58	18.58	19.74
<b>2.90</b>	20.62	18.73	14.58	20.62	19.44	20.60
<b>2.97</b>	21.18	19.30	15.14	21.18	19.90	21.06
<b>3.00</b>	21.43	19.54	15.38	21.43	20.10	21.26

## FBH BUILD RATE\*\*:

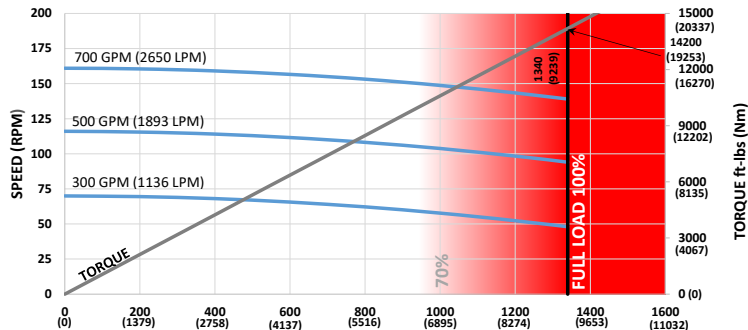
<b>1.25</b>	6.85	4.60	-	8.48	9.01	10.17
<b>1.50</b>	8.85	6.61	1.67	10.22	10.74	11.91
<b>1.75</b>	10.86	8.61	3.67	11.95	12.48	13.64
<b>2.00</b>	12.86	10.62	5.68	13.69	14.22	15.38
<b>2.25</b>	14.87	12.62	7.69	15.42	15.95	17.11
<b>2.50</b>	16.87	14.63	9.69	17.16	17.69	18.85

\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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## 6.5 & 6.75 in (165 & 171mm) 7-8 Lobe 5.7 Stage HR



<b>Lobe Configuration</b>	7-8 Lobe 5.7 Stage HR	
<b>Displacement</b>	0.23 rev/gal	0.06 rev/l
<b>Max Differential @ No Load</b>	1340 psi	9239 kPa
<b>Max Torque @ No Load</b>	14200 ft-lbs	19253 Nm
<b>Max Power</b>	376 HP	280 kW
<b>C = Overall Length</b>	382.7 in	9721 mm
<b>Weight</b>	2895 lbs	1313 kg

Flow Rate		Speed
GPM	LPM	RPM
300	1136	48 - 70
500	1893	94 - 116
700	2650	139 - 161

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

### ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	0.36	-	-	1.90	2.25	-
<b>0.78</b>	2.93	1.38	-	4.10	4.44	5.21
<b>1.15</b>	5.37	3.82	0.40	6.18	6.53	7.30
<b>1.50</b>	7.67	6.12	2.71	8.15	8.50	9.27
<b>1.83</b>	9.84	8.29	4.88	10.01	10.36	11.13
<b>2.12</b>	11.75	10.20	6.79	11.75	11.99	12.76
<b>2.38</b>	13.46	11.91	8.50	13.46	13.46	14.23
<b>2.60</b>	14.91	13.36	9.95	14.91	14.70	15.47
<b>2.77</b>	16.03	14.48	11.07	16.03	15.66	16.43
<b>2.90</b>	16.88	15.33	11.92	16.88	16.39	17.16
<b>2.97</b>	17.34	15.79	12.38	17.34	16.78	17.55
<b>3.00</b>	17.54	15.99	12.58	17.54	16.95	17.72

### FBH BUILD RATE\*\*:

<b>1.25</b>	5.58	3.74	-	7.04	7.39	8.15
<b>1.50</b>	7.23	5.39	1.34	8.50	8.85	9.62
<b>1.75</b>	8.87	7.03	2.98	9.97	10.32	11.09
<b>2.00</b>	10.52	8.68	4.63	11.44	11.79	12.56
<b>2.25</b>	12.16	10.32	6.27	12.90	13.25	14.02
<b>2.50</b>	13.81	11.97	7.92	14.37	14.72	15.49

\*Stabilizers assumed as 1/8" undergage

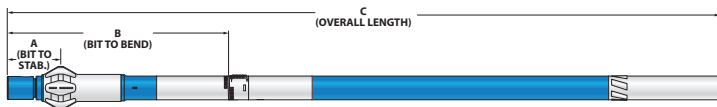
\*\*Additional FBH Angles Available

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

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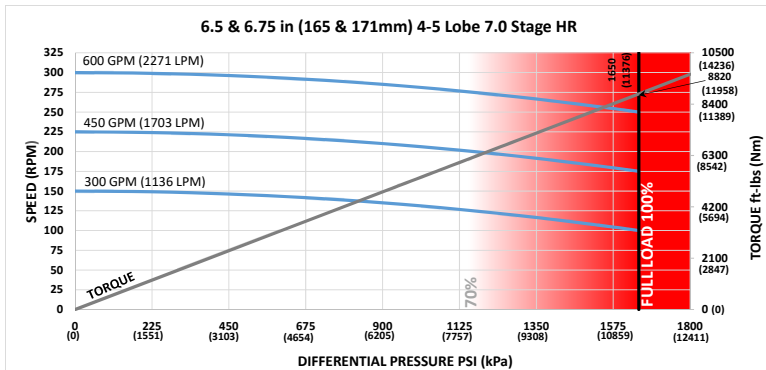
## 6-1/2 & 6-3/4 in (165 & 171 mm) MUD LUBE



<b>Bit Size Range</b>	7-7/8 - 9-7/8 in	200 - 251 mm
<b>Bit Box Connection</b>	4-1/2 REGULAR	
<b>Dynamic Bearing Load On/Off Bottom</b>	94460 lbf	42000 daN
<b>Static Bearing Load On/Off Bottom</b>	425874 lbf	189400 daN
<b>Max. Overpull for Re-run</b>	376900 lbf	167700 daN
<b>Absolute Overpull</b>	628200 lbf	279400 daN
<b>Adjustable Make Up Torque</b>	25000 ft-lbs	33900 Nm
<b>A = Bit to Stabilizer (center)</b>	17.61 in	447 mm
<b>B = Bit to Bend</b>	<b>Adjustable</b>	67.87 in / 1724 mm
	<b>Fixed</b>	52.98 in / 1346 mm

6-1/2 & 6-3/4 in (165 & 171 mm) 4-5 Lobe 7.0 Stage HR MUD LUBE	135
6-1/2 & 6-3/4 in (165 & 171 mm) 6-7 Lobe 5.0 Stage HR MUD LUBE	136
6-1/2 & 6-3/4 in (165 & 171 mm) 7-8 Lobe 2.0 Stage HR MUD LUBE	137
6-1/2 & 6-3/4 in (165 & 171 mm) 7-8 Lobe 2.9 Stage HR MUD LUBE	138
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6-1/2 & 6-3/4 in (165 & 171 mm) 7-8 Lobe 3.0 Stage HR SLOW MUD LUBE	141
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6-1/2 & 6-3/4 in (165 & 171 mm) 7-8 Lobe 3.5 Stage HR MUD LUBE	143
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6-1/2 & 6-3/4 in (165 & 171 mm) 7-8 Lobe 5.0 Stage HR MUD LUBE	145
6-1/2 & 6-3/4 in (165 & 171 mm) 7-8 Lobe 5.7 Stage HR MUD LUBE	146

# 6-1/2 & 6-3/4 in (165 & 171 mm) 4-5 Lobe 7.0 Stage HR MUD LUBE



<b>Lobe Configuration</b>	4-5 Lobe 7.0 Stage HR		<b>Flow Rate</b>		<b>Speed</b>
<b>Displacement</b>	0.49 rev/gal	0.13 rev/l	<b>GPM</b>	<b>LPM</b>	<b>RPM</b>
<b>Max Differential @ No Load</b>	1650 psi	11376 kPa	300	1136	100 - 150
<b>Max Torque @ No Load</b>	8820 ft-lbs	11958 Nm	450	1703	175 - 225
<b>Max Power</b>	420 HP	313 kW	600	2271	250 - 300
<b>C = Overall Length</b>	332.76 in	8452 mm			
<b>Weight</b>	1977 lbs	897 kg			

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	0.55	-	-	2.26	2.74	-
<b>0.78</b>	3.53	1.80	-	4.71	5.19	6.24
<b>1.15</b>	6.35	4.62	0.81	7.04	7.51	8.56
<b>1.50</b>	9.02	7.29	3.48	9.24	9.71	10.76
<b>1.83</b>	11.53	9.80	6.00	11.53	11.79	12.84
<b>2.12</b>	13.74	12.01	8.21	13.74	13.61	14.66
<b>2.38</b>	15.73	14.00	10.19	15.73	15.25	16.30
<b>2.60</b>	17.40	15.67	11.87	17.40	16.63	17.68
<b>2.77</b>	18.70	16.97	13.17	18.70	17.70	18.75
<b>2.90</b>	19.69	17.96	14.16	19.69	18.52	19.56
<b>2.97</b>	20.22	18.50	14.69	20.22	18.96	20.00
<b>3.00</b>	20.45	18.72	14.92	20.45	19.14	20.19

## FBH BUILD RATE\*\*:

<b>1.25</b>	6.50	4.36	-	8.16	8.64	9.69
<b>1.50</b>	8.40	6.27	1.58	9.83	10.31	11.36
<b>1.75</b>	10.31	8.18	3.48	11.50	11.98	13.03
<b>2.00</b>	12.21	10.08	5.39	13.17	13.65	14.70
<b>2.25</b>	14.12	11.99	7.30	14.84	15.32	16.37
<b>2.50</b>	16.03	13.89	9.20	16.51	16.99	18.04

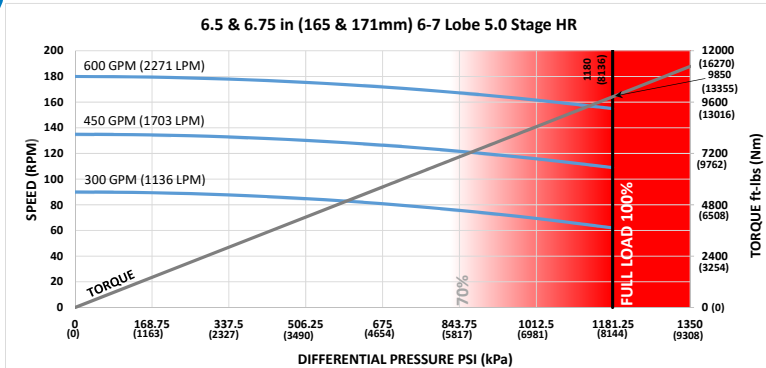
\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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# MUD MOTORS

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<b>Lobe Configuration</b>	6-7 Lobe 5.0 Stage HR	
<b>Displacement</b>	0.3 rev/gal	0.08 rev/l
<b>Max Differential @ No Load</b>	1180 psi	8136 kPa
<b>Max Torque @ No Load</b>	9850 ft-lbs	13355 Nm
<b>Max Power</b>	291 HP	217 kW
<b>C = Overall Length</b>	322.76 in	8198 mm
<b>Weight</b>	1947 lbs	883 kg

Flow Rate		Speed
GPM	LPM	RPM
300	1136	62 - 90
450	1703	109 - 135
600	2271	155 - 180

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

**ADJUSTABLE BUILD RATE:**

Hole Size	SLICK			STABILIZED*		
	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	0.58	-	-	2.34	2.85	-
<b>0.78</b>	3.65	1.86	-	4.86	5.37	6.49
<b>1.15</b>	6.56	4.78	0.84	7.24	7.75	8.87
<b>1.50</b>	9.32	7.53	3.60	9.49	10.00	11.13
<b>1.83</b>	11.92	10.13	6.20	11.92	12.13	13.25
<b>2.12</b>	14.20	12.42	8.49	14.20	14.00	15.12
<b>2.38</b>	16.25	14.46	10.53	16.25	15.67	16.80
<b>2.60</b>	17.98	16.20	12.27	17.98	17.09	18.21
<b>2.77</b>	19.32	17.54	13.61	19.32	18.19	19.31
<b>2.90</b>	20.34	18.56	14.63	20.34	19.02	20.15
<b>2.97</b>	20.90	19.11	15.18	20.90	19.47	20.60
<b>3.00</b>	21.13	19.35	15.42	21.13	19.67	20.79

**FBH BUILD RATE\*\*:**

<b>1.25</b>	6.72	4.51	-	8.41	8.92	10.05
<b>1.50</b>	8.69	6.48	1.64	10.13	10.64	11.76
<b>1.75</b>	10.65	8.45	3.60	11.85	12.36	13.48
<b>2.00</b>	12.62	10.42	5.57	13.56	14.07	15.20
<b>2.25</b>	14.59	12.39	7.54	15.28	15.79	16.91
<b>2.50</b>	16.56	14.36	9.51	17.00	17.51	18.63

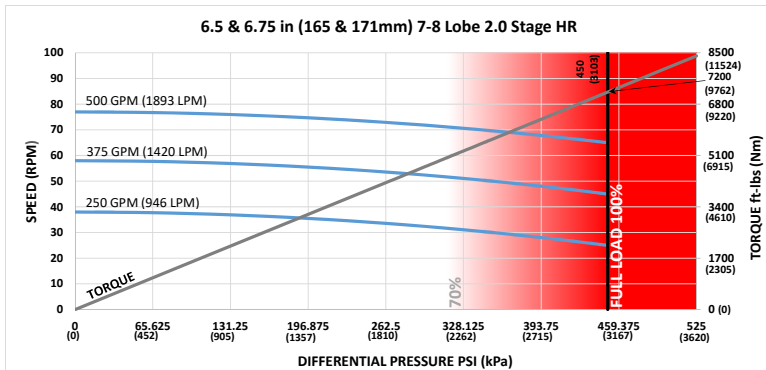
\*Stabilizers assumed as 1/8" undergage

\*\*Additional FBH Angles Available

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

# 6-1/2 & 6-3/4 in (165 & 171 mm) 7-8 Lobe 2.0 Stage HR MUD LUBE



<b>Lobe Configuration</b>	7-8 Lobe 2.0 Stage HR	
<b>Displacement</b>	0.15 rev/gal	0.04 rev/l
<b>Max Differential @ No Load</b>	450 psi	3103 kPa
<b>Max Torque @ No Load</b>	7200 ft-lbs	9762 Nm
<b>Max Power</b>	89 HP	66 kW
<b>C = Overall Length</b>	276.26 in	7017 mm
<b>Weight</b>	1703 lbs	772 kg

Flow Rate		Speed
GPM	LPM	RPM
250	946	25 - 38
375	1420	45 - 58
500	1893	65 - 77

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	0.74	-	-	2.83	3.55	-
<b>0.78</b>	4.36	2.26	-	5.66	6.38	7.98
<b>1.15</b>	7.80	5.69	1.05	8.34	9.07	10.66
<b>1.50</b>	11.06	8.95	4.31	11.06	11.61	13.20
<b>1.83</b>	14.12	12.01	7.38	14.12	14.01	15.60
<b>2.12</b>	16.82	14.71	10.07	16.82	16.11	17.71
<b>2.38</b>	19.23	17.13	12.49	19.23	18.00	19.59
<b>2.60</b>	21.28	19.17	14.53	21.28	19.60	21.19
<b>2.77</b>	22.86	20.75	16.12	22.86	20.83	22.42
<b>2.90</b>	24.07	21.96	17.32	24.07	21.96	23.37
<b>2.97</b>	24.72	22.61	17.98	24.72	22.61	23.88
<b>3.00</b>	25.00	22.89	18.25	25.00	22.89	24.09

## FBH BUILD RATE\*\*:

<b>1.25</b>	7.98	5.38	-	9.82	10.55	12.14
<b>1.50</b>	10.30	7.70	1.98	11.79	12.51	14.11
<b>1.75</b>	12.62	10.02	4.30	13.75	14.48	16.07
<b>2.00</b>	14.95	12.35	6.63	15.72	16.44	18.04
<b>2.25</b>	17.27	14.67	8.95	17.69	18.41	20.00
<b>2.50</b>	19.59	16.99	11.28	19.65	20.38	21.97

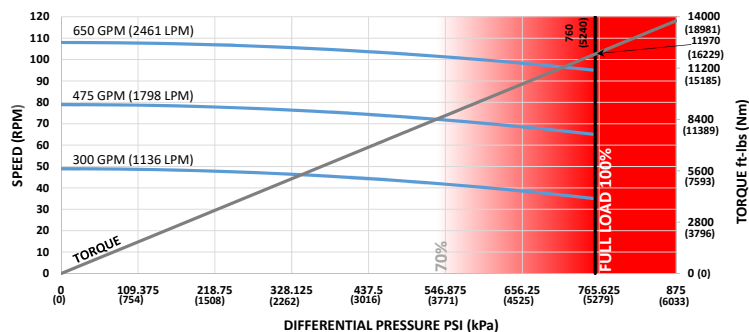
\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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# MUD MOTORS

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**6.5 & 6.75 in (165 & 171mm) 7-8 Lobe 2.9 Stage HR**


Lobe Configuration	7-8 Lobe 2.9 Stage HR		Flow Rate		Speed
Displacement	0.17 rev/gal	0.04 rev/l	<b>GPM</b>	<b>LPM</b>	<b>RPM</b>
Max Differential @ No Load	760 psi	5240 kPa	300	1136	35 - 49
Max Torque @ No Load	11970 ft-lbs	16229 Nm	475	1798	65 - 79
Max Power	217 HP	161 kW	650	2461	95 - 108
C = Overall Length	342.76 in	8706 mm			
Weight	2063 lbs	936 kg			

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

**ADJUSTABLE BUILD RATE:**

Hole Size	SLICK			STABILIZED*		
	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)
<b>BEND ANGLE</b>	<b>Degrees per 100 Feet (30 m)</b>			<b>Degrees per 100 Feet (30 m)</b>		
<b>0.39</b>	0.53	-	-	2.18	2.63	-
<b>0.78</b>	3.41	1.73	-	4.58	5.02	6.01
<b>1.15</b>	6.15	4.47	0.78	6.85	7.29	8.28
<b>1.50</b>	8.73	7.05	3.37	8.99	9.44	10.42
<b>1.83</b>	11.17	9.49	5.80	11.17	11.47	12.45
<b>2.12</b>	13.31	11.64	7.95	13.31	13.25	14.23
<b>2.38</b>	15.24	13.56	9.87	15.24	14.84	15.82
<b>2.60</b>	16.86	15.18	11.50	16.86	16.19	17.17
<b>2.77</b>	18.12	16.44	12.75	18.12	17.23	18.22
<b>2.90</b>	19.08	17.40	13.72	19.08	18.03	19.01
<b>2.97</b>	19.59	17.92	14.23	19.59	18.46	19.44
<b>3.00</b>	19.82	18.14	14.45	19.82	18.64	19.63

**FBH BUILD RATE\*\*:**

<b>1.25</b>	6.29	4.22	-	7.92	8.37	9.35
<b>1.50</b>	8.14	6.07	1.52	9.55	10.00	10.98
<b>1.75</b>	9.99	7.92	3.37	11.18	11.62	12.61
<b>2.00</b>	11.83	9.77	5.22	12.80	13.25	14.23
<b>2.25</b>	13.68	11.61	7.07	14.43	14.88	15.86
<b>2.50</b>	15.53	13.46	8.91	16.06	16.50	17.49

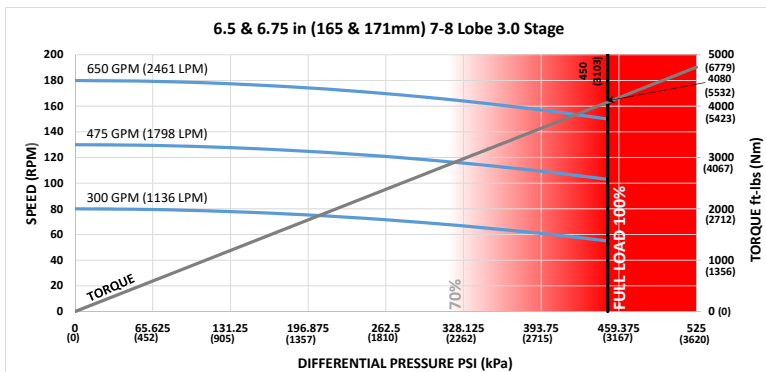
\*Stabilizers assumed as 1/8" undergage

\*\*Additional FBH Angles Available

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

# 6-1/2 & 6-3/4 in (165 & 171 mm) 7-8 Lobe 3.0 Stage MUD LUBE



Lobe Configuration	7-8 Lobe 3.0 Stage		Flow Rate		Speed
Displacement	0.27 rev/gal	0.07 rev/l	GPM	LPM	RPM
Max Differential @ No Load	450 psi	3103 kPa	300	1136	55 - 80
Max Torque @ No Load	4080 ft-lbs	5532 Nm	475	1798	103 - 130
Max Power	117 HP	87 kW	650	2461	150 - 180
C = Overall Length	247.76 in	6293 mm			
Weight	1475 lbs	669 kg			

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)
BEND ANGLE	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	0.89	-	-	3.24	4.17	-
<b>0.78</b>	4.97	2.59	-	6.29	7.22	9.27
<b>1.15</b>	8.83	6.46	1.24	9.19	10.12	12.17
<b>1.50</b>	12.49	10.12	4.90	12.49	12.86	14.91
<b>1.83</b>	15.93	13.56	8.35	15.93	15.45	17.50
<b>2.12</b>	18.96	16.59	11.38	18.96	17.72	19.77
<b>2.38</b>	21.68	19.31	14.10	21.68	19.76	21.81
<b>2.60</b>	23.98	21.61	16.40	23.98	21.61	23.53
<b>2.77</b>	25.75	23.39	18.18	25.75	23.39	24.86
<b>2.90</b>	27.11	24.74	19.53	27.11	24.74	25.88
<b>2.97</b>	27.84	25.48	20.27	27.84	25.48	26.43
<b>3.00</b>	28.16	25.79	20.58	28.16	25.79	26.67

## FBH BUILD RATE\*\*:

<b>1.25</b>	9.01	6.09	-	10.94	11.87	13.92
<b>1.50</b>	11.63	8.70	2.28	13.09	14.02	16.07
<b>1.75</b>	14.24	11.32	4.89	15.25	16.18	18.22
<b>2.00</b>	16.85	13.93	7.50	17.40	18.33	20.37
<b>2.25</b>	19.46	16.54	10.11	19.55	20.48	22.53
<b>2.50</b>	22.07	19.15	12.73	22.07	22.63	24.68

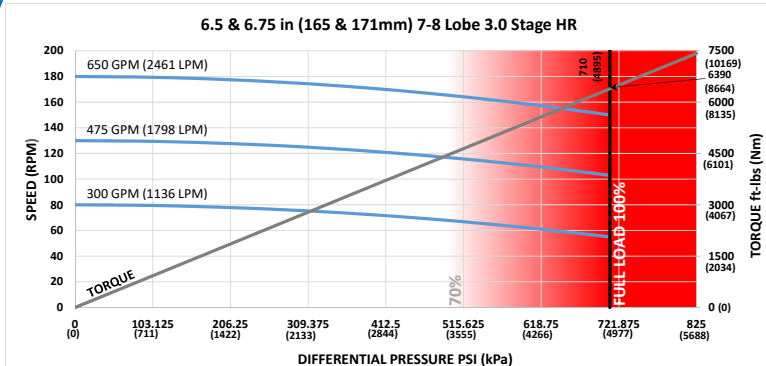
\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.

# MUD MOTORS

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<b>Lobe Configuration</b>	7-8 Lobe 3.0 Stage HR	
<b>Displacement</b>	0.27 rev/gal	0.07 rev/l
<b>Max Differential @ No Load</b>	710 psi	4895 kPa
<b>Max Torque @ No Load</b>	6390 ft.-lbs	8664 Nm
<b>Max Power</b>	183 HP	136 kW
<b>C = Overall Length</b>	247.76 in	6293 mm
<b>Weight</b>	1475 lbs	669 kg

<b>Flow Rate</b>		<b>Speed</b>
<b>GPM</b>	<b>LPM</b>	<b>RPM</b>
300	1136	55 - 80
475	1798	103 - 130
650	2461	150 - 180

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

### ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	0.89	-	-	3.24	4.17	-
<b>0.78</b>	4.97	2.59	-	6.29	7.22	9.27
<b>1.15</b>	8.83	6.46	1.24	9.19	10.12	12.17
<b>1.50</b>	12.49	10.12	4.90	12.49	12.86	14.91
<b>1.83</b>	15.93	13.56	8.35	15.93	15.45	17.50
<b>2.12</b>	18.96	16.59	11.38	18.96	17.72	19.77
<b>2.38</b>	21.68	19.31	14.10	21.68	19.76	21.81
<b>2.60</b>	23.98	21.61	16.40	23.98	21.61	23.53
<b>2.77</b>	25.75	23.39	18.18	25.75	23.39	24.86
<b>2.90</b>	27.11	24.74	19.53	27.11	24.74	25.88
<b>2.97</b>	27.84	25.48	20.27	27.84	25.48	26.43
<b>3.00</b>	28.16	25.79	20.58	28.16	25.79	26.67

### FBH BUILD RATE\*\*:

<b>1.25</b>	9.01	6.09	-	10.94	11.87	13.92
<b>1.50</b>	11.63	8.70	2.28	13.09	14.02	16.07
<b>1.75</b>	14.24	11.32	4.89	15.25	16.18	18.22
<b>2.00</b>	16.85	13.93	7.50	17.40	18.33	20.37
<b>2.25</b>	19.46	16.54	10.11	19.55	20.48	22.53
<b>2.50</b>	22.07	19.15	12.73	22.07	22.63	24.68

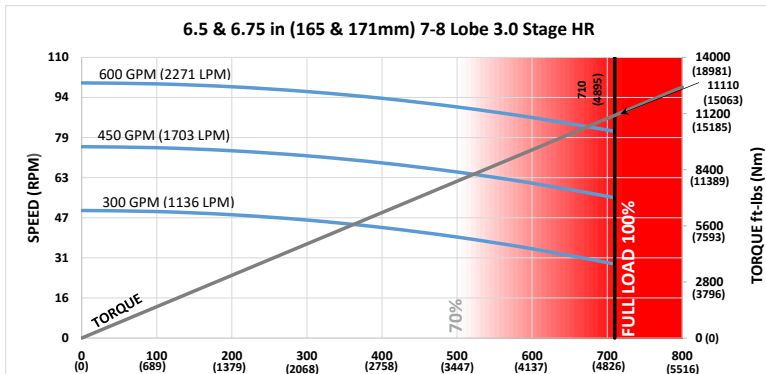
\*Stabilizers assumed as 1/8" undergage

\*\*Additional FBH Angles Available

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.

# 6-1/2 & 6-3/4 in (165 & 171 mm) 7-8 Lobe 3.0 Stage HR SLOW MUD LUBE



<b>Lobe Configuration</b>	7-8 Lobe 3.0 Stage HR	
<b>Displacement</b>	0.16 rev/gal	0.04 rev/l
<b>Max Differential @ No Load</b>	710 psi	4895 kPa
<b>Max Torque @ No Load</b>	7090 ft-lbs	9613 Nm
<b>Max Power</b>	109 HP	82 kW
<b>C = Overall Length</b>	326.76 in	8300 mm
<b>Weight</b>	2093 lbs	949 kg

<b>Flow Rate</b>		<b>Speed</b>
<b>GPM</b>	<b>LPM</b>	<b>RPM</b>
300	1136	29 - 50
450	1703	55 - 75
600	2271	81 - 100

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	0.57	-	-	2.31	2.81	-
<b>0.78</b>	3.60	1.84	-	4.80	5.29	6.39
<b>1.15</b>	6.48	4.71	0.83	7.16	7.65	8.75
<b>1.50</b>	9.20	7.43	3.55	9.39	9.89	10.98
<b>1.83</b>	11.76	10.00	6.12	11.76	11.99	13.08
<b>2.12</b>	14.02	12.25	8.37	14.02	13.84	14.93
<b>2.38</b>	16.04	14.27	10.39	16.04	15.50	16.59
<b>2.60</b>	17.75	15.98	12.11	17.75	16.90	18.00
<b>2.77</b>	19.07	17.31	13.43	19.07	17.99	19.08
<b>2.90</b>	20.08	18.32	14.44	20.08	18.82	19.91
<b>2.97</b>	20.62	18.86	14.98	20.62	19.26	20.36
<b>3.00</b>	20.86	19.09	15.22	20.86	19.46	20.55

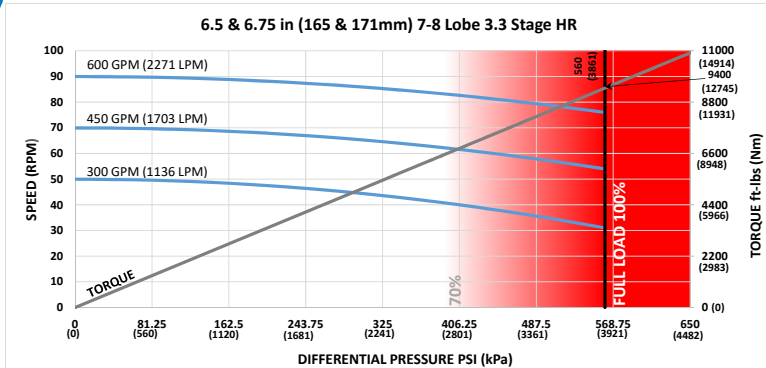
## FBH BUILD RATE\*\*:

<b>1.25</b>	6.63	4.45	-	8.31	8.81	9.90
<b>1.50</b>	8.57	6.40	1.61	10.01	10.51	11.60
<b>1.75</b>	10.51	8.34	3.56	11.71	12.20	13.30
<b>2.00</b>	12.46	10.28	5.50	13.41	13.90	14.99
<b>2.25</b>	14.40	12.23	7.44	15.10	15.60	16.69
<b>2.50</b>	16.34	14.17	9.39	16.80	17.30	18.39

\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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<b>Lobe Configuration</b>	7-8 Lobe 3.3 Stage HR	
<b>Displacement</b>	0.15 rev/gal	0.04 rev/l
<b>Max Differential @ No Load</b>	560 psi	3861 kPa
<b>Max Torque @ No Load</b>	9400 ft-lbs	12745 Nm
<b>Max Power</b>	136 HP	101 kW
<b>C = Overall Length</b>	367.76 in	9341 mm
<b>Weight</b>	2370 lbs	1075 kg

Flow Rate		Speed
GPM	LPM	RPM
300	1136	31 - 50
450	1703	54 - 70
600	2271	76 - 90

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

**ADJUSTABLE BUILD RATE:**

Hole Size	SLICK			STABILIZED*		
	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	0.48	-	-	2.01	2.39	-
<b>0.78</b>	3.15	1.60	-	4.27	4.65	5.49
<b>1.15</b>	5.69	4.13	0.71	6.41	6.79	7.63
<b>1.50</b>	8.09	6.54	3.11	8.44	8.82	9.66
<b>1.83</b>	10.36	8.80	5.38	10.36	10.73	11.57
<b>2.12</b>	12.35	10.79	7.37	12.35	12.41	13.25
<b>2.38</b>	14.13	12.58	9.15	14.13	13.91	14.75
<b>2.60</b>	15.64	14.09	10.66	15.64	15.18	16.03
<b>2.77</b>	16.81	15.25	11.83	16.81	16.17	17.01
<b>2.90</b>	17.70	16.14	12.72	17.70	16.92	17.76
<b>2.97</b>	18.18	16.62	13.20	18.18	17.33	18.17
<b>3.00</b>	18.39	16.83	13.41	18.39	17.50	18.34

**FBH BUILD RATE\*\*:**

<b>1.25</b>	5.83	3.91	-	7.39	7.77	8.61
<b>1.50</b>	7.54	5.62	1.40	8.91	9.29	10.14
<b>1.75</b>	9.26	7.34	3.12	10.44	10.82	11.66
<b>2.00</b>	10.97	9.05	4.83	11.97	12.35	13.19
<b>2.25</b>	12.69	10.77	6.55	13.49	13.87	14.72
<b>2.50</b>	14.40	12.49	8.26	15.02	15.40	16.24

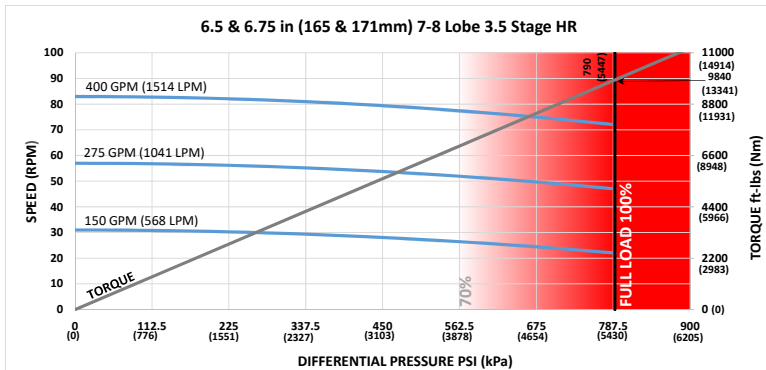
\*Stabilizers assumed as 1/8" undergage

\*\*Additional FBH Angles Available

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

# 6-1/2 & 6-3/4 in (165 & 171 mm) 7-8 Lobe 3.5 Stage HR MUD LUBE



<b>Lobe Configuration</b>	7-8 Lobe 3.5 Stage HR	
<b>Displacement</b>	0.21 rev/gal	0.05 rev/l
<b>Max Differential @ No Load</b>	790 psi	5447 kPa
<b>Max Torque @ No Load</b>	9840 ft-lbs	13341 Nm
<b>Max Power</b>	135 HP	101 kW
<b>C = Overall Length</b>	354.06 in	8993 mm
<b>Weight</b>	2124 lbs	963 kg

Flow Rate		Speed
GPM	LPM	RPM
150	568	22 - 31
275	1041	47 - 57
400	1514	72 - 83

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	0.50	-	-	2.10	2.52	-
<b>0.78</b>	3.29	1.67	-	4.43	4.85	5.76
<b>1.15</b>	5.93	4.31	0.75	6.64	7.06	7.97
<b>1.50</b>	8.43	6.81	3.25	8.73	9.15	10.06
<b>1.83</b>	10.79	9.17	5.60	10.79	11.12	12.04
<b>2.12</b>	12.86	11.24	7.67	12.86	12.85	13.77
<b>2.38</b>	14.72	13.10	9.53	14.72	14.41	15.32
<b>2.60</b>	16.29	14.67	11.10	16.29	15.72	16.64
<b>2.77</b>	17.50	15.88	12.32	17.50	16.74	17.65
<b>2.90</b>	18.43	16.81	13.25	18.43	17.51	18.43
<b>2.97</b>	18.93	17.31	13.75	18.93	17.93	18.85
<b>3.00</b>	19.14	17.52	13.96	19.14	18.11	19.02

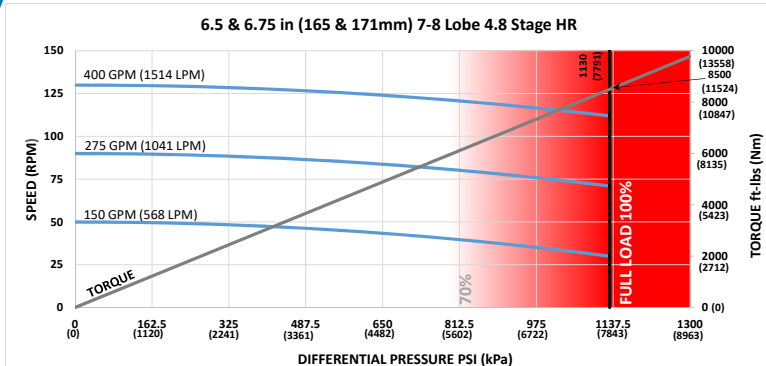
## FBH BUILD RATE\*\*:

<b>1.25</b>	6.07	4.07	-	7.67	8.09	9.00
<b>1.50</b>	7.86	5.86	1.46	9.25	9.67	10.58
<b>1.75</b>	9.64	7.65	3.25	10.83	11.25	12.16
<b>2.00</b>	11.43	9.43	5.04	12.41	12.83	13.74
<b>2.25</b>	13.21	11.22	6.82	13.99	14.41	15.32
<b>2.50</b>	15.00	13.00	8.61	15.57	15.99	16.90

\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.



Lobe Configuration	7-8 Lobe 4.8 Stage HR		Flow Rate		Speed
Displacement	0.33 rev/gal	0.09 rev/l	GPM	LPM	RPM
Max Differential @ No Load	1130 psi	7791 kPa	150	568	30 - 50
Max Torque @ No Load	8500 ft.-lbs	11524 Nm	275	1041	71 - 90
Max Power	181 HP	135 kW	400	1514	112 - 130
C = Overall Length	326.26 in	8287 mm			
Weight	1973 lbs	895 kg			

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

### ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)
BEND ANGLE	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
0.39	0.57	-	-	2.31	2.81	-
0.78	3.61	1.84	-	4.80	5.30	6.40
1.15	6.49	4.72	0.83	7.17	7.67	8.76
1.50	9.21	7.44	3.56	9.40	9.90	11.00
1.83	11.78	10.01	6.13	11.78	12.01	13.11
2.12	14.04	12.27	8.39	14.04	13.86	14.96
2.38	16.06	14.30	10.41	16.06	15.52	16.62
2.60	17.78	16.01	12.13	17.78	16.93	18.02
2.77	19.10	17.33	13.45	19.10	18.01	19.11
2.90	20.11	18.35	14.46	20.11	18.84	19.94
2.97	20.66	18.89	15.01	20.66	19.29	20.39
3.00	20.89	19.12	15.24	20.89	19.48	20.58

### FBH BUILD RATE\*\*:

1.25	6.64	4.46	-	8.32	8.82	9.92
1.50	8.58	6.41	1.61	10.02	10.52	11.62
1.75	10.53	8.35	3.56	11.72	12.22	13.32
2.00	12.48	10.30	5.51	13.42	13.92	15.02
2.25	14.42	12.25	7.46	15.12	15.62	16.72
2.50	16.37	14.19	9.40	16.82	17.32	18.42

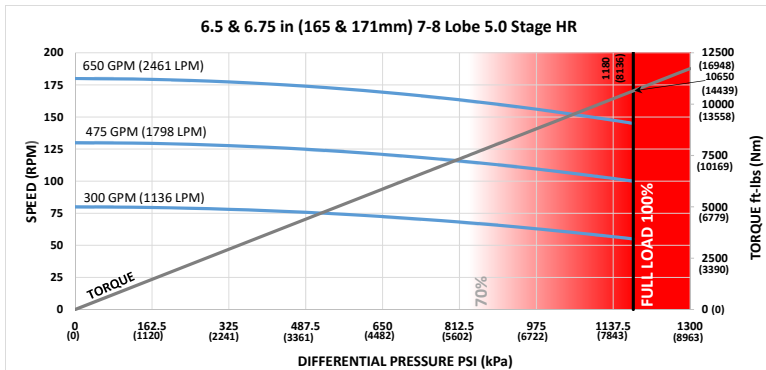
\*Stabilizers assumed as 1/8" undergage

\*\*Additional FBH Angles Available

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

# 6-1/2 & 6-3/4 in (165 & 171 mm) 7-8 Lobe 5.0 Stage HR MUD LUBE



<b>Lobe Configuration</b>	7-8 Lobe 5.0 Stage HR	
<b>Displacement</b>	0.27 rev/gal	0.07 rev/l
<b>Max Differential @ No Load</b>	1180 psi	8136 kPa
<b>Max Torque @ No Load</b>	10650 ft-lbs	14439 Nm
<b>Max Power</b>	294 HP	219 kW
<b>C = Overall Length</b>	317.26 in	8058 mm
<b>Weight</b>	2015 lbs	914 kg

Flow Rate		Speed
GPM	LPM	RPM
300	1136	55 - 80
475	1798	100 - 130
650	2461	145 - 180

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	5-7/8 (149mm)	6 (152mm)	6-1/4 (159mm)	5-7/8 (149mm)	6 (152mm)	6-1/4 (159mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	0.59	-	-	2.39	2.92	-
<b>0.78</b>	3.72	1.90	-	4.94	5.47	6.64
<b>1.15</b>	6.69	4.87	0.86	7.36	7.89	9.05
<b>1.50</b>	9.50	7.68	3.67	9.64	10.17	11.34
<b>1.83</b>	12.14	10.32	6.32	12.14	12.33	13.49
<b>2.12</b>	14.47	12.65	8.65	14.47	14.22	15.39
<b>2.38</b>	16.55	14.73	10.73	16.55	15.92	17.09
<b>2.60</b>	18.32	16.50	12.50	18.32	17.36	18.52
<b>2.77</b>	19.68	17.86	13.86	19.68	18.47	19.63
<b>2.90</b>	20.72	18.91	14.90	20.72	19.32	20.48
<b>2.97</b>	21.29	19.47	15.47	21.29	19.77	20.94
<b>3.00</b>	21.53	19.71	15.71	21.53	19.97	21.14

## FBH BUILD RATE\*\*:

<b>1.25</b>	6.84	4.60	-	8.56	9.09	10.26
<b>1.50</b>	8.85	6.61	1.67	10.30	10.83	12.00
<b>1.75</b>	10.85	8.61	3.68	12.05	12.58	13.74
<b>2.00</b>	12.86	10.62	5.68	13.79	14.32	15.49
<b>2.25</b>	14.86	12.62	7.69	15.53	16.06	17.23
<b>2.50</b>	16.87	14.63	9.69	17.27	17.80	18.97

\*Stabilizers assumed as 1/8" undergauge

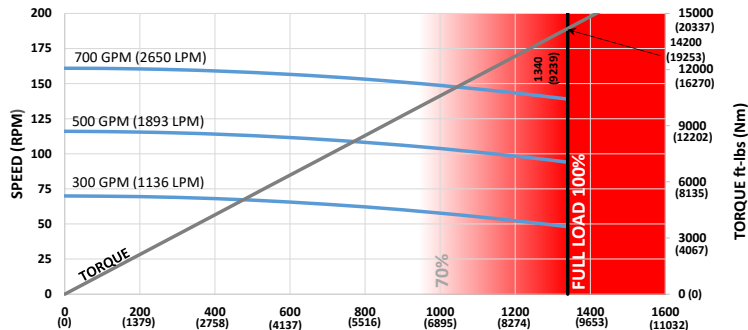
\*\*Additional FBH Angles Available

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# MUD MOTORS

# 6-1/2 & 6-3/4 in (165 & 171 mm) 7-8 Lobe 5.7 Stage HR MUD LUBE

## 6.5 & 6.75 in (165 & 171mm) 7-8 Lobe 5.7 Stage HR



<b>Lobe Configuration</b>	7-8 Lobe 5.7 Stage HR	
<b>Displacement</b>	0.23 rev/gal	0.06 rev/l
<b>Max Differential @ No Load</b>	1340 psi	9239 kPa
<b>Max Torque @ No Load</b>	14200 ft-lbs	19253 Nm
<b>Max Power</b>	376 HP	280 kW
<b>C = Overall Length</b>	382.76 in	9722 mm
<b>Weight</b>	2433 lbs	1104 kg

Flow Rate		Speed
GPM	LPM	RPM
300	1136	48 - 70
500	1893	94 - 116
700	2650	139 - 161

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

### ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)	7-7/8 (200mm)	8-1/2 (216mm)	9-7/8 (251mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	0.45	-	-	1.92	2.27	-
<b>0.78</b>	3.02	1.52	-	4.10	4.45	5.22
<b>1.15</b>	5.45	3.96	0.67	6.17	6.52	7.29
<b>1.50</b>	7.75	6.26	2.98	8.13	8.48	9.25
<b>1.83</b>	9.93	8.43	5.15	9.98	10.33	11.10
<b>2.12</b>	11.83	10.34	7.06	11.83	11.95	12.72
<b>2.38</b>	13.54	12.05	8.77	13.54	13.41	14.18
<b>2.60</b>	14.99	13.50	10.22	14.99	14.64	15.41
<b>2.77</b>	16.11	14.62	11.33	16.11	15.59	16.36
<b>2.90</b>	16.96	15.47	12.19	16.96	16.32	17.09
<b>2.97</b>	17.43	15.93	12.65	17.43	16.71	17.48
<b>3.00</b>	17.62	16.13	12.85	17.62	16.88	17.65

### FBH BUILD RATE\*\*:

<b>1.25</b>	5.58	3.74	-	7.10	7.45	8.22
<b>1.50</b>	7.23	5.39	1.34	8.57	8.92	9.69
<b>1.75</b>	8.87	7.03	2.98	10.04	10.39	11.16
<b>2.00</b>	10.52	8.68	4.63	11.51	11.86	12.63
<b>2.25</b>	12.16	10.32	6.27	12.98	13.33	14.10
<b>2.50</b>	13.81	11.97	7.92	14.45	14.81	15.58

\*Stabilizers assumed as 1/8" undergauge

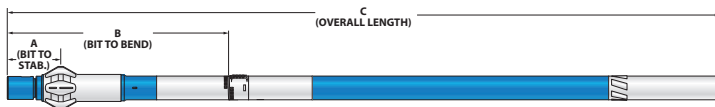
\*\*Additional FBH Angles Available

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.

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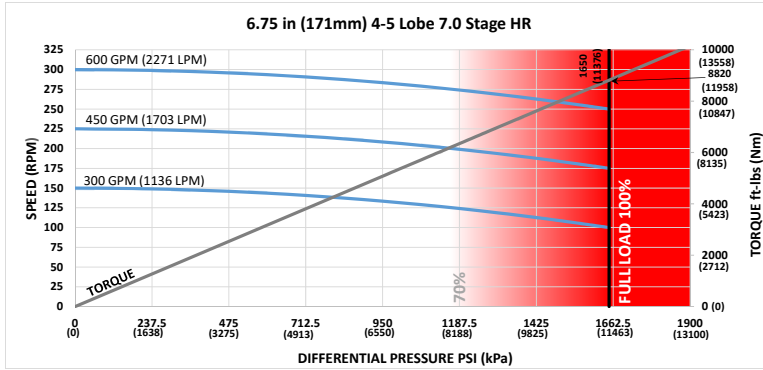
## 7 in (178 mm) SERIES 2



<b>Bit Size Range</b>	8-1/2 - 9-7/8 in	216 - 251 mm
<b>Bit Box Connection</b>	4-1/2 REGULAR	
<b>Dynamic Bearing Load On/Off Bottom</b>	162100 lbf	72100 daN
<b>Static Bearing Load On/Off Bottom</b>	510500 lbf	227100 daN
<b>Max. Overpull for Re-run</b>	602600 lbf	268000 daN
<b>Absolute Overpull</b>	1004400 lbf	446800 daN
<b>Adjustable Make Up Torque</b>	25000 ft-lbs	33900 Nm
<b>A = Bit to Stabilizer (center)</b>	17.2 in	437 mm
<b>B = Bit to Bend</b>	<b>Adjustable</b>	66 in / 1676 mm
	<b>Fixed</b>	54 in / 1372 mm

7 in (178 mm) 4-5 Lobe 7.0 Stage HR SERIES 2	149
7 in (178 mm) 6-7 Lobe 5.0 Stage HR SERIES 2	150
7 in (178 mm) 7-8 Lobe 2.9 Stage HR SERIES 2	151
7 in (178 mm) 7-8 Lobe 5.0 Stage HR SERIES 2	152
7 in (178 mm) 7-8 Lobe 5.7 Stage HR SERIES 2	153
7 in (178 mm) 9-10 Lobe 8.0 Stage HR SERIES 2	154

# 7 in (178 mm) 4-5 Lobe 7.0 Stage HR **SERIES 2**



<b>Lobe Configuration</b>	4-5 Lobe 7.0 Stage HR	
<b>Displacement</b>	0.49 rev/gal	0.13 rev/l
<b>Max Differential @ No Load</b>	1650 psi	11376 kPa
<b>Max Torque @ No Load</b>	8820 ft-lbs	11958 Nm
<b>Max Power</b>	420 HP	313 kW
<b>C = Overall Length</b>	331.1 in	8410 mm
<b>Weight</b>	2527 lbs	1146 kg

Flow Rate		Speed
GPM	LPM	RPM
300	1136	100 - 150
450	1703	175 - 225
600	2271	250 - 300

**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)	8-1/2 (216mm)	8-3/4 (222mm)	9-7/8 (251mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	0.14	-	-	2.53	2.72	-
<b>0.78</b>	3.10	2.40	-	4.99	5.18	6.03
<b>1.15</b>	5.91	5.21	2.03	7.33	7.52	8.36
<b>1.50</b>	8.57	7.87	4.69	9.53	9.72	10.57
<b>1.83</b>	11.08	10.37	7.19	11.61	11.80	12.65
<b>2.12</b>	13.28	12.57	9.40	13.44	13.63	14.48
<b>2.38</b>	15.25	14.55	11.37	15.25	15.27	16.12
<b>2.60</b>	16.92	16.22	13.04	16.92	16.66	17.51
<b>2.77</b>	18.21	17.51	14.33	18.21	17.73	18.58
<b>2.90</b>	19.20	18.50	15.32	19.20	18.55	19.40
<b>2.97</b>	19.73	19.03	15.85	19.73	19.03	19.84
<b>3.00</b>	19.96	19.25	16.08	19.96	19.25	20.03

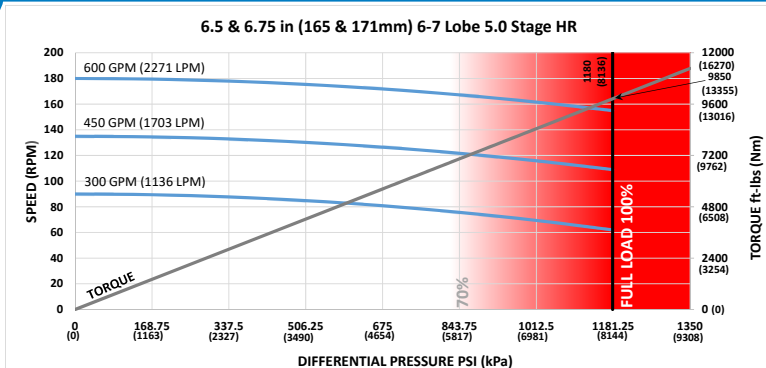
## FBH BUILD RATE\*\*:

<b>1.25</b>	6.07	5.24	1.47	8.35	8.54	9.39
<b>1.50</b>	7.97	7.13	3.37	10.01	10.20	11.05
<b>1.75</b>	9.87	9.03	5.27	11.66	11.85	12.70
<b>2.00</b>	11.77	10.93	7.17	13.32	13.51	14.36
<b>2.25</b>	13.67	12.83	9.07	14.97	15.16	16.01
<b>2.50</b>	15.56	14.73	10.97	16.63	16.82	17.67

\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.



<b>Lobe Configuration</b>	6-7 Lobe 5.0 Stage HR	
<b>Displacement</b>	0.3 rev/gal	0.08 rev/l
<b>Max Differential @ No Load</b>	1180 psi	8136 kPa
<b>Max Torque @ No Load</b>	9850 ft-lbs	13355 Nm
<b>Max Power</b>	291 HP	217 kW
<b>C = Overall Length</b>	321.1 in	8156 mm
<b>Weight</b>	2497 lbs	1133 kg

Flow Rate		Speed
GPM	LPM	RPM
300	1136	62 - 90
450	1703	109 - 135
600	2271	155 - 180

**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)	8-1/2 (216mm)	8-3/4 (222mm)	9-7/8 (251mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	0.16	-	-	2.64	2.84	-
<b>0.78</b>	3.22	2.49	-	5.16	5.36	6.27
<b>1.15</b>	6.12	5.39	2.11	7.55	7.75	8.66
<b>1.50</b>	8.87	8.14	4.86	9.81	10.01	10.92
<b>1.83</b>	11.45	10.73	7.45	11.94	12.15	13.06
<b>2.12</b>	13.73	13.00	9.72	13.82	14.02	14.93
<b>2.38</b>	15.77	15.04	11.76	15.77	15.70	16.61
<b>2.60</b>	17.49	16.76	13.48	17.49	17.12	18.03
<b>2.77</b>	18.82	18.10	14.82	18.82	18.22	19.13
<b>2.90</b>	19.84	19.12	15.84	19.84	19.12	19.97
<b>2.97</b>	20.39	19.66	16.39	20.39	19.66	20.43
<b>3.00</b>	20.63	19.90	16.62	20.63	19.90	20.62

### FBH BUILD RATE\*\*:

<b>1.25</b>	6.28	5.42	1.53	8.62	8.82	9.73
<b>1.50</b>	8.25	7.38	3.50	10.32	10.52	11.43
<b>1.75</b>	10.21	9.34	5.46	12.02	12.22	13.13
<b>2.00</b>	12.17	11.30	7.42	13.72	13.92	14.83
<b>2.25</b>	14.13	13.26	9.38	15.42	15.62	16.53
<b>2.50</b>	16.09	15.22	11.34	17.12	17.32	18.23

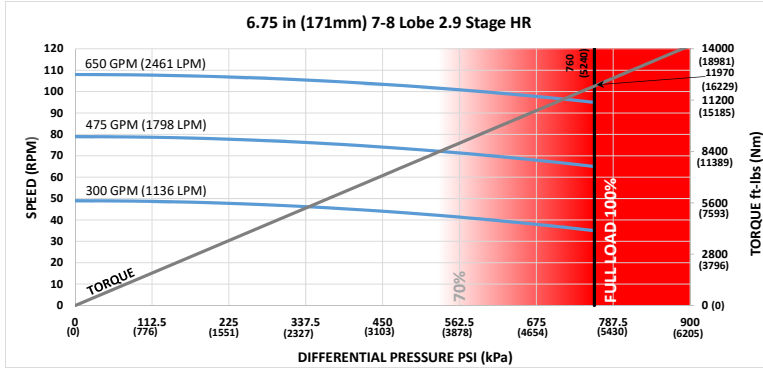
\*Stabilizers assumed as 1/8" undergage

\*\*Additional FBH Angles Available

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.

# 7 in (178 mm) 7-8 Lobe 2.9 Stage HR **SERIES 2**



<b>Lobe Configuration</b>	7-8 Lobe 2.9 Stage HR	
<b>Displacement</b>	0.17 rev/gal	0.04 rev/l
<b>Max Differential @ No Load</b>	760 psi	5240 kPa
<b>Max Torque @ No Load</b>	11970 ft-lbs	16229 Nm
<b>Max Power</b>	217 HP	161 kW
<b>C = Overall Length</b>	341.1 in	8664 mm
<b>Weight</b>	2613 lbs	1185 kg

Flow Rate		Speed
GPM	LPM	RPM
300	1136	35 - 49
475	1798	65 - 79
650	2461	95 - 108

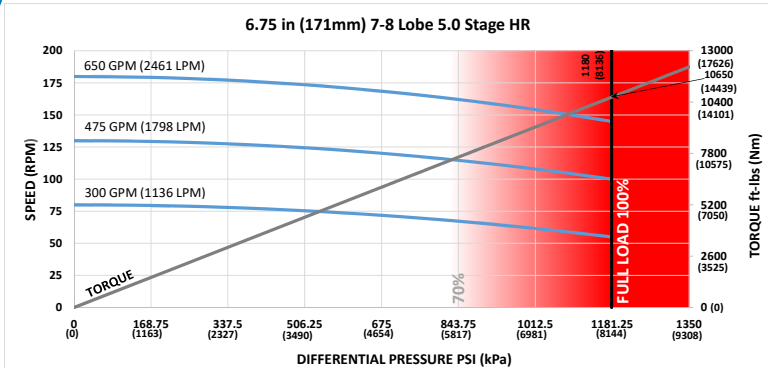
**Possible damage may occur when motor is run higher than 70% of Maximum Differential Pressure.**

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	8-1/2 (216mm)	8-3/4 (222mm)	9-7/8 (251mm)	8-1/2 (216mm)	8-3/4 (222mm)	9-7/8 (251mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	0.13	-	-	2.44	2.62	-
<b>0.78</b>	3.00	2.31	-	4.84	5.02	5.81
<b>1.15</b>	5.72	5.03	1.95	7.12	7.29	8.09
<b>1.50</b>	8.29	7.61	4.53	9.27	9.45	10.24
<b>1.83</b>	10.72	10.04	6.96	11.30	11.48	12.27
<b>2.12</b>	12.86	12.17	9.10	13.09	13.26	14.06
<b>2.38</b>	14.77	14.09	11.01	14.77	14.86	15.66
<b>2.60</b>	16.39	15.71	12.63	16.39	16.22	17.01
<b>2.77</b>	17.64	16.96	13.88	17.64	17.26	18.06
<b>2.90</b>	18.60	17.91	14.84	18.60	18.06	18.86
<b>2.97</b>	19.11	18.43	15.35	19.11	18.49	19.29
<b>3.00</b>	19.33	18.65	15.57	19.33	18.68	19.47

FBH BUILD RATE**:						
<b>1.25</b>	5.87	5.06	1.42	8.10	8.28	9.07
<b>1.50</b>	7.71	6.90	3.26	9.71	9.89	10.69
<b>1.75</b>	9.55	8.74	5.10	11.33	11.50	12.30
<b>2.00</b>	11.39	10.58	6.94	12.94	13.12	13.91
<b>2.25</b>	13.23	12.42	8.78	14.55	14.73	15.52
<b>2.50</b>	15.07	14.26	10.62	16.16	16.34	17.14

\*Stabilizers assumed as 1/8" undergauge  
 \*\*Additional FBH Angles Available  
 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.



<b>Lobe Configuration</b>	7-8 Lobe 5.0 Stage HR	
<b>Displacement</b>	0.27 rev/gal	0.07 rev/l
<b>Max Differential @ No Load</b>	1180 psi	8136 kPa
<b>Max Torque @ No Load</b>	10650 ft-lbs	14439 Nm
<b>Max Power</b>	294 HP	219 kW
<b>C = Overall Length</b>	315.6 in	8016 mm
<b>Weight</b>	2565 lbs	1163 kg

Flow Rate		Speed
GPM	LPM	RPM
300	1136	55 - 80
475	1798	100 - 130
650	2461	145 - 180

**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)	8-1/2 (216mm)	8-3/4 (222mm)	9-7/8 (251mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	0.18	-	-	2.70	2.91	-
<b>0.78</b>	3.29	2.55	-	5.25	5.46	6.41
<b>1.15</b>	6.24	5.50	2.16	7.68	7.89	8.83
<b>1.50</b>	9.04	8.30	4.96	9.97	10.18	11.13
<b>1.83</b>	11.67	10.93	7.59	12.13	12.34	13.29
<b>2.12</b>	13.99	13.25	9.91	14.03	14.24	15.19
<b>2.38</b>	16.06	15.32	11.98	16.06	15.95	16.89
<b>2.60</b>	17.82	17.08	13.74	17.82	17.39	18.34
<b>2.77</b>	19.18	18.44	15.10	19.18	18.51	19.45
<b>2.90</b>	20.22	19.47	16.14	20.22	19.47	20.30
<b>2.97</b>	20.77	20.03	16.70	20.77	20.03	20.76
<b>3.00</b>	21.01	20.27	16.94	21.01	20.27	20.96

**FBH BUILD RATE\*\*:**

<b>1.25</b>	6.41	5.53	1.57	8.77	8.98	9.93
<b>1.50</b>	8.40	7.52	3.57	10.50	10.71	11.65
<b>1.75</b>	10.40	9.52	5.56	12.23	12.44	13.38
<b>2.00</b>	12.40	11.52	7.56	13.95	14.16	15.11
<b>2.25</b>	14.39	13.51	9.56	15.68	15.89	16.83
<b>2.50</b>	16.39	15.51	11.55	17.40	17.61	18.56

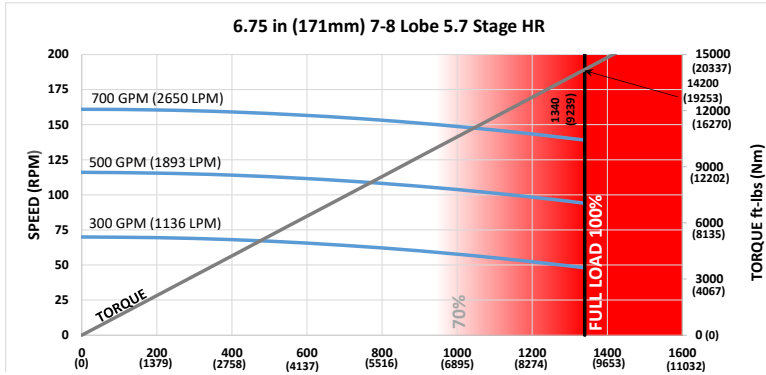
\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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

# 7 in (178 mm) 7-8 Lobe 5.7 Stage HR **SERIES 2**



Lobe Configuration		7-8 Lobe 5.7 Stage HR	
Displacement	0.23 rev/gal	0.06 rev/l	
Max Differential @ No Load	1340 psi	9239 kPa	
Max Torque @ No Load	14200 ft-lbs	19253 Nm	
Max Power	376 HP	280 kW	
C = Overall Length	381.1 in	9680 mm	
Weight	2983 lbs	1353 kg	

Flow Rate		Speed
GPM	LPM	RPM
300	1136	48 - 70
500	1893	94 - 116
700	2650	139 - 161

**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)	8-1/2 (216mm)	8-3/4 (222mm)	9-7/8 (251mm)
BEND ANGLE	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	0.07	-	-	2.12	2.26	-
<b>0.78</b>	2.63	2.02	-	4.31	4.45	5.07
<b>1.15</b>	5.05	4.44	1.70	6.38	6.52	7.15
<b>1.50</b>	7.35	6.74	4.00	8.35	8.48	9.11
<b>1.83</b>	9.51	8.90	6.16	10.20	10.33	10.96
<b>2.12</b>	11.41	10.80	8.06	11.82	11.96	12.59
<b>2.38</b>	13.12	12.51	9.77	13.28	13.42	14.04
<b>2.60</b>	14.56	13.95	11.21	14.56	14.65	15.28
<b>2.77</b>	15.67	15.06	12.32	15.67	15.61	16.23
<b>2.90</b>	16.53	15.92	13.18	16.53	16.34	16.96
<b>2.97</b>	16.98	16.38	13.63	16.98	16.73	17.35
<b>3.00</b>	17.18	16.57	13.83	17.18	16.90	17.52

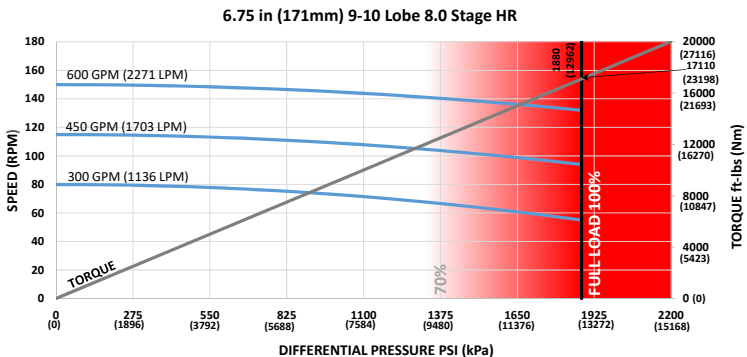
## FBH BUILD RATE\*\*:

<b>1.25</b>	5.20	4.47	1.22	7.23	7.37	8.00
<b>1.50</b>	6.83	6.11	2.86	8.69	8.83	9.46
<b>1.75</b>	8.47	7.75	4.50	10.15	10.29	10.92
<b>2.00</b>	10.11	9.39	6.14	11.61	11.75	12.38
<b>2.25</b>	11.75	11.03	7.78	13.07	13.21	13.84
<b>2.50</b>	13.39	12.67	9.42	14.53	14.67	15.30

\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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Lobe Configuration	9-10 Lobe 8.0 Stage HR		Flow Rate		Speed
Displacement	0.26 rev/gal	0.07 rev/l	<b>GPM</b>	<b>LPM</b>	<b>RPM</b>
Max Differential @ No Load	1880 psi	12962 kPa	300	1136	55 - 80
Max Torque @ No Load	17110 ft-lbs	23198 Nm	450	1703	94 - 115
Max Power	430 HP	321 kW	600	2271	132 - 150
C = Overall Length	381.1 in	9680 mm			
Weight	2962 lbs	1344 kg			

**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)	8-1/2 (216mm)	8-3/4 (222mm)	9-7/8 (251mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	0.07	-	-	2.12	2.26	-
<b>0.78</b>	2.63	2.02	-	4.31	4.45	5.07
<b>1.15</b>	5.05	4.44	1.70	6.38	6.52	7.15
<b>1.50</b>	7.35	6.74	4.00	8.35	8.48	9.11
<b>1.83</b>	9.51	8.90	6.16	10.20	10.33	10.96
<b>2.12</b>	11.41	10.80	8.06	11.82	11.96	12.59
<b>2.38</b>	13.12	12.51	9.77	13.28	13.42	14.04
<b>2.60</b>	14.56	13.95	11.21	14.56	14.65	15.28
<b>2.77</b>	15.67	15.06	12.32	15.67	15.61	16.23
<b>2.90</b>	16.53	15.92	13.18	16.53	16.34	16.96
<b>2.97</b>	16.98	16.38	13.63	16.98	16.73	17.35
<b>3.00</b>	17.18	16.57	13.83	17.18	16.90	17.52

**FBH BUILD RATE\*\*:**

<b>1.25</b>	5.20	4.47	1.22	7.23	7.37	8.00
<b>1.50</b>	6.83	6.11	2.86	8.69	8.83	9.46
<b>1.75</b>	8.47	7.75	4.50	10.15	10.29	10.92
<b>2.00</b>	10.11	9.39	6.14	11.61	11.75	12.38
<b>2.25</b>	11.75	11.03	7.78	13.07	13.21	13.84
<b>2.50</b>	13.39	12.67	9.42	14.53	14.67	15.30

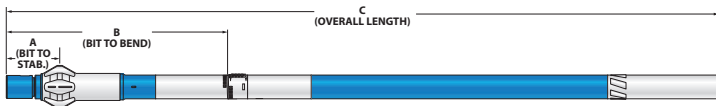
\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.

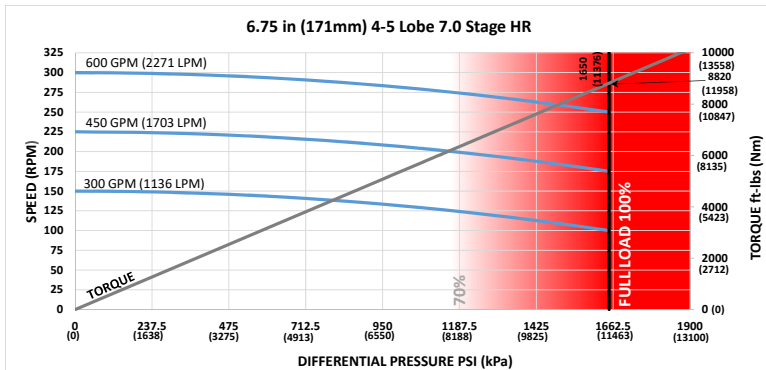
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<b>Bit Size Range</b>	8-1/2 - 9-7/8 in	216 - 251 mm
<b>Bit Box Connection</b>	4-1/2 REGULAR	
<b>Dynamic Bearing Load On/Off Bottom</b>	151925 lbf	67600 daN
<b>Static Bearing Load On/Off Bottom</b>	509765 lbf	226800 daN
<b>Max. Overpull for Re-run</b>	509765 lbf	226800 daN
<b>Absolute Overpull</b>	742200 lbf	330100 daN
<b>Adjustable Make Up Torque</b>	32000 ft-lbs	43400 Nm
<b>A = Bit to Stabilizer (center)</b>	16 in	406 mm
<b>B = Bit to Bend</b>	<b>Adjustable</b>	68 in 1727 mm
	<b>Fixed</b>	56 in 1422 mm

7 in (178 mm) Bottom w/ 6-3/4 in (171 mm) 4-5 Lobe 7.0 Stage HR SERIES 3	157
7 in (178 mm) Bottom w/ 6-3/4 in (171 mm) 7-8 Lobe 2.9 Stage HR SERIES 3	158
7 in (178 mm) Bottom w/ 6-3/4 in (171 mm) 7-8 Lobe 5.0 Stage HR SERIES 3	159
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7 in (178 mm) 9-10 Lobe 8.0 Stage HR SERIES 3	167

# 7 in (178 mm) Bottom w/ 6-3/4 in (171 mm) 4-5 Lobe 7.0 Stage HR **SERIES 3**



<b>Lobe Configuration</b>	4-5 Lobe 7.0 Stage HR		<b>Flow Rate</b>		<b>Speed</b>
<b>Displacement</b>	0.49 rev/gal	0.13 rev/l	<b>GPM</b>	<b>LPM</b>	<b>RPM</b>
<b>Max Differential @ No Load</b>	1650 psi	11376 kPa	300	1136	100 - 150
<b>Max Torque @ No Load</b>	8820 ft-lbs	11958 Nm	450	1703	175 - 225
<b>Max Power</b>	420 HP	313 kW	600	2271	250 - 300
<b>C = Overall Length</b>	341 in	8661 mm			
<b>Weight</b>	2142 lbs	972 kg			

**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)	8-1/2 (216mm)	8-3/4 (222mm)	9-7/8 (251mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	3.78	3.10	0.07	3.78	3.10	3.38
<b>0.78</b>	6.68	6.00	2.97	6.68	6.00	5.77
<b>1.15</b>	9.43	8.75	5.72	9.43	8.75	8.04
<b>1.50</b>	12.03	11.35	8.32	12.03	11.35	10.18
<b>1.83</b>	14.48	13.80	10.77	14.48	13.80	12.20
<b>2.12</b>	16.63	15.96	12.93	16.63	15.96	13.98
<b>2.38</b>	18.56	17.89	14.86	18.56	17.89	15.57
<b>2.60</b>	20.20	19.52	16.50	20.20	19.52	16.92
<b>2.77</b>	21.46	20.79	17.76	21.46	20.79	17.96
<b>2.90</b>	22.42	21.75	18.72	22.42	21.75	18.76
<b>2.97</b>	22.94	22.27	19.24	22.94	22.27	19.24
<b>3.00</b>	23.17	22.49	19.47	23.17	22.49	19.47

## FBH BUILD RATE\*\*:

<b>1.25</b>	7.03	6.23	2.66	8.04	8.22	9.02
<b>1.50</b>	8.89	8.09	4.52	9.64	9.82	10.63
<b>1.75</b>	10.74	9.95	6.38	11.25	11.43	12.24
<b>2.00</b>	12.60	11.81	8.23	12.86	13.04	13.84
<b>2.25</b>	14.46	13.66	10.09	14.46	14.64	15.45
<b>2.50</b>	16.32	15.52	11.95	16.32	16.25	17.06

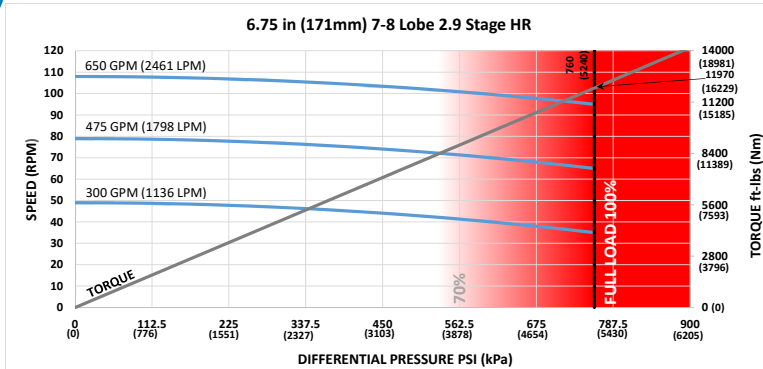
\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.

# MUD MOTORS

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Lobe Configuration	7-8 Lobe 2.9 Stage HR		Flow Rate		Speed
Displacement	0.17 rev/gal	0.04 rev/l	<b>GPM</b>	<b>LPM</b>	<b>RPM</b>
Max Differential @ No Load	760 psi	5240 kPa	300	1136	35 - 49
Max Torque @ No Load	11970 ft-lbs	16229 Nm	475	1798	65 - 79
Max Power	217 HP	161 kW	650	2461	95 - 108
C = Overall Length	351 in	8915 mm			
Weight	2228 lbs	1011 kg			

**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)	8-1/2 (216mm)	8-3/4 (222mm)	9-7/8 (251mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	3.62	2.97	0.03	3.62	2.97	3.23
<b>0.78</b>	6.43	5.78	2.84	6.43	5.78	5.57
<b>1.15</b>	9.10	8.44	5.50	9.10	8.44	7.78
<b>1.50</b>	11.62	10.97	8.03	11.62	10.97	9.87
<b>1.83</b>	14.00	13.34	10.40	14.00	13.34	11.85
<b>2.12</b>	16.09	15.43	12.49	16.09	15.43	13.58
<b>2.38</b>	17.96	17.31	14.37	17.96	17.31	15.14
<b>2.60</b>	19.54	18.89	15.95	19.54	18.89	16.45
<b>2.77</b>	20.77	20.12	17.18	20.77	20.12	17.47
<b>2.90</b>	21.70	21.05	18.12	21.70	21.05	18.25
<b>2.97</b>	22.21	21.56	18.62	22.21	21.56	18.67
<b>3.00</b>	22.43	21.77	18.84	22.43	21.77	18.85

**FBH BUILD RATE\*\*:**

<b>1.25</b>	6.80	6.03	2.56	7.80	7.97	8.73
<b>1.50</b>	8.60	7.83	4.36	9.37	9.54	10.30
<b>1.75</b>	10.40	9.63	6.17	10.94	11.10	11.86
<b>2.00</b>	12.20	11.43	7.97	12.50	12.67	13.43
<b>2.25</b>	14.00	13.23	9.77	14.07	14.24	15.00
<b>2.50</b>	15.81	15.04	11.57	15.81	15.80	16.56

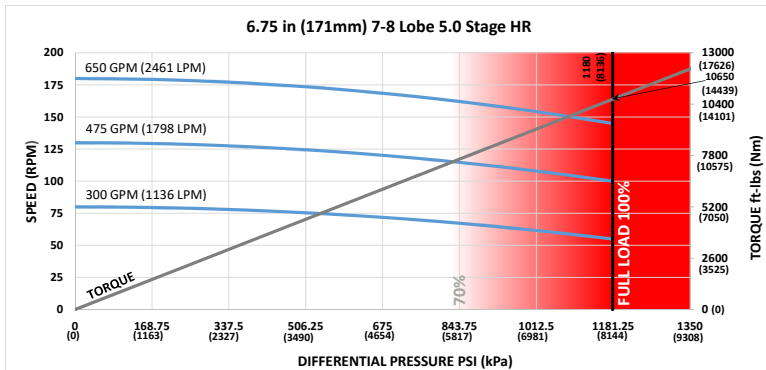
\*Stabilizers assumed as 1/8" undergage

\*\*Additional FBH Angles Available

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.

# 7 in (178 mm) Bottom w/ 6-3/4 in (171 mm) 7-8 Lobe 5.0 Stage HR **SERIES 3**



<b>Lobe Configuration</b>	7-8 Lobe 5.0 Stage HR	
<b>Displacement</b>	0.27 rev/gal	0.07 rev/l
<b>Max Differential @ No Load</b>	1180 psi	8136 kPa
<b>Max Torque @ No Load</b>	10650 ft-lbs	14439 Nm
<b>Max Power</b>	294 HP	219 kW
<b>C = Overall Length</b>	325.5 in	8268 mm
<b>Weight</b>	2180 lbs	989 kg

Flow Rate		Speed
GPM	LPM	RPM
300	1136	55 - 80
475	1798	100 - 130
650	2461	145 - 180

**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)	8-1/2 (216mm)	8-3/4 (222mm)	9-7/8 (251mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	4.05	3.35	0.16	4.05	3.35	3.64
<b>0.78</b>	7.10	6.39	3.21	7.10	6.39	6.12
<b>1.15</b>	9.99	9.28	6.10	9.99	9.28	8.47
<b>1.50</b>	12.72	12.01	8.83	12.72	12.01	10.69
<b>1.83</b>	15.29	14.59	11.40	15.29	14.59	12.79
<b>2.12</b>	17.56	16.85	13.67	17.56	16.85	14.64
<b>2.38</b>	19.58	18.88	15.70	19.58	18.88	16.29
<b>2.60</b>	21.30	20.59	17.41	21.30	20.59	17.69
<b>2.77</b>	22.63	21.92	18.74	22.63	21.92	18.77
<b>2.90</b>	23.64	22.93	19.75	23.64	22.93	19.75
<b>2.97</b>	24.19	23.48	20.30	24.19	23.48	20.30
<b>3.00</b>	24.42	23.71	20.54	24.42	23.71	20.54

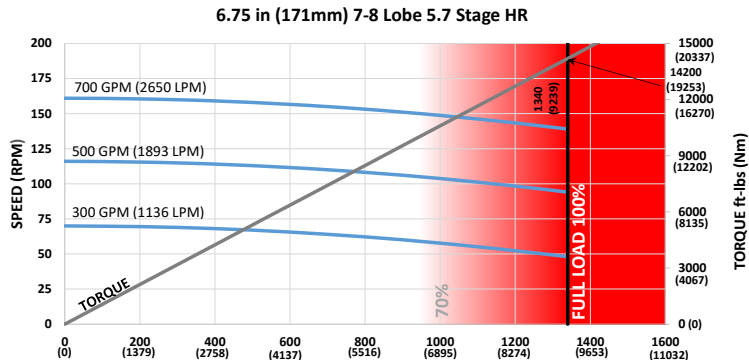
## FBH BUILD RATE\*\*:

<b>1.25</b>	7.42	6.58	2.83	8.43	8.63	9.52
<b>1.50</b>	9.37	8.53	4.78	10.10	10.30	11.19
<b>1.75</b>	11.32	10.49	6.73	11.77	11.97	12.87
<b>2.00</b>	13.27	12.44	8.68	13.44	13.64	14.54
<b>2.25</b>	15.22	14.39	10.64	15.22	15.32	16.21
<b>2.50</b>	17.17	16.34	12.59	17.17	16.99	17.89

\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.



<b>Lobe Configuration</b>	7-8 Lobe 5.7 Stage HR	
<b>Displacement</b>	0.23 rev/gal	0.06 rev/l
<b>Max Differential @ No Load</b>	1340 psi	9239 kPa
<b>Max Torque @ No Load</b>	14200 ft-lbs	19253 Nm
<b>Max Power</b>	376 HP	280 kW
<b>C = Overall Length</b>	391 in	9931 mm
<b>Weight</b>	2598 lbs	1178 kg

Flow Rate		Speed
GPM	LPM	RPM
300	1136	48 - 70
500	1893	94 - 116
700	2650	139 - 161

**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)	8-1/2 (216mm)	8-3/4 (222mm)	9-7/8 (251mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	3.09	2.51	-	3.09	2.51	2.74
<b>0.78</b>	5.60	5.02	2.40	5.60	5.02	4.88
<b>1.15</b>	7.98	7.40	4.78	7.98	7.40	6.90
<b>1.50</b>	10.24	9.65	7.03	10.24	9.65	8.81
<b>1.83</b>	12.36	11.78	9.15	12.36	11.78	10.62
<b>2.12</b>	14.22	13.64	11.02	14.22	13.64	12.20
<b>2.38</b>	15.90	15.31	12.69	15.90	15.31	13.62
<b>2.60</b>	17.31	16.73	14.11	17.31	16.73	14.83
<b>2.77</b>	18.40	17.82	15.20	18.40	17.82	15.76
<b>2.90</b>	19.24	18.66	16.04	19.24	18.66	16.47
<b>2.97</b>	19.69	19.11	16.49	19.69	19.11	16.85
<b>3.00</b>	19.88	19.30	16.68	19.88	19.30	17.01

**FBH BUILD RATE\*\*:**

<b>1.25</b>	6.01	5.32	2.23	6.99	7.13	7.72
<b>1.50</b>	7.62	6.93	3.84	8.41	8.55	9.15
<b>1.75</b>	9.23	8.54	5.45	9.84	9.97	10.57
<b>2.00</b>	10.84	10.15	7.06	11.26	11.39	11.99
<b>2.25</b>	12.45	11.76	8.67	12.68	12.82	13.41
<b>2.50</b>	14.05	13.37	10.27	14.10	14.24	14.84

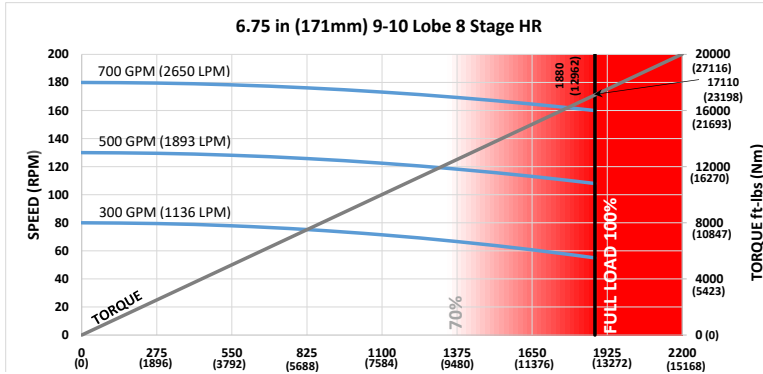
\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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

# 7 in (178 mm) Bottom w/ 6-3/4 in (171 mm) 9-10 Lobe 8.0 Stage HR **SERIES 3**



Lobe Configuration	9-10 Lobe 8.0 Stage HR		Flow Rate	Speed
Displacement	0.26 rev/gal	0.07 rev/l	<b>GPM</b>	<b>RPM</b>
Max Differential @ No Load	1880 psi	12962 kPa	300	1136
Max Torque @ No Load	17110 ft-lbs	23198 Nm	500	1893
Max Power	521 HP	389 kW	700	2650
C = Overall Length	391 in	9931 mm		
Weight	2577 lbs	1169 kg		

**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)	8-1/2 (216mm)	8-3/4 (222mm)	9-7/8 (251mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	3.09	2.51	-	3.09	2.51	2.74
<b>0.78</b>	5.60	5.02	2.40	5.60	5.02	4.88
<b>1.15</b>	7.98	7.40	4.78	7.98	7.40	6.90
<b>1.50</b>	10.24	9.65	7.03	10.24	9.65	8.81
<b>1.83</b>	12.36	11.78	9.15	12.36	11.78	10.62
<b>2.12</b>	14.22	13.64	11.02	14.22	13.64	12.20
<b>2.38</b>	15.90	15.31	12.69	15.90	15.31	13.62
<b>2.60</b>	17.31	16.73	14.11	17.31	16.73	14.83
<b>2.77</b>	18.40	17.82	15.20	18.40	17.82	15.76
<b>2.90</b>	19.24	18.66	16.04	19.24	18.66	16.47
<b>2.97</b>	19.69	19.11	16.49	19.69	19.11	16.85
<b>3.00</b>	19.88	19.30	16.68	19.88	19.30	17.01

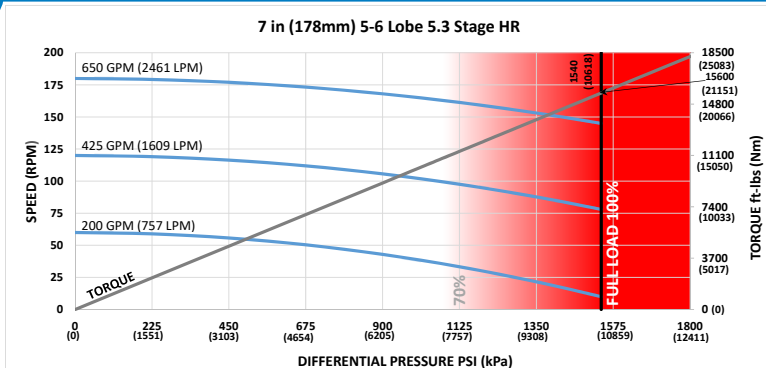
## FBH BUILD RATE\*\*:

<b>1.25</b>	6.01	5.32	2.23	6.99	7.13	7.72
<b>1.50</b>	7.62	6.93	3.84	8.41	8.55	9.15
<b>1.75</b>	9.23	8.54	5.45	9.84	9.97	10.57
<b>2.00</b>	10.84	10.15	7.06	11.26	11.39	11.99
<b>2.25</b>	12.45	11.76	8.67	12.68	12.82	13.41
<b>2.50</b>	14.05	13.37	10.27	14.10	14.24	14.84

\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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Lobe Configuration	5-6 Lobe 5.3 Stage HR		Flow Rate		Speed
Displacement	0.30 rev/gal	0.08 rev/l	<b>GPM</b>	<b>LPM</b>	<b>RPM</b>
Max Differential @ No Load	1540 psi	10618 kPa	200	757	10 - 60
Max Torque @ No Load	15600 ft-lbs	21151 Nm	425	1609	78 - 120
Max Power	431 HP	321 kW	650	2461	145 - 180
C = Overall Length	366.8 in	9317 mm			
Weight	2231 lbs	1012 kg			

**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)	8-1/2 (216mm)	8-3/4 (222mm)	9-7/8 (251mm)
<b>BEND ANGLE</b>	<b>Degrees per 100 Feet (30 m)</b>			<b>Degrees per 100 Feet (30 m)</b>		
<b>0.39</b>	3.26	2.64	-	3.26	2.64	2.91
<b>0.78</b>	5.94	5.32	2.51	5.94	5.32	5.16
<b>1.15</b>	8.49	7.87	5.06	8.49	7.87	7.30
<b>1.50</b>	10.90	10.27	7.47	10.90	10.27	9.32
<b>1.83</b>	13.17	12.54	9.74	13.17	12.54	11.22
<b>2.12</b>	15.16	14.54	11.73	15.16	14.54	12.89
<b>2.38</b>	16.95	16.33	13.52	16.95	16.33	14.39
<b>2.60</b>	18.46	17.84	15.04	18.46	17.84	15.66
<b>2.77</b>	19.63	19.01	16.21	19.63	19.01	16.64
<b>2.90</b>	20.53	19.90	17.10	20.53	19.90	17.39
<b>2.97</b>	21.01	20.39	17.58	21.01	20.39	17.80
<b>3.00</b>	21.21	20.59	17.79	21.21	20.59	17.97

### FBH BUILD RATE\*\*:

<b>1.25</b>	6.34	5.60	2.29	7.35	7.50	8.19
<b>1.50</b>	8.06	7.32	4.01	8.86	9.01	9.70
<b>1.75</b>	9.78	9.04	5.73	10.36	10.52	11.21
<b>2.00</b>	11.50	10.76	7.46	11.87	12.02	12.71
<b>2.25</b>	13.22	12.48	9.18	13.38	13.53	14.22
<b>2.50</b>	14.94	14.20	10.90	14.94	15.04	15.72

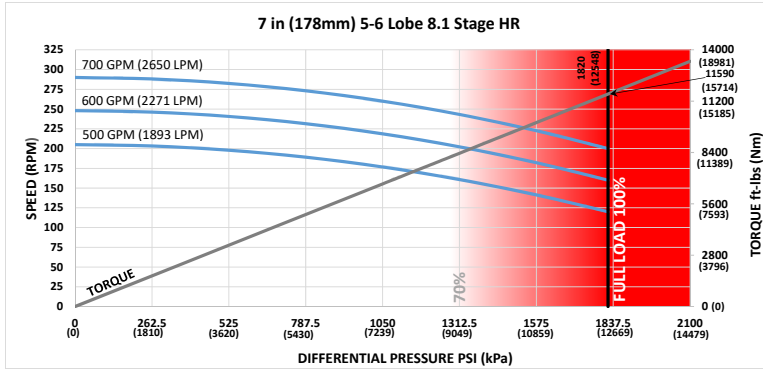
\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.

# 7 in (178 mm) 5-6 Lobe 8.1 Stage HR **SERIES 3**



<b>Lobe Configuration</b>	5-6 Lobe 8.1 Stage HR		<b>Flow Rate</b>		<b>Speed</b>
<b>Displacement</b>	0.41 rev/gal	0.11 rev/l	<b>GPM</b>	<b>LPM</b>	<b>RPM</b>
<b>Max Differential @ No Load</b>	1820 psi	12548 kPa	500	1893	120 - 205
<b>Max Torque @ No Load</b>	11590 ft-lbs	15714 Nm	600	2271	160 - 248
<b>Max Power</b>	441 HP	329 kW	700	2650	200 - 290
<b>C = Overall Length</b>	391 in	9931 mm			
<b>Weight</b>	3212 lbs	1457 kg			

**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)	8-1/2 (216mm)	8-3/4 (222mm)	9-7/8 (251mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	2.94	2.35	-	2.94	2.35	2.61
<b>0.78</b>	5.45	4.86	2.24	5.45	4.86	4.74
<b>1.15</b>	7.83	7.24	4.62	7.83	7.24	6.77
<b>1.50</b>	10.08	9.50	6.87	10.08	9.50	8.68
<b>1.83</b>	12.20	11.62	9.00	12.20	11.62	10.48
<b>2.12</b>	14.07	13.48	10.86	14.07	13.48	12.07
<b>2.38</b>	15.74	15.16	12.53	15.74	15.16	13.49
<b>2.60</b>	17.15	16.57	13.95	17.15	16.57	14.69
<b>2.77</b>	18.25	17.67	15.04	18.25	17.67	15.62
<b>2.90</b>	19.08	18.50	15.88	19.08	18.50	16.33
<b>2.97</b>	19.53	18.95	16.33	19.53	18.95	16.72
<b>3.00</b>	19.73	19.14	16.52	19.73	19.14	16.88

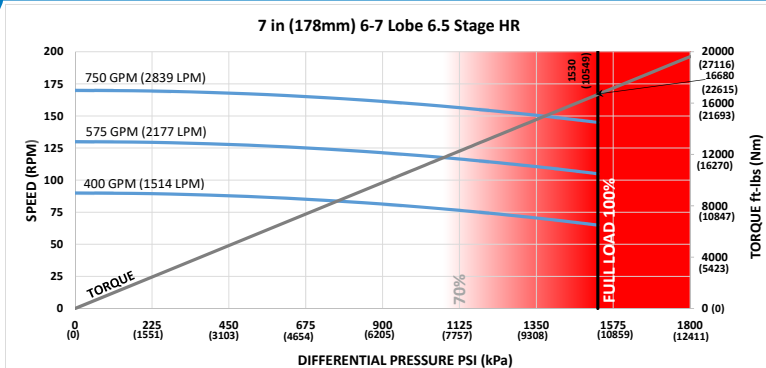
## FBH BUILD RATE\*\*:

<b>1.25</b>	5.86	5.17	2.08	6.86	6.99	7.59
<b>1.50</b>	7.47	6.78	3.69	8.28	8.41	9.01
<b>1.75</b>	9.08	8.39	5.30	9.70	9.84	10.44
<b>2.00</b>	10.69	10.00	6.91	11.13	11.26	11.86
<b>2.25</b>	12.30	11.61	8.51	12.55	12.68	13.28
<b>2.50</b>	13.90	13.22	10.12	13.97	14.10	14.70

\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.



Lobe Configuration	6-7 Lobe 6.5 Stage HR		Flow Rate		Speed
Displacement	0.23 rev/gal	0.06 rev/l	GPM	LPM	RPM
Max Differential @ No Load	1530 psi	10549 kPa	400	1514	65 - 90
Max Torque @ No Load	16680 ft-lbs	22615 Nm	575	2177	105 - 130
Max Power	461 HP	343 kW	750	2839	145 - 170
C = Overall Length	406 in	10312 mm			
Weight	2655 lbs	1204 kg			

**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)	8-1/2 (216mm)	8-3/4 (222mm)	9-7/8 (251mm)
BEND ANGLE	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
0.39	2.79	2.23	-	2.79	2.23	2.47
0.78	5.20	4.64	2.12	5.20	4.64	4.54
1.15	7.49	6.93	4.41	7.49	6.93	6.50
1.50	9.66	9.10	6.57	9.66	9.10	8.35
1.83	11.70	11.14	8.61	11.70	11.14	10.10
2.12	13.49	12.93	10.41	13.49	12.93	11.63
2.38	15.10	14.54	12.02	15.10	14.54	13.01
2.60	16.46	15.90	13.38	16.46	15.90	14.17
2.77	17.51	16.95	14.43	17.51	16.95	15.07
2.90	18.31	17.75	15.23	18.31	17.75	15.76
2.97	18.75	18.19	15.67	18.75	18.19	16.13
3.00	18.93	18.37	15.85	18.93	18.37	16.29

### FBH BUILD RATE\*\*:

1.25	5.62	4.96	1.99	6.61	6.73	7.28
1.50	7.17	6.51	3.54	7.98	8.10	8.66
1.75	8.72	8.06	5.08	9.36	9.48	10.03
2.00	10.26	9.60	6.63	10.73	10.85	11.41
2.25	11.81	11.15	8.18	12.11	12.23	12.78
2.50	13.36	12.70	9.72	13.48	13.60	14.16

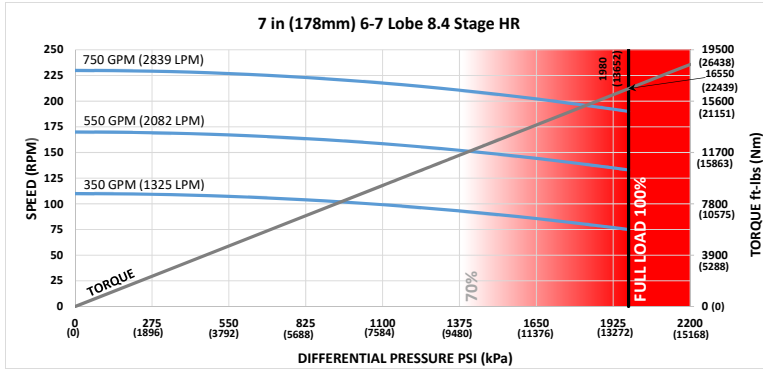
\*Stabilizers assumed as 1/8" undergage

\*\*Additional FBH Angles Available

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.

# 7 in (178 mm) 6-7 Lobe 8.4 Stage HR **SERIES 3**



<b>Lobe Configuration</b>	6-7 Lobe 8.4 Stage HR	
<b>Displacement</b>	0.3 rev/gal	0.08 rev/l
<b>Max Differential @ No Load</b>	1980 psi	13652 kPa
<b>Max Torque @ No Load</b>	16550 ft-lbs	22439 Nm
<b>Max Power</b>	599 HP	446 kW
<b>C = Overall Length</b>	406 in	10312 mm
<b>Weight</b>	2655 lbs	1204 kg

Flow Rate		Speed
GPM	LPM	RPM
350	1325	75 - 110
550	2082	133 - 170
750	2839	190 - 230

**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)	8-1/2 (216mm)	8-3/4 (222mm)	9-7/8 (251mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	2.79	2.23	-	2.79	2.23	2.47
<b>0.78</b>	5.20	4.64	2.12	5.20	4.64	4.54
<b>1.15</b>	7.49	6.93	4.41	7.49	6.93	6.50
<b>1.50</b>	9.66	9.10	6.57	9.66	9.10	8.35
<b>1.83</b>	11.70	11.14	8.61	11.70	11.14	10.10
<b>2.12</b>	13.49	12.93	10.41	13.49	12.93	11.63
<b>2.38</b>	15.10	14.54	12.02	15.10	14.54	13.01
<b>2.60</b>	16.46	15.90	13.38	16.46	15.90	14.17
<b>2.77</b>	17.51	16.95	14.43	17.51	16.95	15.07
<b>2.90</b>	18.31	17.75	15.23	18.31	17.75	15.76
<b>2.97</b>	18.75	18.19	15.67	18.75	18.19	16.13
<b>3.00</b>	18.93	18.37	15.85	18.93	18.37	16.29

## FBH BUILD RATE\*\*:

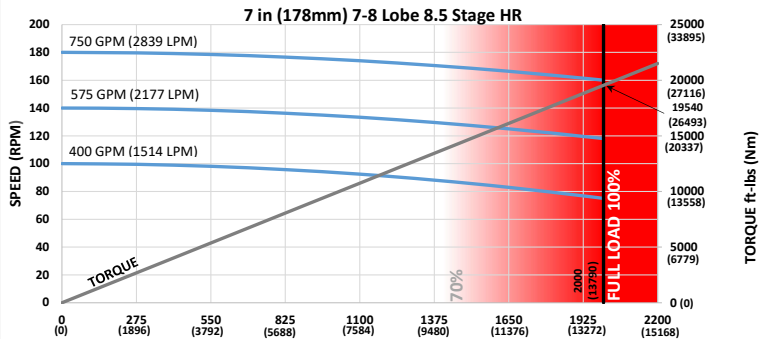
<b>1.25</b>	5.62	4.96	1.99	6.61	6.73	7.28
<b>1.50</b>	7.17	6.51	3.54	7.98	8.10	8.66
<b>1.75</b>	8.72	8.06	5.08	9.36	9.48	10.03
<b>2.00</b>	10.26	9.60	6.63	10.73	10.85	11.41
<b>2.25</b>	11.81	11.15	8.18	12.11	12.23	12.78
<b>2.50</b>	13.36	12.70	9.72	13.48	13.60	14.16

\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.

# MUD MOTORS



<b>Lobe Configuration</b>	7-8 Lobe 8.5 Stage HR	
<b>Displacement</b>	0.26 rev/gal	0.07 rev/l
<b>Max Differential @ No Load</b>	1910 psi	13169 kPa
<b>Max Torque @ No Load</b>	18710 ft.-lbs	25367 Nm
<b>Max Power</b>	606 HP	452 kW
<b>C = Overall Length</b>	431 in	10947 mm
<b>Weight</b>	2976 lbs	1350 kg

Flow Rate		Speed
GPM	LPM	RPM
500	1893	100 - 130
625	2366	135 - 165
750	2839	170 - 200

**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)	8-1/2 (216mm)	8-3/4 (222mm)	9-7/8 (251mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	2.58	2.05	-	2.58	2.05	2.27
<b>0.78</b>	4.84	4.32	1.95	4.84	4.32	4.23
<b>1.15</b>	6.99	6.47	4.10	6.99	6.47	6.09
<b>1.50</b>	9.03	8.50	6.13	9.03	8.50	7.85
<b>1.83</b>	10.94	10.42	8.05	10.94	10.42	9.51
<b>2.12</b>	12.63	12.10	9.73	12.63	12.10	10.97
<b>2.38</b>	14.14	13.61	11.24	14.14	13.61	12.27
<b>2.60</b>	15.42	14.89	12.52	15.42	14.89	13.38
<b>2.77</b>	16.40	15.88	13.51	16.40	15.88	14.24
<b>2.90</b>	17.16	16.63	14.27	17.16	16.63	14.89
<b>2.97</b>	17.57	17.04	14.67	17.57	17.04	15.24
<b>3.00</b>	17.74	17.21	14.85	17.74	17.21	15.39

**FBH BUILD RATE\*\*:**

<b>1.25</b>	5.27	4.65	1.85	6.23	6.33	6.82
<b>1.50</b>	6.72	6.10	3.31	7.53	7.64	8.12
<b>1.75</b>	8.18	7.55	4.76	8.83	8.94	9.42
<b>2.00</b>	9.63	9.01	6.21	10.13	10.24	10.72
<b>2.25</b>	11.08	10.46	7.67	11.43	11.54	12.03
<b>2.50</b>	12.53	11.91	9.12	12.74	12.84	13.33

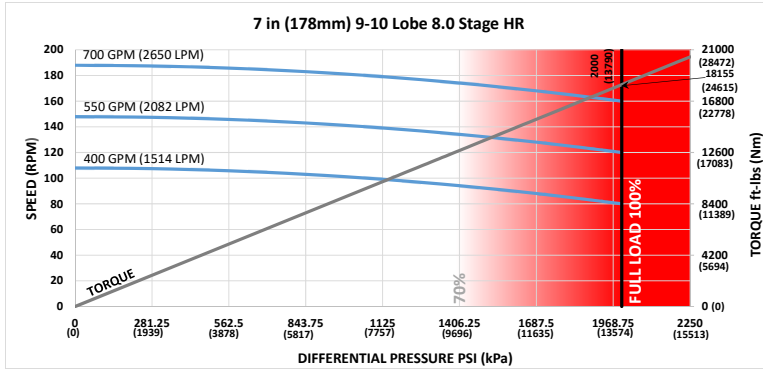
\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.

# 7 in (178 mm) 9-10 Lobe 8.0 Stage HR **SERIES 3**



<b>Lobe Configuration</b>	9-10 Lobe 8.0 Stage HR	
<b>Displacement</b>	0.27 rev/gal	0.07 rev/l
<b>Max Differential @ No Load</b>	2000 psi	13790 kPa
<b>Max Torque @ No Load</b>	18155 ft-lbs	24615 Nm
<b>Max Power</b>	553 HP	412 kW
<b>C = Overall Length</b>	391 in	9931 mm
<b>Weight</b>	2595 lbs	1177 kg

Flow Rate		Speed
GPM	LPM	RPM
400	1514	80 - 108
550	2082	120 - 148
700	2650	160 - 188

**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)	8-1/2 (216mm)	8-3/4 (222mm)	9-7/8 (251mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	2.94	2.35	-	2.94	2.35	2.61
<b>0.78</b>	5.45	4.86	2.24	5.45	4.86	4.74
<b>1.15</b>	7.83	7.24	4.62	7.83	7.24	6.77
<b>1.50</b>	10.08	9.50	6.87	10.08	9.50	8.68
<b>1.83</b>	12.20	11.62	9.00	12.20	11.62	10.48
<b>2.12</b>	14.07	13.48	10.86	14.07	13.48	12.07
<b>2.38</b>	15.74	15.16	12.53	15.74	15.16	13.49
<b>2.60</b>	17.15	16.57	13.95	17.15	16.57	14.69
<b>2.77</b>	18.25	17.67	15.04	18.25	17.67	15.62
<b>2.90</b>	19.08	18.50	15.88	19.08	18.50	16.33
<b>2.97</b>	19.53	18.95	16.33	19.53	18.95	16.72
<b>3.00</b>	19.73	19.14	16.52	19.73	19.14	16.88

## FBH BUILD RATE\*\*:

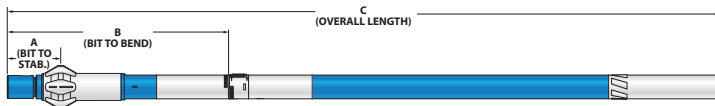
<b>1.25</b>	5.86	5.17	2.08	6.86	6.99	7.59
<b>1.50</b>	7.47	6.78	3.69	8.28	8.41	9.01
<b>1.75</b>	9.08	8.39	5.30	9.70	9.84	10.44
<b>2.00</b>	10.69	10.00	6.91	11.13	11.26	11.86
<b>2.25</b>	12.30	11.61	8.51	12.55	12.68	13.28
<b>2.50</b>	13.90	13.22	10.12	13.97	14.10	14.70

\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.

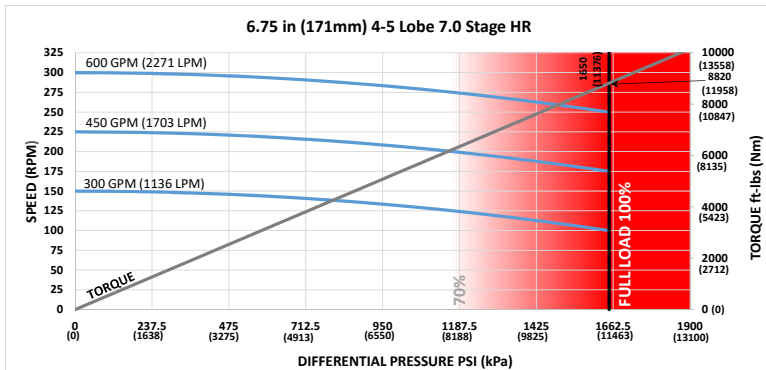
# MUD MOTORS



<b>Bit Size Range</b>	8-1/2 - 9-7/8 in	216 - 251 mm
<b>Bit Box Connection</b>	4-1/2 REGULAR	
<b>Dynamic Bearing Load On/Off Bottom</b>	100357 lbf	44600 daN
<b>Static Bearing Load On/Off Bottom</b>	355612 lbf	158200 daN
<b>Max. Overpull for Re-run</b>	432800 lbf	192500 daN
<b>Absolute Overpull</b>	721400 lbf	320900 daN
<b>Adjustable Make Up Torque</b>	25000 ft-lbs	33900 Nm
<b>A = Bit to Stabilizer (center)</b>	21.1 in	536 mm
<b>B = Bit to Bend</b>	<b>Adjustable</b>	66.7 in / 1694 mm
	<b>Fixed</b>	54.6 in / 1387 mm

7 in (178 mm) Bottom w/ 6-3/4 in (171 mm) 4-5 Lobe 7.0 Stage HR MUD LUBE	169
7 in (178 mm) Bottom w/ 6-3/4 in (171 mm) 7-8 Lobe 2.9 Stage HR MUD LUBE	170
7 in (178 mm) Bottom w/ 6-3/4 in (171 mm) 7-8 Lobe 5.0 Stage HR MUD LUBE	171
7 in (178 mm) Bottom w/ 6-3/4 in (171 mm) 7-8 Lobe 5.7 Stage HR MUD LUBE	172
7 in (178 mm) Bottom w/ 6-3/4 in (171 mm) 9-10 Lobe 8.0 Stage HR MUD LUBE	173
7 in (178 mm) 5-6 Lobe 5.3 Stage HR MUD LUBE	174
7 in (178 mm) 5-6 Lobe 8.1 Stage HR MUD LUBE	175
7 in (178 mm) 6-7 Lobe 6.5 Stage HR MUD LUBE	176
7 in (178 mm) 6-7 Lobe 8.4 Stage HR MUD LUBE	177
7 in (178 mm) 7-8 Lobe 8.5 Stage HR MUD LUBE	178
7 in (178 mm) 9-10 Lobe 8.0 Stage HR MUD LUBE	179

# 7 in (178 mm) Bottom w/ 6-3/4 in (171 mm) 4-5 Lobe 7.0 Stage HR MUD LUBE



Lobe Configuration	4-5 Lobe 7.0 Stage HR		Flow Rate		Speed
Displacement	0.49 rev/gal	0.13 rev/l	<b>GPM</b>	<b>LPM</b>	<b>RPM</b>
Max Differential @ No Load	1650 psi	11376 kPa	300	1136	100 - 150
Max Torque @ No Load	8820 ft-lbs	11958 Nm	450	1703	175 - 225
Max Power	420 HP	313 kW	600	2271	250 - 300
C = Overall Length	339.7 in	8628 mm			
Weight	2371 lbs	1075 kg			

**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)	8-1/2 (216mm)	8-3/4 (222mm)	9-7/8 (251mm)
BEND ANGLE	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	3.79	3.10	0.01	3.79	3.10	3.65
<b>0.78</b>	6.70	6.01	2.92	6.70	6.01	6.10
<b>1.15</b>	9.46	8.77	5.68	9.46	8.77	8.43
<b>1.50</b>	12.07	11.38	8.29	12.07	11.38	10.63
<b>1.83</b>	14.53	13.84	10.75	14.53	13.84	12.70
<b>2.12</b>	16.69	16.01	12.91	16.69	16.01	14.52
<b>2.38</b>	18.63	17.95	14.85	18.63	17.95	16.16
<b>2.60</b>	20.27	19.59	16.49	20.27	19.59	17.54
<b>2.77</b>	21.54	20.85	17.76	21.54	20.85	18.61
<b>2.90</b>	22.51	21.82	18.73	22.51	21.82	19.43
<b>2.97</b>	23.03	22.34	19.26	23.03	22.34	19.87
<b>3.00</b>	23.25	22.57	19.48	23.25	22.57	20.05

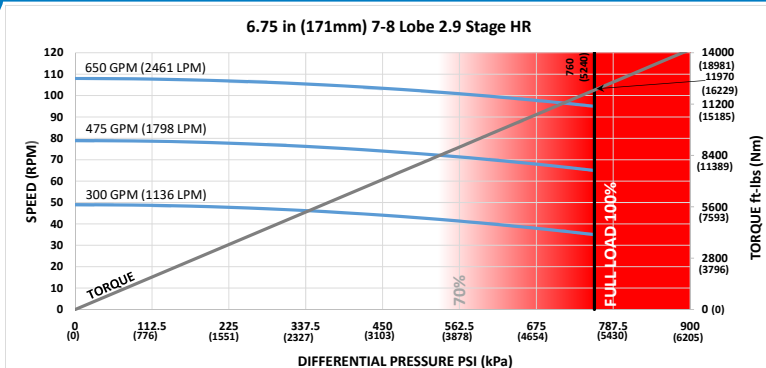
## FBH BUILD RATE\*\*:

<b>1.25</b>	7.00	6.18	2.52	8.43	8.61	9.44
<b>1.50</b>	8.86	8.05	4.38	10.08	10.26	11.09
<b>1.75</b>	10.73	9.91	6.25	11.73	11.91	12.74
<b>2.00</b>	12.59	11.78	8.11	13.38	13.56	14.39
<b>2.25</b>	14.46	13.64	9.98	15.03	15.21	16.04
<b>2.50</b>	16.32	15.51	11.85	16.68	16.86	17.69

\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.



Lobe Configuration	7-8 Lobe 2.9 Stage HR		Flow Rate		Speed
Displacement	0.17 rev/gal	0.04 rev/l	<b>GPM</b>	<b>LPM</b>	<b>RPM</b>
Max Differential @ No Load	760 psi	5240 kPa	300	1136	35 - 49
Max Torque @ No Load	11970 ft-lbs	16229 Nm	475	1798	65 - 79
Max Power	217 HP	161 kW	650	2461	95 - 108
C = Overall Length	349.7 in	8882 mm			
Weight	2457 lbs	1114 kg			

**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)	8-1/2 (216mm)	8-3/4 (222mm)	9-7/8 (251mm)
<b>BEND ANGLE</b>	<b>Degrees per 100 Feet (30 m)</b>			<b>Degrees per 100 Feet (30 m)</b>		
<b>0.39</b>	3.63	2.96	-	3.63	2.96	3.49
<b>0.78</b>	6.45	5.78	2.78	6.45	5.78	5.88
<b>1.15</b>	9.13	8.46	5.46	9.13	8.46	8.15
<b>1.50</b>	11.66	10.99	7.99	11.66	10.99	10.30
<b>1.83</b>	14.05	13.38	10.38	14.05	13.38	12.32
<b>2.12</b>	16.14	15.48	12.48	16.14	15.48	14.10
<b>2.38</b>	18.02	17.36	14.36	18.02	17.36	15.69
<b>2.60</b>	19.62	18.95	15.95	19.62	18.95	17.04
<b>2.77</b>	20.84	20.18	17.18	20.84	20.18	18.09
<b>2.90</b>	21.78	21.12	18.12	21.78	21.12	18.88
<b>2.97</b>	22.29	21.62	18.63	22.29	21.62	19.31
<b>3.00</b>	22.51	21.84	18.85	22.51	21.84	19.50

**FBH BUILD RATE\*\*:**

<b>1.25</b>	6.77	5.98	2.42	8.18	8.35	9.13
<b>1.50</b>	8.58	7.79	4.23	9.78	9.96	10.73
<b>1.75</b>	10.38	9.59	6.04	11.39	11.56	12.34
<b>2.00</b>	12.19	11.40	7.85	13.00	13.17	13.95
<b>2.25</b>	14.00	13.21	9.66	14.60	14.78	15.55
<b>2.50</b>	15.81	15.02	11.47	16.21	16.38	17.16

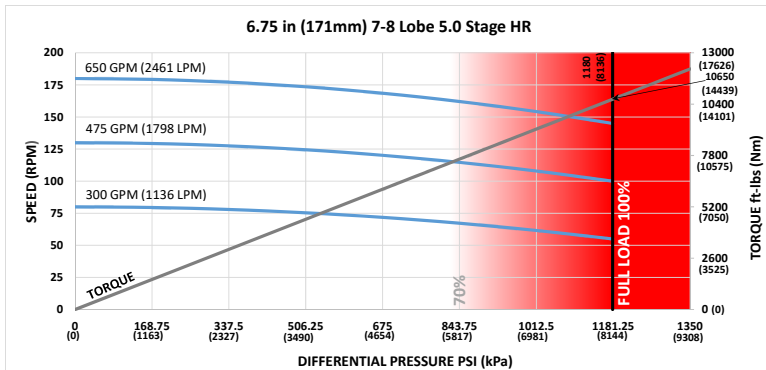
\*Stabilizers assumed as 1/8" undergage

\*\*Additional FBH Angles Available

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

# 7 in (178 mm) Bottom w/ 6-3/4 in (171 mm) 7-8 Lobe 5.0 Stage HR MUD LUBE



<b>Lobe Configuration</b>	7-8 Lobe 5.0 Stage HR	
<b>Displacement</b>	0.27 rev/gal	0.07 rev/l
<b>Max Differential @ No Load</b>	1180 psi	8136 kPa
<b>Max Torque @ No Load</b>	10650 ft-lbs	14439 Nm
<b>Max Power</b>	294 HP	219 kW
<b>C = Overall Length</b>	324.2 in	8235 mm
<b>Weight</b>	2409 lbs	1093 kg

Flow Rate		Speed
GPM	LPM	RPM
300	1136	55 - 80
475	1798	100 - 130
650	2461	145 - 180

**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)	8-1/2 (216mm)	8-3/4 (222mm)	9-7/8 (251mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	4.07	3.34	0.09	4.07	3.34	3.93
<b>0.78</b>	7.12	6.40	3.15	7.12	6.40	6.47
<b>1.15</b>	10.02	9.30	6.05	10.02	9.30	8.89
<b>1.50</b>	12.77	12.04	8.79	12.77	12.04	11.18
<b>1.83</b>	15.35	14.63	11.38	15.35	14.63	13.34
<b>2.12</b>	17.62	16.90	13.65	17.62	16.90	15.23
<b>2.38</b>	19.66	18.94	15.69	19.66	18.94	16.93
<b>2.60</b>	21.38	20.66	17.42	21.38	20.66	18.37
<b>2.77</b>	22.72	22.00	18.75	22.72	22.00	19.48
<b>2.90</b>	23.74	23.01	19.77	23.74	23.01	20.33
<b>2.97</b>	24.28	23.56	20.32	24.28	23.56	20.78
<b>3.00</b>	24.52	23.80	20.55	24.52	23.80	20.98

## FBH BUILD RATE\*\*:

<b>1.25</b>	7.39	6.53	2.68	8.85	9.06	9.98
<b>1.50</b>	9.35	8.49	4.64	10.57	10.78	11.70
<b>1.75</b>	11.31	10.45	6.60	12.29	12.50	13.42
<b>2.00</b>	13.26	12.41	8.56	14.01	14.22	15.14
<b>2.25</b>	15.22	14.37	10.52	15.73	15.94	16.86
<b>2.50</b>	17.18	16.33	12.48	17.45	17.66	18.58

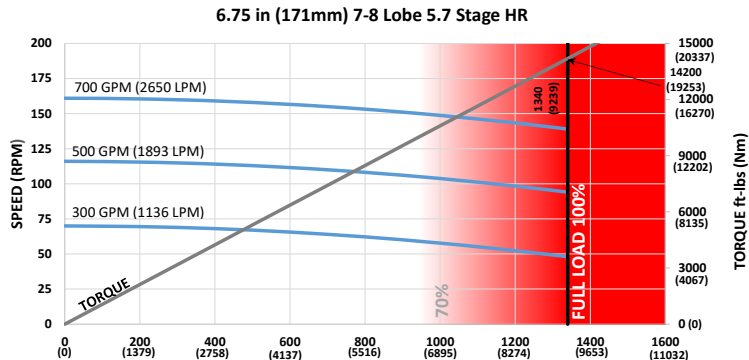
\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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# MUD MOTORS

171



<b>Lobe Configuration</b>	7-8 Lobe 5.7 Stage HR	
<b>Displacement</b>	0.23 rev/gal	0.06 rev/l
<b>Max Differential @ No Load</b>	1340 psi	9239 kPa
<b>Max Torque @ No Load</b>	14200 ft-lbs	19253 Nm
<b>Max Power</b>	376 HP	280 kW
<b>C = Overall Length</b>	389.7 in	9898 mm
<b>Weight</b>	2827 lbs	1282 kg

Flow Rate		Speed
GPM	LPM	RPM
300	1136	48 - 70
500	1893	94 - 116
700	2650	139 - 161

**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)	8-1/2 (216mm)	8-3/4 (222mm)	9-7/8 (251mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	3.10	2.51	-	3.10	2.51	2.96
<b>0.78</b>	5.62	5.02	2.35	5.62	5.02	5.14
<b>1.15</b>	8.01	7.41	4.73	8.01	7.41	7.21
<b>1.50</b>	10.27	9.67	7.00	10.27	9.67	9.16
<b>1.83</b>	12.40	11.80	9.13	12.40	11.80	11.01
<b>2.12</b>	14.27	13.67	11.00	14.27	13.67	12.63
<b>2.38</b>	15.95	15.35	12.68	15.95	15.35	14.08
<b>2.60</b>	17.37	16.77	14.10	17.37	16.77	15.31
<b>2.77</b>	18.46	17.87	15.20	18.46	17.87	16.26
<b>2.90</b>	19.30	18.71	16.03	19.30	18.71	16.99
<b>2.97</b>	19.75	19.16	16.49	19.75	19.16	17.38
<b>3.00</b>	19.95	19.35	16.68	19.95	19.35	17.55

### FBH BUILD RATE\*\*:

<b>1.25</b>	5.98	5.28	2.11	7.30	7.44	8.05
<b>1.50</b>	7.60	6.89	3.72	8.76	8.89	9.51
<b>1.75</b>	9.21	8.51	5.33	10.21	10.35	10.96
<b>2.00</b>	10.82	10.12	6.95	11.67	11.80	12.42
<b>2.25</b>	12.44	11.73	8.56	13.12	13.26	13.87
<b>2.50</b>	14.05	13.35	10.18	14.58	14.71	15.33

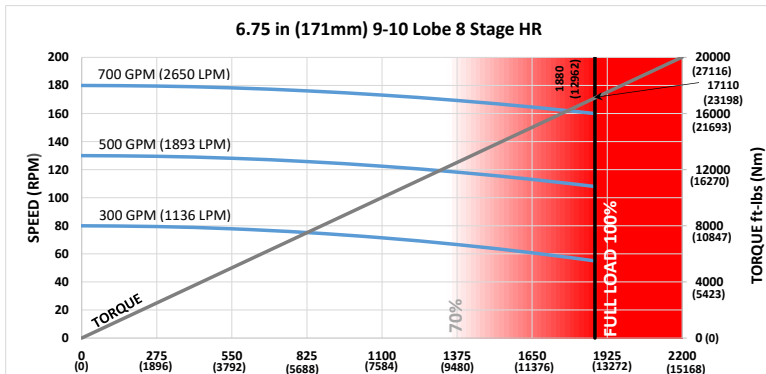
\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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

# 7 in (178 mm) Bottom w/ 6-3/4 in (171 mm) 9-10 Lobe 8.0 Stage HR MUD LUBE



Lobe Configuration	9-10 Lobe 8.0 Stage HR		Flow Rate	Speed
Displacement	0.26 rev/gal	0.07 rev/l	GPM	LPM
			300	1136
			500	1893
			700	2650
Max Differential @ No Load	1880 psi	12962 kPa		
Max Torque @ No Load	17110 ft-lbs	23198 Nm		
Max Power	521 HP	389 kW		
C = Overall Length	389.7 in	9898 mm		
Weight	2806 lbs	1273 kg		

**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)	8-1/2 (216mm)	8-3/4 (222mm)	9-7/8 (251mm)
BEND ANGLE	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	3.10	2.51	-	3.10	2.51	2.96
<b>0.78</b>	5.62	5.02	2.35	5.62	5.02	5.14
<b>1.15</b>	8.01	7.41	4.73	8.01	7.41	7.21
<b>1.50</b>	10.27	9.67	7.00	10.27	9.67	9.16
<b>1.83</b>	12.40	11.80	9.13	12.40	11.80	11.01
<b>2.12</b>	14.27	13.67	11.00	14.27	13.67	12.63
<b>2.38</b>	15.95	15.35	12.68	15.95	15.35	14.08
<b>2.60</b>	17.37	16.77	14.10	17.37	16.77	15.31
<b>2.77</b>	18.46	17.87	15.20	18.46	17.87	16.26
<b>2.90</b>	19.30	18.71	16.03	19.30	18.71	16.99
<b>2.97</b>	19.75	19.16	16.49	19.75	19.16	17.38
<b>3.00</b>	19.95	19.35	16.68	19.95	19.35	17.55

## FBH BUILD RATE\*\*:

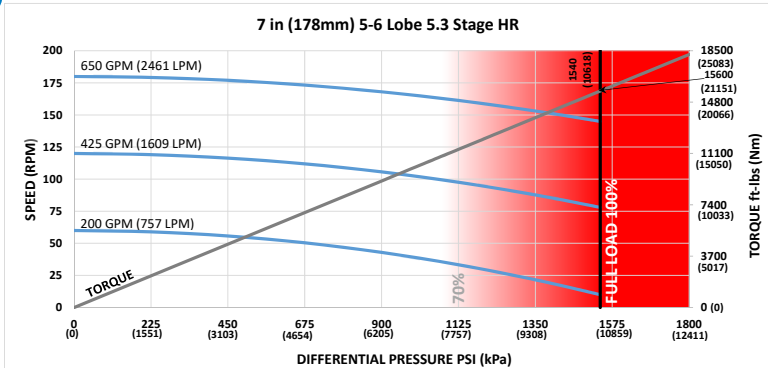
<b>1.25</b>	5.98	5.28	2.11	7.30	7.44	8.05
<b>1.50</b>	7.60	6.89	3.72	8.76	8.89	9.51
<b>1.75</b>	9.21	8.51	5.33	10.21	10.35	10.96
<b>2.00</b>	10.82	10.12	6.95	11.67	11.80	12.42
<b>2.25</b>	12.44	11.73	8.56	13.12	13.26	13.87
<b>2.50</b>	14.05	13.35	10.18	14.58	14.71	15.33

\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.

# 7 in (178 mm) 5-6 Lobe 5.3 Stage HR MUD LUBE



<b>Lobe Configuration</b>	5-6 Lobe 5.3 Stage HR	
<b>Displacement</b>	0.30 rev/gal	0.08 rev/l
<b>Max Differential @ No Load</b>	1540 psi	10618 kPa
<b>Max Torque @ No Load</b>	15600 ft-lbs	21151 Nm
<b>Max Power</b>	431 HP	321 kW
<b>C = Overall Length</b>	365.5 in	9284 mm
<b>Weight</b>	2460 lbs	1116 kg

Flow Rate		Speed
GPM	LPM	RPM
200	757	10 - 60
425	1609	78 - 120
650	2461	145 - 180

**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)	8-1/2 (216mm)	8-3/4 (222mm)	9-7/8 (251mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	3.40	2.76	-	3.40	2.76	3.26
<b>0.78</b>	6.09	5.46	2.59	6.09	5.46	5.56
<b>1.15</b>	8.65	8.01	5.15	8.65	8.01	7.75
<b>1.50</b>	11.07	10.43	7.57	11.07	10.43	9.82
<b>1.83</b>	13.34	12.71	9.84	13.34	12.71	11.77
<b>2.12</b>	15.35	14.71	11.85	15.35	14.71	13.48
<b>2.38</b>	17.14	16.51	13.64	17.14	16.51	15.02
<b>2.60</b>	18.66	18.02	15.16	18.66	18.02	16.31
<b>2.77</b>	19.83	19.20	16.34	19.83	19.20	17.32
<b>2.90</b>	20.73	20.10	17.23	20.73	20.10	18.09
<b>2.97</b>	21.21	20.58	17.72	21.21	20.58	18.50
<b>3.00</b>	21.42	20.79	17.93	21.42	20.79	18.68

### FBH BUILD RATE\*\*:

<b>1.25</b>	6.43	5.68	2.29	7.81	7.96	8.67
<b>1.50</b>	8.16	7.41	4.01	9.35	9.51	10.21
<b>1.75</b>	9.89	9.13	5.74	10.89	11.05	11.76
<b>2.00</b>	11.61	10.86	7.47	12.44	12.59	13.30
<b>2.25</b>	13.34	12.59	9.19	13.98	14.14	14.84
<b>2.50</b>	15.07	14.31	10.92	15.52	15.68	16.39

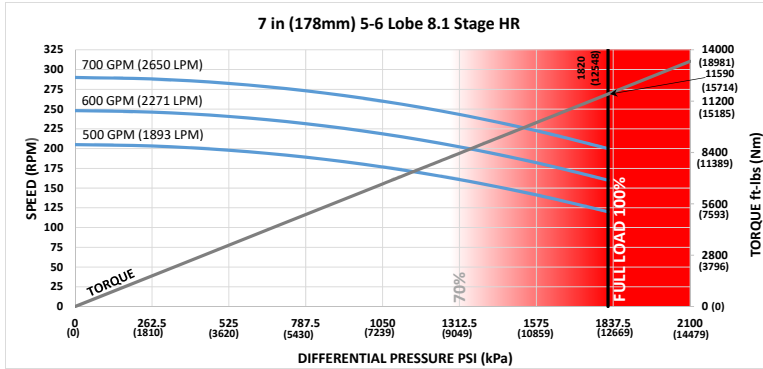
\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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

# 7 in (178 mm) 5-6 Lobe 8.1 Stage HR MUD LUBE



<b>Lobe Configuration</b>	5-6 Lobe 8.1 Stage HR	
<b>Displacement</b>	0.41 rev/gal	0.11 rev/l
<b>Max Differential @ No Load</b>	1820 psi	12548 kPa
<b>Max Torque @ No Load</b>	11590 ft-lbs	15714 Nm
<b>Max Power</b>	441 HP	329 kW
<b>C = Overall Length</b>	389.7 in	9898 mm
<b>Weight</b>	3441 lbs	1561 kg

Flow Rate		Speed
GPM	LPM	RPM
500	1893	120 - 205
600	2271	160 - 248
700	2650	200 - 290

**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)	8-1/2 (216mm)	8-3/4 (222mm)	9-7/8 (251mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	3.10	2.51	-	3.10	2.51	2.96
<b>0.78</b>	5.62	5.02	2.35	5.62	5.02	5.14
<b>1.15</b>	8.01	7.41	4.73	8.01	7.41	7.21
<b>1.50</b>	10.27	9.67	7.00	10.27	9.67	9.16
<b>1.83</b>	12.40	11.80	9.13	12.40	11.80	11.01
<b>2.12</b>	14.27	13.67	11.00	14.27	13.67	12.63
<b>2.38</b>	15.95	15.35	12.68	15.95	15.35	14.08
<b>2.60</b>	17.37	16.77	14.10	17.37	16.77	15.31
<b>2.77</b>	18.46	17.87	15.20	18.46	17.87	16.26
<b>2.90</b>	19.30	18.71	16.03	19.30	18.71	16.99
<b>2.97</b>	19.75	19.16	16.49	19.75	19.16	17.38
<b>3.00</b>	19.95	19.35	16.68	19.95	19.35	17.55

## FBH BUILD RATE\*\*:

<b>1.25</b>	5.98	5.28	2.11	7.30	7.44	8.05
<b>1.50</b>	7.60	6.89	3.72	8.76	8.89	9.51
<b>1.75</b>	9.21	8.51	5.33	10.21	10.35	10.96
<b>2.00</b>	10.82	10.12	6.95	11.67	11.80	12.42
<b>2.25</b>	12.44	11.73	8.56	13.12	13.26	13.87
<b>2.50</b>	14.05	13.35	10.18	14.58	14.71	15.33

\*Stabilizers assumed as 1/8" undergauge

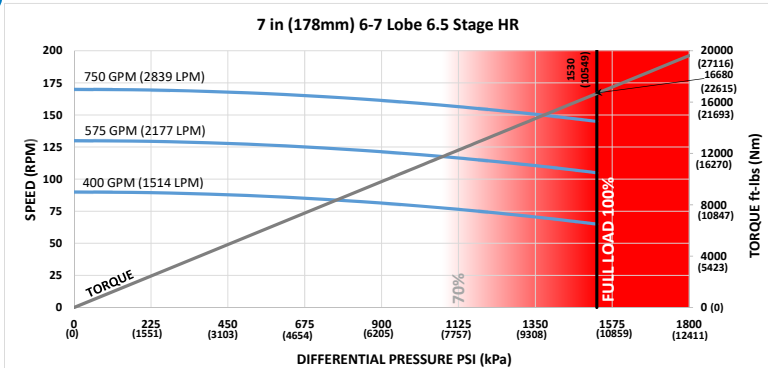
\*\*Additional FBH Angles Available

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# MUD MOTORS

175

# 7 in (178 mm) 6-7 Lobe 6.5 Stage HR MUD LUBE



<b>Lobe Configuration</b>	6-7 Lobe 6.5 Stage HR	
<b>Displacement</b>	0.23 rev/gal	0.06 rev/l
<b>Max Differential @ No Load</b>	1530 psi	10549 kPa
<b>Max Torque @ No Load</b>	16680 ft-lbs	22615 Nm
<b>Max Power</b>	461 HP	343 kW
<b>C = Overall Length</b>	404.7 in	10279 mm
<b>Weight</b>	2884 lbs	1308 kg

Flow Rate		Speed
GPM	LPM	RPM
400	1514	65 - 90
575	2177	105 - 130
750	2839	145 - 170

**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)	8-1/2 (216mm)	8-3/4 (222mm)	9-7/8 (251mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	2.94	2.37	-	2.94	2.37	2.80
<b>0.78</b>	5.36	4.79	2.21	5.36	4.79	4.90
<b>1.15</b>	7.66	7.08	4.51	7.66	7.08	6.91
<b>1.50</b>	9.83	9.26	6.68	9.83	9.26	8.80
<b>1.83</b>	11.88	11.30	8.73	11.88	11.30	10.58
<b>2.12</b>	13.68	13.10	10.53	13.68	13.10	12.15
<b>2.38</b>	15.29	14.72	12.14	15.29	14.72	13.56
<b>2.60</b>	16.65	16.08	13.51	16.65	16.08	14.75
<b>2.77</b>	17.71	17.14	14.56	17.71	17.14	15.67
<b>2.90</b>	18.51	17.94	15.37	18.51	17.94	16.37
<b>2.97</b>	18.95	18.38	15.81	18.95	18.38	16.75
<b>3.00</b>	19.13	18.56	15.99	19.13	18.56	16.91

## FBH BUILD RATE\*\*:

<b>1.25</b>	5.73	5.06	2.01	7.02	7.15	7.71
<b>1.50</b>	7.28	6.61	3.56	8.43	8.55	9.12
<b>1.75</b>	8.84	8.16	5.11	9.83	9.96	10.52
<b>2.00</b>	10.39	9.71	6.66	11.24	11.36	11.93
<b>2.25</b>	11.94	11.26	8.21	12.64	12.77	13.33
<b>2.50</b>	13.49	12.81	9.77	14.05	14.17	14.74

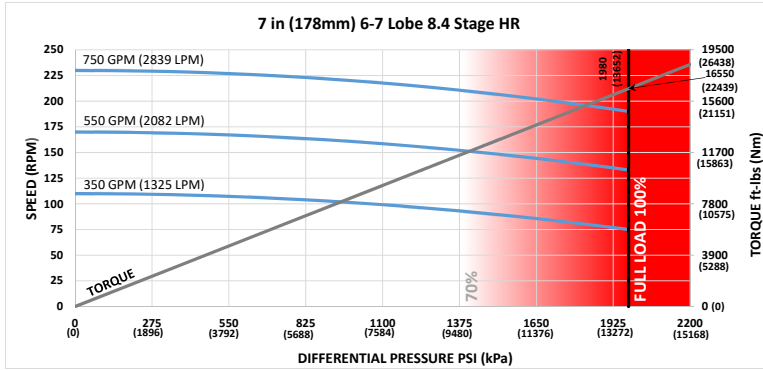
\*Stabilizers assumed as 1/8" undergage

\*\*Additional FBH Angles Available

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.

# 7 in (178 mm) 6-7 Lobe 8.4 Stage HR MUD LUBE



<b>Lobe Configuration</b>	6-7 Lobe 8.4 Stage HR	
<b>Displacement</b>	0.3 rev/gal	0.08 rev/l
<b>Max Differential @ No Load</b>	1980 psi	13652 kPa
<b>Max Torque @ No Load</b>	16550 ft-lbs	22439 Nm
<b>Max Power</b>	599 HP	446 kW
<b>C = Overall Length</b>	404.7 in	10279 mm
<b>Weight</b>	2884 lbs	1308 kg

Flow Rate		Speed
GPM	LPM	RPM
350	1325	75 - 110
550	2082	133 - 170
750	2839	190 - 230

**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)	8-1/2 (216mm)	8-3/4 (222mm)	9-7/8 (251mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	2.94	2.37	-	2.94	2.37	2.80
<b>0.78</b>	5.36	4.79	2.21	5.36	4.79	4.90
<b>1.15</b>	7.66	7.08	4.51	7.66	7.08	6.91
<b>1.50</b>	9.83	9.26	6.68	9.83	9.26	8.80
<b>1.83</b>	11.88	11.30	8.73	11.88	11.30	10.58
<b>2.12</b>	13.68	13.10	10.53	13.68	13.10	12.15
<b>2.38</b>	15.29	14.72	12.14	15.29	14.72	13.56
<b>2.60</b>	16.65	16.08	13.51	16.65	16.08	14.75
<b>2.77</b>	17.71	17.14	14.56	17.71	17.14	15.67
<b>2.90</b>	18.51	17.94	15.37	18.51	17.94	16.37
<b>2.97</b>	18.95	18.38	15.81	18.95	18.38	16.75
<b>3.00</b>	19.13	18.56	15.99	19.13	18.56	16.91

## FBH BUILD RATE\*\*:

<b>1.25</b>	5.73	5.06	2.01	7.02	7.15	7.71
<b>1.50</b>	7.28	6.61	3.56	8.43	8.55	9.12
<b>1.75</b>	8.84	8.16	5.11	9.83	9.96	10.52
<b>2.00</b>	10.39	9.71	6.66	11.24	11.36	11.93
<b>2.25</b>	11.94	11.26	8.21	12.64	12.77	13.33
<b>2.50</b>	13.49	12.81	9.77	14.05	14.17	14.74

\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.

# 7 in (178 mm) 7-8 Lobe 8.5 Stage HR MUD LUBE



<b>Lobe Configuration</b>	7-8 Lobe 8.5 Stage HR	
<b>Displacement</b>	0.26 rev/gal	0.07 rev/l
<b>Max Differential @ No Load</b>	1910 psi	13169 kPa
<b>Max Torque @ No Load</b>	18710 ft.-lbs	25367 Nm
<b>Max Power</b>	606 HP	452 kW
<b>C = Overall Length</b>	429.7 in	10914 mm
<b>Weight</b>	3205 lbs	1454 kg

Flow Rate		Speed
GPM	LPM	RPM
500	1893	100 - 130
625	2366	135 - 165
750	2839	170 - 200

**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)	8-1/2 (216mm)	8-3/4 (222mm)	9-7/8 (251mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	2.71	2.17	-	2.71	2.17	2.56
<b>0.78</b>	4.98	4.44	2.02	4.98	4.44	4.56
<b>1.15</b>	7.14	6.60	4.18	7.14	6.60	6.46
<b>1.50</b>	9.18	8.64	6.22	9.18	8.64	8.25
<b>1.83</b>	11.10	10.56	8.15	11.10	10.56	9.95
<b>2.12</b>	12.79	12.25	9.84	12.79	12.25	11.43
<b>2.38</b>	14.30	13.77	11.35	14.30	13.77	12.77
<b>2.60</b>	15.59	15.05	12.63	15.59	15.05	13.89
<b>2.77</b>	16.58	16.04	13.62	16.58	16.04	14.77
<b>2.90</b>	17.33	16.80	14.38	17.33	16.80	15.43
<b>2.97</b>	17.74	17.20	14.79	17.74	17.20	15.79
<b>3.00</b>	17.92	17.38	14.96	17.92	17.38	15.95

## FBH BUILD RATE\*\*:

<b>1.25</b>	5.36	4.72	1.86	6.60	6.71	7.20
<b>1.50</b>	6.82	6.18	3.32	7.93	8.04	8.53
<b>1.75</b>	8.28	7.64	4.78	9.26	9.37	9.86
<b>2.00</b>	9.73	9.10	6.23	10.58	10.69	11.19
<b>2.25</b>	11.19	10.55	7.69	11.91	12.02	12.52
<b>2.50</b>	12.65	12.01	9.15	13.24	13.35	13.85

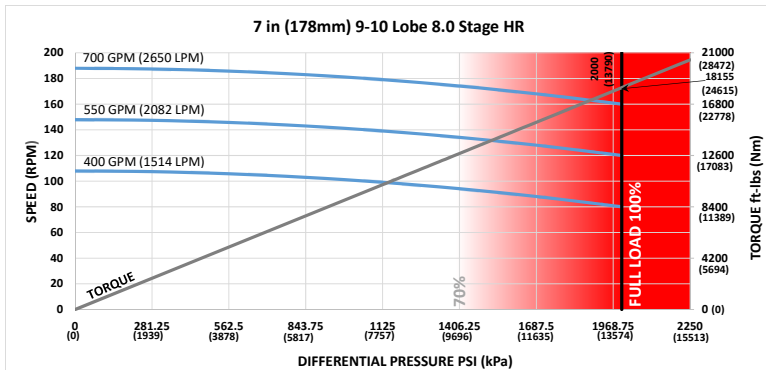
\*Stabilizers assumed as 1/8" undergage

\*\*Additional FBH Angles Available

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.

# 7 in (178 mm) 9-10 Lobe 8.0 Stage HR MUD LUBE



<b>Lobe Configuration</b>	9-10 Lobe 8.0 Stage HR	
<b>Displacement</b>	0.27 rev/gal	0.07 rev/l
<b>Max Differential @ No Load</b>	2000 psi	13790 kPa
<b>Max Torque @ No Load</b>	18155 ft-lbs	24615 Nm
<b>Max Power</b>	553 HP	412 kW
<b>C = Overall Length</b>	389.7 in	9898 mm
<b>Weight</b>	2824 lbs	1281 kg

Flow Rate		Speed
GPM	LPM	RPM
400	1514	80 - 108
550	2082	120 - 148
700	2650	160 - 188

**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)	8-1/2 (216mm)	8-3/4 (222mm)	9-7/8 (251mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	3.10	2.51	-	3.10	2.51	2.96
<b>0.78</b>	5.62	5.02	2.35	5.62	5.02	5.14
<b>1.15</b>	8.01	7.41	4.73	8.01	7.41	7.21
<b>1.50</b>	10.27	9.67	7.00	10.27	9.67	9.16
<b>1.83</b>	12.40	11.80	9.13	12.40	11.80	11.01
<b>2.12</b>	14.27	13.67	11.00	14.27	13.67	12.63
<b>2.38</b>	15.95	15.35	12.68	15.95	15.35	14.08
<b>2.60</b>	17.37	16.77	14.10	17.37	16.77	15.31
<b>2.77</b>	18.46	17.87	15.20	18.46	17.87	16.26
<b>2.90</b>	19.30	18.71	16.03	19.30	18.71	16.99
<b>2.97</b>	19.75	19.16	16.49	19.75	19.16	17.38
<b>3.00</b>	19.95	19.35	16.68	19.95	19.35	17.55

## FBH BUILD RATE\*\*:

<b>1.25</b>	5.98	5.28	2.11	7.30	7.44	8.05
<b>1.50</b>	7.60	6.89	3.72	8.76	8.89	9.51
<b>1.75</b>	9.21	8.51	5.33	10.21	10.35	10.96
<b>2.00</b>	10.82	10.12	6.95	11.67	11.80	12.42
<b>2.25</b>	12.44	11.73	8.56	13.12	13.26	13.87
<b>2.50</b>	14.05	13.35	10.18	14.58	14.71	15.33

\*Stabilizers assumed as 1/8" undergauge

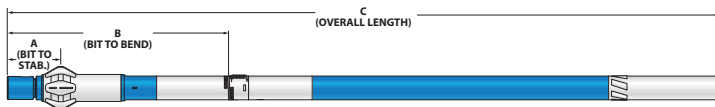
\*\*Additional FBH Angles Available

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# MUD MOTORS

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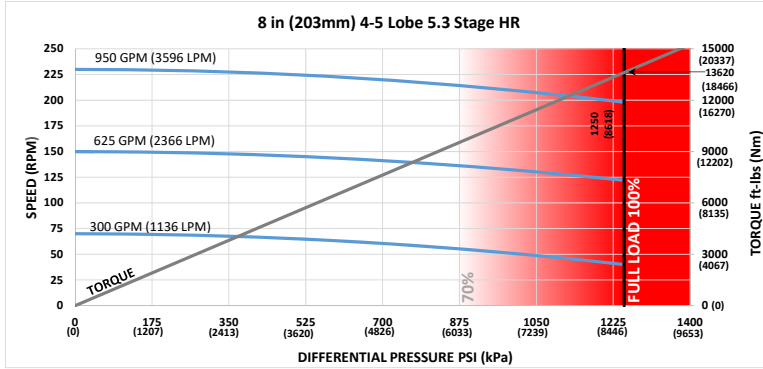
## 8 in (203 mm) SERIES 1



<b>Bit Size Range</b>	9-7/8 - 12-1/4 in	251 - 311 mm
<b>Bit Box Connection</b>	6-5/8 REGULAR	
<b>Dynamic Bearing Load On/Off Bottom</b>	162510 lbf	72300 daN
<b>Static Bearing Load On/Off Bottom</b>	573485 lbf	255100 daN
<b>Max. Overpull for Re-run</b>	554100 lbf	246500 daN
<b>Absolute Overpull</b>	923500 lbf	410800 daN
<b>Adjustable Make Up Torque</b>	40000 ft-lbs	54200 Nm
<b>A = Bit to Stabilizer (center)</b>	19.26 in	489 mm
<b>B = Bit to Bend</b>	<b>Adjustable</b>	87 in 2210 mm
	<b>Fixed</b>	72.3 in 1836 mm

8 in (203 mm) 4-5 Lobe 5.3 Stage HR SERIES 1	181
8 in (203 mm) 5-6 Lobe 3.0 Stage SERIES 1	182
8 in (203 mm) 5-6 Lobe 3.0 Stage HR SERIES 1	183
8 in (203 mm) 6-7 Lobe 4.0 Stage HR SERIES 1	184
8 in (203 mm) 6-7 Lobe 5.0 Stage HR SERIES 1	185
8 in (203 mm) 7-8 Lobe 3.0 Stage SERIES 1	186
8 in (203 mm) 7-8 Lobe 3.0 Stage HR SERIES 1	187
8 in (203 mm) 7-8 Lobe 3.4 Stage HR SERIES 1	188
8 in (203 mm) 7-8 Lobe 4.0 Stage HR SERIES 1	189
8 in (203 mm) 7-8 Lobe 5.9 Stage HR SERIES 1	190

# 8 in (203 mm) 4-5 Lobe 5.3 Stage HR SERIES 1



<b>Lobe Configuration</b>	4-5 Lobe 5.3 Stage HR	
<b>Displacement</b>	0.24 rev/gal	0.06 rev/l
<b>Max Differential @ No Load</b>	1250 psi	8618 kPa
<b>Max Torque @ No Load</b>	13620 ft-lbs	18466 Nm
<b>Max Power</b>	513 HP	383 kW
<b>C = Overall Length</b>	380.7 in	9670 mm
<b>Weight</b>	4378 lbs	1986 kg

Flow Rate		Speed
GPM	LPM	RPM
300	1136	40 - 70
625	2366	122 - 150
950	3596	198 - 230

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	9-7/8 (251mm)	10-5/8 (270mm)	12-1/4 (311mm)	9-7/8 (251mm)	10-5/8 (270mm)	12-1/4 (311mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	-	-	-	2.18	2.62	-
<b>0.78</b>	2.42	0.97	-	4.25	4.68	5.63
<b>1.15</b>	4.89	3.44	0.30	6.21	6.64	7.59
<b>1.50</b>	7.23	5.78	2.64	8.06	8.50	9.45
<b>1.83</b>	9.43	7.98	4.84	9.81	10.25	11.20
<b>2.12</b>	11.37	9.92	6.78	11.37	11.79	12.74
<b>2.38</b>	13.11	11.66	8.52	13.11	13.17	14.11
<b>2.60</b>	14.58	13.13	9.99	14.58	14.33	15.28
<b>2.77</b>	15.71	14.27	11.13	15.71	15.23	16.18
<b>2.90</b>	16.58	15.13	12.00	16.58	15.92	16.87
<b>2.97</b>	17.05	15.60	12.46	17.05	16.29	17.24
<b>3.00</b>	17.25	15.80	12.66	17.25	16.45	17.40

## FBH BUILD RATE\*\*:

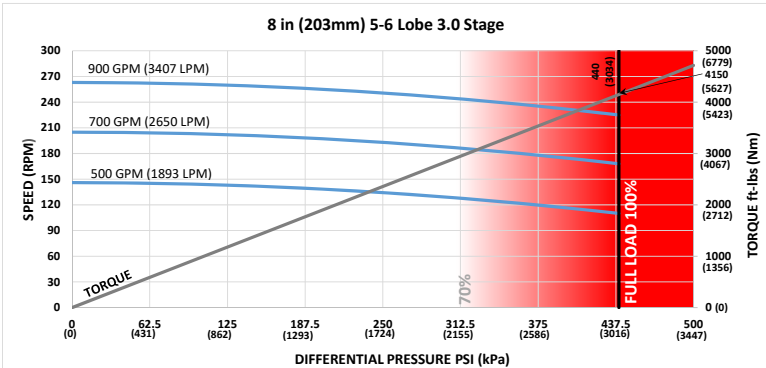
<b>1.25</b>	5.05	3.35	-	7.11	7.55	8.50
<b>1.50</b>	6.72	5.02	1.33	8.51	8.95	9.90
<b>1.75</b>	8.39	6.69	3.00	9.91	10.35	11.30
<b>2.00</b>	10.06	8.36	4.67	11.31	11.75	12.70
<b>2.25</b>	11.73	10.03	6.34	12.71	13.15	14.10
<b>2.50</b>	13.40	11.70	8.01	14.11	14.55	15.50

\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.

# MUD MOTORS



<b>Lobe Configuration</b>	5-6 Lobe 3.0 Stage	
<b>Displacement</b>	0.29 rev/gal	0.08 rev/l
<b>Max Differential @ No Load</b>	440 psi	3034 kPa
<b>Max Torque @ No Load</b>	4150 ft-lbs	5627 Nm
<b>Max Power</b>	178 HP	133 kW
<b>C = Overall Length</b>	264.33 in	6714 mm
<b>Weight</b>	3202 lbs	1452 kg

<b>Flow Rate</b>		<b>Speed</b>
<b>GPM</b>	<b>LPM</b>	<b>RPM</b>
500	1893	110 - 146
700	2650	168 - 205
900	3407	225 - 263

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

**ADJUSTABLE BUILD RATE:**

Hole Size	SLICK			STABILIZED*		
	9-7/8 (251mm)	10-5/8 (270mm)	12-1/4 (311mm)	9-7/8 (251mm)	10-5/8 (270mm)	12-1/4 (311mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	-	-	-	3.50	4.50	-
<b>0.78</b>	3.69	1.55	-	6.12	7.12	9.29
<b>1.15</b>	7.35	5.20	0.56	8.60	9.61	11.78
<b>1.50</b>	10.81	8.66	4.02	10.95	11.96	14.13
<b>1.83</b>	14.07	11.93	7.28	14.07	14.18	16.35
<b>2.12</b>	16.94	14.79	10.15	16.94	16.13	18.30
<b>2.38</b>	19.51	17.36	12.72	19.51	17.87	20.05
<b>2.60</b>	21.68	19.54	14.90	21.68	19.54	21.53
<b>2.77</b>	23.36	21.22	16.58	23.36	21.22	22.67
<b>2.90</b>	24.65	22.51	17.87	24.65	22.51	23.54
<b>2.97</b>	25.34	23.20	18.56	25.34	23.20	24.02
<b>3.00</b>	25.64	23.50	18.86	25.64	23.50	24.22

**FBH BUILD RATE\*\*:**

<b>1.25</b>	7.57	5.05	-	10.13	11.14	13.31
<b>1.50</b>	10.04	7.52	2.06	11.98	12.99	15.16
<b>1.75</b>	12.51	9.99	4.54	13.84	14.84	17.01
<b>2.00</b>	14.98	12.46	7.01	15.69	16.69	18.87
<b>2.25</b>	17.45	14.93	9.48	17.54	18.54	20.72
<b>2.50</b>	19.92	17.41	11.95	19.92	20.40	22.57

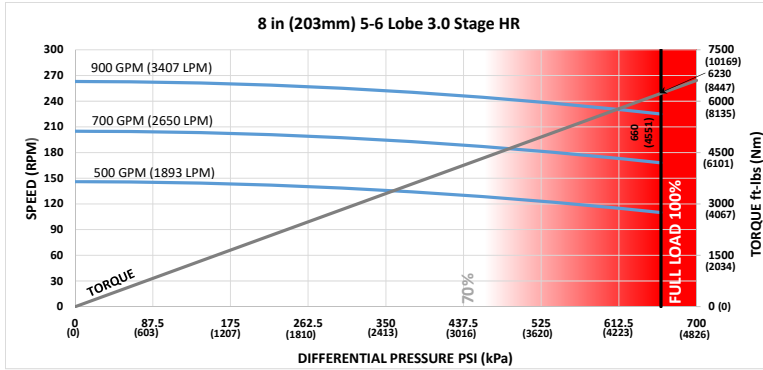
\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.

# 8 in (203 mm) 5-6 Lobe 3.0 Stage HR SERIES 1



<b>Lobe Configuration</b>	5-6 Lobe 3.0 Stage HR	
<b>Displacement</b>	0.29 rev/gal	0.08 rev/l
<b>Max Differential @ No Load</b>	660 psi	4551 kPa
<b>Max Torque @ No Load</b>	6230 ft-lbs	8447 Nm
<b>Max Power</b>	267 HP	199 kW
<b>C = Overall Length</b>	264.33 in	6714 mm
<b>Weight</b>	3202 lbs	1452 kg

Flow Rate		Speed
GPM	LPM	RPM
500	1893	110 - 146
700	2650	168 - 205
900	3407	225 - 263

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	9-7/8 (251mm)	10-5/8 (270mm)	12-1/4 (311mm)	9-7/8 (251mm)	10-5/8 (270mm)	12-1/4 (311mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	-	-	-	3.50	4.50	-
<b>0.78</b>	3.69	1.55	-	6.12	7.12	9.29
<b>1.15</b>	7.35	5.20	0.56	8.60	9.61	11.78
<b>1.50</b>	10.81	8.66	4.02	10.95	11.96	14.13
<b>1.83</b>	14.07	11.93	7.28	14.07	14.18	16.35
<b>2.12</b>	16.94	14.79	10.15	16.94	16.13	18.30
<b>2.38</b>	19.51	17.36	12.72	19.51	17.87	20.05
<b>2.60</b>	21.68	19.54	14.90	21.68	19.54	21.53
<b>2.77</b>	23.36	21.22	16.58	23.36	21.22	22.67
<b>2.90</b>	24.65	22.51	17.87	24.65	22.51	23.54
<b>2.97</b>	25.34	23.20	18.56	25.34	23.20	24.02
<b>3.00</b>	25.64	23.50	18.86	25.64	23.50	24.22

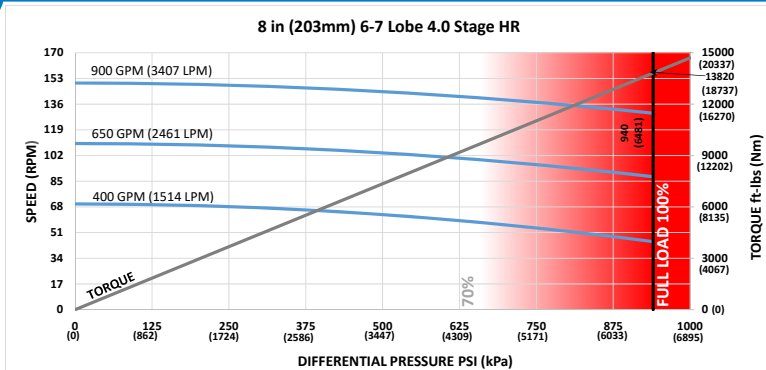
## FBH BUILD RATE\*\*:

<b>1.25</b>	7.57	5.05	-	10.13	11.14	13.31
<b>1.50</b>	10.04	7.52	2.06	11.98	12.99	15.16
<b>1.75</b>	12.51	9.99	4.54	13.84	14.84	17.01
<b>2.00</b>	14.98	12.46	7.01	15.69	16.69	18.87
<b>2.25</b>	17.45	14.93	9.48	17.54	18.54	20.72
<b>2.50</b>	19.92	17.41	11.95	19.39	20.40	22.57

\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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Lobe Configuration	6-7 Lobe 4.0 Stage HR		Flow Rate		Speed
Displacement	0.17 rev/gal	0.04 rev/l	<b>GPM</b>	<b>LPM</b>	<b>RPM</b>
Max Differential @ No Load	940 psi	6481 kPa	400	1514	45 - 70
Max Torque @ No Load	13820 ft-lbs	18737 Nm	650	2461	88 - 110
Max Power	342 HP	255 kW	900	3407	130 - 150
C = Overall Length	358.7 in	9111 mm			
Weight	4199 lbs	1905 kg			

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

### ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	9-7/8 (251mm)	10-5/8 (270mm)	12-1/4 (311mm)	9-7/8 (251mm)	10-5/8 (270mm)	12-1/4 (311mm)
BEND ANGLE	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	-	-	-	2.35	2.85	-
<b>0.78</b>	2.58	1.04	-	4.51	5.01	6.09
<b>1.15</b>	5.22	3.67	0.33	6.56	7.06	8.14
<b>1.50</b>	7.71	6.16	2.82	8.50	9.00	10.08
<b>1.83</b>	10.06	8.51	5.17	10.33	10.83	11.91
<b>2.12</b>	12.12	10.58	7.23	12.12	12.43	13.52
<b>2.38</b>	13.97	12.43	9.09	13.97	13.87	14.96
<b>2.60</b>	15.54	14.00	10.65	15.54	15.09	16.18
<b>2.77</b>	16.75	15.21	11.86	16.75	16.04	17.12
<b>2.90</b>	17.67	16.13	12.79	17.67	16.76	17.84
<b>2.97</b>	18.17	16.63	13.29	18.17	17.14	18.23
<b>3.00</b>	18.39	16.84	13.50	18.39	17.31	18.39

### FBH BUILD RATE\*\*:

<b>1.25</b>	5.39	3.57	-	7.54	8.04	9.12
<b>1.50</b>	7.17	5.35	1.42	9.01	9.51	10.59
<b>1.75</b>	8.95	7.13	3.20	10.48	10.98	12.06
<b>2.00</b>	10.72	8.91	4.98	11.95	12.45	13.53
<b>2.25</b>	12.50	10.69	6.76	13.42	13.92	15.01
<b>2.50</b>	14.28	12.47	8.54	14.89	15.39	16.48

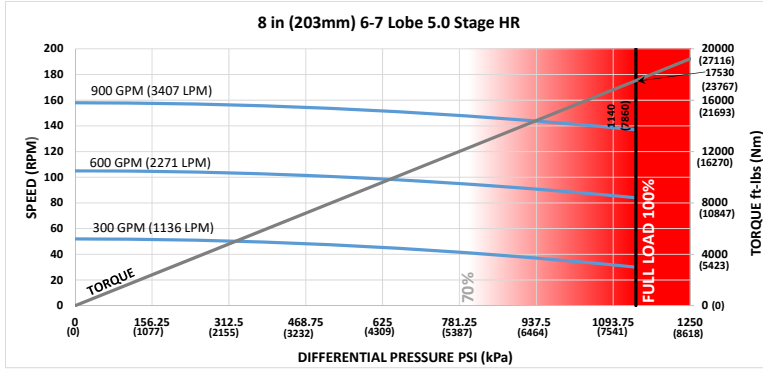
\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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

# 8 in (203 mm) 6-7 Lobe 5.0 Stage HR SERIES 1



<b>Lobe Configuration</b>	6-7 Lobe 5.0 Stage HR		<b>Flow Rate</b>		<b>Speed</b>
<b>Displacement</b>	0.18 rev/gal	0.05 rev/l	<b>GPM</b>	<b>LPM</b>	<b>RPM</b>
<b>Max Differential @ No Load</b>	1140 psi	7860 kPa	300	1136	30 - 52
<b>Max Torque @ No Load</b>	17530 ft-lbs	23767 Nm	600	2271	84 - 105
<b>Max Power</b>	457 HP	341 kW	900	3407	137 - 158
<b>C = Overall Length</b>	402.7 in	10229 mm			
<b>Weight</b>	4622 lbs	2097 kg			

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	9-7/8 (251mm)	10-5/8 (270mm)	12-1/4 (311mm)	9-7/8 (251mm)	10-5/8 (270mm)	12-1/4 (311mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	-	-	-	2.03	2.42	-
<b>0.78</b>	2.27	0.90	-	4.01	4.40	5.24
<b>1.15</b>	4.60	3.23	0.27	5.89	6.28	7.11
<b>1.50</b>	6.80	5.44	2.48	7.67	8.05	8.89
<b>1.83</b>	8.88	7.52	4.56	9.34	9.73	10.57
<b>2.12</b>	10.71	9.34	6.38	10.82	11.20	12.04
<b>2.38</b>	12.34	10.98	8.02	12.34	12.52	13.36
<b>2.60</b>	13.73	12.36	9.41	13.73	13.64	14.48
<b>2.77</b>	14.80	13.43	10.48	14.80	14.50	15.34
<b>2.90</b>	15.62	14.25	11.30	15.62	15.16	16.00
<b>2.97</b>	16.06	14.69	11.74	16.06	15.52	16.36
<b>3.00</b>	16.25	14.88	11.93	16.25	15.67	16.51

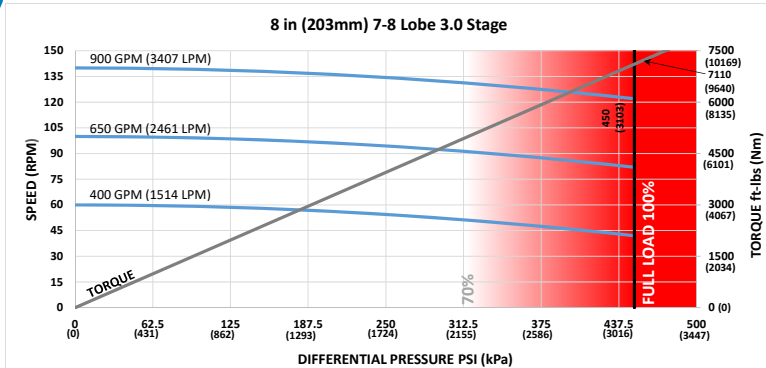
## FBH BUILD RATE\*\*:

<b>1.25</b>	4.75	3.15	-	6.73	7.12	7.95
<b>1.50</b>	6.32	4.72	1.25	8.06	8.45	9.29
<b>1.75</b>	7.90	6.29	2.82	9.40	9.79	10.62
<b>2.00</b>	9.47	7.87	4.39	10.74	11.12	11.96
<b>2.25</b>	11.05	9.44	5.97	12.07	12.46	13.29
<b>2.50</b>	12.62	11.02	7.54	13.41	13.79	14.63

\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.



Lobe Configuration	7-8 Lobe 3.0 Stage		Flow Rate		Speed
Displacement	0.16 rev/gal	0.04 rev/l	GPM	LPM	RPM
Max Differential @ No Load	450 psi	3103 kPa	400	1514	42 - 60
Max Torque @ No Load	7110 ft-lbs	9640 Nm	650	2461	82 - 100
Max Power	165 HP	123 kW	900	3407	122 - 140
C = Overall Length	312.7 in	7943 mm			
Weight	3840 lbs	1742 kg			

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

### ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	9-7/8 (251mm)	10-5/8 (270mm)	12-1/4 (311mm)	9-7/8 (251mm)	10-5/8 (270mm)	12-1/4 (311mm)
BEND ANGLE	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
0.39	-	-	-	2.80	3.48	-
0.78	3.02	1.23	-	5.17	5.85	7.33
1.15	6.07	4.28	0.41	7.43	8.11	9.58
1.50	8.96	7.17	3.30	9.56	10.24	11.72
1.83	11.68	9.89	6.02	11.68	12.25	13.73
2.12	14.07	12.28	8.41	14.07	14.02	15.50
2.38	16.21	14.42	10.55	16.21	15.61	17.08
2.60	18.03	16.24	12.37	18.03	16.95	18.42
2.77	19.43	17.64	13.77	19.43	17.98	19.46
2.90	20.50	18.71	14.84	20.50	18.78	20.25
2.97	21.08	19.29	15.42	21.08	19.29	20.68
3.00	21.32	19.54	15.67	21.32	19.54	20.86

### FBH BUILD RATE\*\*:

1.25	6.26	4.16	-	8.62	9.30	10.78
1.50	8.32	6.22	1.68	10.26	10.94	12.42
1.75	10.39	8.29	3.74	11.90	12.58	14.06
2.00	12.45	10.35	5.80	13.54	14.22	15.70
2.25	14.51	12.41	7.86	15.18	15.86	17.34
2.50	16.57	14.47	9.92	16.82	17.50	18.98

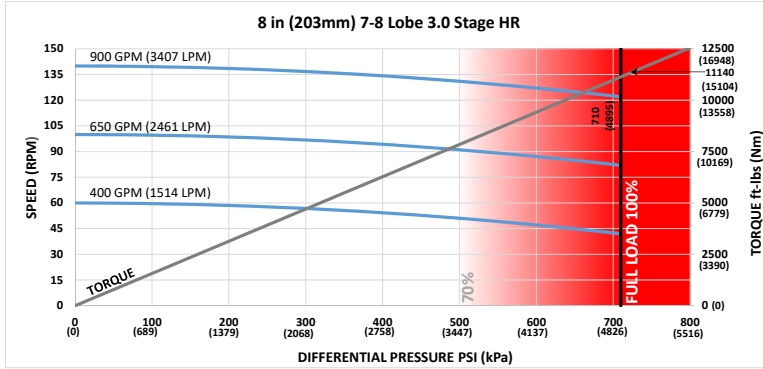
\*Stabilizers assumed as 1/8" undergage

\*\*Additional FBH Angles Available

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.

# 8 in (203 mm) 7-8 Lobe 3.0 Stage HR SERIES 1



<b>Lobe Configuration</b>	7-8 Lobe 3.0 Stage HR	
<b>Displacement</b>	0.16 rev/gal	0.04 rev/l
<b>Max Differential @ No Load</b>	710 psi	4895 kPa
<b>Max Torque @ No Load</b>	11140 ft-lbs	15104 Nm
<b>Max Power</b>	259 HP	193 kW
<b>C = Overall Length</b>	312.7 in	7943 mm
<b>Weight</b>	3840 lbs	1742 kg

Flow Rate		Speed
GPM	LPM	RPM
400	1514	42 - 60
650	2461	82 - 100
900	3407	122 - 140

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	9-7/8 (251mm)	10-5/8 (270mm)	12-1/4 (311mm)	9-7/8 (251mm)	10-5/8 (270mm)	12-1/4 (311mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	-	-	-	2.80	3.48	-
<b>0.78</b>	3.02	1.23	-	5.17	5.85	7.33
<b>1.15</b>	6.07	4.28	0.41	7.43	8.11	9.58
<b>1.50</b>	8.96	7.17	3.30	9.56	10.24	11.72
<b>1.83</b>	11.68	9.89	6.02	11.68	12.25	13.73
<b>2.12</b>	14.07	12.28	8.41	14.07	14.02	15.50
<b>2.38</b>	16.21	14.42	10.55	16.21	15.61	17.08
<b>2.60</b>	18.03	16.24	12.37	18.03	16.95	18.42
<b>2.77</b>	19.43	17.64	13.77	19.43	17.98	19.46
<b>2.90</b>	20.50	18.71	14.84	20.50	18.78	20.25
<b>2.97</b>	21.08	19.29	15.42	21.08	19.29	20.68
<b>3.00</b>	21.32	19.54	15.67	21.32	19.54	20.86

## FBH BUILD RATE\*\*:

<b>1.25</b>	6.26	4.16	-	8.62	9.30	10.78
<b>1.50</b>	8.32	6.22	1.68	10.26	10.94	12.42
<b>1.75</b>	10.39	8.29	3.74	11.90	12.58	14.06
<b>2.00</b>	12.45	10.35	5.80	13.54	14.22	15.70
<b>2.25</b>	14.51	12.41	7.86	15.18	15.86	17.34
<b>2.50</b>	16.57	14.47	9.92	16.82	17.50	18.98

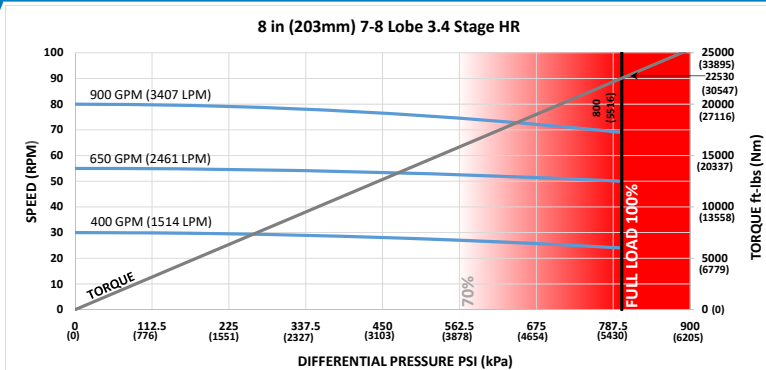
\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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# MUD MOTORS

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<b>Lobe Configuration</b>	7-8 Lobe 3.4 Stage HR	
<b>Displacement</b>	0.09 rev/gal	0.02 rev/l
<b>Max Differential @ No Load</b>	800 psi	5516 kPa
<b>Max Torque @ No Load</b>	22530 ft-lbs	30547 Nm
<b>Max Power</b>	296 HP	221 kW
<b>C = Overall Length</b>	452.7 in	11499 mm
<b>Weight</b>	5180 lbs	2350 kg

<b>Flow Rate</b>		<b>Speed</b>
<b>GPM</b>	<b>LPM</b>	<b>RPM</b>
400	1514	24 - 30
650	2461	50 - 55
900	3407	69 - 80

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	9-7/8 (251mm)	10-5/8 (270mm)	12-1/4 (311mm)	9-7/8 (251mm)	10-5/8 (270mm)	12-1/4 (311mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	-	-	-	1.76	2.06	-
<b>0.78</b>	2.00	0.79	-	3.57	3.87	4.51
<b>1.15</b>	4.06	2.85	0.23	5.28	5.58	6.22
<b>1.50</b>	6.00	4.80	2.18	6.90	7.19	7.84
<b>1.83</b>	7.84	6.63	4.02	8.42	8.72	9.37
<b>2.12</b>	9.45	8.25	5.63	9.76	10.06	10.71
<b>2.38</b>	10.90	9.69	7.08	10.96	11.26	11.91
<b>2.60</b>	12.13	10.92	8.30	12.13	12.28	12.93
<b>2.77</b>	13.07	11.87	9.25	13.07	13.07	13.71
<b>2.90</b>	13.80	12.59	9.97	13.80	13.67	14.31
<b>2.97</b>	14.19	12.98	10.36	14.19	13.99	14.64
<b>3.00</b>	14.35	13.15	10.53	14.35	14.13	14.78

## FBH BUILD RATE\*\*:

<b>1.25</b>	4.19	2.77	-	6.00	6.29	6.94
<b>1.50</b>	5.58	4.16	1.09	7.20	7.50	8.15
<b>1.75</b>	6.97	5.55	2.48	8.41	8.71	9.36
<b>2.00</b>	8.36	6.95	3.87	9.62	9.91	10.56
<b>2.25</b>	9.76	8.34	5.27	10.82	11.12	11.77
<b>2.50</b>	11.15	9.73	6.66	12.03	12.33	12.98

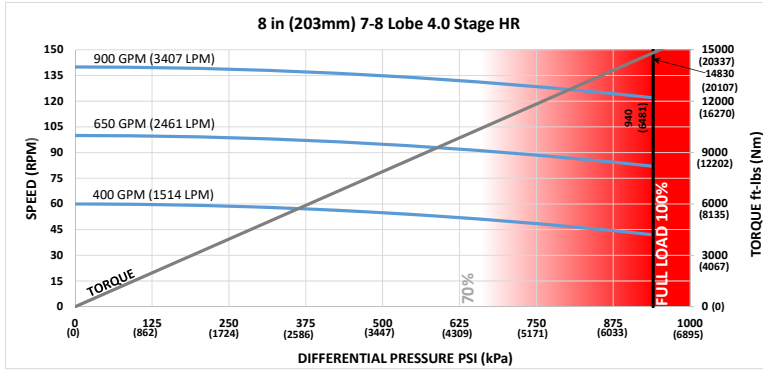
\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.

# 8 in (203 mm) 7-8 Lobe 4.0 Stage HR SERIES 1



<b>Lobe Configuration</b>	7-8 Lobe 4.0 Stage HR	
<b>Displacement</b>	0.16 rev/gal	0.04 rev/l
<b>Max Differential @ No Load</b>	940 psi	6481 kPa
<b>Max Torque @ No Load</b>	14830 ft-lbs	20107 Nm
<b>Max Power</b>	344 HP	257 kW
<b>C = Overall Length</b>	355.95 in	9041 mm
<b>Weight</b>	4311 lbs	1956 kg

Flow Rate		Speed
GPM	LPM	RPM
400	1514	42 - 60
650	2461	82 - 100
900	3407	122 - 140

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	9-7/8 (251mm)	10-5/8 (270mm)	12-1/4 (311mm)	9-7/8 (251mm)	10-5/8 (270mm)	12-1/4 (311mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	-	-	-	2.37	2.88	-
<b>0.78</b>	2.61	1.05	-	4.54	5.05	6.15
<b>1.15</b>	5.26	3.70	0.33	6.60	7.11	8.21
<b>1.50</b>	7.77	6.22	2.84	8.55	9.06	10.16
<b>1.83</b>	10.14	8.59	5.21	10.39	10.90	12.00
<b>2.12</b>	12.22	10.67	7.29	12.22	12.52	13.62
<b>2.38</b>	14.09	12.53	9.16	14.09	13.97	15.07
<b>2.60</b>	15.67	14.11	10.74	15.67	15.19	16.30
<b>2.77</b>	16.89	15.33	11.96	16.89	16.14	17.24
<b>2.90</b>	17.82	16.27	12.90	17.82	16.87	17.97
<b>2.97</b>	18.32	16.77	13.40	18.32	17.26	18.36
<b>3.00</b>	18.54	16.98	13.61	18.54	17.42	18.53

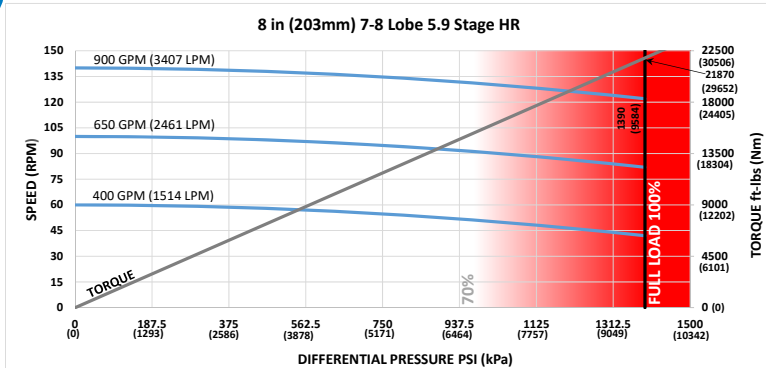
## FBH BUILD RATE\*\*:

<b>1.25</b>	5.43	3.60	-	7.60	8.10	9.21
<b>1.50</b>	7.23	5.40	1.44	9.08	9.58	10.69
<b>1.75</b>	9.02	7.19	3.23	10.56	11.06	12.17
<b>2.00</b>	10.81	8.99	5.03	12.04	12.55	13.65
<b>2.25</b>	12.61	10.78	6.82	13.52	14.03	15.13
<b>2.50</b>	14.40	12.57	8.62	15.00	15.51	16.61

\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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<b>Lobe Configuration</b>	7-8 Lobe 5.9 Stage HR	
<b>Displacement</b>	0.16 rev/gal	0.04 rev/l
<b>Max Differential @ No Load</b>	1390 psi	9584 kPa
<b>Max Torque @ No Load</b>	21870 ft-lbs	29652 Nm
<b>Max Power</b>	508 HP	379 kW
<b>C = Overall Length</b>	452.7 in	11499 mm
<b>Weight</b>	5321 lbs	2414 kg

Flow Rate		Speed
GPM	LPM	RPM
400	1514	42 - 60
650	2461	82 - 100
900	3407	122 - 140

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

### ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	9-7/8 (251mm)	10-5/8 (270mm)	12-1/4 (311mm)	9-7/8 (251mm)	10-5/8 (270mm)	12-1/4 (311mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	-	-	-	1.76	2.06	-
<b>0.78</b>	2.00	0.79	-	3.57	3.87	4.51
<b>1.15</b>	4.06	2.85	0.23	5.28	5.58	6.22
<b>1.50</b>	6.00	4.80	2.18	6.90	7.19	7.84
<b>1.83</b>	7.84	6.63	4.02	8.42	8.72	9.37
<b>2.12</b>	9.45	8.25	5.63	9.76	10.06	10.71
<b>2.38</b>	10.90	9.69	7.08	10.96	11.26	11.91
<b>2.60</b>	12.13	10.92	8.30	12.13	12.28	12.93
<b>2.77</b>	13.07	11.87	9.25	13.07	13.07	13.71
<b>2.90</b>	13.80	12.59	9.97	13.80	13.67	14.31
<b>2.97</b>	14.19	12.98	10.36	14.19	13.99	14.64
<b>3.00</b>	14.35	13.15	10.53	14.35	14.13	14.78

### FBH BUILD RATE\*\*:

<b>1.25</b>	4.19	2.77	-	6.00	6.29	6.94
<b>1.50</b>	5.58	4.16	1.09	7.20	7.50	8.15
<b>1.75</b>	6.97	5.55	2.48	8.41	8.71	9.36
<b>2.00</b>	8.36	6.95	3.87	9.62	9.91	10.56
<b>2.25</b>	9.76	8.34	5.27	10.82	11.12	11.77
<b>2.50</b>	11.15	9.73	6.66	12.03	12.33	12.98

\*Stabilizers assumed as 1/8" undergage

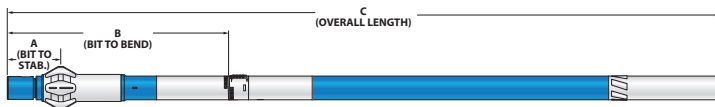
\*\*Additional FBH Angles Available

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

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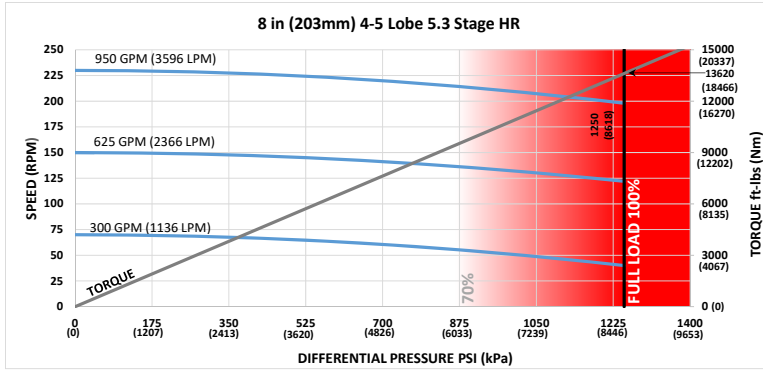
## 8 in (203 mm) SERIES 2



<b>Bit Size Range</b>	9-7/8 - 12-1/4 in	251 - 311 mm
<b>Bit Box Connection</b>	6-5/8 REGULAR	
<b>Dynamic Bearing Load On/Off Bottom</b>	162510 lbf	72300 daN
<b>Static Bearing Load On/Off Bottom</b>	573485 lbf	255100 daN
<b>Max. Overpull for Re-run</b>	554100 lbf	246500 daN
<b>Absolute Overpull</b>	923500 lbf	410800 daN
<b>Adjustable Make Up Torque</b>	40000 ft-lbs	54200 Nm
<b>A = Bit to Stabilizer (center)</b>	16.87 in	428 mm
<b>B = Bit to Bend</b>	<b>Adjustable</b>	74.7 in / 1897 mm
	<b>Fixed</b>	60.1 in / 1527 mm

8 in (203 mm) 4-5 Lobe 5.3 Stage HR SERIES 2	193
8 in (203 mm) 5-6 Lobe 3.0 Stage SERIES 2	194
8 in (203 mm) 5-6 Lobe 3.0 Stage HR SERIES 2	195
8 in (203 mm) 6-7 Lobe 4.0 Stage HR SERIES 2	196
8 in (203 mm) 6-7 Lobe 5.0 Stage HR SERIES 2	197
8 in (203 mm) 7-8 Lobe 3.0 Stage SERIES 2	198
8 in (203 mm) 7-8 Lobe 3.0 Stage HR SERIES 2	199
8 in (203 mm) 7-8 Lobe 3.4 Stage HR SERIES 2	200
8 in (203 mm) 7-8 Lobe 4.0 Stage HR SERIES 2	201
8 in (203 mm) 7-8 Lobe 5.9 Stage HR SERIES 2	202

# 8 in (203 mm) 4-5 Lobe 5.3 Stage HR **SERIES 2**



<b>Lobe Configuration</b>	4-5 Lobe 5.3 Stage HR	
<b>Displacement</b>	0.24 rev/gal	0.06 rev/l
<b>Max Differential @ No Load</b>	1250 psi	8618 kPa
<b>Max Torque @ No Load</b>	13620 ft-lbs	18466 Nm
<b>Max Power</b>	513 HP	383 kW
<b>C = Overall Length</b>	368.4 in	9357 mm
<b>Weight</b>	4198 lbs	1904 kg

Flow Rate		Speed
GPM	LPM	RPM
300	1136	40 - 70
625	2366	122 - 150
950	3596	198 - 230

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	9-7/8 (251mm)	10-5/8 (270mm)	12-1/4 (311mm)	9-7/8 (251mm)	10-5/8 (270mm)	12-1/4 (311mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	-	-	-	2.28	2.75	-
<b>0.78</b>	2.08	0.36	-	4.49	4.96	5.97
<b>1.15</b>	4.64	2.92	-	6.59	7.05	8.07
<b>1.50</b>	7.06	5.35	1.63	8.57	9.03	10.05
<b>1.83</b>	9.34	7.63	3.92	10.44	10.90	11.92
<b>2.12</b>	11.35	9.64	5.92	12.08	12.54	13.56
<b>2.38</b>	13.15	11.44	7.72	13.55	14.02	15.03
<b>2.60</b>	14.67	12.96	9.25	14.79	15.26	16.27
<b>2.77</b>	15.85	14.13	10.42	15.85	16.22	17.24
<b>2.90</b>	16.75	15.03	11.32	16.75	16.96	17.97
<b>2.97</b>	17.23	15.52	11.81	17.23	17.36	18.37
<b>3.00</b>	17.44	15.73	12.01	17.44	17.53	18.54

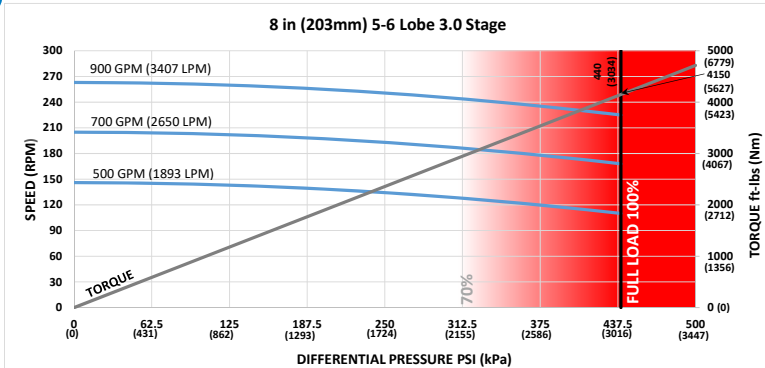
## FBH BUILD RATE\*\*:

<b>1.25</b>	4.63	2.57	-	7.55	8.02	9.03
<b>1.50</b>	6.36	4.30	-	9.04	9.51	10.52
<b>1.75</b>	8.09	6.03	1.57	10.54	11.01	12.02
<b>2.00</b>	9.82	7.76	3.30	12.03	12.50	13.51
<b>2.25</b>	11.55	9.49	5.03	13.53	13.99	15.01
<b>2.50</b>	13.28	11.22	6.76	15.02	15.49	16.50

\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.



<b>Lobe Configuration</b>	5-6 Lobe 3.0 Stage		<b>Flow Rate</b>		<b>Speed</b>
<b>Displacement</b>	0.29 rev/gal	0.08 rev/l	<b>GPM</b>	<b>LPM</b>	<b>RPM</b>
<b>Max Differential @ No Load</b>	440 psi	3034 kPa	500	1893	110 - 146
<b>Max Torque @ No Load</b>	4150 ft-lbs	5627 Nm	700	2650	168 - 205
<b>Max Power</b>	178 HP	133 kW	900	3407	225 - 263
<b>C = Overall Length</b>	252.03 in	6402 mm			
<b>Weight</b>	3022 lbs	1371 kg			

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

**ADJUSTABLE BUILD RATE:**

Hole Size	SLICK			STABILIZED*		
	9-7/8 (251mm)	10-5/8 (270mm)	12-1/4 (311mm)	9-7/8 (251mm)	10-5/8 (270mm)	12-1/4 (311mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	-	-	-	3.82	4.93	-
<b>0.78</b>	3.25	0.67	-	6.72	7.83	10.23
<b>1.15</b>	7.10	4.52	-	9.47	10.58	12.98
<b>1.50</b>	10.74	8.17	2.58	12.07	13.18	15.58
<b>1.83</b>	14.18	11.60	6.02	14.52	15.63	18.03
<b>2.12</b>	17.20	14.62	9.04	17.20	17.78	20.18
<b>2.38</b>	19.91	17.33	11.75	19.91	19.71	22.12
<b>2.60</b>	22.20	19.62	14.04	22.20	21.35	23.75
<b>2.77</b>	23.97	21.39	15.81	23.97	22.61	25.01
<b>2.90</b>	25.32	22.75	17.17	25.32	23.57	25.98
<b>2.97</b>	26.05	23.48	17.90	26.05	24.09	26.50
<b>3.00</b>	26.37	23.79	18.21	26.37	24.32	26.72

**FBH BUILD RATE\*\*:**

<b>1.25</b>	7.08	3.97	-	11.15	12.26	14.66
<b>1.50</b>	9.68	6.58	-	13.20	14.31	16.71
<b>1.75</b>	12.28	9.18	2.46	15.24	16.35	18.75
<b>2.00</b>	14.88	11.78	5.07	17.29	18.40	20.80
<b>2.25</b>	17.49	14.39	7.67	19.33	20.44	22.84
<b>2.50</b>	20.09	16.99	10.28	21.38	22.49	24.89

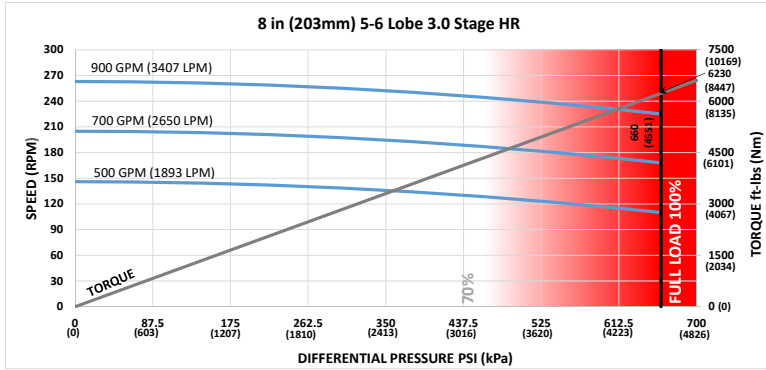
\*Stabilizers assumed as 1/8" undergage

\*\*Additional FBH Angles Available

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.

# 8 in (203 mm) 5-6 Lobe 3.0 Stage HR **SERIES 2**



<b>Lobe Configuration</b>	5-6 Lobe 3.0 Stage HR	
<b>Displacement</b>	0.29 rev/gal	0.08 rev/l
<b>Max Differential @ No Load</b>	660 psi	4551 kPa
<b>Max Torque @ No Load</b>	6230 ft-lbs	8447 Nm
<b>Max Power</b>	267 HP	199 kW
<b>C = Overall Length</b>	252.03 in	6402 mm
<b>Weight</b>	3022 lbs	1371 kg

Flow Rate		Speed
GPM	LPM	RPM
500	1893	110 - 146
700	2650	168 - 205
900	3407	225 - 263

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	9-7/8 (251mm)	10-5/8 (270mm)	12-1/4 (311mm)	9-7/8 (251mm)	10-5/8 (270mm)	12-1/4 (311mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	-	-	-	3.82	4.93	-
<b>0.78</b>	3.25	0.67	-	6.72	7.83	10.23
<b>1.15</b>	7.10	4.52	-	9.47	10.58	12.98
<b>1.50</b>	10.74	8.17	2.58	12.07	13.18	15.58
<b>1.83</b>	14.18	11.60	6.02	14.52	15.63	18.03
<b>2.12</b>	17.20	14.62	9.04	17.20	17.78	20.18
<b>2.38</b>	19.91	17.33	11.75	19.91	19.71	22.12
<b>2.60</b>	22.20	19.62	14.04	22.20	21.35	23.75
<b>2.77</b>	23.97	21.39	15.81	23.97	22.61	25.01
<b>2.90</b>	25.32	22.75	17.17	25.32	23.57	25.98
<b>2.97</b>	26.05	23.48	17.90	26.05	24.09	26.50
<b>3.00</b>	26.37	23.79	18.21	26.37	24.32	26.72

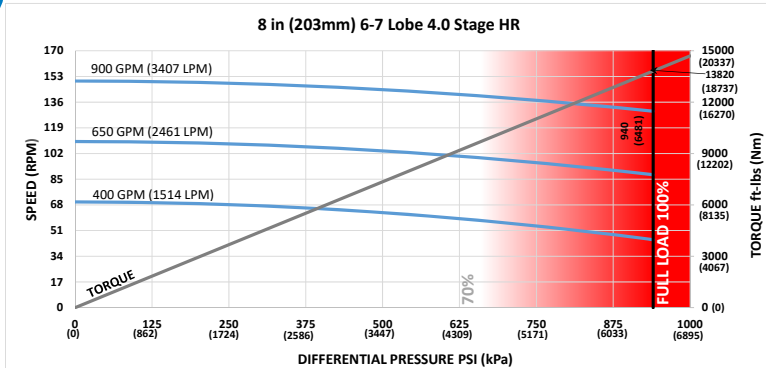
## FBH BUILD RATE\*\*:

<b>1.25</b>	7.08	3.97	-	11.15	12.26	14.66
<b>1.50</b>	9.68	6.58	-	13.20	14.31	16.71
<b>1.75</b>	12.28	9.18	2.46	15.24	16.35	18.75
<b>2.00</b>	14.88	11.78	5.07	17.29	18.40	20.80
<b>2.25</b>	17.49	14.39	7.67	19.33	20.44	22.84
<b>2.50</b>	20.09	16.99	10.28	21.38	22.49	24.89

\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.



<b>Lobe Configuration</b>	6-7 Lobe 4.0 Stage HR	
<b>Displacement</b>	0.17 rev/gal	0.04 rev/l
<b>Max Differential @ No Load</b>	940 psi	6481 kPa
<b>Max Torque @ No Load</b>	13820 ft-lbs	18737 Nm
<b>Max Power</b>	342 HP	255 kW
<b>C = Overall Length</b>	346.4 in	8799 mm
<b>Weight</b>	4019 lbs	1823 kg

Flow Rate		Speed
GPM	LPM	RPM
400	1514	45 - 70
650	2461	88 - 110
900	3407	130 - 150

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

**ADJUSTABLE BUILD RATE:**

Hole Size	SLICK			STABILIZED*		
	9-7/8 (251mm)	10-5/8 (270mm)	12-1/4 (311mm)	9-7/8 (251mm)	10-5/8 (270mm)	12-1/4 (311mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	-	-	-	2.47	3.01	-
<b>0.78</b>	2.23	0.40	-	4.79	5.33	6.49
<b>1.15</b>	4.96	3.13	-	6.99	7.53	8.69
<b>1.50</b>	7.55	5.72	1.75	9.07	9.61	10.77
<b>1.83</b>	9.99	8.16	4.19	11.03	11.57	12.73
<b>2.12</b>	12.13	10.30	6.33	12.76	13.29	14.46
<b>2.38</b>	14.05	12.22	8.26	14.30	14.84	16.00
<b>2.60</b>	15.67	13.84	9.88	15.67	16.15	17.31
<b>2.77</b>	16.93	15.10	11.14	16.93	17.16	18.32
<b>2.90</b>	17.89	16.06	12.10	17.89	17.93	19.09
<b>2.97</b>	18.41	16.58	12.62	18.41	18.35	19.51
<b>3.00</b>	18.63	16.80	12.84	18.63	18.52	19.69

**FBH BUILD RATE\*\*:**

<b>1.25</b>	4.96	2.75	-	8.04	8.58	9.74
<b>1.50</b>	6.80	4.60	-	9.62	10.15	11.32
<b>1.75</b>	8.65	6.45	1.68	11.20	11.73	12.89
<b>2.00</b>	10.50	8.30	3.53	12.77	13.31	14.47
<b>2.25</b>	12.34	10.14	5.38	14.35	14.89	16.05
<b>2.50</b>	14.19	11.99	7.22	15.93	16.46	17.62

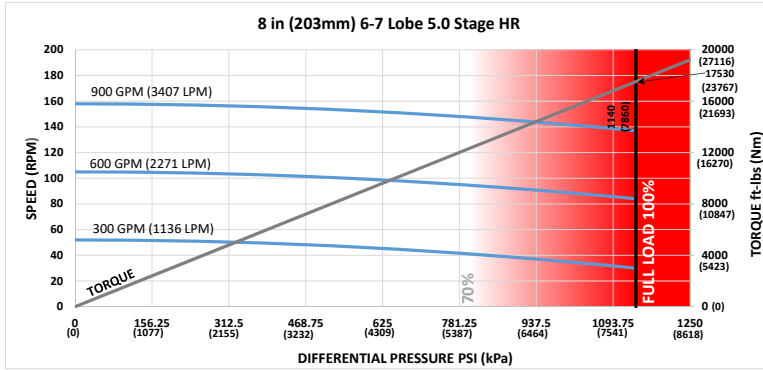
\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.

# 8 in (203 mm) 6-7 Lobe 5.0 Stage HR **SERIES 2**



<b>Lobe Configuration</b>	6-7 Lobe 5.0 Stage HR	
<b>Displacement</b>	0.18 rev/gal	0.05 rev/l
<b>Max Differential @ No Load</b>	1140 psi	7860 kPa
<b>Max Torque @ No Load</b>	17530 ft-lbs	23767 Nm
<b>Max Power</b>	457 HP	341 kW
<b>C = Overall Length</b>	390.4 in	9916 mm
<b>Weight</b>	4442 lbs	2015 kg

Flow Rate		Speed
GPM	LPM	RPM
300	1136	30 - 52
600	2271	84 - 105
900	3407	137 - 158

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	9-7/8 (251mm)	10-5/8 (270mm)	12-1/4 (311mm)	9-7/8 (251mm)	10-5/8 (270mm)	12-1/4 (311mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	-	-	-	2.12	2.53	-
<b>0.78</b>	1.95	0.33	-	4.23	4.64	5.53
<b>1.15</b>	4.35	2.74	-	6.22	6.64	7.53
<b>1.50</b>	6.63	5.02	1.53	8.11	8.53	9.42
<b>1.83</b>	8.78	7.17	3.68	9.90	10.31	11.20
<b>2.12</b>	10.67	9.05	5.56	11.46	11.87	12.76
<b>2.38</b>	12.36	10.75	7.25	12.87	13.28	14.17
<b>2.60</b>	13.79	12.18	8.69	14.05	14.46	15.36
<b>2.77</b>	14.89	13.28	9.79	14.97	15.38	16.27
<b>2.90</b>	15.74	14.13	10.64	15.74	16.08	16.98
<b>2.97</b>	16.20	14.58	11.10	16.20	16.46	17.35
<b>3.00</b>	16.39	14.78	11.29	16.39	16.62	17.52

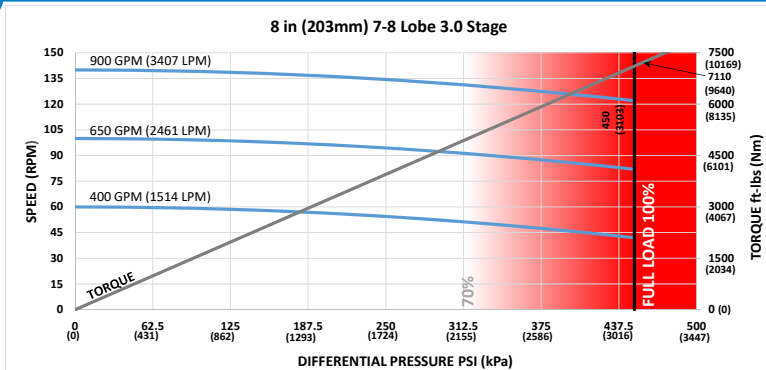
## FBH BUILD RATE\*\*:

<b>1.25</b>	4.35	2.41	-	7.11	7.52	8.42
<b>1.50</b>	5.98	4.04	-	8.53	8.94	9.83
<b>1.75</b>	7.60	5.66	1.47	9.95	10.36	11.25
<b>2.00</b>	9.23	7.29	3.09	11.37	11.78	12.67
<b>2.25</b>	10.86	8.92	4.72	12.79	13.20	14.09
<b>2.50</b>	12.48	10.55	6.35	14.21	14.62	15.51

\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.



Lobe Configuration	7-8 Lobe 3.0 Stage		Flow Rate		Speed
Displacement	0.16 rev/gal	0.04 rev/l	GPM	LPM	RPM
Max Differential @ No Load	450 psi	3103 kPa	400	1514	42 - 60
Max Torque @ No Load	7110 ft-lbs	9640 Nm	650	2461	82 - 100
Max Power	165 HP	123 kW	900	3407	122 - 140
C = Overall Length	300.4 in	7630 mm			
Weight	3660 lbs	1660 kg			

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

### ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	9-7/8 (251mm)	10-5/8 (270mm)	12-1/4 (311mm)	9-7/8 (251mm)	10-5/8 (270mm)	12-1/4 (311mm)
BEND ANGLE	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	-	-	-	2.99	3.73	-
<b>0.78</b>	2.63	0.50	-	5.57	6.31	7.91
<b>1.15</b>	5.81	3.68	-	8.02	8.76	10.36
<b>1.50</b>	8.82	6.69	2.07	10.33	11.07	12.68
<b>1.83</b>	11.67	9.53	4.92	12.52	13.26	14.86
<b>2.12</b>	14.16	12.03	7.41	14.44	15.18	16.78
<b>2.38</b>	16.40	14.27	9.65	16.40	16.90	18.50
<b>2.60</b>	18.29	16.16	11.55	18.29	18.35	19.95
<b>2.77</b>	19.76	17.63	13.01	19.76	19.48	21.08
<b>2.90</b>	20.87	18.74	14.13	20.87	20.34	21.94
<b>2.97</b>	21.48	19.35	14.73	21.48	20.80	22.40
<b>3.00</b>	21.73	19.61	14.99	21.73	21.00	22.60

### FBH BUILD RATE\*\*:

<b>1.25</b>	5.80	3.24	-	9.31	10.05	11.65
<b>1.50</b>	7.95	5.39	-	11.09	11.83	13.43
<b>1.75</b>	10.10	7.54	1.99	12.87	13.61	15.21
<b>2.00</b>	12.26	9.69	4.14	14.65	15.39	16.99
<b>2.25</b>	14.41	11.84	6.29	16.43	17.17	18.77
<b>2.50</b>	16.56	14.00	8.45	18.21	18.95	20.55

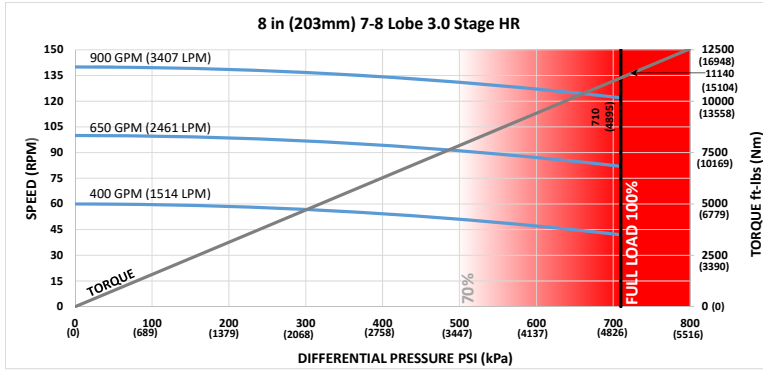
\*Stabilizers assumed as 1/8" undergage

\*\*Additional FBH Angles Available

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.

# 8 in (203 mm) 7-8 Lobe 3.0 Stage HR **SERIES 2**



<b>Lobe Configuration</b>	7-8 Lobe 3.0 Stage HR	
<b>Displacement</b>	0.16 rev/gal	0.04 rev/l
<b>Max Differential @ No Load</b>	710 psi	4895 kPa
<b>Max Torque @ No Load</b>	11140 ft-lbs	15104 Nm
<b>Max Power</b>	259 HP	193 kW
<b>C = Overall Length</b>	300.4 in	7630 mm
<b>Weight</b>	3660 lbs	1660 kg

Flow Rate		Speed
GPM	LPM	RPM
400	1514	42 - 60
650	2461	82 - 100
900	3407	122 - 140

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	9-7/8 (251mm)	10-5/8 (270mm)	12-1/4 (311mm)	9-7/8 (251mm)	10-5/8 (270mm)	12-1/4 (311mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	-	-	-	2.99	3.73	-
<b>0.78</b>	2.63	0.50	-	5.57	6.31	7.91
<b>1.15</b>	5.81	3.68	-	8.02	8.76	10.36
<b>1.50</b>	8.82	6.69	2.07	10.33	11.07	12.68
<b>1.83</b>	11.67	9.53	4.92	12.52	13.26	14.86
<b>2.12</b>	14.16	12.03	7.41	14.44	15.18	16.78
<b>2.38</b>	16.40	14.27	9.65	16.40	16.90	18.50
<b>2.60</b>	18.29	16.16	11.55	18.29	18.35	19.95
<b>2.77</b>	19.76	17.63	13.01	19.76	19.48	21.08
<b>2.90</b>	20.87	18.74	14.13	20.87	20.34	21.94
<b>2.97</b>	21.48	19.35	14.73	21.48	20.80	22.40
<b>3.00</b>	21.73	19.61	14.99	21.73	21.00	22.60

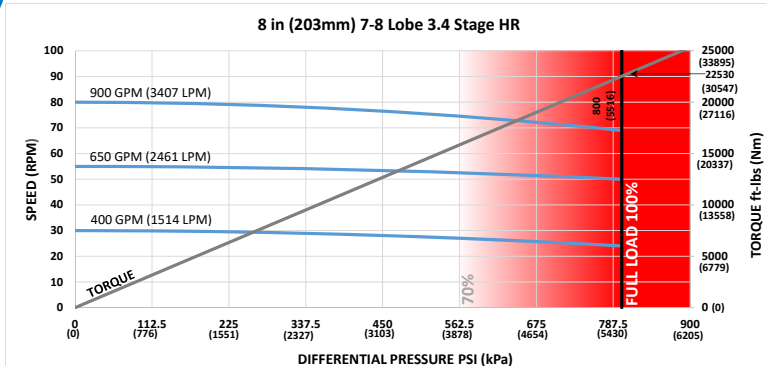
## FBH BUILD RATE\*\*:

<b>1.25</b>	5.80	3.24	-	9.31	10.05	11.65
<b>1.50</b>	7.95	5.39	-	11.09	11.83	13.43
<b>1.75</b>	10.10	7.54	1.99	12.87	13.61	15.21
<b>2.00</b>	12.26	9.69	4.14	14.65	15.39	16.99
<b>2.25</b>	14.41	11.84	6.29	16.43	17.17	18.77
<b>2.50</b>	16.56	14.00	8.45	18.21	18.95	20.55

\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.



Lobe Configuration	7-8 Lobe 3.4 Stage HR		Flow Rate		Speed
Displacement	0.09 rev/gal	0.02 rev/l	GPM	LPM	RPM
Max Differential @ No Load	800 psi	5516 kPa	400	1514	24 - 30
Max Torque @ No Load	22530 ft-lbs	30547 Nm	650	2461	50 - 55
Max Power	296 HP	221 kW	900	3407	69 - 80
C = Overall Length	440.4 in	11186 mm			
Weight	5000 lbs	2268 kg			

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

### ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	9-7/8 (251mm)	10-5/8 (270mm)	12-1/4 (311mm)	9-7/8 (251mm)	10-5/8 (270mm)	12-1/4 (311mm)
BEND ANGLE	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
0.39	-	-	-	1.82	2.14	-
0.78	1.70	0.28	-	3.73	4.04	4.73
1.15	3.82	2.40	-	5.53	5.85	6.53
1.50	5.83	4.41	1.33	7.24	7.56	8.24
1.83	7.72	6.30	3.23	8.85	9.17	9.85
2.12	9.38	7.96	4.89	10.27	10.58	11.26
2.38	10.87	9.45	6.38	11.53	11.85	12.53
2.60	12.13	10.71	7.64	12.61	12.92	13.61
2.77	13.10	11.69	8.61	13.44	13.75	14.44
2.90	13.85	12.43	9.36	14.07	14.39	15.07
2.97	14.25	12.83	9.76	14.41	14.73	15.41
3.00	14.42	13.00	9.93	14.56	14.88	15.56

### FBH BUILD RATE\*\*:

1.25	3.82	2.11	-	6.29	6.60	7.29
1.50	5.25	3.55	-	7.56	7.88	8.56
1.75	6.68	4.98	1.28	8.84	9.15	9.83
2.00	8.12	6.41	2.71	10.11	10.42	11.11
2.25	9.55	7.84	4.15	11.38	11.70	12.38
2.50	10.98	9.28	5.58	12.66	12.97	13.65

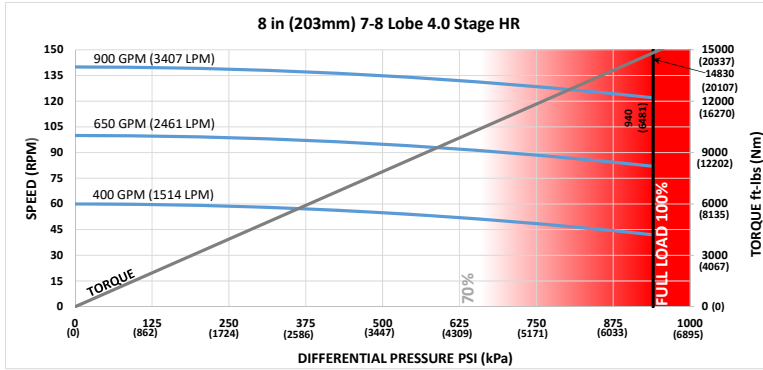
\*Stabilizers assumed as 1/8" undergage

\*\*Additional FBH Angles Available

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.

# 8 in (203 mm) 7-8 Lobe 4.0 Stage HR **SERIES 2**



<b>Lobe Configuration</b>	7-8 Lobe 4.0 Stage HR	
<b>Displacement</b>	0.16 rev/gal	0.04 rev/l
<b>Max Differential @ No Load</b>	940 psi	6481 kPa
<b>Max Torque @ No Load</b>	14830 ft-lbs	20107 Nm
<b>Max Power</b>	344 HP	257 kW
<b>C = Overall Length</b>	343.65 in	8729 mm
<b>Weight</b>	4131 lbs	1874 kg

Flow Rate		Speed
GPM	LPM	RPM
400	1514	42 - 60
650	2461	82 - 100
900	3407	122 - 140

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	9-7/8 (251mm)	10-5/8 (270mm)	12-1/4 (311mm)	9-7/8 (251mm)	10-5/8 (270mm)	12-1/4 (311mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	-	-	-	2.50	3.05	-
<b>0.78</b>	2.25	0.40	-	4.83	5.38	6.56
<b>1.15</b>	5.01	3.16	-	7.05	7.59	8.77
<b>1.50</b>	7.61	5.77	1.77	9.14	9.68	10.87
<b>1.83</b>	10.07	8.23	4.23	11.11	11.66	12.84
<b>2.12</b>	12.23	10.39	6.39	12.85	13.39	14.58
<b>2.38</b>	14.17	12.33	8.33	14.40	14.95	16.13
<b>2.60</b>	15.81	13.96	9.97	15.81	16.26	17.45
<b>2.77</b>	17.08	15.23	11.24	17.08	17.28	18.46
<b>2.90</b>	18.04	16.20	12.20	18.04	18.06	19.24
<b>2.97</b>	18.57	16.72	12.73	18.57	18.48	19.66
<b>3.00</b>	18.79	16.95	12.95	18.79	18.66	19.84

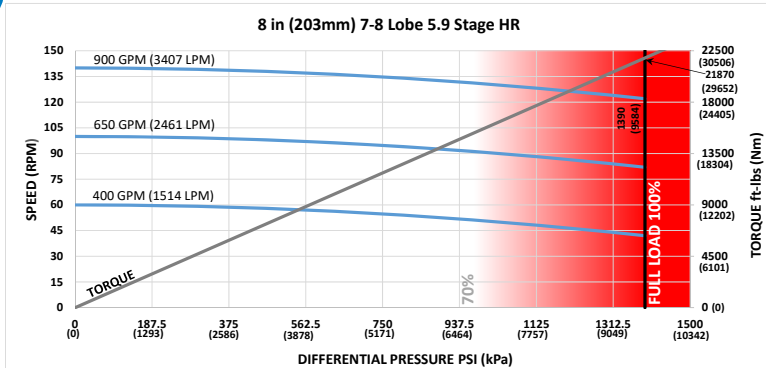
## FBH BUILD RATE\*\*:

<b>1.25</b>	5.00	2.78	-	8.11	8.65	9.84
<b>1.50</b>	6.86	4.64	-	9.70	10.24	11.42
<b>1.75</b>	8.72	6.50	1.70	11.28	11.83	13.01
<b>2.00</b>	10.59	8.37	3.56	12.87	13.42	14.60
<b>2.25</b>	12.45	10.23	5.42	14.46	15.00	16.19
<b>2.50</b>	14.31	12.09	7.29	16.05	16.59	17.77

\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.



<b>Lobe Configuration</b>	7-8 Lobe 5.9 Stage HR	
<b>Displacement</b>	0.16 rev/gal	0.04 rev/l
<b>Max Differential @ No Load</b>	1390 psi	9584 kPa
<b>Max Torque @ No Load</b>	21870 ft-lbs	29652 Nm
<b>Max Power</b>	508 HP	379 kW
<b>C = Overall Length</b>	440.4 in	11186 mm
<b>Weight</b>	5141 lbs	2332 kg

Flow Rate		Speed
GPM	LPM	RPM
400	1514	42 - 60
650	2461	82 - 100
900	3407	122 - 140

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

**ADJUSTABLE BUILD RATE:**

Hole Size	SLICK			STABILIZED*		
	9-7/8 (251mm)	10-5/8 (270mm)	12-1/4 (311mm)	9-7/8 (251mm)	10-5/8 (270mm)	12-1/4 (311mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	-	-	-	1.82	2.14	-
<b>0.78</b>	1.70	0.28	-	3.73	4.04	4.73
<b>1.15</b>	3.82	2.40	-	5.53	5.85	6.53
<b>1.50</b>	5.83	4.41	1.33	7.24	7.56	8.24
<b>1.83</b>	7.72	6.30	3.23	8.85	9.17	9.85
<b>2.12</b>	9.38	7.96	4.89	10.27	10.58	11.26
<b>2.38</b>	10.87	9.45	6.38	11.53	11.85	12.53
<b>2.60</b>	12.13	10.71	7.64	12.61	12.92	13.61
<b>2.77</b>	13.10	11.69	8.61	13.44	13.75	14.44
<b>2.90</b>	13.85	12.43	9.36	14.07	14.39	15.07
<b>2.97</b>	14.25	12.83	9.76	14.41	14.73	15.41
<b>3.00</b>	14.42	13.00	9.93	14.56	14.88	15.56

**FBH BUILD RATE\*\*:**

<b>1.25</b>	3.82	2.11	-	6.29	6.60	7.29
<b>1.50</b>	5.25	3.55	-	7.56	7.88	8.56
<b>1.75</b>	6.68	4.98	1.28	8.84	9.15	9.83
<b>2.00</b>	8.12	6.41	2.71	10.11	10.42	11.11
<b>2.25</b>	9.55	7.84	4.15	11.38	11.70	12.38
<b>2.50</b>	10.98	9.28	5.58	12.66	12.97	13.65

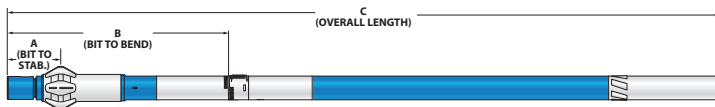
\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.

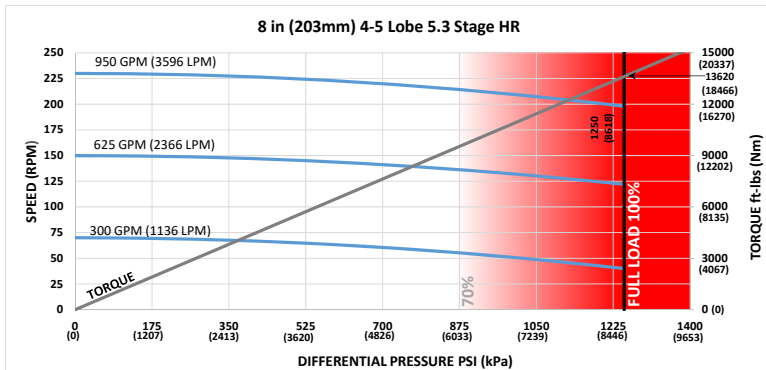
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<b>Bit Size Range</b>	9-7/8 - 12-1/4 in	251 - 311 mm
<b>Bit Box Connection</b>	6-5/8 REGULAR	
<b>Dynamic Bearing Load On/Off Bottom</b>	145951 lbf	64900 daN
<b>Static Bearing Load On/Off Bottom</b>	534312 lbf	237700 daN
<b>Max. Overpull for Re-run</b>	542500 lbf	241300 daN
<b>Absolute Overpull</b>	904100 lbf	402200 daN
<b>Adjustable Make Up Torque</b>	40000 ft-lbs	54200 Nm
<b>A = Bit to Stabilizer (center)</b>	23.5 in	597 mm
<b>B = Bit to Bend</b>	<b>Adjustable</b>	74.9 in 1902 mm
	<b>Fixed</b>	60.3 in 1532 mm

8 in (203 mm) 4-5 Lobe 5.3 Stage HR MUD LUBE	205
8 in (203 mm) 5-6 Lobe 3.0 Stage MUD LUBE	206
8 in (203 mm) 5-6 Lobe 3.0 Stage HR MUD LUBE	207
8 in (203 mm) 6-7 Lobe 4.0 Stage HR MUD LUBE	208
8 in (203 mm) 6-7 Lobe 5.0 Stage HR MUD LUBE	209
8 in (203 mm) 7-8 Lobe 3.0 Stage MUD LUBE	210
8 in (203 mm) 7-8 Lobe 3.0 Stage HR MUD LUBE	211
8 in (203 mm) 7-8 Lobe 3.4 Stage HR MUD LUBE	212
8 in (203 mm) 7-8 Lobe 4.0 Stage HR MUD LUBE	213
8 in (203 mm) 7-8 Lobe 5.9 Stage HR MUD LUBE	214

# 8 in (203 mm) 4-5 Lobe 5.3 Stage HR MUD LUBE



<b>Lobe Configuration</b>	4-5 Lobe 5.3 Stage HR	
<b>Displacement</b>	0.24 rev/gal	0.06 rev/l
<b>Max Differential @ No Load</b>	1250 psi	8618 kPa
<b>Max Torque @ No Load</b>	13620 ft-lbs	18466 Nm
<b>Max Power</b>	513 HP	383 kW
<b>C = Overall Length</b>	369.1 in	9375 mm
<b>Weight</b>	4128 lbs	1873 kg

Flow Rate		Speed
GPM	LPM	RPM
300	1136	40 - 70
625	2366	122 - 150
950	3596	198 - 230

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	9-7/8 (251mm)	10-5/8 (270mm)	12-1/4 (311mm)	9-7/8 (251mm)	10-5/8 (270mm)	12-1/4 (311mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	-	-	-	2.51	2.99	-
<b>0.78</b>	2.08	0.36	-	4.76	5.24	6.27
<b>1.15</b>	4.64	2.92	-	6.90	7.38	8.41
<b>1.50</b>	7.06	5.34	1.65	8.92	9.40	10.43
<b>1.83</b>	9.35	7.63	3.93	10.82	11.30	12.33
<b>2.12</b>	11.35	9.63	5.94	12.50	12.98	14.01
<b>2.38</b>	13.15	11.43	7.74	14.00	14.48	15.51
<b>2.60</b>	14.67	12.95	9.26	15.27	15.75	16.78
<b>2.77</b>	15.85	14.13	10.44	16.25	16.73	17.76
<b>2.90</b>	16.74	15.03	11.34	17.00	17.48	18.51
<b>2.97</b>	17.23	15.51	11.82	17.40	17.88	18.91
<b>3.00</b>	17.44	15.72	12.03	17.58	18.06	19.09

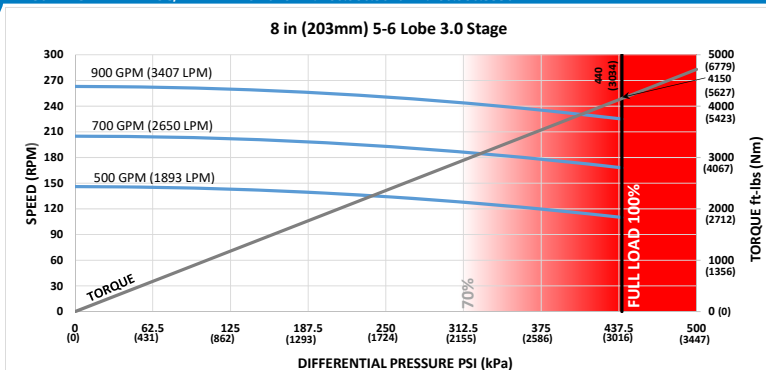
## FBH BUILD RATE\*\*:

<b>1.25</b>	4.64	2.57	-	7.88	8.36	9.39
<b>1.50</b>	6.37	4.30	-	9.40	9.88	10.91
<b>1.75</b>	8.10	6.03	1.60	10.93	11.41	12.44
<b>2.00</b>	9.83	7.76	3.32	12.45	12.93	13.96
<b>2.25</b>	11.56	9.49	5.05	13.98	14.46	15.49
<b>2.50</b>	13.28	11.22	6.78	15.50	15.98	17.01

\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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 DYNAMAX office.



Lobe Configuration	5-6 Lobe 3.0 Stage		Flow Rate		Speed
Displacement	0.29 rev/gal	0.08 rev/l	<b>GPM</b>	<b>LPM</b>	<b>RPM</b>
Max Differential @ No Load	440 psi	3034 kPa	500	1893	110 - 146
Max Torque @ No Load	4150 ft-lbs	5627 Nm	700	2650	168 - 205
Max Power	178 HP	133 kW	900	3407	225 - 263
C = Overall Length	252.73 in	6419 mm			
Weight	2952 lbs	1339 kg			

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	9-7/8 (251mm)	10-5/8 (270mm)	12-1/4 (311mm)	9-7/8 (251mm)	10-5/8 (270mm)	12-1/4 (311mm)
BEND ANGLE	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	-	-	-	4.23	5.38	-
<b>0.78</b>	3.26	0.67	-	7.22	8.37	10.84
<b>1.15</b>	7.11	4.52	-	10.05	11.21	13.68
<b>1.50</b>	10.75	8.16	2.61	12.74	13.89	16.36
<b>1.83</b>	14.18	11.59	6.04	15.27	16.42	18.89
<b>2.12</b>	17.20	14.61	9.06	17.49	18.64	21.11
<b>2.38</b>	19.90	17.32	11.77	19.90	20.63	23.11
<b>2.60</b>	22.19	19.61	14.06	22.19	22.32	24.79
<b>2.77</b>	23.96	21.38	15.83	23.96	23.62	26.10
<b>2.90</b>	25.31	22.73	17.18	25.31	24.62	27.09
<b>2.97</b>	26.04	23.46	17.91	26.04	25.16	27.63
<b>3.00</b>	26.35	23.77	18.22	26.35	25.39	27.86

## FBH BUILD RATE\*\*:

<b>1.25</b>	7.09	3.98	-	11.79	12.94	15.42
<b>1.50</b>	9.69	6.58	-	13.90	15.05	17.53
<b>1.75</b>	12.29	9.18	2.50	16.01	17.17	19.64
<b>2.00</b>	14.89	11.78	5.11	18.12	19.28	21.75
<b>2.25</b>	17.49	14.38	7.71	20.23	21.39	23.86
<b>2.50</b>	20.09	16.98	10.31	22.34	23.50	25.97

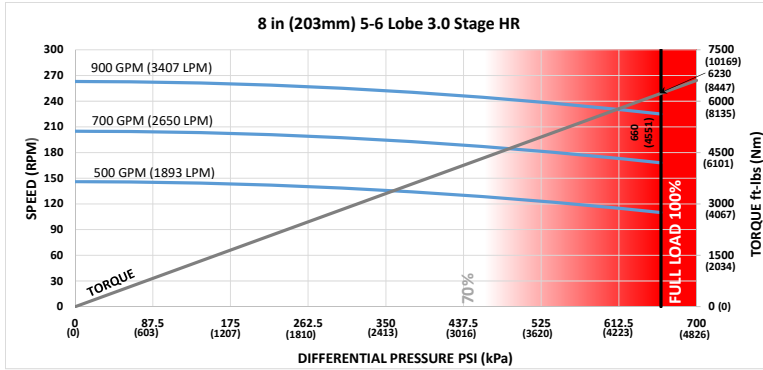
\*Stabilizers assumed as 1/8" undergage

\*\*Additional FBH Angles Available

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.

# 8 in (203 mm) 5-6 Lobe 3.0 Stage HR MUD LUBE



<b>Lobe Configuration</b>	5-6 Lobe 3.0 Stage HR	
<b>Displacement</b>	0.29 rev/gal	0.08 rev/l
<b>Max Differential @ No Load</b>	660 psi	4551 kPa
<b>Max Torque @ No Load</b>	6230 ft-lbs	8447 Nm
<b>Max Power</b>	267 HP	199 kW
<b>C = Overall Length</b>	252.73 in	6419 mm
<b>Weight</b>	2952 lbs	1339 kg

Flow Rate		Speed
GPM	LPM	RPM
500	1893	110 - 146
700	2650	168 - 205
900	3407	225 - 263

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	9-7/8 (251mm)	10-5/8 (270mm)	12-1/4 (311mm)	9-7/8 (251mm)	10-5/8 (270mm)	12-1/4 (311mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	-	-	-	4.23	5.38	-
<b>0.78</b>	3.26	0.67	-	7.22	8.37	10.84
<b>1.15</b>	7.11	4.52	-	10.05	11.21	13.68
<b>1.50</b>	10.75	8.16	2.61	12.74	13.89	16.36
<b>1.83</b>	14.18	11.59	6.04	15.27	16.42	18.89
<b>2.12</b>	17.20	14.61	9.06	17.49	18.64	21.11
<b>2.38</b>	19.90	17.32	11.77	19.90	20.63	23.11
<b>2.60</b>	22.19	19.61	14.06	22.19	22.32	24.79
<b>2.77</b>	23.96	21.38	15.83	23.96	23.62	26.10
<b>2.90</b>	25.31	22.73	17.18	25.31	24.62	27.09
<b>2.97</b>	26.04	23.46	17.91	26.04	25.16	27.63
<b>3.00</b>	26.35	23.77	18.22	26.35	25.39	27.86

## FBH BUILD RATE\*\*:

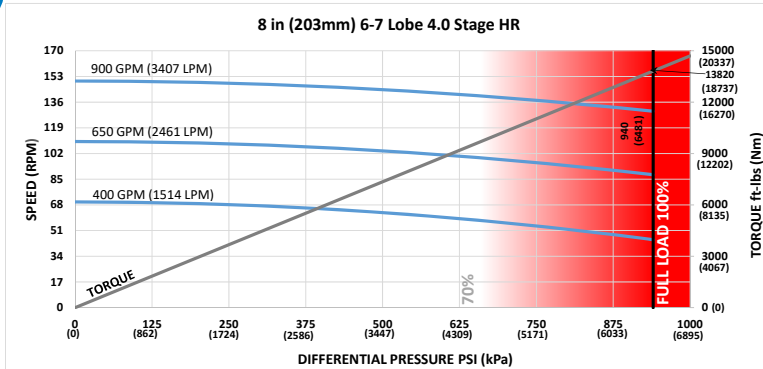
<b>1.25</b>	7.09	3.98	-	11.79	12.94	15.42
<b>1.50</b>	9.69	6.58	-	13.90	15.05	17.53
<b>1.75</b>	12.29	9.18	2.50	16.01	17.17	19.64
<b>2.00</b>	14.89	11.78	5.11	18.12	19.28	21.75
<b>2.25</b>	17.49	14.38	7.71	20.23	21.39	23.86
<b>2.50</b>	20.09	16.98	10.31	22.34	23.50	25.97

\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.

# 8 in (203 mm) 6-7 Lobe 4.0 Stage HR MUD LUBE



<b>Lobe Configuration</b>	6-7 Lobe 5.0 Stage HR		<b>Flow Rate</b>		<b>Speed</b>
<b>Displacement</b>	0.18 rev/gal	0.05 rev/l	<b>GPM</b>	<b>LPM</b>	<b>RPM</b>
<b>Max Differential @ No Load</b>	1140 psi	7860 kPa	300	1136	30 - 52
<b>Max Torque @ No Load</b>	17530 ft-lbs	23767 Nm	600	2271	84 - 105
<b>Max Power</b>	457 HP	341 kW	900	3407	137 - 158
<b>C = Overall Length</b>	391.1 in	9934 mm			
<b>Weight</b>	4372 lbs	1983 kg			

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	9-7/8 (251mm)	10-5/8 (270mm)	12-1/4 (311mm)	9-7/8 (251mm)	10-5/8 (270mm)	12-1/4 (311mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	-	-	-	2.33	2.75	-
<b>0.78</b>	1.95	0.33	-	4.47	4.89	5.80
<b>1.15</b>	4.36	2.74	-	6.51	6.93	7.83
<b>1.50</b>	6.64	5.02	1.55	8.43	8.85	9.76
<b>1.83</b>	8.78	7.16	3.69	10.25	10.67	11.57
<b>2.12</b>	10.67	9.05	5.58	11.84	12.26	13.17
<b>2.38</b>	12.36	10.74	7.27	13.27	13.69	14.60
<b>2.60</b>	13.79	12.17	8.70	14.48	14.90	15.81
<b>2.77</b>	14.89	13.28	9.81	15.42	15.84	16.74
<b>2.90</b>	15.74	14.12	10.65	16.13	16.55	17.46
<b>2.97</b>	16.19	14.58	11.11	16.52	16.94	17.84
<b>3.00</b>	16.39	14.77	11.30	16.68	17.10	18.01

## FBH BUILD RATE\*\*:

<b>1.25</b>	4.36	2.41	-	7.41	7.83	8.74
<b>1.50</b>	5.98	4.04	-	8.86	9.28	10.18
<b>1.75</b>	7.61	5.67	1.49	10.31	10.73	11.63
<b>2.00</b>	9.24	7.29	3.12	11.75	12.17	13.08
<b>2.25</b>	10.86	8.92	4.75	13.20	13.62	14.52
<b>2.50</b>	12.49	10.54	6.37	14.64	15.06	15.97

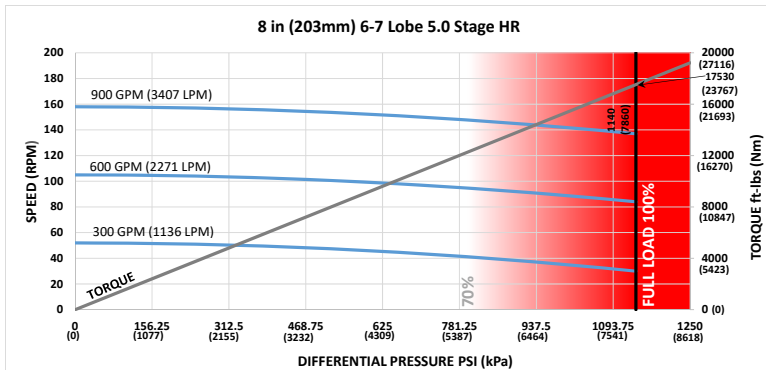
\*Stabilizers assumed as 1/8" undergage

\*\*Additional FBH Angles Available

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.

# 8 in (203 mm) 6-7 Lobe 5.0 Stage HR MUD LUBE



<b>Lobe Configuration</b>	6-7 Lobe 5.0 Stage HR	
<b>Displacement</b>	0.18 rev/gal	0.05 rev/l
<b>Max Differential @ No Load</b>	1140 psi	7860 kPa
<b>Max Torque @ No Load</b>	17530 ft-lbs	23767 Nm
<b>Max Power</b>	457 HP	341 kW
<b>C = Overall Length</b>	391.1 in	9934 mm
<b>Weight</b>	4372 lbs	1983 kg

Flow Rate		Speed
GPM	LPM	RPM
300	1136	30 - 52
600	2271	84 - 105
900	3407	137 - 158

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	9-7/8 (251mm)	10-5/8 (270mm)	12-1/4 (311mm)	9-7/8 (251mm)	10-5/8 (270mm)	12-1/4 (311mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	-	-	-	2.33	2.75	-
<b>0.78</b>	1.95	0.33	-	4.47	4.89	5.80
<b>1.15</b>	4.36	2.74	-	6.51	6.93	7.83
<b>1.50</b>	6.64	5.02	1.55	8.43	8.85	9.76
<b>1.83</b>	8.78	7.16	3.69	10.25	10.67	11.57
<b>2.12</b>	10.67	9.05	5.58	11.84	12.26	13.17
<b>2.38</b>	12.36	10.74	7.27	13.27	13.69	14.60
<b>2.60</b>	13.79	12.17	8.70	14.48	14.90	15.81
<b>2.77</b>	14.89	13.28	9.81	15.42	15.84	16.74
<b>2.90</b>	15.74	14.12	10.65	16.13	16.55	17.46
<b>2.97</b>	16.19	14.58	11.11	16.52	16.94	17.84
<b>3.00</b>	16.39	14.77	11.30	16.68	17.10	18.01

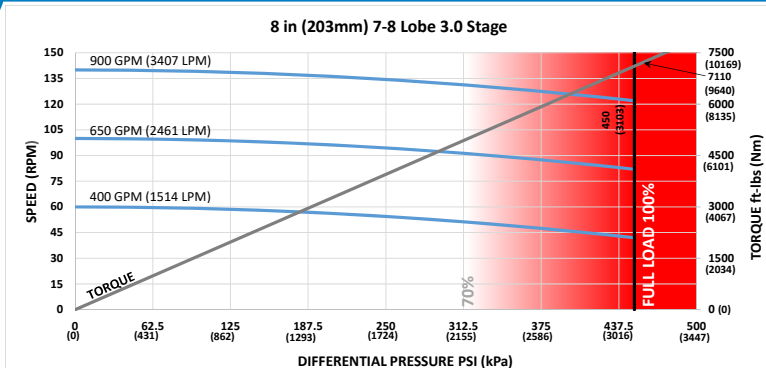
## FBH BUILD RATE\*\*:

<b>1.25</b>	4.36	2.41	-	7.41	7.83	8.74
<b>1.50</b>	5.98	4.04	-	8.86	9.28	10.18
<b>1.75</b>	7.61	5.67	1.49	10.31	10.73	11.63
<b>2.00</b>	9.24	7.29	3.12	11.75	12.17	13.08
<b>2.25</b>	10.86	8.92	4.75	13.20	13.62	14.52
<b>2.50</b>	12.49	10.54	6.37	14.64	15.06	15.97

\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.



Lobe Configuration	7-8 Lobe 3.0 Stage		Flow Rate		Speed
Displacement	0.16 rev/gal	0.04 rev/l	GPM	LPM	RPM
Max Differential @ No Load	450 psi	3103 kPa	400	1514	42 - 60
Max Torque @ No Load	7110 ft-lbs	9640 Nm	650	2461	82 - 100
Max Power	165 HP	123 kW	900	3407	122 - 140
C = Overall Length	301.1 in	7648 mm			
Weight	3590 lbs	1628 kg			

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

### ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	9-7/8 (251mm)	10-5/8 (270mm)	12-1/4 (311mm)	9-7/8 (251mm)	10-5/8 (270mm)	12-1/4 (311mm)
BEND ANGLE	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	-	-	-	3.30	4.06	-
<b>0.78</b>	2.64	0.50	-	5.94	6.71	8.34
<b>1.15</b>	5.82	3.68	-	8.45	9.22	10.85
<b>1.50</b>	8.83	6.69	2.10	10.83	11.59	13.23
<b>1.83</b>	11.67	9.53	4.94	13.07	13.83	15.47
<b>2.12</b>	14.16	12.02	7.43	15.03	15.80	17.44
<b>2.38</b>	16.40	14.26	9.67	16.80	17.56	19.20
<b>2.60</b>	18.29	16.15	11.56	18.29	19.05	20.69
<b>2.77</b>	19.75	17.61	13.03	19.75	20.21	21.85
<b>2.90</b>	20.87	18.73	14.14	20.87	21.09	22.73
<b>2.97</b>	21.47	19.33	14.75	21.47	21.57	23.20
<b>3.00</b>	21.73	19.59	15.01	21.73	21.77	23.41

### FBH BUILD RATE\*\*:

<b>1.25</b>	5.81	3.24	-	9.77	10.54	12.18
<b>1.50</b>	7.96	5.39	-	11.60	12.36	14.00
<b>1.75</b>	10.11	7.54	2.02	13.42	14.19	15.83
<b>2.00</b>	12.26	9.69	4.17	15.25	16.01	17.65
<b>2.25</b>	14.41	11.84	6.32	17.07	17.84	19.48
<b>2.50</b>	16.56	13.99	8.48	18.90	19.66	21.30

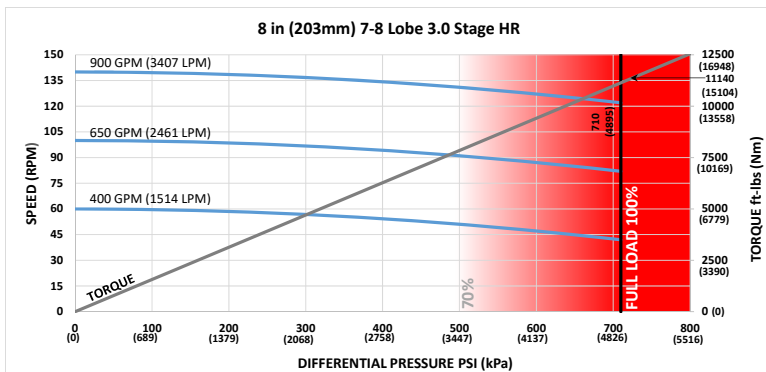
\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.

# 8 in (203 mm) 7-8 Lobe 3.0 Stage HR MUD LUBE



<b>Lobe Configuration</b>	7-8 Lobe 3.0 Stage HR		<b>Flow Rate</b>		<b>Speed</b>
<b>Displacement</b>	0.16 rev/gal	0.04 rev/l	<b>GPM</b>	<b>LPM</b>	<b>RPM</b>
<b>Max Differential @ No Load</b>	710 psi	4895 kPa	400	1514	42 - 60
<b>Max Torque @ No Load</b>	11140 ft-lbs	15104 Nm	650	2461	82 - 100
<b>Max Power</b>	259 HP	193 kW	900	3407	122 - 140
<b>C = Overall Length</b>	301.1 in	7648 mm			
<b>Weight</b>	3590 lbs	1628 kg			

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	9-7/8 (251mm)	10-5/8 (270mm)	12-1/4 (311mm)	9-7/8 (251mm)	10-5/8 (270mm)	12-1/4 (311mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	-	-	-	3.30	4.06	-
<b>0.78</b>	2.64	0.50	-	5.94	6.71	8.34
<b>1.15</b>	5.82	3.68	-	8.45	9.22	10.85
<b>1.50</b>	8.83	6.69	2.10	10.83	11.59	13.23
<b>1.83</b>	11.67	9.53	4.94	13.07	13.83	15.47
<b>2.12</b>	14.16	12.02	7.43	15.03	15.80	17.44
<b>2.38</b>	16.40	14.26	9.67	16.80	17.56	19.20
<b>2.60</b>	18.29	16.15	11.56	18.29	19.05	20.69
<b>2.77</b>	19.75	17.61	13.03	19.75	20.21	21.85
<b>2.90</b>	20.87	18.73	14.14	20.87	21.09	22.73
<b>2.97</b>	21.47	19.33	14.75	21.47	21.57	23.20
<b>3.00</b>	21.73	19.59	15.01	21.73	21.77	23.41

## FBH BUILD RATE\*\*:

<b>1.25</b>	5.81	3.24	-	9.77	10.54	12.18
<b>1.50</b>	7.96	5.39	-	11.60	12.36	14.00
<b>1.75</b>	10.11	7.54	2.02	13.42	14.19	15.83
<b>2.00</b>	12.26	9.69	4.17	15.25	16.01	17.65
<b>2.25</b>	14.41	11.84	6.32	17.07	17.84	19.48
<b>2.50</b>	16.56	13.99	8.48	18.90	19.66	21.30

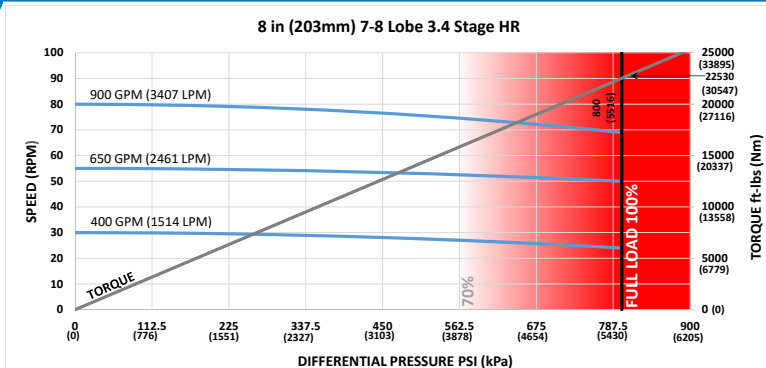
\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.

# MUD MOTORS

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Lobe Configuration	7-8 Lobe 3.4 Stage HR		Flow Rate		Speed
Displacement	0.09 rev/gal	0.02 rev/l	GPM	LPM	RPM
Max Differential @ No Load	800 psi	5516 kPa	400	1514	24 - 30
Max Torque @ No Load	22530 ft-lbs	30547 Nm	650	2461	50 - 55
Max Power	296 HP	221 kW	900	3407	69 - 80
C = Overall Length	441.1 in	11204 mm			
Weight	4930 lbs	2236 kg			

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	9-7/8 (251mm)	10-5/8 (270mm)	12-1/4 (311mm)	9-7/8 (251mm)	10-5/8 (270mm)	12-1/4 (311mm)
BEND ANGLE	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
0.39	-	-	-	2.00	2.32	-
0.78	1.71	0.28	-	3.93	4.25	4.95
1.15	3.83	2.40	-	5.77	6.09	6.78
1.50	5.83	4.41	1.35	7.50	7.83	8.52
1.83	7.72	6.30	3.24	9.14	9.46	10.15
2.12	9.38	7.96	4.90	10.58	10.90	11.59
2.38	10.87	9.45	6.39	11.87	12.19	12.88
2.60	12.13	10.71	7.65	12.96	13.28	13.97
2.77	13.10	11.68	8.63	13.80	14.12	14.82
2.90	13.85	12.43	9.37	14.45	14.77	15.46
2.97	14.25	12.83	9.77	14.79	15.11	15.81
3.00	14.42	13.00	9.94	14.94	15.26	15.96

## FBH BUILD RATE\*\*:

1.25	3.83	2.12	-	6.54	6.86	7.55
1.50	5.26	3.55	-	7.83	8.15	8.84
1.75	6.69	4.98	1.30	9.12	9.45	10.14
2.00	8.12	6.41	2.74	10.42	10.74	11.43
2.25	9.55	7.84	4.17	11.71	12.03	12.73
2.50	10.99	9.27	5.60	13.01	13.33	14.02

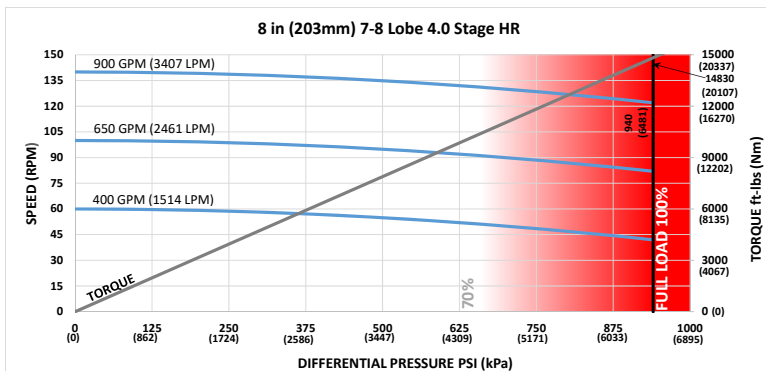
\*Stabilizers assumed as 1/8" undergage

\*\*Additional FBH Angles Available

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.

# 8 in (203 mm) 7-8 Lobe 4.0 Stage HR MUD LUBE



Lobe Configuration	7-8 Lobe 4.0 Stage HR		Flow Rate		Speed
Displacement	0.16 rev/gal	0.04 rev/l	<b>GPM</b>	<b>LPM</b>	<b>RPM</b>
Max Differential @ No Load	940 psi	6481 kPa	400	1514	42 - 60
Max Torque @ No Load	14830 ft-lbs	20107 Nm	650	2461	82 - 100
Max Power	344 HP	257 kW	900	3407	122 - 140
C = Overall Length	344.35 in	8746 mm			
Weight	4061 lbs	1842 kg			

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	9-7/8 (251mm)	10-5/8 (270mm)	12-1/4 (311mm)	9-7/8 (251mm)	10-5/8 (270mm)	12-1/4 (311mm)
BEND ANGLE	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	-	-	-	2.75	3.31	-
<b>0.78</b>	2.26	0.40	-	5.13	5.69	6.90
<b>1.15</b>	5.01	3.16	-	7.39	7.95	9.16
<b>1.50</b>	7.62	5.76	1.79	9.53	10.09	11.30
<b>1.83</b>	10.07	8.22	4.25	11.55	12.11	13.31
<b>2.12</b>	12.23	10.38	6.41	13.32	13.88	15.09
<b>2.38</b>	14.17	12.32	8.34	14.91	15.47	16.68
<b>2.60</b>	15.81	13.96	9.98	16.25	16.82	18.02
<b>2.77</b>	17.07	15.22	11.25	17.29	17.85	19.06
<b>2.90</b>	18.04	16.19	12.22	18.09	18.65	19.85
<b>2.97</b>	18.56	16.71	12.74	18.56	19.08	20.28
<b>3.00</b>	18.79	16.94	12.96	18.79	19.26	20.46

## FBH BUILD RATE\*\*:

<b>1.25</b>	5.01	2.78	-	8.48	9.04	10.24
<b>1.50</b>	6.87	4.64	-	10.10	10.66	11.87
<b>1.75</b>	8.73	6.50	1.73	11.72	12.28	13.49
<b>2.00</b>	10.59	8.37	3.59	13.34	13.91	15.11
<b>2.25</b>	12.45	10.23	5.45	14.97	15.53	16.73
<b>2.50</b>	14.32	12.09	7.31	16.59	17.15	18.35

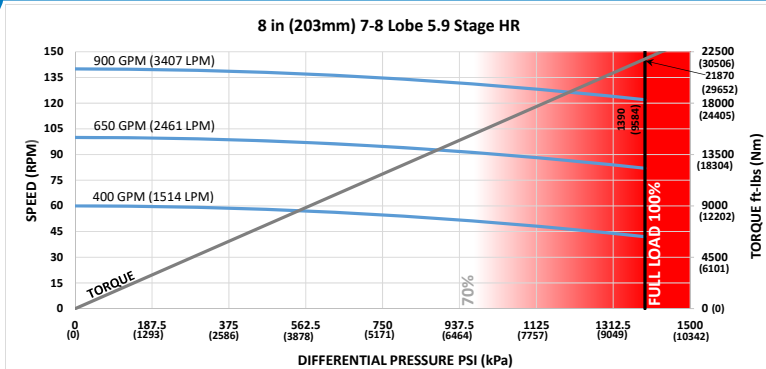
\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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# MUD MOTORS

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Lobe Configuration	7-8 Lobe 5.9 Stage HR		Flow Rate		Speed
Displacement	0.16 rev/gal	0.04 rev/l	<b>GPM</b>	<b>LPM</b>	<b>RPM</b>
Max Differential @ No Load	1390 psi	9584 kPa	400	1514	42 - 60
Max Torque @ No Load	21870 ft.-lbs	29652 Nm	650	2461	82 - 100
Max Power	508 HP	379 kW	900	3407	122 - 140
C = Overall Length	441.1 in	11204 mm			
Weight	5071 lbs	2300 kg			

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	9-7/8 (251mm)	10-5/8 (270mm)	12-1/4 (311mm)	9-7/8 (251mm)	10-5/8 (270mm)	12-1/4 (311mm)
<b>BEND ANGLE</b>	<b>Degrees per 100 Feet (30 m)</b>			<b>Degrees per 100 Feet (30 m)</b>		
<b>0.39</b>	-	-	-	2.00	2.32	-
<b>0.78</b>	1.71	0.28	-	3.93	4.25	4.95
<b>1.15</b>	3.83	2.40	-	5.77	6.09	6.78
<b>1.50</b>	5.83	4.41	1.35	7.50	7.83	8.52
<b>1.83</b>	7.72	6.30	3.24	9.14	9.46	10.15
<b>2.12</b>	9.38	7.96	4.90	10.58	10.90	11.59
<b>2.38</b>	10.87	9.45	6.39	11.87	12.19	12.88
<b>2.60</b>	12.13	10.71	7.65	12.96	13.28	13.97
<b>2.77</b>	13.10	11.68	8.63	13.80	14.12	14.82
<b>2.90</b>	13.85	12.43	9.37	14.45	14.77	15.46
<b>2.97</b>	14.25	12.83	9.77	14.79	15.11	15.81
<b>3.00</b>	14.42	13.00	9.94	14.94	15.26	15.96

## FBH BUILD RATE\*\*:

<b>1.25</b>	3.83	2.12	-	6.54	6.86	7.55
<b>1.50</b>	5.26	3.55	-	7.83	8.15	8.84
<b>1.75</b>	6.69	4.98	1.30	9.12	9.45	10.14
<b>2.00</b>	8.12	6.41	2.74	10.42	10.74	11.43
<b>2.25</b>	9.55	7.84	4.17	11.71	12.03	12.73
<b>2.50</b>	10.99	9.27	5.60	13.01	13.33	14.02

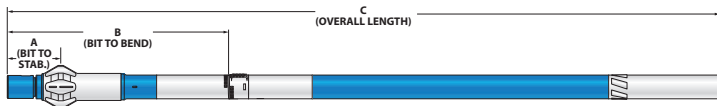
\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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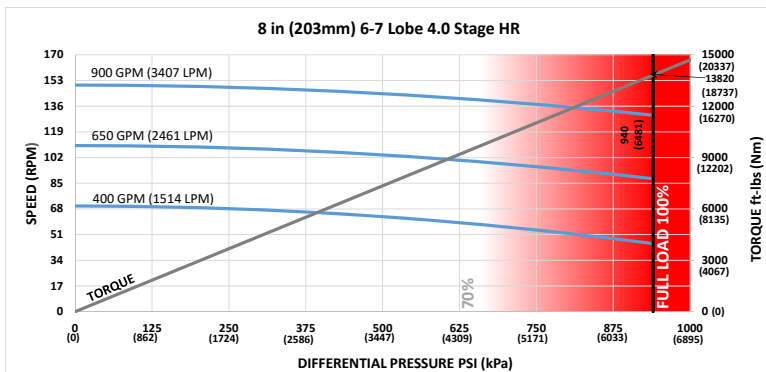
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<b>Bit Size Range</b>	12-1/4 - 17-1/2 in	311 - 445 mm
<b>Bit Box Connection</b>	6-5/8 or 7-5/8 REGULAR	
<b>Dynamic Bearing Load On/Off Bottom</b>	240975 lbf	107200 daN
<b>Static Bearing Load On/Off Bottom</b>	852600 lbf	379300 daN
<b>Max. Overpull for Re-run</b>	741100 lbf	329700 daN
<b>Absolute Overpull</b>	1235100 lbf	549400 daN
<b>Adjustable Make Up Torque</b>	60000 ft-lbs	81300 Nm
<b>A = Bit to Stabilizer (center)</b>	20.2 in	513 mm
<b>B = Bit to Bend</b>	<b>Adjustable</b>	87.3 in 2217 mm
	<b>Fixed</b>	87.3 in 2217 mm

9-5/8 in (244 mm) w/ 8 in (203 mm) 6-7 Lobe 4.0 Stage HR SERIES 1	217
9-5/8 in (244 mm) w/ 8 in (203 mm) 7-8 Lobe 3.0 Stage HR SERIES 1	218
9-5/8 in (244 mm) w/ 8 in (203 mm) 7-8 Lobe 3.4 Stage HR SERIES 1	219
9-5/8 in (244 mm) w/ 8 in (203 mm) 7-8 Lobe 4.0 Stage HR SERIES 1	220
9-5/8 in (244 mm) w/ 8 in (203 mm) 7-8 Lobe 5.9 Stage HR SERIES 1	221
9-5/8 in (244 mm) 3-4 Lobe 6.0 Stage HR SERIES 1	222
9-5/8 in (244 mm) 6-7 Lobe 5.0 Stage HR SERIES 1	223
9-5/8 in (244 mm) 6-7 Lobe 6.0 Stage HR SERIES 1	224
9-5/8 in (244 mm) 7-8 Lobe 5.7 Stage HR SERIES 1	225

# 9-5/8 in (244 mm) w/ 8 in (203 mm) 6-7 Lobe 4.0 Stage HR SERIES 1



Lobe Configuration	6-7 Lobe 4.0 Stage HR		Flow Rate		Speed
Displacement	0.17 rev/gal	0.04 rev/l	<b>GPM</b>	<b>LPM</b>	<b>RPM</b>
Max Differential @ No Load	940 psi	6481 kPa	400	1514	45 - 70
Max Torque @ No Load	13820 ft-lbs	18737 Nm	650	2461	88 - 110
Max Power	342 HP	255 kW	900	3407	130 - 150
C = Overall Length	364.7 in	9263 mm			
Weight	4836 lbs	2194 kg			

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	12-1/4 (311mm)	14 (356mm)	17-1/2 (445mm)	12-1/4 (311mm)	14 (356mm)	17-1/2 (445mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	-	-	-	2.87	-	-
<b>0.78</b>	1.51	-	-	5.00	6.13	-
<b>1.15</b>	4.09	0.68	-	7.02	8.14	10.40
<b>1.50</b>	6.53	3.11	-	8.92	10.05	12.31
<b>1.83</b>	8.82	5.41	-	10.72	11.85	14.11
<b>2.12</b>	10.84	7.43	0.62	12.31	13.43	15.69
<b>2.38</b>	12.65	9.24	2.43	13.72	14.85	17.11
<b>2.60</b>	14.19	10.78	3.96	14.92	16.05	18.31
<b>2.77</b>	15.37	11.96	5.15	15.85	16.98	19.23
<b>2.90</b>	16.27	12.87	6.05	16.56	17.69	19.94
<b>2.97</b>	16.76	13.35	6.54	16.94	18.07	20.33
<b>3.00</b>	16.97	13.56	6.75	17.11	18.23	20.49

## FBH BUILD RATE\*\*:

<b>1.25</b>	5.28	1.87	-	7.56	8.69	10.94
<b>1.50</b>	7.02	3.61	-	8.92	10.05	12.31
<b>1.75</b>	8.77	5.35	-	10.29	11.42	13.67
<b>2.00</b>	10.51	7.10	0.28	11.65	12.78	15.03
<b>2.25</b>	12.25	8.84	2.02	13.02	14.14	16.40
<b>2.50</b>	13.99	10.58	3.76	14.38	15.51	17.76

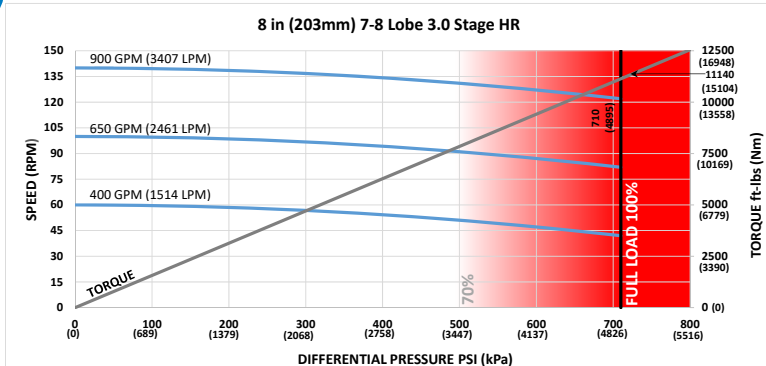
\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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# MUD MOTORS

217



Lobe Configuration	7-8 Lobe 3.0 Stage HR		Flow Rate		Speed
Displacement	0.16 rev/gal	0.04 rev/l	GPM	LPM	RPM
Max Differential @ No Load	710 psi	4895 kPa	400	1514	42 - 60
Max Torque @ No Load	11140 ft-lbs	15104 Nm	650	2461	82 - 100
Max Power	259 HP	193 kW	900	3407	122 - 140
C = Overall Length	318.7 in	8095 mm			
Weight	4477 lbs	2031 kg			

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	12-1/4 (311mm)	14 (356mm)	17-1/2 (445mm)	12-1/4 (311mm)	14 (356mm)	17-1/2 (445mm)
BEND ANGLE	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
0.39	-	-	-	3.49	-	-
0.78	1.80	-	-	5.82	7.35	10.41
1.15	4.78	0.84	-	8.04	9.57	12.63
1.50	7.59	3.65	-	10.14	11.66	14.72
1.83	10.24	6.31	-	12.11	13.64	16.70
2.12	12.57	8.64	0.77	13.85	15.38	18.44
2.38	14.66	10.73	2.86	15.41	16.94	19.99
2.60	16.43	12.50	4.63	16.73	18.25	21.31
2.77	17.80	13.86	6.00	17.80	19.27	22.33
2.90	18.84	14.91	7.04	18.84	20.05	23.11
2.97	19.40	15.47	7.61	19.40	20.47	23.53
3.00	19.64	15.71	7.85	19.64	20.65	23.71

## FBH BUILD RATE\*\*:

1.25	6.20	2.26	-	8.64	10.17	13.22
1.50	8.20	4.27	-	10.14	11.66	14.72
1.75	10.21	6.28	-	11.63	13.16	16.22
2.00	12.22	8.29	0.42	13.13	14.66	17.72
2.25	14.23	10.30	2.43	14.63	16.16	19.21
2.50	16.24	12.31	4.44	16.24	17.66	20.71

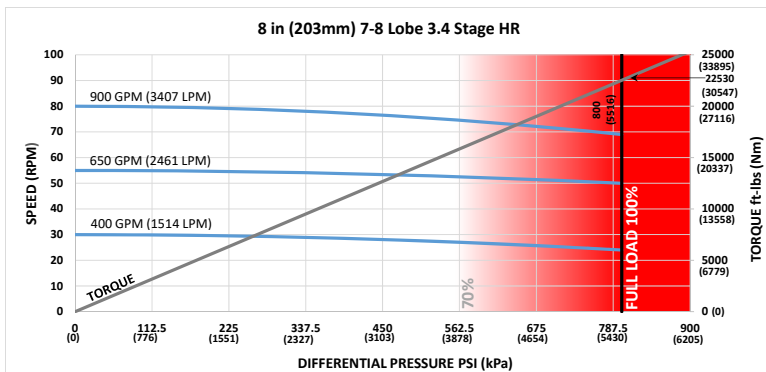
\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.

# 9-5/8 in (244 mm) w/ 8 in (203 mm) 7-8 Lobe 3.4 Stage HR SERIES 1



<b>Lobe Configuration</b>	7-8 Lobe 3.4 Stage HR	
<b>Displacement</b>	0.09 rev/gal	0.02 rev/l
<b>Max Differential @ No Load</b>	800 psi	5516 kPa
<b>Max Torque @ No Load</b>	22530 ft-lbs	30547 Nm
<b>Max Power</b>	296 HP	221 kW
<b>C = Overall Length</b>	458.7 in	11651 mm
<b>Weight</b>	5817 lbs	2639 kg

Flow Rate		Speed
GPM	LPM	RPM
400	1514	24 - 30
650	2461	50 - 55
900	3407	69 - 80

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	12-1/4 (311mm)	14 (356mm)	17-1/2 (445mm)	12-1/4 (311mm)	14 (356mm)	17-1/2 (445mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	-	-	-	2.10	-	-
<b>0.78</b>	1.14	-	-	3.88	4.56	-
<b>1.15</b>	3.17	0.48	-	5.56	6.24	7.60
<b>1.50</b>	5.08	2.40	-	7.16	7.84	9.20
<b>1.83</b>	6.89	4.21	-	8.67	9.35	10.70
<b>2.12</b>	8.47	5.79	0.44	9.99	10.67	12.03
<b>2.38</b>	9.89	7.22	1.86	11.17	11.85	13.21
<b>2.60</b>	11.10	8.42	3.06	12.18	12.86	14.22
<b>2.77</b>	12.03	9.35	3.99	12.95	13.63	14.99
<b>2.90</b>	12.74	10.06	4.71	13.55	14.23	15.58
<b>2.97</b>	13.12	10.44	5.09	13.87	14.55	15.90
<b>3.00</b>	13.29	10.61	5.25	14.00	14.68	16.04

## FBH BUILD RATE\*\*:

<b>1.25</b>	4.07	1.39	-	6.02	6.70	8.06
<b>1.50</b>	5.44	2.76	-	7.16	7.84	9.20
<b>1.75</b>	6.81	4.13	-	8.30	8.98	10.34
<b>2.00</b>	8.18	5.50	0.14	9.44	10.12	11.48
<b>2.25</b>	9.54	6.86	1.51	10.58	11.26	12.62
<b>2.50</b>	10.91	8.23	2.88	11.72	12.40	13.76

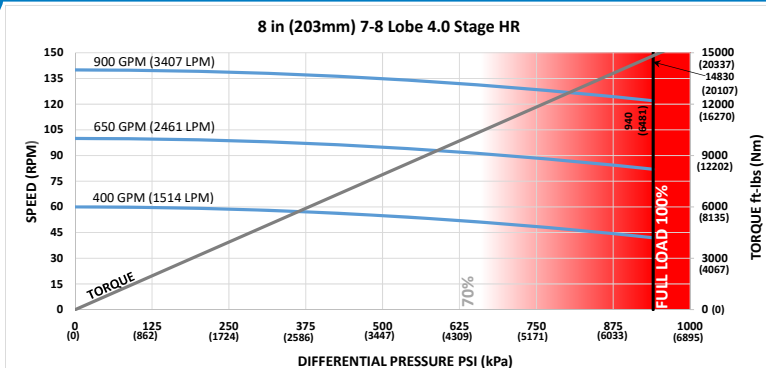
\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.

# MUD MOTORS

219



Lobe Configuration	7-8 Lobe 4.0 Stage HR		Flow Rate		Speed
Displacement	0.16 rev/gal	0.04 rev/l	GPM	LPM	RPM
Max Differential @ No Load	940 psi	6481 kPa	400	1514	42 - 60
Max Torque @ No Load	14830 ft.-lbs	20107 Nm	650	2461	82 - 100
Max Power	344 HP	257 kW	900	3407	122 - 140
C = Overall Length	361.95 in	9194 mm			
Weight	4948 lbs	2244 kg			

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	12-1/4 (311mm)	14 (356mm)	17-1/2 (445mm)	12-1/4 (311mm)	14 (356mm)	17-1/2 (445mm)
BEND ANGLE	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
0.39	-	-	-	2.90	-	-
0.78	1.53	-	-	5.04	6.19	-
1.15	4.12	0.68	-	7.07	8.22	10.51
1.50	6.58	3.14	-	8.99	10.14	12.43
1.83	8.90	5.46	-	10.80	11.95	14.24
2.12	10.93	7.50	0.62	12.39	13.54	15.83
2.38	12.76	9.32	2.45	13.82	14.96	17.26
2.60	14.30	10.87	3.99	15.02	16.17	18.46
2.77	15.50	12.06	5.19	15.95	17.10	19.40
2.90	16.41	12.97	6.10	16.67	17.81	20.11
2.97	16.90	13.46	6.59	17.05	18.20	20.49
3.00	17.11	13.68	6.81	17.22	18.36	20.66

## FBH BUILD RATE\*\*:

1.25	5.33	1.89	-	7.62	8.77	11.06
1.50	7.09	3.65	-	8.99	10.14	12.43
1.75	8.84	5.40	-	10.36	11.51	13.80
2.00	10.59	7.16	0.28	11.73	12.88	15.17
2.25	12.35	8.91	2.04	13.10	14.25	16.54
2.50	14.10	10.67	3.80	14.47	15.62	17.91

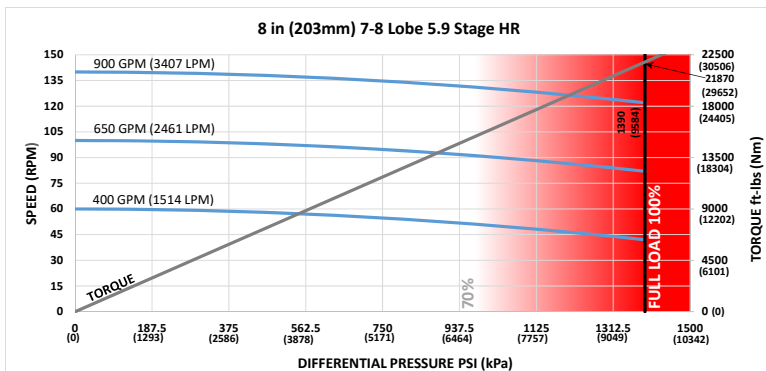
\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.

# 9-5/8 in (244 mm) w/ 8 in (203 mm) 7-8 Lobe 5.9 Stage HR SERIES 1



<b>Lobe Configuration</b>	7-8 Lobe 5.9 Stage HR	
<b>Displacement</b>	0.16 rev/gal	0.04 rev/l
<b>Max Differential @ No Load</b>	1390 psi	9584 kPa
<b>Max Torque @ No Load</b>	21870 ft-lbs	29652 Nm
<b>Max Power</b>	508 HP	379 kW
<b>C = Overall Length</b>	458.7 in	11651 mm
<b>Weight</b>	5958 lbs	2703 kg

Flow Rate		Speed
GPM	LPM	RPM
400	1514	42 - 60
650	2461	82 - 100
900	3407	122 - 140

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	5-7/8 (149mm)	6 (152mm)	6-1/4 (159mm)	5-7/8 (149mm)	6 (152mm)	6-1/4 (159mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	-	-	-	2.10	-	-
<b>0.78</b>	1.14	-	-	3.88	4.56	-
<b>1.15</b>	3.17	0.48	-	5.56	6.24	7.60
<b>1.50</b>	5.08	2.40	-	7.16	7.84	9.20
<b>1.83</b>	6.89	4.21	-	8.67	9.35	10.70
<b>2.12</b>	8.47	5.79	0.44	9.99	10.67	12.03
<b>2.38</b>	9.89	7.22	1.86	11.17	11.85	13.21
<b>2.60</b>	11.10	8.42	3.06	12.18	12.86	14.22
<b>2.77</b>	12.03	9.35	3.99	12.95	13.63	14.99
<b>2.90</b>	12.74	10.06	4.71	13.55	14.23	15.58
<b>2.97</b>	13.12	10.44	5.09	13.87	14.55	15.90
<b>3.00</b>	13.29	10.61	5.25	14.00	14.68	16.04

## FBH BUILD RATE\*\*:

<b>1.25</b>	4.07	1.39	-	6.02	6.70	8.06
<b>1.50</b>	5.44	2.76	-	7.16	7.84	9.20
<b>1.75</b>	6.81	4.13	-	8.30	8.98	10.34
<b>2.00</b>	8.18	5.50	0.14	9.44	10.12	11.48
<b>2.25</b>	9.54	6.86	1.51	10.58	11.26	12.62
<b>2.50</b>	10.91	8.23	2.88	11.72	12.40	13.76

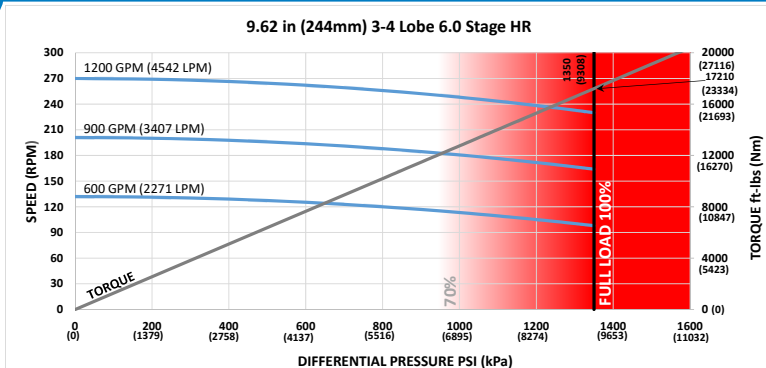
\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.

# MUD MOTORS

221



Lobe Configuration	3-4 Lobe 6.0 Stage HR		Flow Rate		Speed
Displacement	0.22 rev/gal	0.06 rev/l	GPM	LPM	RPM
Max Differential @ No Load	1350 psi	9308 kPa	600	2271	98 - 132
Max Torque @ No Load	17210 ft.-lbs	23334 Nm	900	3407	164 - 201
Max Power	754 HP	562 kW	1200	4542	230 - 270
C = Overall Length	386.7 in	9822 mm			
Weight	5634 lbs	2556 kg			

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	12-1/4 (311mm)	14 (356mm)	17-1/2 (445mm)	12-1/4 (311mm)	14 (356mm)	17-1/2 (445mm)
BEND ANGLE	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
0.39	-	-	-	2.65	-	-
0.78	1.40	-	-	4.68	5.67	-
1.15	3.83	0.62	-	6.61	7.60	9.58
1.50	6.12	2.91	-	8.44	9.43	11.41
1.83	8.28	5.07	-	10.16	11.15	13.13
2.12	10.18	6.97	0.56	11.68	12.67	14.65
2.38	11.88	8.67	2.26	13.03	14.02	16.00
2.60	13.32	10.11	3.71	14.18	15.17	17.15
2.77	14.43	11.23	4.82	15.07	16.06	18.04
2.90	15.28	12.08	5.67	15.75	16.74	18.72
2.97	15.74	12.54	6.13	16.11	17.10	19.08
3.00	15.94	12.73	6.33	16.27	17.26	19.24

## FBH BUILD RATE\*\*:

1.25	4.94	1.73	-	7.13	8.12	10.10
1.50	6.57	3.37	-	8.44	9.43	11.41
1.75	8.21	5.00	-	9.75	10.73	12.71
2.00	9.85	6.64	0.23	11.05	12.04	14.02
2.25	11.48	8.28	1.87	12.36	13.35	15.32
2.50	13.12	9.92	3.51	13.66	14.65	16.63

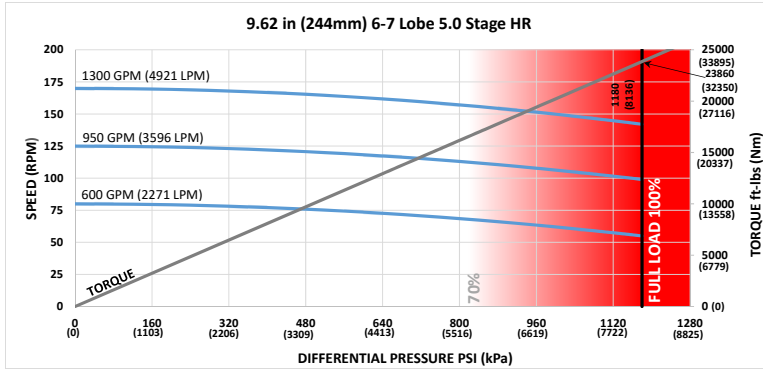
\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.

# 9-5/8 in (244 mm) 6-7 Lobe 5.0 Stage HR SERIES 1



<b>Lobe Configuration</b>	6-7 Lobe 5.0 Stage HR	
<b>Displacement</b>	0.13 rev/gal	0.03 rev/l
<b>Max Differential @ No Load</b>	1180 psi	8136 kPa
<b>Max Torque @ No Load</b>	23860 ft-lbs	32350 Nm
<b>Max Power</b>	645 HP	481 kW
<b>C = Overall Length</b>	376.7 in	9568 mm
<b>Weight</b>	5834 lbs	2646 kg

Flow Rate		Speed
GPM	LPM	RPM
600	2271	55 - 80
950	3596	99 - 125
1300	4921	142 - 170

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	12-1/4 (311mm)	14 (356mm)	17-1/2 (445mm)	12-1/4 (311mm)	14 (356mm)	17-1/2 (445mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	-	-	-	2.74	-	-
<b>0.78</b>	1.45	-	-	4.82	5.87	-
<b>1.15</b>	3.94	0.64	-	6.79	7.84	9.94
<b>1.50</b>	6.30	3.00	-	8.65	9.70	11.80
<b>1.83</b>	8.52	5.22	-	10.41	11.46	13.56
<b>2.12</b>	10.47	7.17	0.58	11.96	13.00	15.10
<b>2.38</b>	12.22	8.92	2.34	13.34	14.39	16.49
<b>2.60</b>	13.70	10.40	3.82	14.51	15.56	17.66
<b>2.77</b>	14.84	11.55	4.96	15.42	16.47	18.56
<b>2.90</b>	15.72	12.42	5.84	16.11	17.16	19.26
<b>2.97</b>	16.19	12.90	6.31	16.48	17.53	19.63
<b>3.00</b>	16.39	13.10	6.51	16.64	17.69	19.79

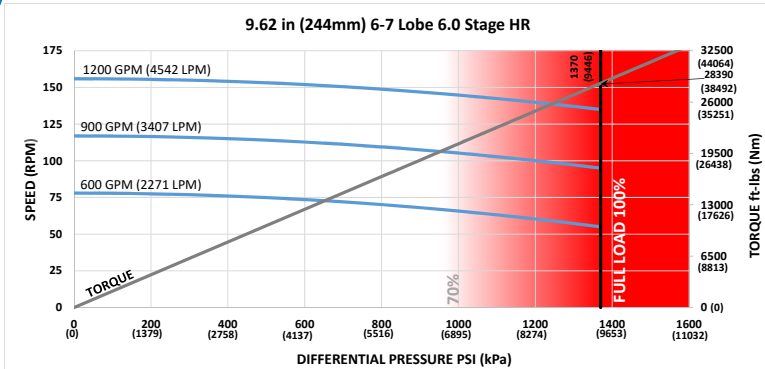
## FBH BUILD RATE\*\*:

<b>1.25</b>	5.09	1.79	-	7.32	8.37	10.47
<b>1.50</b>	6.77	3.48	-	8.65	9.70	11.80
<b>1.75</b>	8.45	5.16	-	9.98	11.03	13.13
<b>2.00</b>	10.14	6.84	0.25	11.32	12.37	14.46
<b>2.25</b>	11.82	8.52	1.94	12.65	13.70	15.79
<b>2.50</b>	13.50	10.21	3.62	13.98	15.03	17.13

\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.



<b>Lobe Configuration</b>	6-7 Lobe 6.0 Stage HR		<b>Flow Rate</b>		<b>Speed</b>
<b>Displacement</b>	0.13 rev/gal	0.03 rev/l	<b>GPM</b>	<b>LPM</b>	<b>RPM</b>
<b>Max Differential @ No Load</b>	1370 psi	9446 kPa	600	2271	55 - 78
<b>Max Torque @ No Load</b>	28390 ft-lbs	38492 Nm	900	3407	95 - 117
<b>Max Power</b>	730 HP	544 kW	1200	4542	135 - 156
<b>C = Overall Length</b>	408.7 in	10381 mm			
<b>Weight</b>	6259 lbs	2839 kg			

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

**ADJUSTABLE BUILD RATE:**

Hole Size	SLICK			STABILIZED*		
	12-1/4 (311mm)	14 (356mm)	17-1/2 (445mm)	12-1/4 (311mm)	14 (356mm)	17-1/2 (445mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	-	-	-	2.45	-	-
<b>0.78</b>	1.31	-	-	4.40	5.28	-
<b>1.15</b>	3.60	0.57	-	6.25	7.13	8.88
<b>1.50</b>	5.76	2.73	-	8.00	8.88	10.63
<b>1.83</b>	7.80	4.77	-	9.65	10.53	12.28
<b>2.12</b>	9.59	6.56	0.52	11.11	11.98	13.73
<b>2.38</b>	11.19	8.17	2.12	12.41	13.28	15.03
<b>2.60</b>	12.55	9.53	3.48	13.51	14.38	16.13
<b>2.77</b>	13.60	10.58	4.53	14.36	15.23	16.98
<b>2.90</b>	14.40	11.38	5.34	15.01	15.88	17.63
<b>2.97</b>	14.83	11.81	5.77	15.36	16.23	17.98
<b>3.00</b>	15.02	12.00	5.95	15.51	16.38	18.13

**FBH BUILD RATE\*\*:**

<b>1.25</b>	4.64	1.61	-	6.75	7.63	9.38
<b>1.50</b>	6.18	3.15	-	8.00	8.88	10.63
<b>1.75</b>	7.72	4.70	-	9.25	10.13	11.88
<b>2.00</b>	9.27	6.24	0.20	10.51	11.38	13.13
<b>2.25</b>	10.81	7.79	1.74	11.76	12.63	14.38
<b>2.50</b>	12.35	9.33	3.29	13.01	13.88	15.63

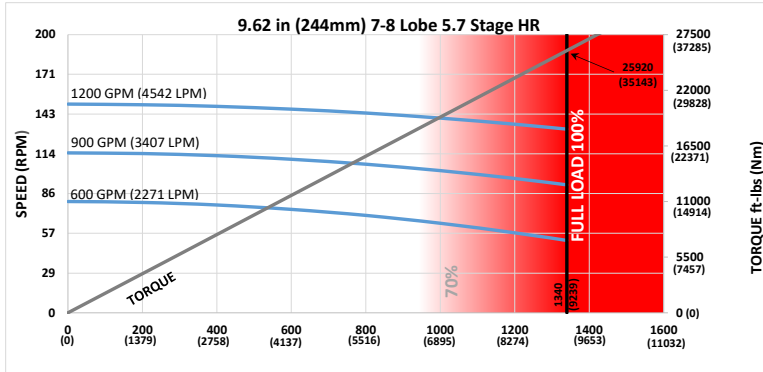
\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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

# 9-5/8 in (244 mm) 7-8 Lobe 5.7 Stage HR SERIES 1



<b>Lobe Configuration</b>	7-8 Lobe 5.7 Stage HR	
<b>Displacement</b>	0.13 rev/gal	0.03 rev/l
<b>Max Differential @ No Load</b>	1340 psi	9239 kPa
<b>Max Torque @ No Load</b>	25920 ft-lbs	35143 Nm
<b>Max Power</b>	651 HP	486 kW
<b>C = Overall Length</b>	398.7 in	10127 mm
<b>Weight</b>	6331 lbs	2872 kg

Flow Rate		Speed
GPM	LPM	RPM
600	2271	52 - 80
900	3407	92 - 115
1200	4542	132 - 150

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	12-1/4 (311mm)	14 (356mm)	17-1/2 (445mm)	12-1/4 (311mm)	14 (356mm)	17-1/2 (445mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	-	-	-	2.54	-	-
<b>0.78</b>	1.35	-	-	4.52	5.45	-
<b>1.15</b>	3.70	0.59	-	6.41	7.34	9.19
<b>1.50</b>	5.92	2.81	-	8.20	9.12	10.97
<b>1.83</b>	8.01	4.90	-	9.88	10.80	12.65
<b>2.12</b>	9.85	6.74	0.54	11.36	12.28	14.13
<b>2.38</b>	11.49	8.39	2.18	12.68	13.61	15.46
<b>2.60</b>	12.89	9.78	3.58	13.81	14.73	16.58
<b>2.77</b>	13.97	10.86	4.66	14.67	15.60	17.45
<b>2.90</b>	14.79	11.69	5.48	15.34	16.26	18.11
<b>2.97</b>	15.23	12.13	5.93	15.69	16.62	18.47
<b>3.00</b>	15.42	12.32	6.12	15.85	16.77	18.62

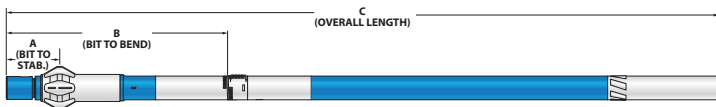
## FBH BUILD RATE\*\*:

<b>1.25</b>	4.77	1.66	-	6.92	7.85	9.70
<b>1.50</b>	6.35	3.25	-	8.20	9.12	10.97
<b>1.75</b>	7.94	4.83	-	9.47	10.40	12.25
<b>2.00</b>	9.52	6.42	0.21	10.75	11.67	13.52
<b>2.25</b>	11.11	8.00	1.80	12.02	12.95	14.80
<b>2.50</b>	12.69	9.59	3.38	13.30	14.22	16.07

\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

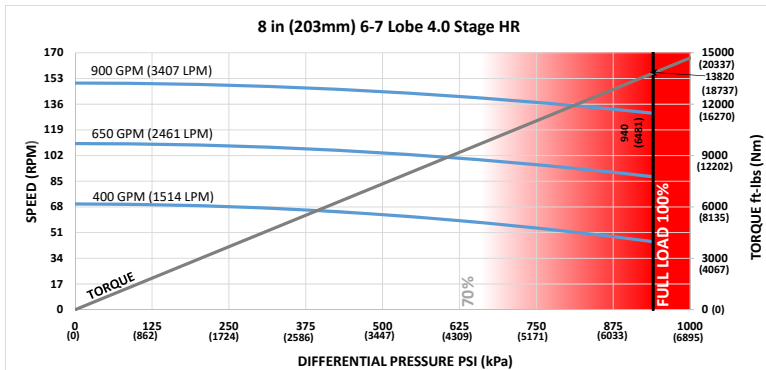
This information is for reference only. Build rates are theoretical calculations using three-point geometry and new motor builds. Actual rate predictions will depend on formation characteristics, bit profiles, and WOB. For custom motor configurations and build rates, please contact your DYNOMAX office.



<b>Bit Size Range</b>	12-1/4 - 17-1/2 in	311 - 445 mm
<b>Bit Box Connection</b>	6-5/8 or 7-5/8 REGULAR	
<b>Dynamic Bearing Load On/Off Bottom</b>	188513 lbf	83900 daN
<b>Static Bearing Load On/Off Bottom</b>	1092750 lbf	486100 daN
<b>Max. Overpull for Re-run</b>	721400 lbf	320900 daN
<b>Absolute Overpull</b>	1202300 lbf	534800 daN
<b>Adjustable Make Up Torque</b>	60000 ft-lbs	81300 Nm
<b>A = Bit to Stabilizer (center)</b>	22.5 in	572 mm
<b>B = Bit to Bend</b>	<b>Adjustable</b>	87.3 in / 2217 mm
	<b>Fixed</b>	87.3 in / 2217 mm

9-5/8 in (244 mm) Bottom w/ 8 in (203 mm) 6-7 Lobe 4.0 Stage HR MUD LUBE	227
9-5/8 in (244 mm) Bottom w/ 8 in (203 mm) 7-8 Lobe 3.0 Stage HR MUD LUBE	228
9-5/8 in (244 mm) Bottom w/ 8 in (203 mm) 7-8 Lobe 3.4 Stage HR MUD LUBE	229
9-5/8 in (244 mm) Bottom w/ 8 in (203 mm) 7-8 Lobe 4.0 Stage HR MUD LUBE	230
9-5/8 in (244 mm) Bottom w/ 8 in (203 mm) 7-8 Lobe 5.9 Stage HR MUD LUBE	231
9-5/8 in (244 mm) 3-4 Lobe 6.0 Stage HR MUD LUBE	232
9-5/8 in (244 mm) 6-7 Lobe 5.0 Stage HR MUD LUBE	233
9-5/8 in (244 mm) 6-7 Lobe 6.0 Stage HR MUD LUBE	234
9-5/8 in (244 mm) 7-8 Lobe 5.7 Stage HR MUD LUBE	235

# 9-5/8 in (244 mm) Bottom w/ 8 in (203 mm) 6-7 Lobe 4.0 Stage HR MUD LUBE



Lobe Configuration	6-7 Lobe 4.0 Stage HR		Flow Rate		Speed
Displacement	0.17 rev/gal	0.04 rev/l	<b>GPM</b>	<b>LPM</b>	<b>RPM</b>
Max Differential @ No Load	940 psi	6481 kPa	400	1514	45 - 70
Max Torque @ No Load	13820 ft-lbs	18737 Nm	650	2461	88 - 110
Max Power	342 HP	255 kW	900	3407	130 - 150
C = Overall Length	365 in	9271 mm			
Weight	4805 lbs	2180 kg			

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	12-1/4 (311mm)	14 (356mm)	17-1/2 (445mm)	12-1/4 (311mm)	14 (356mm)	17-1/2 (445mm)
BEND ANGLE	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	0.13	-	-	3.99	5.12	-
<b>0.78</b>	2.84	-	-	6.13	7.26	9.53
<b>1.15</b>	5.41	2.01	-	8.16	9.30	11.56
<b>1.50</b>	7.85	4.44	-	10.08	11.22	13.48
<b>1.83</b>	10.15	6.74	-	11.90	13.03	15.30
<b>2.12</b>	12.16	8.76	1.95	13.49	14.62	16.89
<b>2.38</b>	13.97	10.57	3.76	14.92	16.05	18.32
<b>2.60</b>	15.50	12.10	5.29	16.12	17.26	19.53
<b>2.77</b>	16.69	13.28	6.47	17.06	18.19	20.46
<b>2.90</b>	17.59	14.19	7.38	17.77	18.91	21.17
<b>2.97</b>	18.08	14.67	7.87	18.16	19.29	21.56
<b>3.00</b>	18.29	14.88	8.07	18.32	19.45	21.72

## FBH BUILD RATE\*\*:

<b>1.25</b>	6.61	3.20	-	8.71	9.84	12.11
<b>1.50</b>	8.35	4.94	-	10.08	11.22	13.48
<b>1.75</b>	10.09	6.68	-	11.46	12.59	14.86
<b>2.00</b>	11.83	8.42	1.61	12.83	13.96	16.23
<b>2.25</b>	13.57	10.16	3.35	14.20	15.34	17.60
<b>2.50</b>	15.31	11.90	5.09	15.57	16.71	18.98

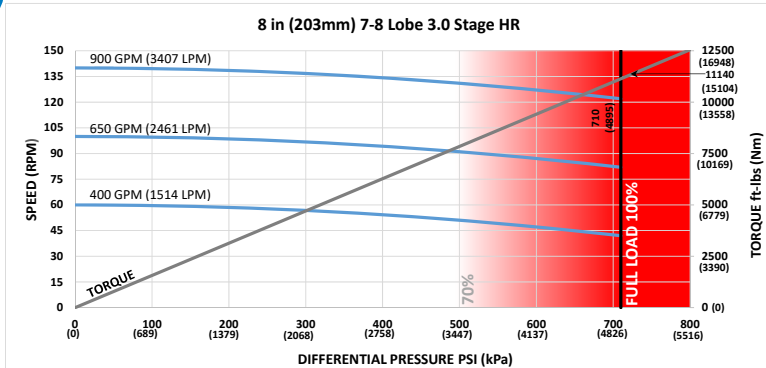
\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.

# MUD MOTORS

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<b>Lobe Configuration</b>	7-8 Lobe 3.0 Stage HR	
<b>Displacement</b>	0.16 rev/gal	0.04 rev/l
<b>Max Differential @ No Load</b>	710 psi	4895 kPa
<b>Max Torque @ No Load</b>	11140 ft-lbs	15104 Nm
<b>Max Power</b>	259 HP	193 kW
<b>C = Overall Length</b>	319 in	8103 mm
<b>Weight</b>	4446 lbs	2017 kg

Flow Rate		Speed
GPM	LPM	RPM
400	1514	42 - 60
650	2461	82 - 100
900	3407	122 - 140

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

**ADJUSTABLE BUILD RATE:**

Hole Size	SLICK			STABILIZED*		
	12-1/4 (311mm)	14 (356mm)	17-1/2 (445mm)	12-1/4 (311mm)	14 (356mm)	17-1/2 (445mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	0.56	-	-	5.00	6.53	-
<b>0.78</b>	3.69	-	-	7.35	8.89	11.97
<b>1.15</b>	6.66	2.73	-	9.58	11.12	14.20
<b>1.50</b>	9.47	5.54	-	11.70	13.24	16.31
<b>1.83</b>	12.12	8.19	0.33	13.69	15.23	18.31
<b>2.12</b>	14.45	10.52	2.66	15.44	16.98	20.06
<b>2.38</b>	16.54	12.61	4.75	17.01	18.55	21.63
<b>2.60</b>	18.31	14.38	6.52	18.34	19.88	22.96
<b>2.77</b>	19.67	15.74	7.89	19.67	20.91	23.98
<b>2.90</b>	20.71	16.79	8.93	20.71	21.69	24.77
<b>2.97</b>	21.28	17.35	9.50	21.28	22.12	25.19
<b>3.00</b>	21.52	17.59	9.74	21.52	22.30	25.37

**FBH BUILD RATE\*\*:**

<b>1.25</b>	8.08	4.15	-	10.19	11.73	14.80
<b>1.50</b>	10.09	6.16	-	11.70	13.24	16.31
<b>1.75</b>	12.10	8.17	0.31	13.21	14.75	17.82
<b>2.00</b>	14.10	10.17	2.31	14.72	16.26	19.33
<b>2.25</b>	16.11	12.18	4.32	16.23	17.77	20.84
<b>2.50</b>	18.12	14.19	6.33	18.12	19.28	22.35

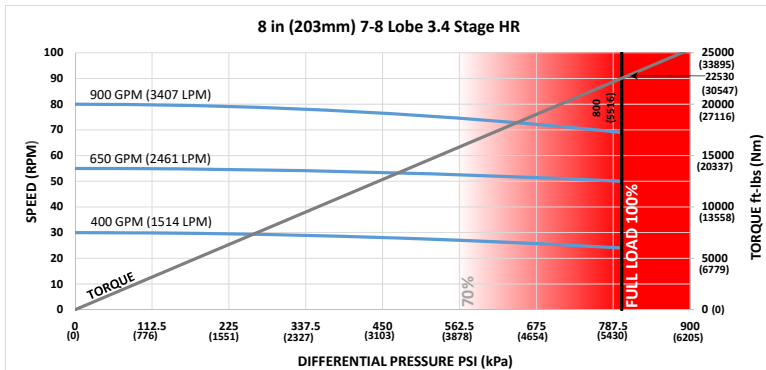
\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.

# 9-5/8 in (244 mm) Bottom w/ 8 in (203 mm) 7-8 Lobe 3.4 Stage HR MUD LUBE



<b>Lobe Configuration</b>	7-8 Lobe 3.4 Stage HR	
<b>Displacement</b>	0.09 rev/gal	0.02 rev/l
<b>Max Differential @ No Load</b>	800 psi	5516 kPa
<b>Max Torque @ No Load</b>	22530 ft-lbs	30547 Nm
<b>Max Power</b>	296 HP	221 kW
<b>C = Overall Length</b>	459 in	11659 mm
<b>Weight</b>	5786 lbs	2624 kg

Flow Rate		Speed
GPM	LPM	RPM
400	1514	24 - 30
650	2461	50 - 55
900	3407	69 - 80

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	12-1/4 (311mm)	14 (356mm)	17-1/2 (445mm)	12-1/4 (311mm)	14 (356mm)	17-1/2 (445mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	-	-	-	2.78	3.46	-
<b>0.78</b>	1.89	-	-	4.57	5.25	6.61
<b>1.15</b>	3.92	1.24	-	6.26	6.94	8.31
<b>1.50</b>	5.83	3.15	-	7.87	8.55	9.91
<b>1.83</b>	7.63	4.96	-	9.38	10.06	11.43
<b>2.12</b>	9.22	6.54	1.19	10.71	11.39	12.76
<b>2.38</b>	10.64	7.96	2.61	11.90	12.58	13.95
<b>2.60</b>	11.84	9.17	3.82	12.91	13.59	14.96
<b>2.77</b>	12.77	10.10	4.75	13.69	14.37	15.74
<b>2.90</b>	13.48	10.81	5.46	14.28	14.97	16.33
<b>2.97</b>	13.87	11.19	5.84	14.61	15.29	16.65
<b>3.00</b>	14.03	11.35	6.00	14.74	15.43	16.79

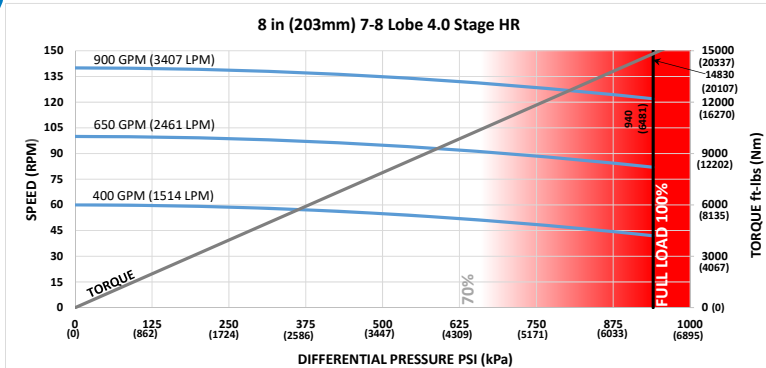
## FBH BUILD RATE\*\*:

<b>1.25</b>	4.82	2.14	-	6.72	7.40	8.77
<b>1.50</b>	6.19	3.51	-	7.87	8.55	9.91
<b>1.75</b>	7.56	4.88	-	9.01	9.70	11.06
<b>2.00</b>	8.92	6.25	0.89	10.16	10.84	12.21
<b>2.25</b>	10.29	7.61	2.26	11.30	11.99	13.35
<b>2.50</b>	11.66	8.98	3.63	12.45	13.13	14.50

\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.



<b>Lobe Configuration</b>	7-8 Lobe 4.0 Stage HR	
<b>Displacement</b>	0.16 rev/gal	0.04 rev/l
<b>Max Differential @ No Load</b>	940 psi	6481 kPa
<b>Max Torque @ No Load</b>	14830 ft-lbs	20107 Nm
<b>Max Power</b>	344 HP	257 kW
<b>C = Overall Length</b>	362.25 in	9201 mm
<b>Weight</b>	4917 lbs	2230 kg

Flow Rate		Speed
GPM	LPM	RPM
400	1514	42 - 60
650	2461	82 - 100
900	3407	122 - 140

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

**ADJUSTABLE BUILD RATE:**

Hole Size	SLICK			STABILIZED*		
	12-1/4 (311mm)	14 (356mm)	17-1/2 (445mm)	12-1/4 (311mm)	14 (356mm)	17-1/2 (445mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	0.15	-	-	4.04	5.19	-
<b>0.78</b>	2.88	-	-	6.19	7.34	9.65
<b>1.15</b>	5.48	2.04	-	8.23	9.39	11.69
<b>1.50</b>	7.93	4.50	-	10.17	11.32	13.63
<b>1.83</b>	10.25	6.81	-	11.99	13.14	15.45
<b>2.12</b>	12.28	8.85	1.98	13.59	14.74	17.05
<b>2.38</b>	14.10	10.67	3.80	15.03	16.18	18.49
<b>2.60</b>	15.65	12.21	5.35	16.24	17.39	19.70
<b>2.77</b>	16.84	13.41	6.54	17.18	18.33	20.64
<b>2.90</b>	17.75	14.32	7.45	17.90	19.05	21.36
<b>2.97</b>	18.24	14.81	7.95	18.28	19.44	21.74
<b>3.00</b>	18.45	15.02	8.16	18.45	19.60	21.91

**FBH BUILD RATE\*\*:**

<b>1.25</b>	6.68	3.25	-	8.79	9.94	12.25
<b>1.50</b>	8.43	5.00	-	10.17	11.32	13.63
<b>1.75</b>	10.19	6.75	-	11.55	12.70	15.01
<b>2.00</b>	11.94	8.51	1.64	12.93	14.08	16.39
<b>2.25</b>	13.69	10.26	3.40	14.31	15.46	17.77
<b>2.50</b>	15.45	12.02	5.15	15.69	16.84	19.15

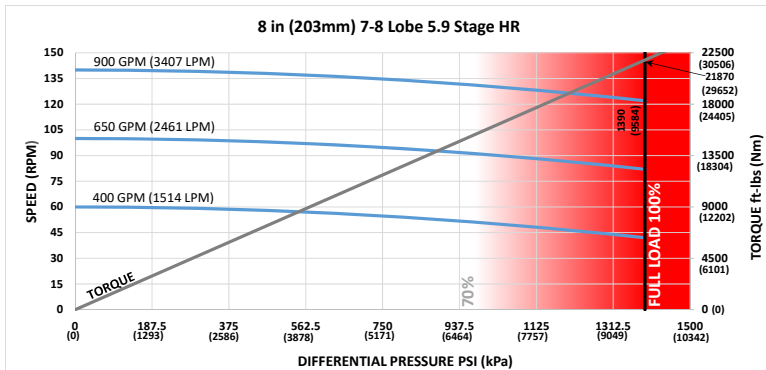
\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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

# 9-5/8 in (244 mm) Bottom w/ 8 in (203 mm) 7-8 Lobe 5.9 Stage HR MUD LUBE



<b>Lobe Configuration</b>	7-8 Lobe 5.9 Stage HR	
<b>Displacement</b>	0.16 rev/gal	0.04 rev/l
<b>Max Differential @ No Load</b>	1390 psi	9584 kPa
<b>Max Torque @ No Load</b>	21870 ft-lbs	29652 Nm
<b>Max Power</b>	508 HP	379 kW
<b>C = Overall Length</b>	459 in	11659 mm
<b>Weight</b>	5927 lbs	2688 kg

Flow Rate		Speed
GPM	LPM	RPM
400	1514	42 - 60
650	2461	82 - 100
900	3407	122 - 140

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	12-1/4 (311mm)	14 (356mm)	17-1/2 (445mm)	12-1/4 (311mm)	14 (356mm)	17-1/2 (445mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	-	-	-	2.78	3.46	-
<b>0.78</b>	1.89	-	-	4.57	5.25	6.61
<b>1.15</b>	3.92	1.24	-	6.26	6.94	8.31
<b>1.50</b>	5.83	3.15	-	7.87	8.55	9.91
<b>1.83</b>	7.63	4.96	-	9.38	10.06	11.43
<b>2.12</b>	9.22	6.54	1.19	10.71	11.39	12.76
<b>2.38</b>	10.64	7.96	2.61	11.90	12.58	13.95
<b>2.60</b>	11.84	9.17	3.82	12.91	13.59	14.96
<b>2.77</b>	12.77	10.10	4.75	13.69	14.37	15.74
<b>2.90</b>	13.48	10.81	5.46	14.28	14.97	16.33
<b>2.97</b>	13.87	11.19	5.84	14.61	15.29	16.65
<b>3.00</b>	14.03	11.35	6.00	14.74	15.43	16.79

## FBH BUILD RATE\*\*:

<b>1.25</b>	4.82	2.14	-	6.72	7.40	8.77
<b>1.50</b>	6.19	3.51	-	7.87	8.55	9.91
<b>1.75</b>	7.56	4.88	-	9.01	9.70	11.06
<b>2.00</b>	8.92	6.25	0.89	10.16	10.84	12.21
<b>2.25</b>	10.29	7.61	2.26	11.30	11.99	13.35
<b>2.50</b>	11.66	8.98	3.63	12.45	13.13	14.50

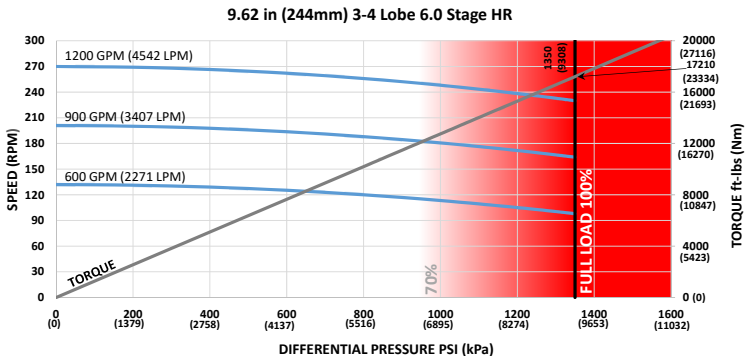
\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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# MUD MOTORS

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<b>Lobe Configuration</b>	3-4 Lobe 6.0 Stage HR	
<b>Displacement</b>	0.22 rev/gal	0.06 rev/l
<b>Max Differential @ No Load</b>	1350 psi	9308 kPa
<b>Max Torque @ No Load</b>	17210 ft-lbs	23334 Nm
<b>Max Power</b>	754 HP	562 kW
<b>C = Overall Length</b>	387 in	9830 mm
<b>Weight</b>	5603 lbs	2541 kg

Flow Rate		Speed
GPM	LPM	RPM
600	2271	98 - 132
900	3407	164 - 201
1200	4542	230 - 270

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

**ADJUSTABLE BUILD RATE:**

Hole Size	SLICK			STABILIZED*		
	12-1/4 (311mm)	14 (356mm)	17-1/2 (445mm)	12-1/4 (311mm)	14 (356mm)	17-1/2 (445mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	-	-	-	2.70	-	-
<b>0.78</b>	1.40	-	-	4.75	5.74	-
<b>1.15</b>	3.82	0.61	-	6.69	7.69	9.68
<b>1.50</b>	6.10	2.90	-	8.53	9.53	11.52
<b>1.83</b>	8.26	5.06	-	10.27	11.26	13.25
<b>2.12</b>	10.16	6.96	0.55	11.79	12.78	14.77
<b>2.38</b>	11.86	8.66	2.26	13.16	14.15	16.14
<b>2.60</b>	13.30	10.10	3.70	14.31	15.31	17.30
<b>2.77</b>	14.41	11.21	4.81	15.20	16.20	18.19
<b>2.90</b>	15.26	12.06	5.66	15.89	16.88	18.87
<b>2.97</b>	15.72	12.52	6.12	16.26	17.25	19.24
<b>3.00</b>	15.92	12.71	6.31	16.41	17.41	19.40

**FBH BUILD RATE\*\*:**

<b>1.25</b>	4.93	1.72	-	7.22	8.21	10.20
<b>1.50</b>	6.56	3.36	-	8.53	9.53	11.52
<b>1.75</b>	8.20	4.99	-	9.85	10.84	12.83
<b>2.00</b>	9.83	6.63	0.22	11.16	12.15	14.14
<b>2.25</b>	11.47	8.26	1.86	12.47	13.47	15.46
<b>2.50</b>	13.10	9.90	3.50	13.79	14.78	16.77

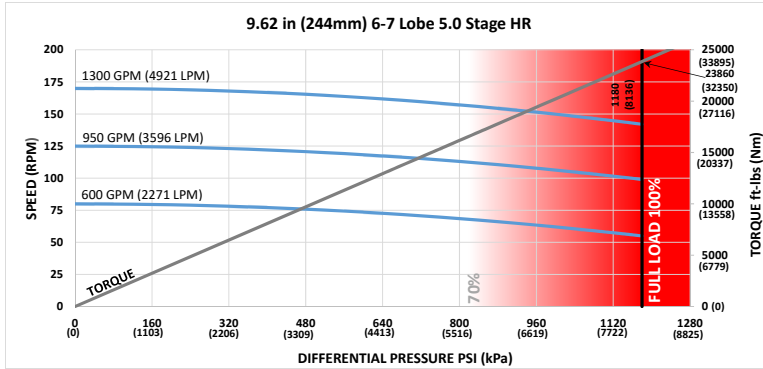
\*Stabilizers assumed as 1/8" undergage

\*\*Additional FBH Angles Available

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

# 9-5/8 in (244 mm) 6-7 Lobe 5.0 Stage HR MUD LUBE



<b>Lobe Configuration</b>	6-7 Lobe 5.0 Stage HR	
<b>Displacement</b>	0.13 rev/gal	0.03 rev/l
<b>Max Differential @ No Load</b>	1180 psi	8136 kPa
<b>Max Torque @ No Load</b>	23860 ft-lbs	32350 Nm
<b>Max Power</b>	645 HP	481 kW
<b>C = Overall Length</b>	377 in	9576 mm
<b>Weight</b>	5803 lbs	2632 kg

Flow Rate		Speed
GPM	LPM	RPM
600	2271	55 - 80
950	3596	99 - 125
1300	4921	142 - 170

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	12-1/4 (311mm)	14 (356mm)	17-1/2 (445mm)	12-1/4 (311mm)	14 (356mm)	17-1/2 (445mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	-	-	-	2.80	-	-
<b>0.78</b>	1.44	-	-	4.89	5.95	-
<b>1.15</b>	3.93	0.64	-	6.87	7.93	10.04
<b>1.50</b>	6.28	2.99	-	8.75	9.81	11.91
<b>1.83</b>	8.50	5.21	-	10.52	11.57	13.68
<b>2.12</b>	10.45	7.16	0.58	12.07	13.13	15.24
<b>2.38</b>	12.20	8.91	2.33	13.47	14.52	16.63
<b>2.60</b>	13.68	10.39	3.81	14.65	15.70	17.81
<b>2.77</b>	14.82	11.53	4.95	15.56	16.61	18.72
<b>2.90</b>	15.70	12.41	5.83	16.25	17.31	19.42
<b>2.97</b>	16.17	12.88	6.30	16.63	17.68	19.79
<b>3.00</b>	16.37	13.08	6.50	16.79	17.85	19.95

## FBH BUILD RATE\*\*:

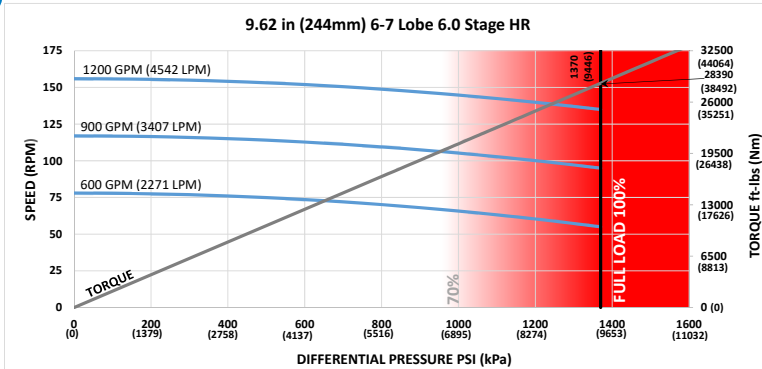
<b>1.25</b>	5.08	1.78	-	7.41	8.47	10.57
<b>1.50</b>	6.76	3.46	-	8.75	9.81	11.91
<b>1.75</b>	8.44	5.15	-	10.09	11.15	13.25
<b>2.00</b>	10.12	6.83	0.24	11.43	12.49	14.59
<b>2.25</b>	11.80	8.51	1.93	12.77	13.83	15.93
<b>2.50</b>	13.48	10.19	3.61	14.11	15.17	17.27

\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

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.

# 9-5/8 in (244 mm) 6-7 Lobe 6.0 Stage HR MUD LUBE



<b>Lobe Configuration</b>	6-7 Lobe 6.0 Stage HR	
<b>Displacement</b>	0.13 rev/gal	0.03 rev/l
<b>Max Differential @ No Load</b>	1370 psi	9446 kPa
<b>Max Torque @ No Load</b>	28390 ft-lbs	38492 Nm
<b>Max Power</b>	730 HP	544 kW
<b>C = Overall Length</b>	409 in	10389 mm
<b>Weight</b>	6228 lbs	2825 kg

Flow Rate		Speed
GPM	LPM	RPM
600	2271	55 - 78
900	3407	95 - 117
1200	4542	135 - 156

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	12-1/4 (311mm)	14 (356mm)	17-1/2 (445mm)	12-1/4 (311mm)	14 (356mm)	17-1/2 (445mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	-	-	-	2.50	-	-
<b>0.78</b>	1.30	-	-	4.46	5.34	-
<b>1.15</b>	3.59	0.56	-	6.33	7.21	8.97
<b>1.50</b>	5.75	2.72	-	8.09	8.97	10.73
<b>1.83</b>	7.78	4.76	-	9.75	10.63	12.39
<b>2.12</b>	9.57	6.55	0.51	11.21	12.09	13.85
<b>2.38</b>	11.18	8.16	2.11	12.52	13.40	15.16
<b>2.60</b>	12.53	9.51	3.47	13.62	14.50	16.26
<b>2.77</b>	13.58	10.56	4.52	14.48	15.36	17.12
<b>2.90</b>	14.39	11.37	5.33	15.13	16.01	17.77
<b>2.97</b>	14.82	11.80	5.76	15.49	16.37	18.13
<b>3.00</b>	15.00	11.98	5.94	15.64	16.52	18.28

## FBH BUILD RATE\*\*:

<b>1.25</b>	4.63	1.60	-	6.83	7.71	9.47
<b>1.50</b>	6.17	3.15	-	8.09	8.97	10.73
<b>1.75</b>	7.71	4.69	-	9.35	10.23	11.99
<b>2.00</b>	9.25	6.23	0.19	10.60	11.48	13.24
<b>2.25</b>	10.80	7.77	1.73	11.86	12.74	14.50
<b>2.50</b>	12.34	9.32	3.28	13.12	14.00	15.76

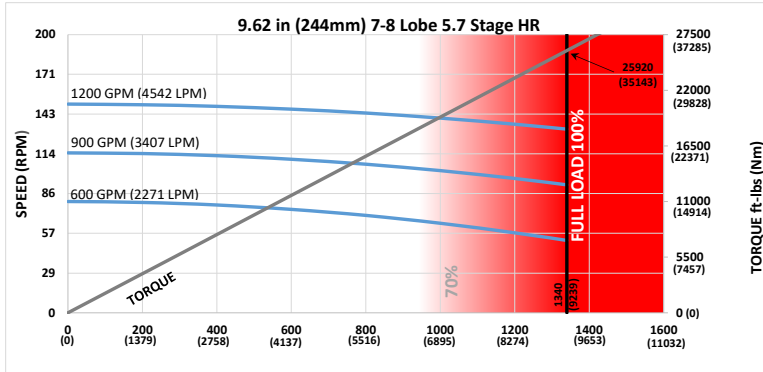
\*Stabilizers assumed as 1/8" undergage

\*\*Additional FBH Angles Available

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.

# 9-5/8 in (244 mm) 7-8 Lobe 5.7 Stage HR MUD LUBE



<b>Lobe Configuration</b>	7-8 Lobe 5.7 Stage HR	
<b>Displacement</b>	0.13 rev/gal	0.03 rev/l
<b>Max Differential @ No Load</b>	1340 psi	9239 kPa
<b>Max Torque @ No Load</b>	25920 ft-lbs	35143 Nm
<b>Max Power</b>	651 HP	486 kW
<b>C = Overall Length</b>	399 in	10135 mm
<b>Weight</b>	6300 lbs	2858 kg

Flow Rate		Speed
GPM	LPM	RPM
600	2271	52 - 80
900	3407	92 - 115
1200	4542	132 - 150

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	12-1/4 (311mm)	14 (356mm)	17-1/2 (445mm)	12-1/4 (311mm)	14 (356mm)	17-1/2 (445mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	-	-	-	2.59	-	-
<b>0.78</b>	1.34	-	-	4.59	5.52	-
<b>1.15</b>	3.69	0.58	-	6.49	7.42	9.28
<b>1.50</b>	5.90	2.80	-	8.28	9.21	11.07
<b>1.83</b>	7.99	4.89	-	9.98	10.91	12.77
<b>2.12</b>	9.83	6.73	0.53	11.47	12.40	14.25
<b>2.38</b>	11.48	8.38	2.18	12.80	13.73	15.59
<b>2.60</b>	12.87	9.77	3.57	13.93	14.86	16.72
<b>2.77</b>	13.95	10.85	4.65	14.80	15.73	17.59
<b>2.90</b>	14.77	11.67	5.47	15.47	16.40	18.26
<b>2.97</b>	15.21	12.11	5.92	15.83	16.76	18.62
<b>3.00</b>	15.40	12.30	6.11	15.98	16.91	18.77

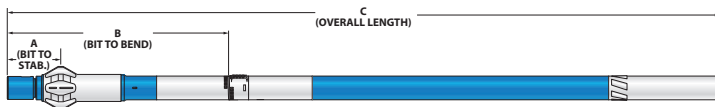
## FBH BUILD RATE\*\*:

<b>1.25</b>	4.76	1.66	-	7.00	7.93	9.79
<b>1.50</b>	6.34	3.24	-	8.28	9.21	11.07
<b>1.75</b>	7.92	4.82	-	9.57	10.50	12.36
<b>2.00</b>	9.51	6.41	0.20	10.85	11.78	13.64
<b>2.25</b>	11.09	7.99	1.79	12.13	13.06	14.92
<b>2.50</b>	12.67	9.57	3.37	13.42	14.35	16.20

\*Stabilizers assumed as 1/8" undergauge

\*\*Additional FBH Angles Available

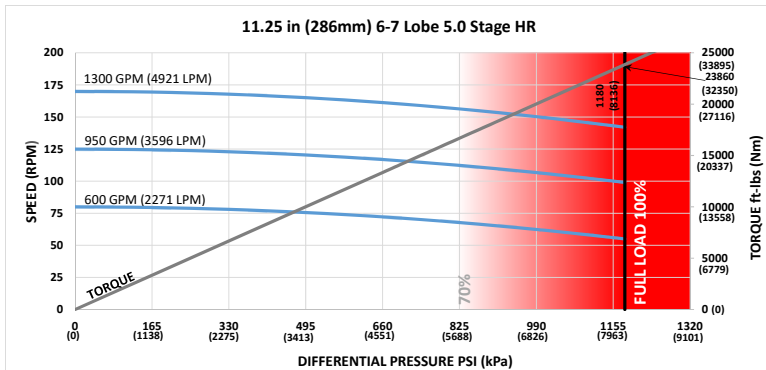
This information is for reference only. Build rates are theoretical calculations using three-point geometry and new motor builds. Actual rate predictions will depend on formation characteristics, bit profiles, and WOB. For custom motor configurations and build rates, please contact your DYNOMAX office.



<b>Bit Size Range</b>	16 - 36 in	406 - 914 mm
<b>Bit Box Connection</b>	7-5/8 REGULAR	
<b>Dynamic Bearing Load On/Off Bottom</b>	385750 lbf	171600 daN
<b>Static Bearing Load On/Off Bottom</b>	1376000 lbf	612100 daN
<b>Max. Overpull for Re-run</b>	784500 lbf	349000 daN
<b>Absolute Overpull</b>	1307500 lbf	581600 daN
<b>Adjustable Make Up Torque</b>	75000 ft-lbs	101700 Nm
<b>A = Bit to Stabilizer (center)</b>	22 in	559 mm
<b>B = Bit to Bend</b>	<b>Adjustable</b>	94.5 in
	<b>Fixed</b>	--

11-1/4 in (286 mm) 6-7 Lobe 5.0 Stage HR SERIES 1 - 9-5/8 in (244 mm) Rotor	237
11-1/4 in (286 mm) 7-8 Lobe 5.7 Stage HR SERIES 1 - 9-5/8 in (244 mm) Rotor	238
11-1/4 in (286 mm) 5-6 Lobe 4.6 Stage HR SERIES 1	239
11-1/4 in (286 mm) 6-7 Lobe 5.5 Stage SERIES 1	240

# 11-1/4 in (286 mm) 6-7 Lobe 5.0 Stage HR SERIES 1 - 9-5/8 in (244 mm) Rotor



<b>Lobe Configuration</b>	6-7 Lobe 5.0 Stage HR	
<b>Displacement</b>	0.13 rev/gal	0.03 rev/l
<b>Max Differential @ No Load</b>	1180 psi	8136 kPa
<b>Max Torque @ No Load</b>	23860 ft-lbs	32350 Nm
<b>Max Power</b>	645 HP	481 kW
<b>C = Overall Length</b>	385.3 in	9787 mm
<b>Weight</b>	8768 lbs	3977 kg

Flow Rate		Speed
GPM	LPM	RPM
600	2271	55 - 80
950	3596	99 - 125
1300	4921	142 - 170

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	16 (406mm)	17-1/2 (445mm)	24 (610mm)	16 (406mm)	17-1/2 (445mm)	24 (610mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	-	-	-	-	-	-
<b>0.78</b>	-	-	-	5.94	6.81	-
<b>1.15</b>	0.63	-	-	7.83	8.70	-
<b>1.50</b>	2.94	0.43	-	9.62	10.49	14.26
<b>1.83</b>	5.11	2.60	-	11.30	12.17	15.94
<b>2.12</b>	7.02	4.51	-	12.78	13.65	17.42
<b>2.38</b>	8.73	6.22	-	14.11	14.98	18.75
<b>2.60</b>	10.18	7.67	-	15.24	16.11	19.88
<b>2.77</b>	11.30	8.79	-	16.11	16.98	20.75
<b>2.90</b>	12.15	9.64	-	16.77	17.64	21.41
<b>2.97</b>	12.61	10.10	-	17.13	18.00	21.77
<b>3.00</b>	12.81	10.30	-	17.28	18.15	21.92

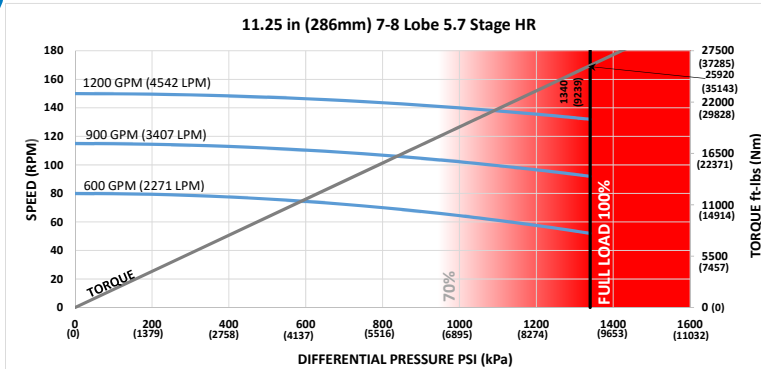
## FBH BUILD RATE:

**NOT CURRENTLY AVAILABLE**

\*Stabilizers assumed as 1/8" undergauge

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.

# 11-1/4 in (286 mm) 7-8 Lobe 5.7 Stage HR SERIES 1 - 9-5/8 in (244 mm) Rotor



Lobe Configuration	7-8 Lobe 5.7 Stage HR		Flow Rate		Speed
Displacement	0.13 rev/gal	0.03 rev/l	GPM	LPM	RPM
Max Differential @ No Load	1340 psi	9239 kPa	600	2271	52 - 80
Max Torque @ No Load	25920 ft-lbs	35143 Nm	900	3407	92 - 115
Max Power	651 HP	486 kW	1200	4542	132 - 150
C = Overall Length	407.3 in	10345 mm			
Weight	9075 lbs	4116 kg			

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

## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	16 (406mm)	17-1/2 (445mm)	24 (610mm)	16 (406mm)	17-1/2 (445mm)	24 (610mm)
BEND ANGLE	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
0.39	-	-	-	-	-	-
0.78	-	-	-	5.51	6.28	-
1.15	0.58	-	-	7.33	8.10	-
1.50	2.76	0.39	-	9.05	9.82	13.15
1.83	4.80	2.44	-	10.67	11.44	14.77
2.12	6.60	4.24	-	12.09	12.86	16.19
2.38	8.22	5.85	-	13.37	14.14	17.47
2.60	9.58	7.22	-	14.45	15.22	18.55
2.77	10.64	8.27	-	15.28	16.05	19.38
2.90	11.45	9.08	-	15.92	16.69	20.02
2.97	11.88	9.51	-	16.26	17.03	20.36
3.00	12.07	9.70	-	16.41	17.18	20.51

## FBH BUILD RATE:

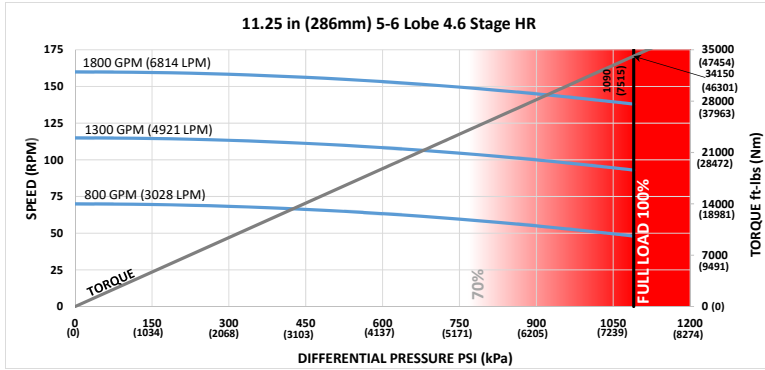
**NOT CURRENTLY AVAILABLE**

\*Stabilizers assumed as 1/8" undergage

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.

# 11-1/4 in (286 mm) 5-6 Lobe 4.6 Stage HR SERIES 1



<b>Lobe Configuration</b>	5-6 Lobe 4.6 Stage HR	
<b>Displacement</b>	0.09 rev/gal	0.02 rev/l
<b>Max Differential @ No Load</b>	1090 psi	7515 kPa
<b>Max Torque @ No Load</b>	34150 ft-lbs	46301 Nm
<b>Max Power</b>	897 HP	669 kW
<b>C = Overall Length</b>	397.3 in	10091 mm
<b>Weight</b>	7975 lbs	3617 kg

Flow Rate		Speed
GPM	LPM	RPM
800	3028	48 - 70
1300	4921	93 - 115
1800	6814	138 - 160

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

## ADJUSTABLE BUILD RATE:

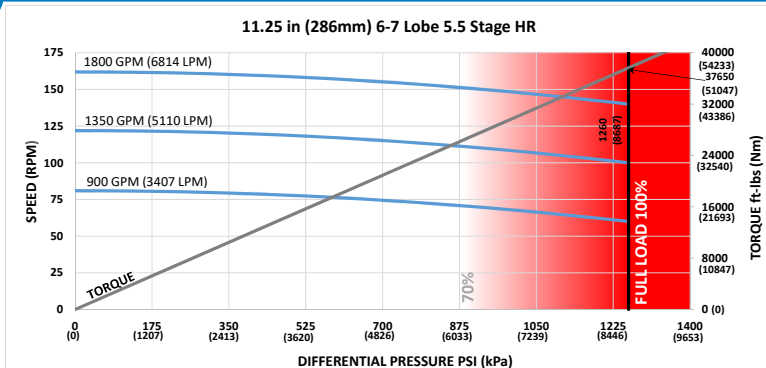
Hole Size	SLICK			STABILIZED*		
	16 (406mm)	17-1/2 (445mm)	24 (610mm)	16 (406mm)	17-1/2 (445mm)	24 (610mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	-	-	-	-	-	-
<b>0.78</b>	-	-	-	5.70	6.51	-
<b>1.15</b>	0.61	-	-	7.55	8.36	-
<b>1.50</b>	2.84	0.40	-	9.30	10.11	13.63
<b>1.83</b>	4.94	2.51	-	10.95	11.76	15.28
<b>2.12</b>	6.79	4.36	-	12.40	13.21	16.73
<b>2.38</b>	8.44	6.01	-	13.70	14.51	18.03
<b>2.60</b>	9.85	7.41	-	14.80	15.61	19.13
<b>2.77</b>	10.93	8.50	-	15.65	16.46	19.98
<b>2.90</b>	11.76	9.33	-	16.30	17.11	20.63
<b>2.97</b>	12.20	9.77	-	16.65	17.46	20.98
<b>3.00</b>	12.39	9.96	-	16.80	17.61	21.13

## FBH BUILD RATE:

**NOT CURRENTLY AVAILABLE**

\*Stabilizers assumed as 1/8" undergauge

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.



Lobe Configuration	6-7 Lobe 5.5 Stage HR		Flow Rate		Speed
Displacement	0.09 rev/gal	0.02 rev/l	<b>GPM</b>	<b>LPM</b>	<b>RPM</b>
Max Differential @ No Load	1260 psi	8687 kPa	900	3407	60 - 81
Max Torque @ No Load	37650 ft-lbs	51047 Nm	1350	5110	100 - 122
Max Power	1004 HP	748 kW	1800	6814	140 - 162
C = Overall Length	417.3 in	10.6 m			
Weight	8630 lb	3915 kg			

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

### ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	16 (406mm)	17-1/2 (445mm)	24 (610mm)	16 (406mm)	17-1/2 (445mm)	24 (610mm)
BEND ANGLE	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	-	-	-	-	-	-
<b>0.78</b>	-	-	-	5.5	6.2	-
<b>1.15</b>	0.5	-	-	7.3	8.0	-
<b>1.50</b>	2.6	0.3	-	9.0	9.7	12.9
<b>1.83</b>	4.6	2.3	-	10.6	11.3	14.5
<b>2.12</b>	6.4	4.0	-	12.0	12.8	15.9
<b>2.38</b>	7.9	5.6	-	13.3	14.0	17.2
<b>2.60</b>	9.3	6.9	-	14.4	15.1	18.3
<b>2.77</b>	10.3	8.0	-	15.2	15.9	19.1
<b>2.90</b>	11.1	8.8	-	15.8	16.6	19.8
<b>2.97</b>	11.5	9.2	-	16.2	16.9	20.1
<b>3.00</b>	11.7	9.4	-	16.3	17.1	20.2

### FBH BUILD RATE:

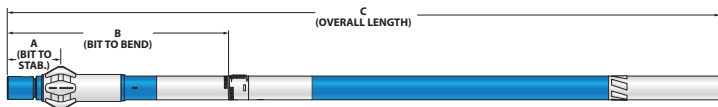
**NOT CURRENTLY AVAILABLE**

\*Stabilizers assumed as 1/8" undergauge

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.

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11-1/4 in (286 mm) 6-7 Lobe 5.0 Stage HR MUD LUBE - 9-5/8 in (244 mm) Rotor 243

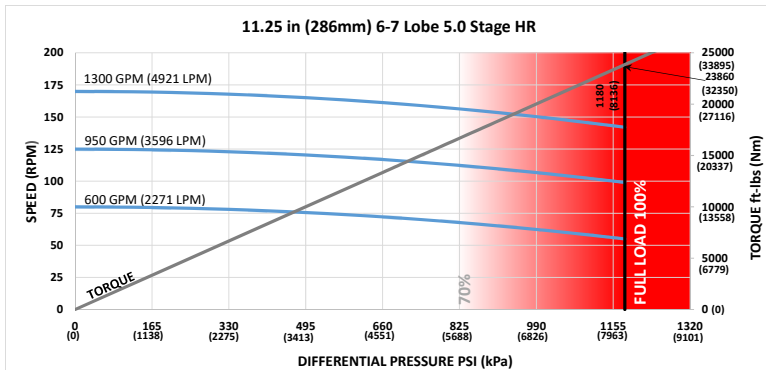
11-1/4 in (286 mm) 7-8 Lobe 5.7 Stage HR MUD LUBE - 9-5/8 in (244 mm) Rotor 244

11-1/4 in (286 mm) 5-6 Lobe 4.6 Stage HR MUD LUBE 245

11-1/4 in (286 mm) 6-7 Lobe 5.5 Stage HR MUD LUBE 246

<b>Bit Size Range</b>	16 - 36 in	406 - 914 mm
<b>Bit Box Connection</b>	7-5/8 REGULAR	
<b>Dynamic Bearing Load On/Off Bottom</b>	232226 lbf	103300 daN
<b>Static Bearing Load On/Off Bottom</b>	1202590 lbf	534900 daN
<b>Max.Overpull for Re-run</b>	1065400 lbf	473900 daN
<b>Absolute Overpull</b>	1775700 lbf	789900 daN
<b>Adjustable Make Up Torque</b>	75000 ft-lbs	101700 Nm
<b>A = Bit to Stabilizer (center)</b>	27.8 in	706 mm
<b>B = Bit to Bend</b>	<b>Adjustable</b>	94.5 in
	<b>Fixed</b>	--

# 11-1/4 in (286 mm) 6-7 Lobe 5.0 Stage HR MUD LUBE - 9-5/8 in (244 mm) Rotor



<b>Lobe Configuration</b>	6-7 Lobe 5.0 Stage HR	
<b>Displacement</b>	0.13 rev/gal	0.03 rev/l
<b>Max Differential @ No Load</b>	1180 psi	8136 kPa
<b>Max Torque @ No Load</b>	23860 ft-lbs	32350 Nm
<b>Max Power</b>	645 HP	481 kW
<b>C = Overall Length</b>	385.3 in	9787 mm
<b>Weight</b>	8710 lbs	3951 kg

Flow Rate		Speed
GPM	LPM	RPM
600	2271	55 - 80
950	3596	99 - 125
1300	4921	142 - 170

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

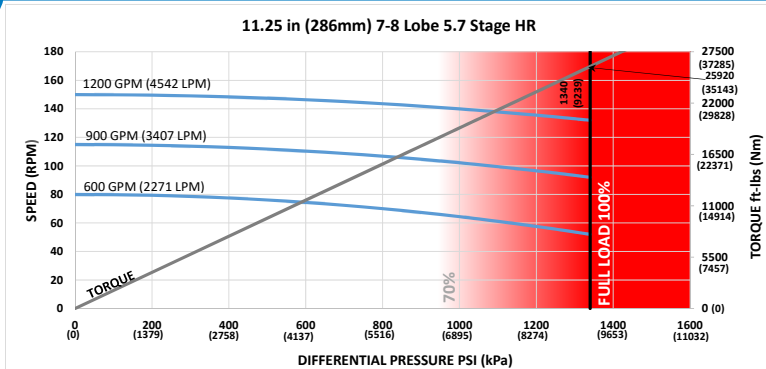
## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	16 (406mm)	17-1/2 (445mm)	24 (610mm)	16 (406mm)	17-1/2 (445mm)	24 (610mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	-	-	-	-	-	-
<b>0.78</b>	-	-	-	6.13	7.02	-
<b>1.15</b>	0.63	-	-	8.05	8.94	12.78
<b>1.50</b>	2.94	0.43	-	9.88	10.76	14.60
<b>1.83</b>	5.11	2.60	-	11.59	12.48	16.32
<b>2.12</b>	7.02	4.51	-	13.10	13.99	17.83
<b>2.38</b>	8.73	6.22	-	14.46	15.34	19.18
<b>2.60</b>	10.18	7.67	-	15.60	16.49	20.32
<b>2.77</b>	11.30	8.79	-	16.49	17.37	21.21
<b>2.90</b>	12.15	9.64	-	17.16	18.05	21.89
<b>2.97</b>	12.61	10.10	-	17.53	18.41	22.25
<b>3.00</b>	12.81	10.30	-	17.68	18.57	22.41

## FBH BUILD RATE:

**NOT CURRENTLY AVAILABLE**

\*Stabilizers assumed as 1/8" undergauge  
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.



Lobe Configuration	7-8 Lobe 5.7 Stage HR		Flow Rate		Speed
Displacement	0.13 rev/gal	0.03 rev/l	GPM	LPM	RPM
Max Differential @ No Load	1340 psi	9239 kPa	600	2271	52 - 80
Max Torque @ No Load	25920 ft-lbs	35143 Nm	900	3407	92 - 115
Max Power	651 HP	486 kW	1200	4542	132 - 150
C = Overall Length	407.3 in	10345 mm			
Weight	9017 lbs	4090 kg			

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

**ADJUSTABLE BUILD RATE:**

Hole Size	SLICK			STABILIZED*		
	16 (406mm)	17-1/2 (445mm)	24 (610mm)	16 (406mm)	17-1/2 (445mm)	24 (610mm)
<b>BEND ANGLE</b>	<b>Degrees per 100 Feet (30 m)</b>			<b>Degrees per 100 Feet (30 m)</b>		
<b>0.39</b>	-	-	-	-	-	-
<b>0.78</b>	-	-	-	5.69	6.47	-
<b>1.15</b>	0.58	-	-	7.54	8.32	-
<b>1.50</b>	2.76	0.39	-	9.28	10.06	13.45
<b>1.83</b>	4.80	2.44	-	10.93	11.71	15.10
<b>2.12</b>	6.60	4.24	-	12.38	13.16	16.54
<b>2.38</b>	8.22	5.85	-	13.67	14.46	17.84
<b>2.60</b>	9.58	7.22	-	14.77	15.55	18.94
<b>2.77</b>	10.64	8.27	-	15.62	16.40	19.79
<b>2.90</b>	11.45	9.08	-	16.27	17.05	20.44
<b>2.97</b>	11.88	9.51	-	16.62	17.40	20.79
<b>3.00</b>	12.07	9.70	-	16.77	17.55	20.94

**FBH BUILD RATE:**

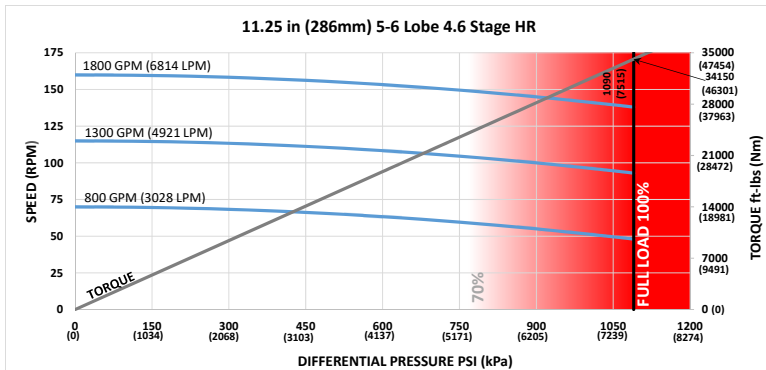
**NOT CURRENTLY AVAILABLE**

\*Stabilizers assumed as 1/8" undergage

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.

# 11-1/4 in (286 mm) 5-6 Lobe 4.6 Stage HR MUD LUBE



<b>Lobe Configuration</b>	5-6 Lobe 4.6 Stage HR	
<b>Displacement</b>	0.09 rev/gal	0.02 rev/l
<b>Max Differential @ No Load</b>	1090 psi	7515 kPa
<b>Max Torque @ No Load</b>	34150 ft-lbs	46301 Nm
<b>Max Power</b>	897 HP	669 kW
<b>C = Overall Length</b>	397.3 in	10091 mm
<b>Weight</b>	7917 lbs	3591 kg

Flow Rate		Speed
GPM	LPM	RPM
800	3028	48 - 70
1300	4921	93 - 115
1800	6814	138 - 160

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

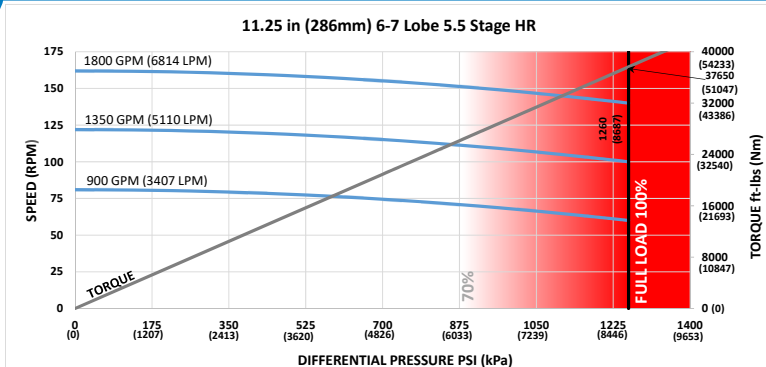
## ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	16 (406mm)	17-1/2 (445mm)	24 (610mm)	16 (406mm)	17-1/2 (445mm)	24 (610mm)
<b>BEND ANGLE</b>	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
<b>0.39</b>	-	-	-	-	-	-
<b>0.78</b>	-	-	-	5.88	6.71	-
<b>1.15</b>	0.61	-	-	7.76	8.59	-
<b>1.50</b>	2.84	0.40	-	9.54	10.37	13.95
<b>1.83</b>	4.94	2.51	-	11.22	12.05	15.63
<b>2.12</b>	6.79	4.36	-	12.70	13.52	17.10
<b>2.38</b>	8.44	6.01	-	14.02	14.85	18.43
<b>2.60</b>	9.85	7.41	-	15.14	15.96	19.55
<b>2.77</b>	10.93	8.50	-	16.00	16.83	20.41
<b>2.90</b>	11.76	9.33	-	16.66	17.49	21.07
<b>2.97</b>	12.20	9.77	-	17.02	17.85	21.43
<b>3.00</b>	12.39	9.96	-	17.17	18.00	21.58

## FBH BUILD RATE:

**NOT CURRENTLY AVAILABLE**

\*Stabilizers assumed as 1/8" undergauge  
 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.



Lobe Configuration	6-7 Lobe 5.5 Stage HR		Flow Rate		Speed
Displacement	0.09 rev/gal	0.02 rev/l	GPM	LPM	RPM
Max Differential @ No Load	1260 psi	8687 kPa	900	3407	60 - 81
Max Torque @ No Load	37650 ft-lbs	51047 Nm	1350	5110	100 - 122
Max Power	1004 HP	748 kW	1800	6814	140 - 162
C = Overall Length	417.3 in	10599 mm			
Weight	8528 lbs	3868 kg			

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

### ADJUSTABLE BUILD RATE:

Hole Size	SLICK			STABILIZED*		
	16 (406mm)	17-1/2 (445mm)	24 (610mm)	16 (406mm)	17-1/2 (445mm)	24 (610mm)
BEND ANGLE	Degrees per 100 Feet (30 m)			Degrees per 100 Feet (30 m)		
0.39	-	-	-	-	-	-
0.78	-	-	-	5.51	6.25	-
1.15	0.56	-	-	7.32	8.06	-
1.50	2.68	0.37	-	9.04	9.78	12.98
1.83	4.68	2.37	-	10.65	11.39	14.60
2.12	6.43	4.12	-	12.07	12.81	16.02
2.38	8.01	5.70	-	13.35	14.09	17.29
2.60	9.34	7.03	-	14.42	15.17	18.37
2.77	10.37	8.06	-	15.26	16.00	19.20
2.90	11.15	8.85	-	15.89	16.64	19.84
2.97	11.58	9.27	-	16.24	16.98	20.18
3.00	11.76	9.45	-	16.38	17.13	20.33

### FBH BUILD RATE:

**NOT CURRENTLY AVAILABLE**

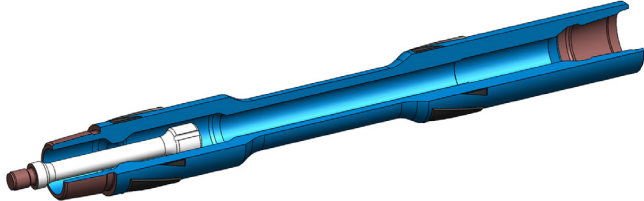
\*Stabilizers assumed as 1/8" undergauge

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.

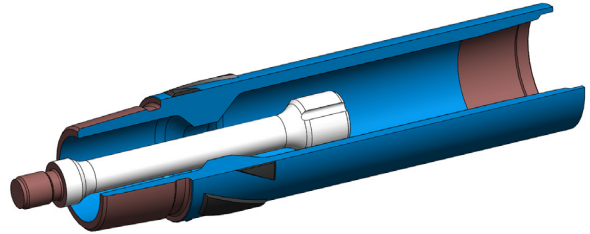
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## OPTIONAL EQUIPMENT

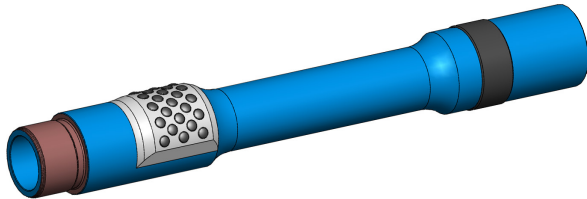
**ROTOR CATCH FLEX SUB W/ FLOAT AND  
HARDBANDING**



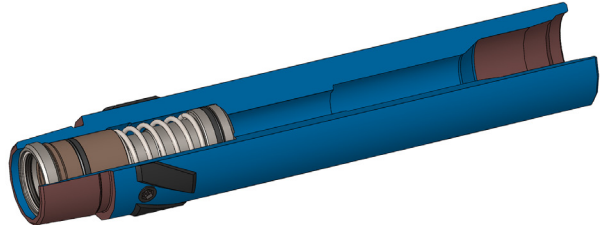
**ROTOR CATCH FLOAT SUB W/ HARDBANDING**



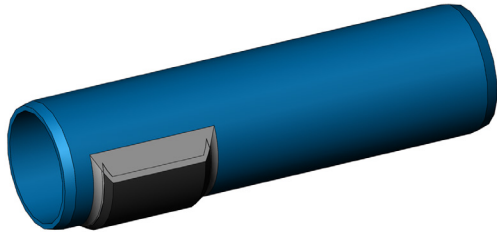
**OFFSET FLEX SUB W/ BUTTONS & HARDBANDING**



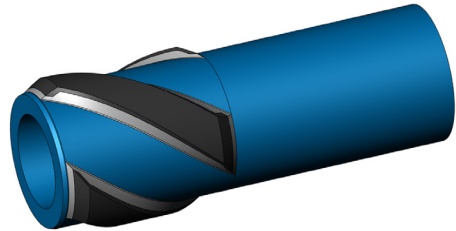
**DUMP SUB WITH FLOAT BORE W/ HARDBANDING**



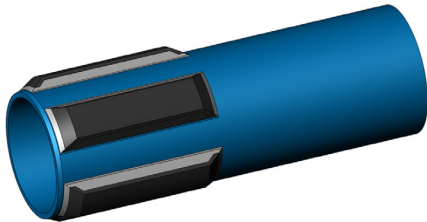
**SCREW-ON KICK PAD**



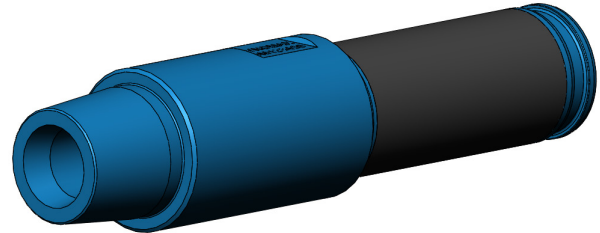
**SCREW-ON SPIRAL STABILIZER**



**SCREW-ON STABILIZER**



**RS MANDRELS AND ZERO BYPASS HOUSINGS**



CONNECTION (ft-lb)	2-3/8"	2-7/8"	3-1/8"	3-3/8"	3-1/2"	3-3/4"	5"	5-1/2"	6-1/2"
<b>SERIES #</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>1</b>
End Cap	1,600	2,500	2,000	4,190	4,310	3,000	10,000	9,500	22,000
Body Connection	1,400	2,400	3,000	2,050	2,510	4,500	12,000	13,000	25,000
Mandrel to Washpipe	520	1,000	1,250	2,230	2,230	2,500	13,500	14,000	15,000
Drive Shaft to Washpipe	380	950	1,000	2,140	2,140	2,000	11,000	10,000	12,500
Drive Shaft to Rotor	380	850	1,000	1,080	1,080	2,000	6,000	8,000	12,500
Adaptor Cap	200	500	750	540	540	1,250	2,000	2,000	5,000
Adjustable Mandrel	1,600	2,600	2,500	2,020	3,070	3,500	12,000	13,000	25,000
Stabilizer	N/A	N/A	N/A	N/A	N/A	3,500	8,000	7,000	12,000
Rotor Catcher to Rotor	N/A	450	500	340	340	500	1,500	1,250	2,500

<b>CONNECTION (N·m)</b>	<b>2-3/8"</b>	<b>2-7/8"</b>	<b>3-1/8"</b>	<b>3-3/8"</b>	<b>3-1/2"</b>	<b>3-3/4"</b>	<b>5"</b>	<b>5-1/2"</b>	<b>6-1/2"</b>
<b>SERIES #</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>1</b>
End Cap	2,170	3,390	2,710	5,700	5,800	4,070	13,600	12,900	29,800
Body Connection	1,900	3,250	4,070	2,780	3,400	6,100	16,300	17,600	33,900
Mandrel to Washpipe	710	1,360	1,690	3,020	3,020	3,390	18,300	19,000	20,300
Drive Shaft to Washpipe	520	1,290	1,360	2,900	2,900	2,710	14,900	13,600	16,900
Drive Shaft to Rotor	520	1,150	1,360	1,460	1,460	2,710	8,100	10,800	16,900
Adaptor Cap	270	680	1,020	730	730	1,690	2,710	2,710	6,800
Adjustable Mandrel	2,170	3,530	3,390	2,740	4,160	4,750	16,300	17,600	33,900
Stabilizer	N/A	N/A	N/A	N/A	N/A	4,750	10,800	9,500	16,300
Rotor Catcher to Rotor	N/A	610	680	460	460	680	2,030	1,690	3,390

CONNECTION (ft-lb)	6-1/2"	6-3/4"	6-3/4"	7"	7"	8"	9-5/8"	11-1/4"
SERIES #	3	1	3	2	3	1 & 2	1	1
End Cap	22,000	18,000	22,000	18,000	24,500	26,000	26,000	35,000
Body Connection	22,000	25,000	22,000	32,000	32,000	40,000	60,000	75,000
Mandrel to Washpipe	17,000	15,000	17,000	20,000	24,000	20,000	35,000	50,000
Drive Shaft to Washpipe	15,000	12,500	15,000	16,000	20,000	16,000	25,000	40,000
Drive Shaft to Rotor	12,500	12,500	12,500	14,000	14,000	16,000	25,000	40,000
Adaptor Cap	5,000	5,000	5,000	5,000	5,000	6,000	8,000	8,000
Adjustable Mandrel	25,000	25,000	25,000	25,000	32,000	40,000	60,000	75,000
Stabilizer	12,000	12,000	12,000	15,000	15,000	30,000	38,000	50,000
Rotor Catcher to Rotor	2,500	2,500	2,500	2,500	2,500	3,500	3,500	4,500

<b>CONNECTION (N·m)</b>	<b>6-1/2"</b>	<b>6-3/4"</b>	<b>6-3/4"</b>	<b>7"</b>	<b>7"</b>	<b>8"</b>	<b>9-5/8"</b>	<b>11-1/4"</b>
<b>SERIES #</b>	<b>3</b>	<b>1</b>	<b>3</b>	<b>2</b>	<b>3</b>	<b>1 &amp; 2</b>	<b>1</b>	<b>1</b>
End Cap	29,800	24,400	29,800	24,400	33,200	35,300	35,300	47,500
Body Connection	29,800	33,900	29,800	43,400	43,400	54,200	81,300	101,700
Mandrel to Washpipe	23,000	20,300	23,000	27,100	32,500	27,100	47,500	67,800
Drive Shaft to Washpipe	20,300	16,900	20,300	21,700	27,100	21,700	33,900	54,200
Drive Shaft to Rotor	16,900	16,900	16,900	19,000	19,000	21,700	33,900	54,200
Adaptor Cap	6,800	6,800	6,800	6,800	6,800	8,100	10,800	10,800
Adjustable Mandrel	33,900	33,900	33,900	33,900	43,400	54,200	81,300	101,700
Stabilizer	16,300	16,300	16,300	20,300	20,300	40,700	51,500	67,800
Rotor Catcher to Rotor	3,390	3,390	3,390	3,390	3,390	4,750	4,750	6,100

CONNECTION (ft-lb)	4-3/4"	5-1/4"	6-1/2"	7"	8"	9-5/8"	11-1/4"
SERIES #	ML	ML	ML	ML	ML	ML	ML
Nozzle To Mandrel	--	--	--	1,000	1,000	2,000	2,000
Lower Shaft Flow Restrictor	10,000	10,000	24,500	28,000	30,000	60,000	100,000
Compression Nut	500	500	1,250	2,000	2,000	5,300	5,000
Lock Nut	4,500	8,000	10,000	13,000	17,000	30,000	40,000
Mandrel to BAA	10,000	10,000	15,000	20,000	25,000	30,000	60,000
RA to Rotor	6,000	8,000	12,500	14,000	16,000	25,000	40,000
Adaptor Cap	2,000	2,000	5,000	5,000	6,000	8,000	8,000
Rotor Catch to Rotor	1,500	1,500	2,500	2,500	3,500	3,500	4,500
Lower Housing Flow Restrictor	8,000	10,000	24,000	24,000	40,000	60,000	70,000
Body Connections	10,000	12,500	22,000	32,000	40,000	60,000	75,000
Adjustable Mandrel	10,000	12,500	25,000	25,000	40,000	60,000	75,000
Stabilizer	8,000	8,500	12,000	12,000	21,000	38,000	50,000

<b>CONNECTION (N·m)</b>	<b>4-3/4"</b>	<b>5-1/4"</b>	<b>6-1/2"</b>	<b>7"</b>	<b>8"</b>	<b>9-5/8"</b>	<b>11-1/4"</b>
<b>SERIES #</b>	<b>ML</b>	<b>ML</b>	<b>ML</b>	<b>ML</b>	<b>ML</b>	<b>ML</b>	<b>ML</b>
Nozzle To Mandrel	--	--	--	1,360	1,360	2,710	2,710
Lower Shaft Flow Restrictor	13,600	13,600	33,200	38,000	40,700	81,300	135,600
Compression Nut	680	680	1,690	2,710	2,710	7,200	6,800
Lock Nut	6,100	10,850	13,600	17,600	23,000	40,700	54,200
Mandrel to BAA	13,600	13,600	20,300	27,100	33,900	40,700	81,300
RA to Rotor	8,130	10,850	16,900	19,000	21,700	33,900	54,200
Adaptor Cap	2,710	2,710	6,800	6,800	8,100	10,800	10,800
Rotor Catch to Rotor	2,030	2,030	3,390	3,390	4,750	4,750	6,100
Lower Housing Flow Restrictor	10,850	13,600	32,500	32,500	54,200	81,300	94,900
Body Connections	13,600	16,900	29,800	43,400	54,200	81,300	101,700
Adjustable Mandrel	13,600	16,900	33,900	33,900	54,200	81,300	101,700
Stabilizer	10,850	11,500	16,300	16,300	28,500	51,500	67,800

**SHOCK SUB SERIES 2 OPERATING PROCEDURE**

1. Shock Subs are designed to reduce/isolate axial deflections and to provide maximum protection against BHA vibrations.
2. The disk springs configuration paired with hydraulic dampening system yields maximum bit performance.
3. The Shock Sub is preset to partial compression, thus enabling compensation in both up and downwards direction as required.
4. Before Installing the Shock Sub in the drill string, make sure the threaded connections are thoroughly cleaned and free of any debris.
5. The Shock Sub must be installed in the drill string with Mandrel end down.
6. Protect the mandrel sealing surface from any kind of damage while in operation or during the handling process.
7. Apply Rig tongs adjacent to the top and bottom connections of the sub to avoid over torquing or breaking any body connections.
8. Avoid breaking any body connections at the rig, this should be only carried out at service centers when the tool is due for service.
9. Common practice is to place the Shock Sub next to the bit. This placement will help to minimize the oscillating mass and an Optimum performance from the Shock Sub can be achieved.
10. Placing Shock Sub further up the assembly should any other Operating conditions arise may reduce the tool effectiveness because of greater oscillating mass.
11. It is advisable not to run Shock Subs with standard seal kit above 275°F (135°C). Optional High Temp seals may be requested while ordering the Sub 350°F (175°C).

12. Dynomax recommends a maximum of 250 hrs. of operation before being serviced.
13. Check for any damage or wear once the Sub is pulled out of the hole. Contact Service center if in doubt. Example: Chrome surface, Wiper seal- for oil leaks etc.
14. Check for any free play when the Sub is out of the hole. Contact Service center if in doubt. Example: In Neutral position, apply a "mark" with a paint pen where the wiper seal sits (Mandrel and splined housing end). Apply some push/pull load to the sub as you would when in a drill string, now release the applied load, the mandrel should return back to its neutral position and wiper seal should align with the same "mark" made before applying the load.
15. Clean the Shock Sub with fresh water, flush out all the drilling fluid to avoid any hydraulic contamination.
16. Apply thread protectors when the Shock Sub is not in use.
17. If the Shock Sub is stored for longer durations, it is advisable to occasionally rotate the Sub to a new position to avoid seals from settling.

Shock Sub Size	Optimal WOB* lb (daN) for 1X1	Optimal WOB* lb (daN) for 2X2
2 7/8"	5,500 (2,400)	11,000 (4,900)
3 1/8"	7,000 (3,100)	14,000 (6,200)
3 3/4"	7,000 (3,100)	14,000 (6,200)
4 3/4" - 5"	19,400 (8,600)	38,900 (17,300)
6 1/2" - 6 3/4"	36,000 (16,000)	72,000 (32,000)
6 1/2" - 6 3/4" LIGHT	20,000 (9,000)	41,000 (18,000)
8"	57,000 (25,000)	114,000 (51,000)
8" LIGHT	28,000 (12,000)	52,000 (23,000)
9 1/2"	94,000 (42,000)	188,000 (84,000)
9 1/2" LIGHT	49,000 (22,000)	97,000 (43,000)
11 1/4"	126,000 (56,000)	252,000 (112,000)
12"	66,000 (29,000)	131,000 (58,000)
14"	92,000 (41,000)	185,000 (82,000)

\*Optimal WOB may vary with operating conditions.

*Different spring configurations for different sizes available upon request.*

How do you know if you have the right spring configuration for the job? Dynomax has your answer, with multiple spring configurations for any size of shock sub, we can meet almost any job specification with an off the shelf tool, and if we don't have just the right thing, we can customize builds to meet your needs.

### HOW TO READ SHOCK SUB OPERATING CHARTS

- 1. Operating Pressure Drop**  
Determine the expected pressure drop between the shock sub and the annulus at the operating flow rate. This includes all tools below the shock sub, such as MWD, Motor, RSS, and Bit. Calculate the maximum and minimum pressure drop throughout the expected flow range.
- 2. Effective Weight**  
Determine the effective weight on the shock sub. In a vertical hole, this will be the WOB minus the Weight of the tools below the Shock Sub. In a lateral this will be the WOB plus the expected drag between the Shock Sub and Bit.
- 3. Plot the Operating Parameters**  
Plot a vertical line at the Minimum operating Pressure Drop, and a second vertical line at the Maximum Operating Pressure Drop (Example in RED). Plot a horizontal line at the minimum expected weight and maximum expected weight (Example in BLACK). The box formed by the four lines is your operating zone.
- 4. Interpret the Results**  
If your operating zone falls entirely in either the "Compression" or "Extension" bands, then you have an effective shock sub; the closer to the middle of the band, the better the performance. If the operating zone lies in the "Neutral" band, then the shock sub will be ineffective against minor shocks, but will have maximum effectiveness against large shock events. Running the sub in the "Solid Closed" or "Solid Open" position will not damage the tool, but will have no ability to absorb shock events.

Example:

Check if a 475 1x1 Shock Sub is effective when placed above a 5" 7-8 4.5 HR Series 2 Motor for drilling a curve and lateral section. Assuming a bit TFA of 0.553 in<sup>2</sup>.

1. Pressure Drop

Motor - 480 psi @ 30% Rated Differential Pressure  
Motor - 1125 psi @ 70% Rated Differential Pressure  
Bit - 109 psi @ 200 gpm  
Bit - 434 psi @ 400 gpm

Minimum Pressure Drop

Min Motor Drop + Min Bit Drop = 480+109 = 589 psi

Maximum Pressure Drop

Max Motor Drop + Max Bit Drop = 1125+434 = 1559 psi

2. Effect Weight

Start of the Curve: 22 klb WOB planned

Motor Weight: 1326 lb

Bit Weight: 84 lb

Lateral: 15 klb WOB planned

Motor Drag: 850 lb

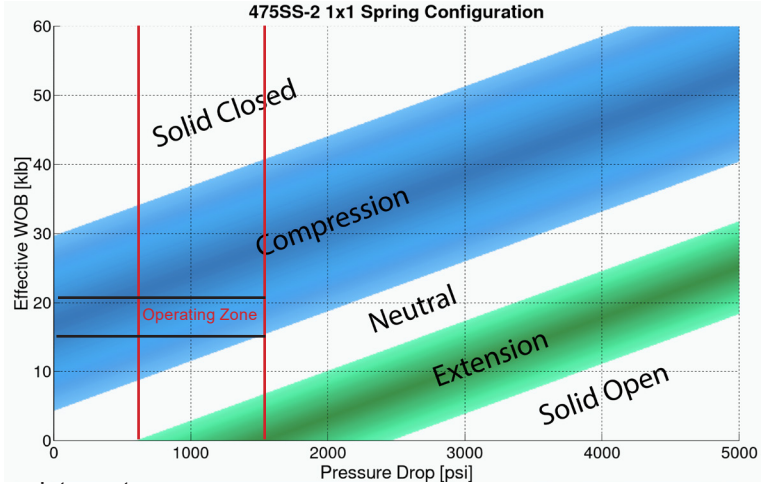
Minimum Effective Weight:

Lateral WOB + Drag = 15,000 + 850 = 15,850 lb

Maximum Effective Weight:

Curve WOB - Motor - Bit = 22,000-1,326-84 = 20,590 lb

3. Plot

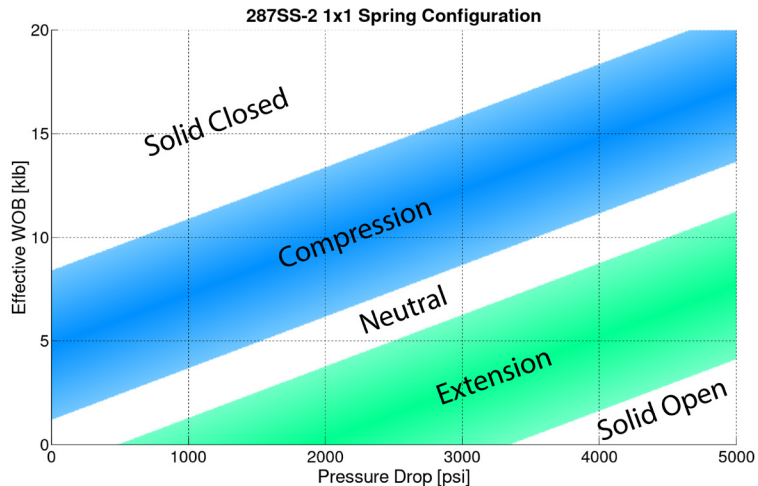


4. Interpret

The Operating Zone falls within the "Compression" Band, meaning the shock tool will be effective.

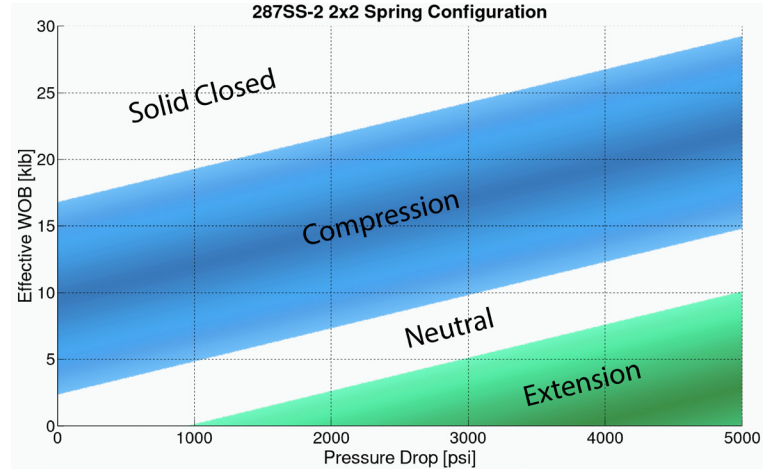
## 287SS02 - 2 7/8 IN (73 MM) SERIES 2 SPRING CONFIGURATION 1X1

End Connections	2-3/8 PAC	
Nominal Tool OD	2.88 in	73 mm
Nominal Tool ID	0.88 in	22 mm
Length	4.5 ft	1.37 m
Weight	74 lb	34 kg
Axial Load Capacity	8,400 lb	3737 daN
Spring Rate	8,000 lb/in	1,401 N/mm
Absolute Overpull	130,600 lb	58,094 daN
Max Torque	3,100 ft-lb	4,203 Nm
Pump Open Area	2.49 in <sup>2</sup>	16.1 cm <sup>2</sup>
Opening Travel	0.89 in	23 mm
Closing Travel	0.90 in	23 mm
Total Travel	1.79 in	45 mm



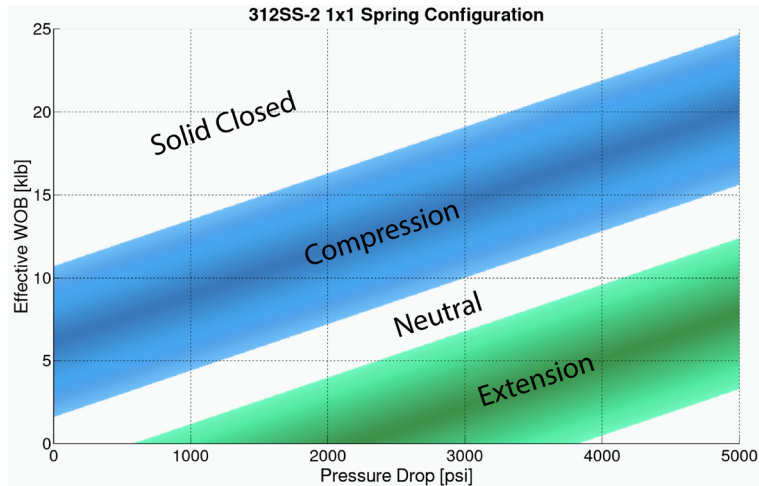
## 287SS02 - 2 7/8 IN (73 MM) SERIES 2 SPRING CONFIGURATION 2X2

End Connections	2-3/8 PAC	
Nominal Tool OD	2.88 in	73 mm
Nominal Tool ID	0.88 in	22 mm
Length	4.5 ft	1.37 m
Weight	74 lb	34 kg
Axial Load Capacity	16,800 lb	7,473 daN
Spring Rate	30,100 lb/in	5,271 N/mm
Absolute Overpull	130,600 lb	58,094 daN
Max Torque	3,100 ft-lb	4,203 Nm
Pump Open Area	2.49 in <sup>2</sup>	16.1 cm <sup>2</sup>
Opening Travel	0.48 in	12 mm
Closing Travel	0.48 in	12 mm
Total Travel	0.97 in	25 mm



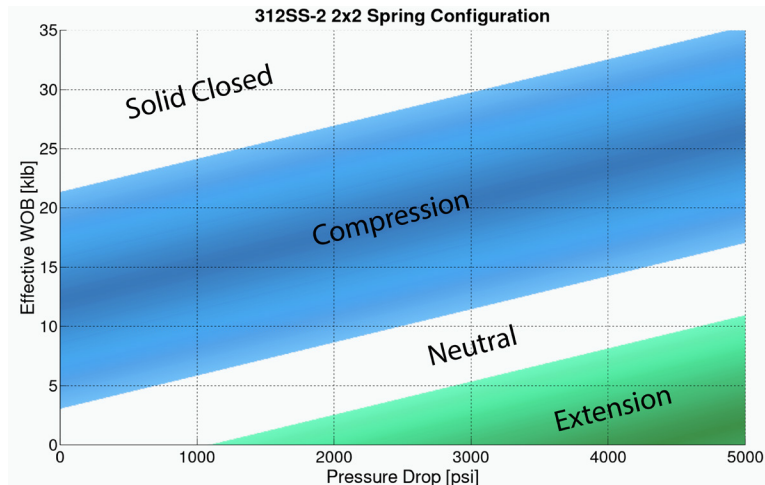
### 312SS02 - 3 1/8 IN (79 MM) SERIES 2 SPRING CONFIGURATION 1X1

End Connections	2-3/8 REGULAR	
Nominal Tool OD	3.13 in	80 mm
Nominal Tool ID	1.0 in	25 mm
Length	5.2 ft	1.58 m
Weight	106 lb	48 kg
Axial Load Capacity	10,700 lb	4760 daN
Spring Rate	9,000 lb/in	1,576 N/mm
Absolute Overpull	207,500 lb	92,301 daN
Max Torque	5,000 ft-lb	6,779 Nm
Pump Open Area	2.80 in <sup>2</sup>	18.1 cm <sup>2</sup>
Opening Travel	1.01 in	26 mm
Closing Travel	1.01 in	26 mm
Total Travel	2.02 in	51 mm



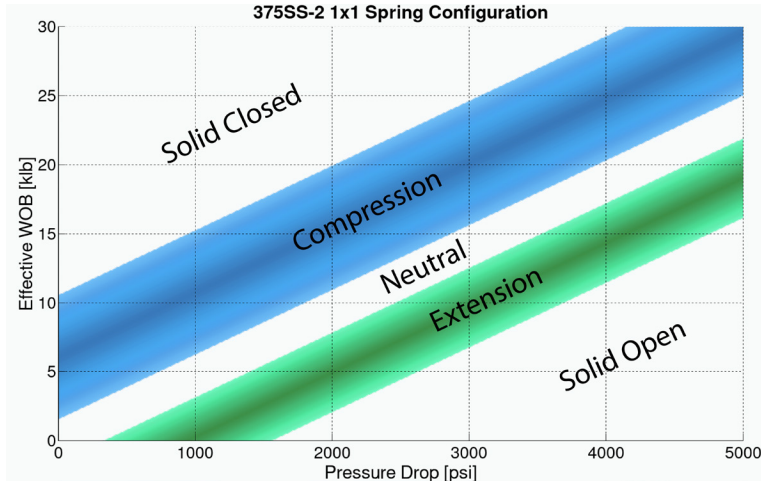
## 312SS02 - 3 1/8 IN (79 MM) SERIES 2 SPRING CONFIGURATION 2X2

End Connections	2-3/8 REGULAR	
Nominal Tool OD	3.13 in	80 mm
Nominal Tool ID	1.0 in	25 mm
Length	5.2 ft	1.58 m
Weight	107 lb	49 kg
Axial Load Capacity	21,350 lb	9497 daN
Spring Rate	30,500 lb/in	5,341 N/mm
Absolute Overpull	207,500 lb	92,301 daN
Max Torque	5,000 ft-lb	6,779 Nm
Pump Open Area	2.80 in <sup>2</sup>	18.1 cm <sup>2</sup>
Opening Travel	0.60 in	15 mm
Closing Travel	0.60 in	15 mm
Total Travel	1.20 in	30 mm



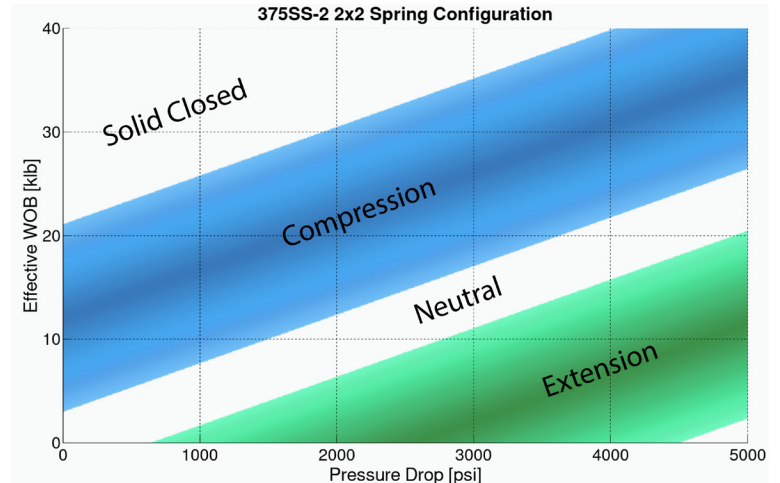
### 375SS02 - 3 3/4 IN (95 MM) SERIES 2 SPRING CONFIGURATION 1X1

End Connections	2-7/8 REGULAR	
Nominal Tool OD	3.75 in	95 mm
Nominal Tool ID	1.25 in	32 mm
Length	7.2 ft	2.19 m
Weight	197 lb	89 kg
Axial Load Capacity	10,550 lb	4,693 daN
Spring Rate	6,000 lb/in	1,051 N/mm
Absolute Overpull	243,200 lb	108,181 daN
Max Torque	7,400 ft-lb	10,033 Nm
Pump Open Area	4.69 in <sup>2</sup>	30.3 cm <sup>2</sup>
Opening Travel	0.96 in	24 mm
Closing Travel	1.50 in	38 mm
Total Travel	2.46 in	62 mm



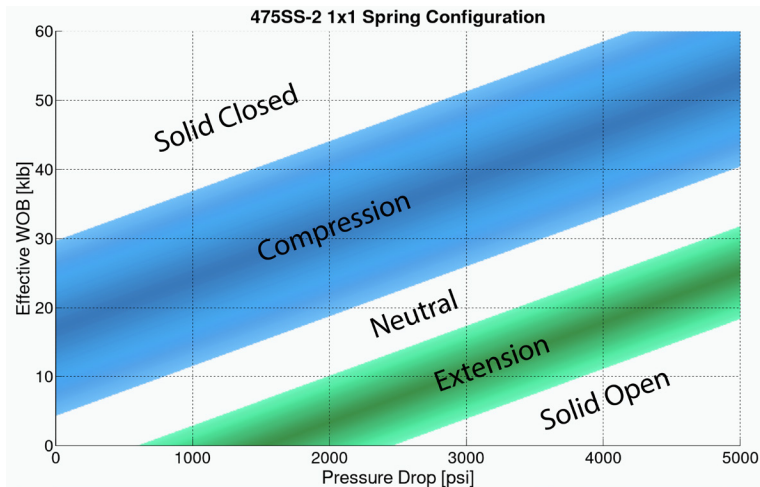
## 375SS02 - 3 3/4 IN (95 MM) SERIES 2 SPRING CONFIGURATION 2X2

End Connections	2-7/8 REGULAR	
Nominal Tool OD	3.75 in	95 mm
Nominal Tool ID	1.25 in	32 mm
Length	7.2 ft	2.19 m
Weight	198 lb	90 kg
Axial Load Capacity	21,100 lb	9,386 daN
Spring Rate	21,300 lb/in	3,730 N/mm
Absolute Overpull	243,200 lb	108,181 daN
Max Torque	7,400 ft-lb	10,033 Nm
Pump Open Area	4.69 in <sup>2</sup>	30.3 cm <sup>2</sup>
Opening Travel	0.85 in	22 mm
Closing Travel	0.85 in	22 mm
Total Travel	1.70 in	43 mm



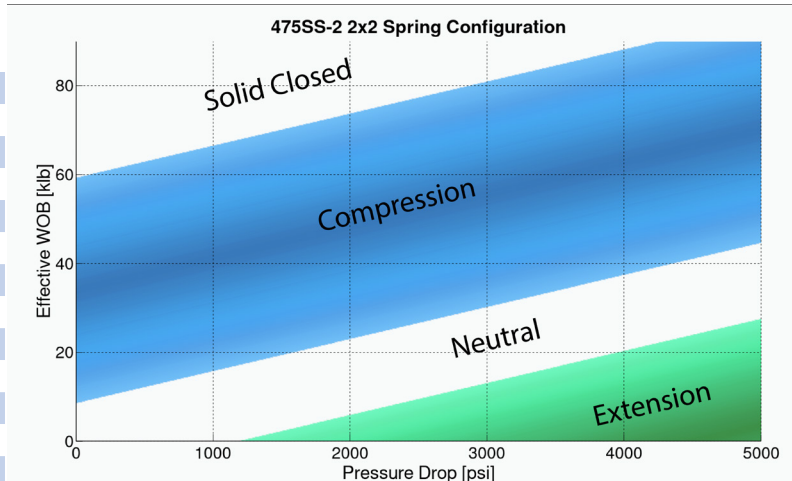
**475SS02                      500SS02**  
**SERIES 2 SPRING CONFIGURATION 1X1**

End Connections	3-1/2 IF (NC38)		4 FH (NC40)	
Nominal Tool OD	4.75 in	121 mm	5 in	127 mm
Nominal Tool ID	1.75 in	44 mm	1.75 in	44 mm
Length	8.1 ft	2.47 m	8.1 ft	2.47 m
Weight	365 lb	166 kg	408 lb	185 kg
Axial Load Capacity	29,650 lb	13,189 daN	29,650 lb	13,189 daN
Spring Rate	14,000 lb/in	2,452 N/mm	14,000 lb/in	2,452 N/mm
Absolute Overpull	323,100 lb	143,722 daN	406,800 lb	180,954 daN
Max Torque	12,200 ft-lb	16,541 Nm	20,500 ft-lb	27,794 Nm
Pump Open Area	7.22 in <sup>2</sup>	46.6 cm <sup>2</sup>	7.22 in <sup>2</sup>	46.6 cm <sup>2</sup>
Opening Travel	0.96 in	24 mm	0.98 in	25 mm
Closing Travel	1.81 in	46 mm	1.81 in	46 mm
Total Travel	2.77 in	70 mm	2.79 in	71 mm



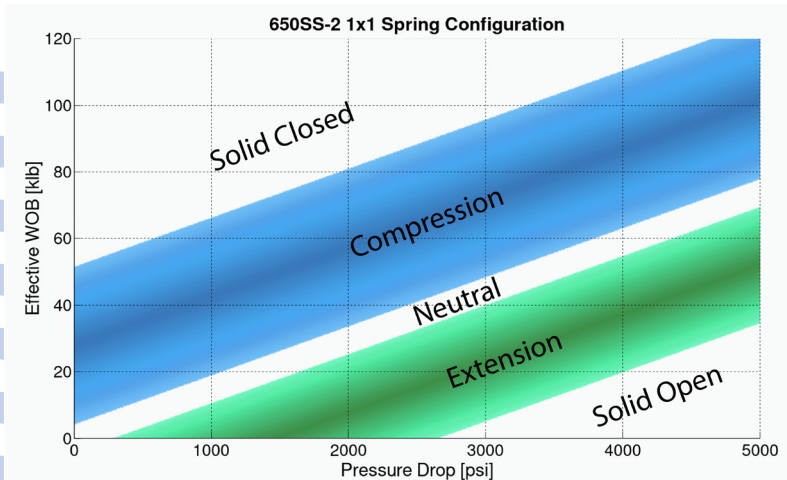
**475SS02                      500SS02**  
**SERIES 2 SPRING CONFIGURATION 2X2**

End Connections	3-1/2 IF (NC38)		4 FH (NC40)	
Nominal Tool OD	4.75 in	121 mm	5 in	127 mm
Nominal Tool ID	1.75 in	44 mm	1.75 in	44 mm
Length	8.1 ft	2.47 m	8.1 ft	2.47 m
Weight	367 lb	166 kg	408 lb	185 kg
Axial Load Capacity	59,300 lb	26,378 daN	59,300 lb	26,378 daN
Spring Rate	50,250 lb/in	8,800 N/mm	50,250 lb/in	8,800 N/mm
Absolute Overpull	323,100 lb	143,722 daN	406,800 lb	180,954 daN
Max Torque	12,200 ft-lb	16,541 Nm	20,500 ft-lb	27,794 Nm
Pump Open Area	7.22 in <sup>2</sup>	46.6 cm <sup>2</sup>	7.22 in <sup>2</sup>	46.6 cm <sup>2</sup>
Opening Travel	0.96 in	24 mm	0.98 in	25 mm
Closing Travel	1.01 in	26 mm	1.01 in	26 mm
Total Travel	2.02 in	51 mm	1.99 in	51 mm



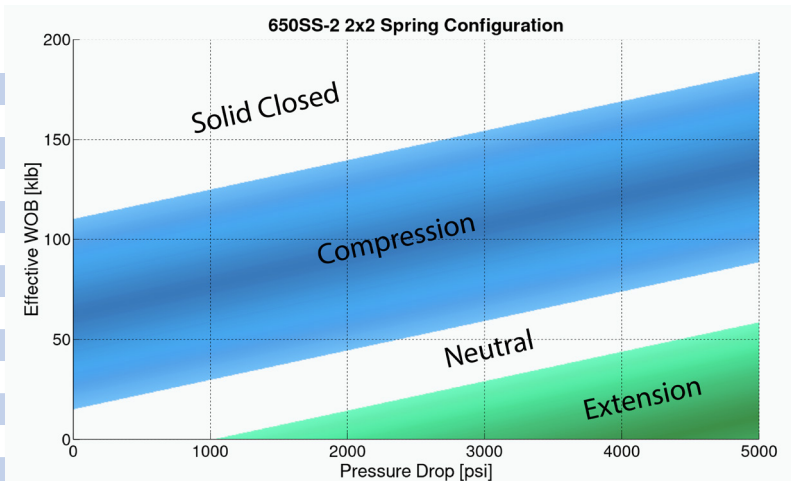
**650SS02                      675SS02**  
**SERIES 2 SPRING CONFIGURATION 1X1**

End Connections	4-1/2 XH (NC46)		4-1/2 IF (NC46)	
Nominal Tool OD	6.5 in	165 mm	6.75 in	171 mm
Nominal Tool ID	2.50 in	64 mm	2.50 in	64 mm
Length	9.6 ft	2.93 m	9.6 ft	2.93 m
Weight	781 lb	354 kg	835 lb	379 kg
Axial Load Capacity	55,150 lb	24,532 daN	55,150 lb	24,532 daN
Spring Rate	23,900 lb/in	4,186 N/mm	23,900 lb/in	4,186 N/mm
Absolute Overpull	728,500 lb	324,053 daN	728,500 lb	324,053 daN
Max Torque	39,100 ft-lb	53,013 Nm	39,400 ft-lb	53,419 Nm
Pump Open Area	14.73 in <sup>2</sup>	95 cm <sup>2</sup>	14.73 in <sup>2</sup>	95 cm <sup>2</sup>
Opening Travel	1.46 in	37 mm	1.46 in	37 mm
Closing Travel	1.98 in	50 mm	1.98 in	50 mm
Total Travel	3.44 in	87 mm	3.44 in	87 mm



**650SS02                      675SS02**  
**SERIES 2 SPRING CONFIGURATION 2X2**

End Connections	4-1/2 XH (NC46)		4-1/2 IF (NC46)	
Nominal Tool OD	6.5 in	165 mm	6.75 in	171 mm
Nominal Tool ID	2.50 in	64 mm	2.50 in	64 mm
Length	9.6 ft	2.93 m	9.6 ft	2.93 m
Weight	786 lb	357 kg	835 lb	379 kg
Axial Load Capacity	110,250 lb	49,042 daN	110,250 lb	49,042 daN
Spring Rate	85,000 lb/in	14,886 N/mm	85,000 lb/in	14,886 N/mm
Absolute Overpull	728,500 lb	324,053 daN	728,500 lb	324,053 daN
Max Torque	39,100 ft-lb	53,013 Nm	39,400 ft-lb	53,419 Nm
Pump Open Area	14.73 in <sup>2</sup>	95 cm <sup>2</sup>	14.73 in <sup>2</sup>	95 cm <sup>2</sup>
Opening Travel	1.12 in	28 mm	1.12 in	28 mm
Closing Travel	1.12 in	28 mm	1.12 in	28 mm
Total Travel	2.24 in	57 mm	2.24 in	57 mm

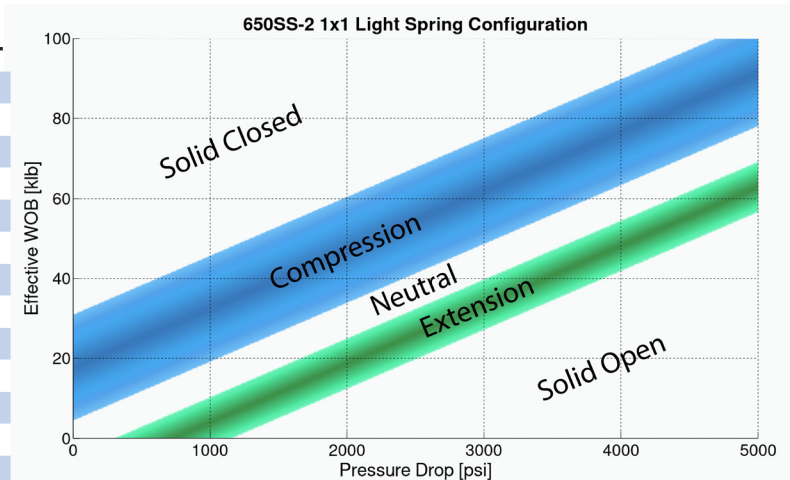


**650SS02**

**675SS02**

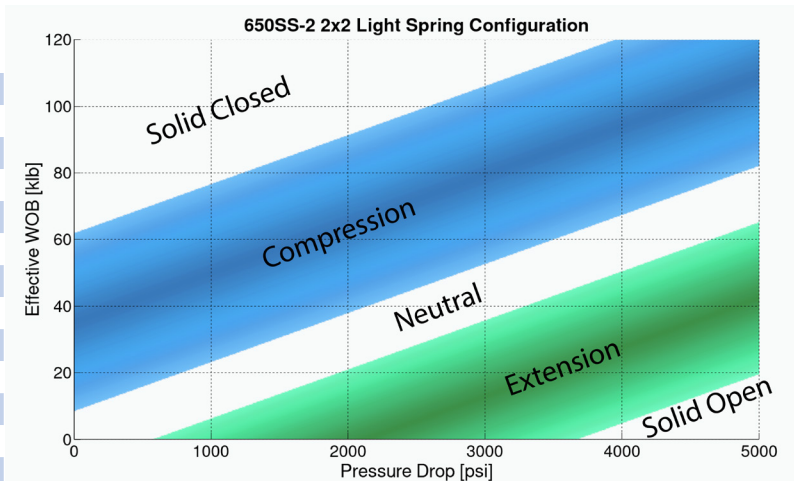
**SERIES 2 SPRING CONFIGURATION 1X1 LIGHT**

End Connections	4-1/2 XH (NC46)		4-1/2 IF (NC46)	
Nominal Tool OD	6.5 in	165 mm	6.75 in	171 mm
Nominal Tool ID	2.50 in	64 mm	2.50 in	64 mm
Length	9.6 ft	2.93 m	9.6 ft	2.93 m
Weight	780 lb	354 kg	835 lb	379 kg
Axial Load Capacity	30,950 lb	13,767 daN	30,950 lb	13,767 daN
Spring Rate	8,600 lb/in	1,506 N/mm	8,600 lb/in	1,506 N/mm
Absolute Overpull	728,500 lb	324,053 daN	728,500 lb	324,053 daN
Max Torque	39,100 ft-lb	53,013 Nm	39,400 ft-lb	53,419 Nm
Pump Open Area	14.73 in <sup>2</sup>	95 cm <sup>2</sup>	14.73 in <sup>2</sup>	95 cm <sup>2</sup>
Opening Travel	1.46 in	37 mm	1.46 in	37 mm
Closing Travel	3.08 in	78 mm	3.08 in	78 mm
Total Travel	4.54 in	115 mm	4.54 in	115 mm



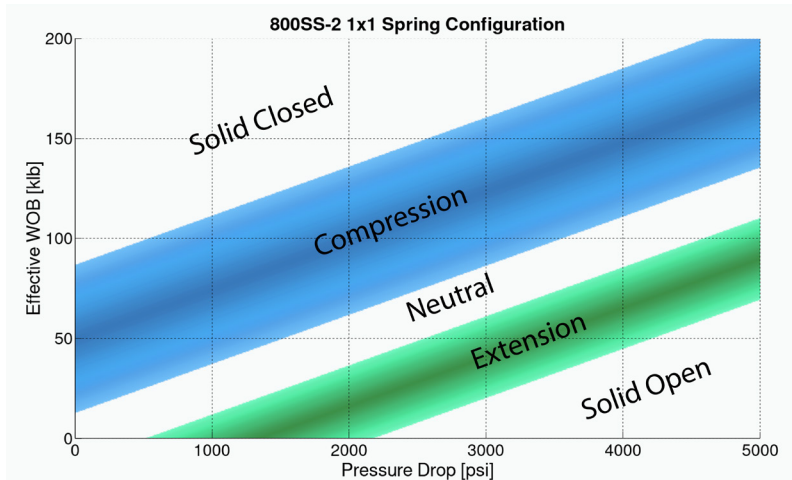
**650SS02                      675SS02**  
**SERIES 2 SPRING CONFIGURATION 2X2 LIGHT**

End Connections	4-1/2 XH (NC46)		4-1/2 IF (NC46)	
Nominal Tool OD	6.5 in	165 mm	6.75 in	171 mm
Nominal Tool ID	2.50 in	64 mm	2.50 in	64 mm
Length	9.6 ft	2.93 m	9.6 ft	2.93 m
Weight	784 lb	356 kg	835 lb	379 kg
Axial Load Capacity	61,900 lb	27,534 daN	61,900 lb	27,534 daN
Spring Rate	31,250 lb/in	5,473 N/mm	31,250 lb/in	5,473 N/mm
Absolute Overpull	728,500 lb	324,053 daN	728,500 lb	324,053 daN
Max Torque	39,100 ft-lb	53,013 Nm	39,400 ft-lb	53,419 Nm
Pump Open Area	14.73 in <sup>2</sup>	95 cm <sup>2</sup>	14.73 in <sup>2</sup>	95 cm <sup>2</sup>
Opening Travel	1.46 in	37 mm	1.46 in	37 mm
Closing Travel	1.71 in	43 mm	1.71 in	43 mm
Total Travel	3.17 in	81 mm	3.17 in	81 mm



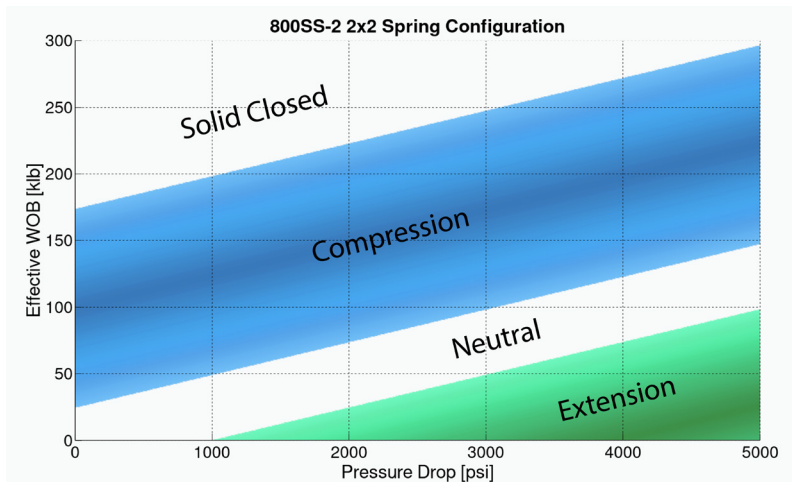
## 800SS02 - 8 IN (203 MM) SERIES 2 SPRING CONFIGURATION 1X1

<b>End Connections</b>	6-5/8 REG	
<b>Nominal Tool OD</b>	8 in	203 mm
<b>Nominal Tool ID</b>	2.81 in	71 mm
<b>Length</b>	11.2 ft	3.41 m
<b>Weight</b>	1,340 lb	608 kg
<b>Axial Load Capacity</b>	86,850 lb	38,633 daN
<b>Spring Rate</b>	28,000 lb/in	4,904 N/mm
<b>Absolute Overpull</b>	725,300 lb	322,630 daN
<b>Max Torque</b>	49,900 ft-lb	67,656 Nm
<b>Pump Open Area</b>	24.58 in <sup>2</sup>	158.6 cm <sup>2</sup>
<b>Opening Travel</b>	1.46 in	37 mm
<b>Closing Travel</b>	2.65 in	67 mm
<b>Total Travel</b>	4.11 in	104 mm



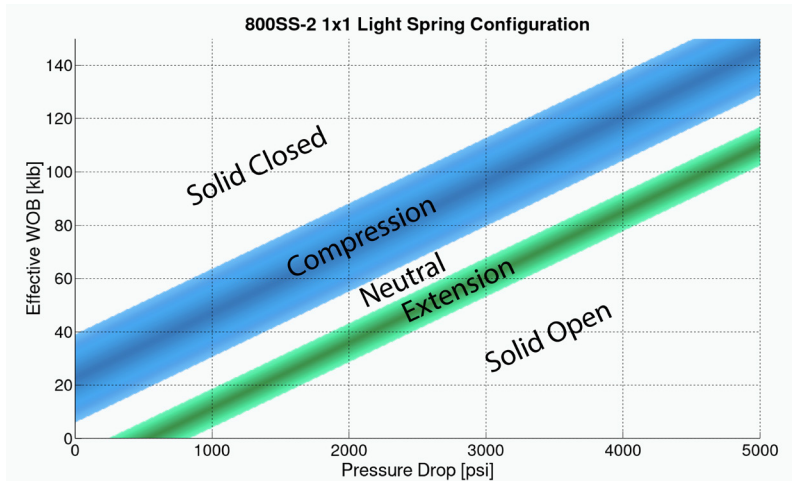
## 800SS02 - 8 IN (203 MM) SERIES 2 SPRING CONFIGURATION 2X2

End Connections	6-5/8 REG	
Nominal Tool OD	8 in	203 mm
Nominal Tool ID	2.81 in	71 mm
Length	11.2 ft	3.41 m
Weight	1,348 lb	611 kg
Axial Load Capacity	173,700 lb	77,266 daN
Spring Rate	99,500 lb/in	17,425 N/mm
Absolute Overpull	725,300 lb	322,630 daN
Max Torque	49,900 ft-lb	67,656 Nm
Pump Open Area	24.58 in <sup>2</sup>	158.6 cm <sup>2</sup>
Opening Travel	1.46 in	37 mm
Closing Travel	1.50 in	38 mm
Total Travel	2.96 in	75 mm



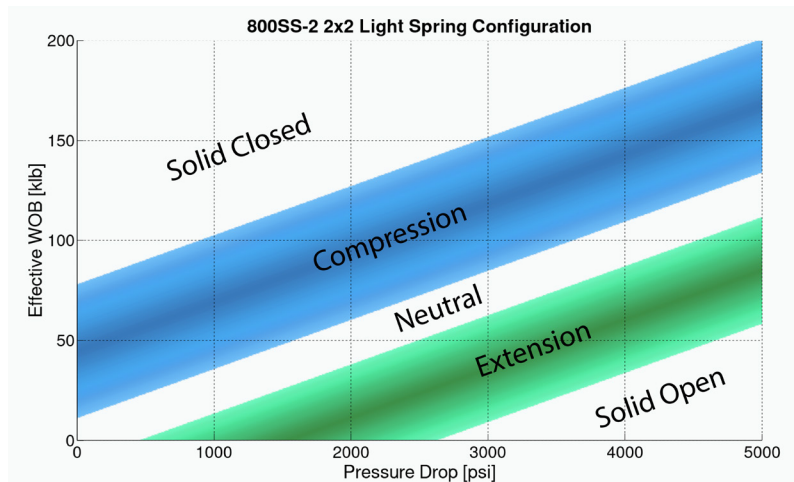
## 800SS02 - 8 IN (203 MM) LIGHT SERIES 2 SPRING CONFIGURATION 1X1

<b>End Connections</b>	6-5/8 REG	
<b>Nominal Tool OD</b>	8 in	203 mm
<b>Nominal Tool ID</b>	2.81 in	71 mm
<b>Length</b>	11.2 ft	3.41 m
<b>Weight</b>	1,339 lb	607 kg
<b>Axial Load Capacity</b>	39,050 lb	17,370 daN
<b>Spring Rate</b>	10,000 lb/in	1,751 N/mm
<b>Absolute Overpull</b>	725,300 lb	322,630 daN
<b>Max Torque</b>	49,900 ft-lb	67,656 Nm
<b>Pump Open Area</b>	24.58 in <sup>2</sup>	158.6 cm <sup>2</sup>
<b>Opening Travel</b>	1.46 in	37 mm
<b>Closing Travel</b>	3.31 in	84 mm
<b>Total Travel</b>	4.77 in	121 mm



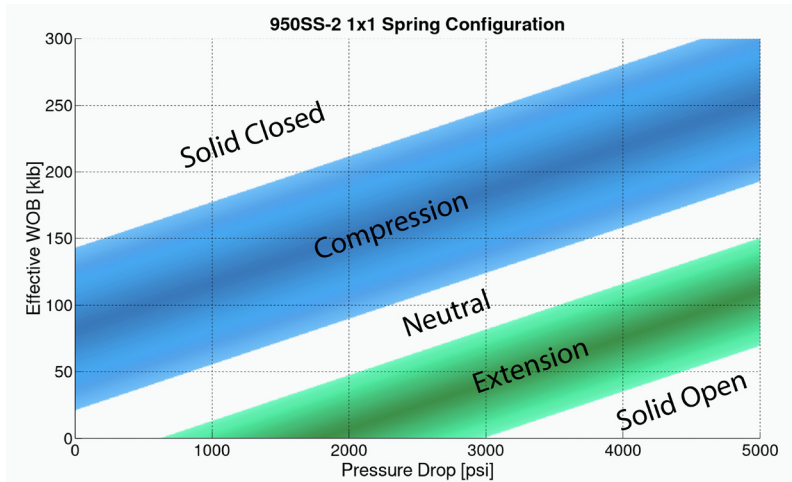
## 800SS02 - 8 IN (203 MM) LIGHT SERIES 2 SPRING CONFIGURATION 2X2

End Connections	6-5/8 REG	
Nominal Tool OD	8 in	203 mm
Nominal Tool ID	2.81 in	71 mm
Length	11.2 ft	3.41 m
Weight	1,345 lb	610 kg
Axial Load Capacity	78,100 lb	34,741 daN
Spring Rate	36,600 lb/in	6,410 N/mm
Absolute Overpull	725,300 lb	322,630 daN
Max Torque	49,900 ft-lb	67,656 Nm
Pump Open Area	24.58 in <sup>2</sup>	158.6 cm <sup>2</sup>
Opening Travel	1.46 in	37 mm
Closing Travel	1.83 in	46 mm
Total Travel	3.29 in	84 mm



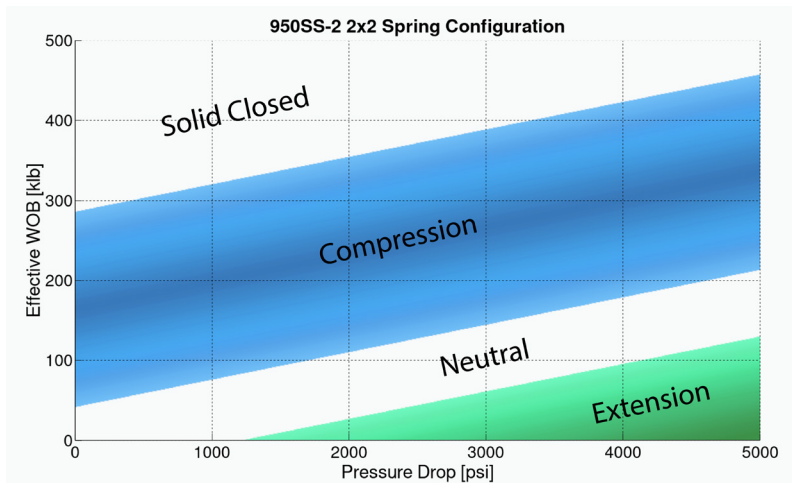
## 950SS02 - 9 1/2 IN (241 MM) SERIES 2 SPRING CONFIGURATION 1X1

End Connections	7-5/8 REG	
Nominal Tool OD	9.5 in	241 mm
Nominal Tool ID	3.00 in	76 mm
Length	13.8 ft	4.21 m
Weight	2,466 lb	1119 kg
Axial Load Capacity	143,050 lb	63,632 daN
Spring Rate	33,850 lb/in	5,928 N/mm
Absolute Overpull	1,439,800 lb	640,455 daN
Max Torque	109,500 ft-lb	148,462 Nm
Pump Open Area	34.33 in <sup>2</sup>	221.5 cm <sup>2</sup>
Opening Travel	2.39 in	61 mm
Closing Travel	3.60 in	91 mm
Total Travel	5.99 in	152 mm



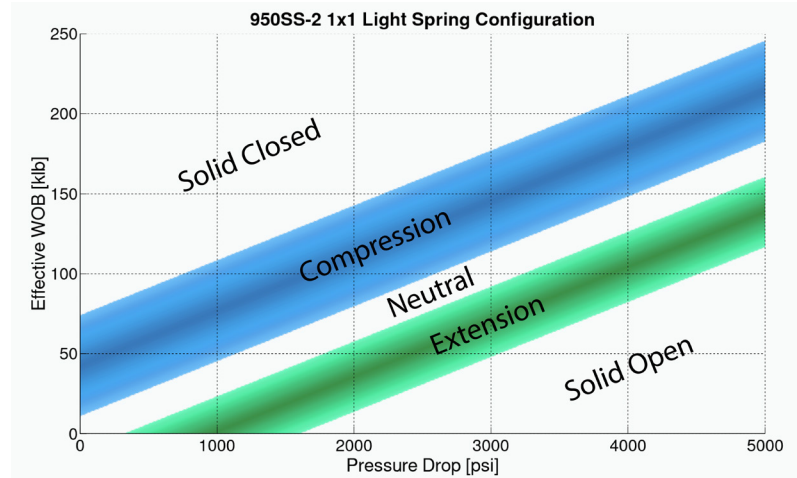
## 950SS02 - 9 1/2 IN (241 MM) SERIES 2 SPRING CONFIGURATION 2X2

<b>End Connections</b>	7-5/8 REG	
<b>Nominal Tool OD</b>	9.5 in	241 mm
<b>Nominal Tool ID</b>	3.00 in	76 mm
<b>Length</b>	13.8 ft	4.21 m
<b>Weight</b>	2,483 lb	1126 kg
<b>Axial Load Capacity</b>	286,100 lb	127,264 daN
<b>Spring Rate</b>	120,400 lb/in	21,085 N/mm
<b>Absolute Overpull</b>	1,439,800 lb	640,455 daN
<b>Max Torque</b>	109,500 ft-lb	148,462 Nm
<b>Pump Open Area</b>	34.33 in <sup>2</sup>	221.5 cm <sup>2</sup>
<b>Opening Travel</b>	2.03 in	52 mm
<b>Closing Travel</b>	2.03 in	52 mm
<b>Total Travel</b>	4.06 in	103 mm



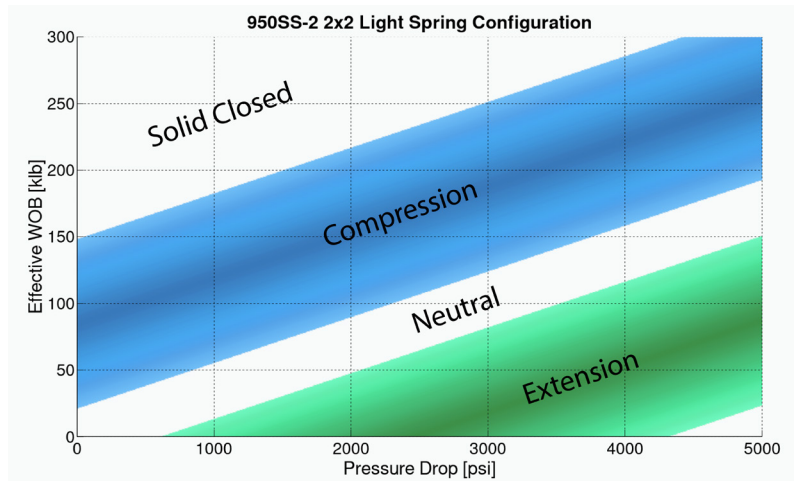
## 950SS02 - 9 1/2 IN (241 MM) LIGHT SERIES 2 SPRING CONFIGURATION 1X1

End Connections	7-5/8 REG	
Nominal Tool OD	9.5 in	241 mm
Nominal Tool ID	3.00 in	76 mm
Length	13.8 ft	4.21 m
Weight	2,473 lb	1122 kg
Axial Load Capacity	74,100 lb	32,961 daN
Spring Rate	18,400 lb/in	3,222 N/mm
Absolute Overpull	1,439,800 lb	640,455 daN
Max Torque	109,500 ft-lb	148,462 Nm
Pump Open Area	34.33 in <sup>2</sup>	221.5 cm <sup>2</sup>
Opening Travel	2.39 in	61 mm
Closing Travel	3.43 in	87 mm
Total Travel	5.82 in	148 mm



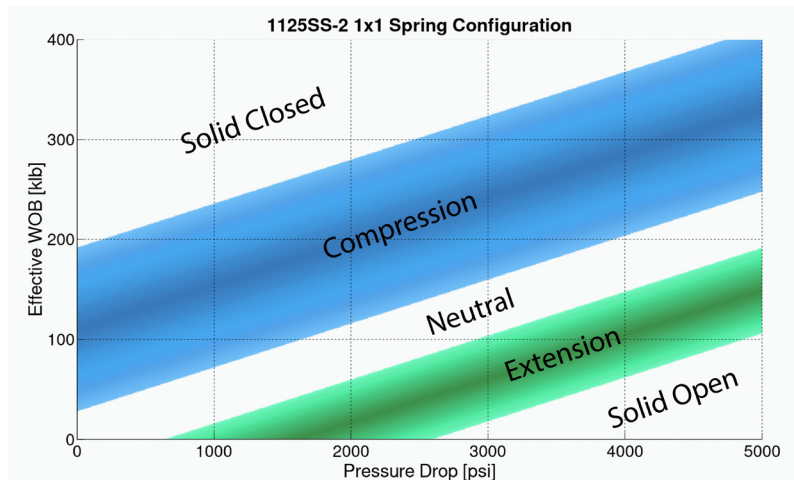
## 950SS02 - 9 1/2 IN (241 MM) LIGHT SERIES 2 SPRING CONFIGURATION 2X2

End Connections	7-5/8 REG	
Nominal Tool OD	9.5 in	241 mm
Nominal Tool ID	3.00 in	76 mm
Length	13.8 ft	4.21 m
Weight	2,480 lb	1125 kg
Axial Load Capacity	148,200 lb	65,923 daN
Spring Rate	69,900 lb/in	12,241 N/mm
Absolute Overpull	1,439,800 lb	640,455 daN
Max Torque	109,500 ft-lb	148,462 Nm
Pump Open Area	34.33 in <sup>2</sup>	221.5 cm <sup>2</sup>
Opening Travel	1.82 in	46 mm
Closing Travel	1.82 in	46 mm
Total Travel	3.64 in	92 mm



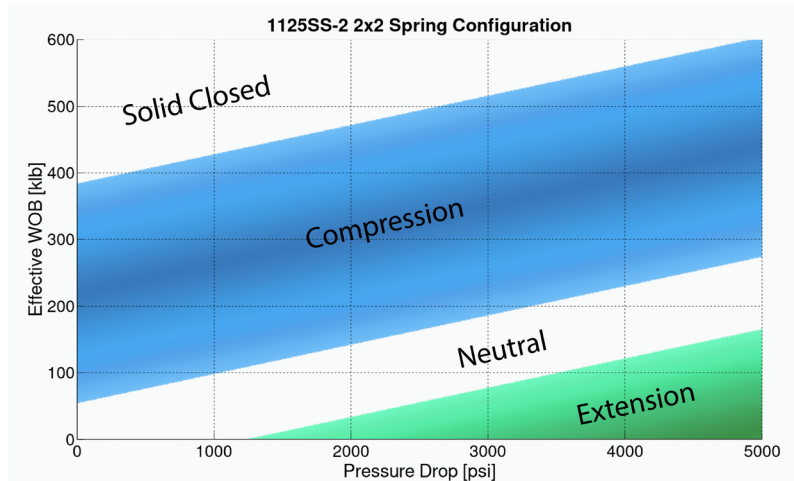
## 1125SS02 - 11 1/4 IN (286 MM) SERIES 2 SPRING CONFIGURATION 1X1

End Connections	7-5/8 REG	
Nominal Tool OD	11.25 in	286 mm
Nominal Tool ID	3.50 in	89 mm
Length	15.3 ft	4.66 m
Weight	3,796 lb	1722 kg
Axial Load Capacity	192,000 lb	85,406 daN
Spring Rate	36,350 lb/in	6,366 N/mm
Absolute Overpull	2,776,300 lb	1,234,960 daN
Max Torque	160,100 ft-lb	217,067 Nm
Pump Open Area	43.96 in <sup>2</sup>	283.6 cm <sup>2</sup>
Opening Travel	2.36 in	60 mm
Closing Travel	4.51 in	115 mm
Total Travel	6.87 in	174 mm



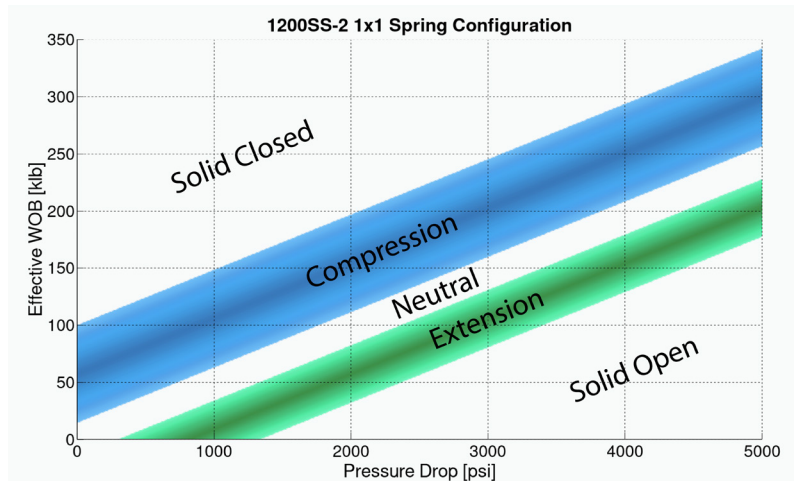
## 1125SS02 - 11 1/4 IN (286 MM) SERIES 2 SPRING CONFIGURATION 2X2

End Connections	7-5/8 REG	
Nominal Tool OD	11.25 in	286 mm
Nominal Tool ID	3.50 in	89 mm
Length	15.3 ft	4.66 m
Weight	3,828 lb	1736 kg
Axial Load Capacity	384,000 lb	170,812 daN
Spring Rate	129,300 lb/in	22,644 N/mm
Absolute Overpull	2,776,300 lb	1,234,960 daN
Max Torque	160,100 ft-lb	217,067 Nm
Pump Open Area	43.96 in <sup>2</sup>	283.6 cm <sup>2</sup>
Opening Travel	2.36 in	60 mm
Closing Travel	2.55 in	65 mm
Total Travel	4.91 in	125 mm



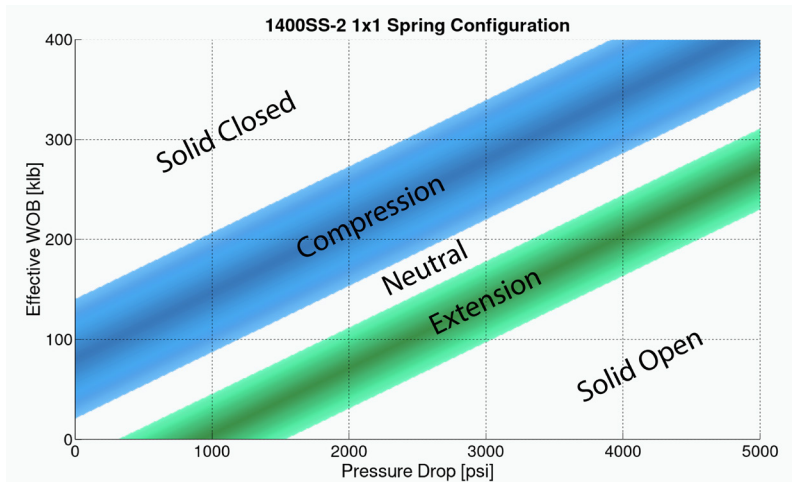
## 1200SS02 - 12 IN (305 MM) SERIES 2 SPRING CONFIGURATION 1X1

<b>End Connections</b>	7-5/8 H90	
<b>Nominal Tool OD</b>	12 in	305 mm
<b>Nominal Tool ID</b>	3.25 in	83 mm
<b>Length</b>	13.3 ft	4.05 m
<b>Weight</b>	3,841 lb	1742 kg
<b>Axial Load Capacity</b>	100,000 lb	44,482 daN
<b>Spring Rate</b>	25,159 lb/in	4,406 N/mm
<b>Absolute Overpull</b>	2,176,700 lb	968,244 daN
<b>Max Torque</b>	156,200 ft-lb	211,779 Nm
<b>Pump Open Area</b>	48.45 in <sup>2</sup>	312.6 cm <sup>2</sup>
<b>Opening Travel</b>	2 in	51 mm
<b>Closing Travel</b>	3.4 in	86 mm
<b>Total Travel</b>	5.4 in	137 mm



## 1400SS02 - 14 IN (356 MM) SERIES 2 SPRING CONFIGURATION 1X1

<b>End Connections</b>	8-5/8 H90	
<b>Nominal Tool OD</b>	14 in	356 mm
<b>Nominal Tool ID</b>	3.25 in	83 mm
<b>Length</b>	15.0 ft	4.57 m
<b>Weight</b>	5,934 lb	2692 kg
<b>Axial Load Capacity</b>	140,450 lb	62,475 daN
<b>Spring Rate</b>	27,000 lb/in	4,728 N/mm
<b>Absolute Overpull</b>	3,288,400 lb	1,462,753 daN
<b>Max Torque</b>	184,500 ft-lb	250,149 Nm
<b>Pump Open Area</b>	66.37 in <sup>2</sup>	428.2 cm <sup>2</sup>
<b>Opening Travel</b>	3 in	76 mm
<b>Closing Travel</b>	4.43 in	113 mm
<b>Total Travel</b>	7.43 in	189 mm



# DYNOMAX SHOCK SUB CONNECTION TORQUES

7501 42 STREET LEDUC, ALBERTA T9E 0R8 T: 780.986.3070 F:780.986.3536

[www.dynomaxdrillingtools.com](http://www.dynomaxdrillingtools.com)[sales@dynomaxdrillingtools.com](mailto:sales@dynomaxdrillingtools.com)

CONNECTION (ft·lb)	287SS- 02	312SS- 02	375SS- 02	475SS- 02	500SS- 02	650SS- 02	675SS- 02	800SS- 02	950SS- 02	1125SS- 02	1200SS- 02	1400SS- 02
Body Connection	2500	3500	6000	10000	12000	22000	25000	40000	60000	75000	93000	145000
Mandrel to Lock Nut	860	850	1500	2500	2500	6000	6000	15000	20000	35000	76000	107000

CONNECTION (N·m)	287SS- 02	312SS- 02	375SS- 02	475SS- 02	500SS- 02	650SS- 02	675SS- 02	800SS- 02	950SS- 02	1125SS- 02	1200SS- 02	1400SS- 02
Body Connection	3390	4750	8140	13560	16270	29830	33900	54230	81350	101690	126090	196590
Mandrel to Lock Nut	1170	1150	2030	3390	3390	8140	8140	20340	27120	47450	103040	145070



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INTENTIONALLY

## JARRING UP

Each **DYNO-JAR™** is sent to the field with a preset latch up value and delay time.

Upwards pull force must be able to overcome the preset latch value plus the drill string weight above the jar plus any applicable hole drag.

When this value is exceeded, the mechanical latch releases and the hydraulic delay will engage. The hydraulic delay is adjustable from the service shop.

At the end of the hydraulic delay, the jar will fire in an upwards motion.

## RESET UP JAR

If the jar fires too soon, it may not have been pushed down in the latch position.

After the jar has fired, set the drill string down on the jar to close the latch.

The jar should close at about 5,000 – 10,000 daN (11,240 - 22480 lb) (calculation must take into account the drill string weight below the jar).

Repeat the jarring up and reset up operations as required.

## JARRING DOWN

Each **DYNO-JAR™** is sent from the factory with a preset latch value.

Apply weight on the jar that will exceed the preset latch down value (available from the service shop). Take into account any dog legs or other factor that may reduce the effect of the weight getting to the jar.

The jar will fire downwards with no hydraulic delay.

## RESET DOWN JAR

Picking up on the jar will pull it back into the latched position.

Repeat the jarring down and reset down operations as required.



## DYNO-JAR™

### DMJ488

<b>TOOL OD</b>	4.88 in	124 mm
<b>TOOL ID</b>	2.250 in	57 mm
<b>LENGTH (LATCHED)</b>	21.3 ft	6.49 m
<b>WEIGHT</b>	1100 lb	499 kg
<b>MAX. PULL WHILE METERING</b>	92000 lb	40,924 daN
<b>MAXIMUM OVERPULL</b>	452000 lb	201,060 daN
<b>YIELD TORQUE</b>	15600 ft-lb	21,083 Nm
<b>PUMP OPEN AREA</b>	3.09 in <sup>2</sup>	20.0 cm
<b>FREE STROKE</b>	8 in	203 mm
<b>OVERALL STROKE</b>	18 in	457 mm
<b>MAX. OPERATING TEMP (REG)</b>	275 °F	135 °C
<b>MAX. OPERATING TEMP (HIGH)</b>	400 °F	204 °C

### DMJ500

<b>TOOL OD</b>	5.00 in	127 mm
<b>TOOL ID</b>	2.250 in	57 mm
<b>LENGTH (LATCHED)</b>	21.3 ft	6.49 m
<b>WEIGHT</b>	1100 lb	499 kg
<b>MAX. PULL WHILE METERING</b>	92000 lb	40,924 daN
<b>MAXIMUM OVERPULL</b>	452000 lb	201,060 daN
<b>YIELD TORQUE</b>	15700 ft-lb	21,307 Nm
<b>PUMP OPEN AREA</b>	3.09 in <sup>2</sup>	20.0 cm
<b>FREE STROKE</b>	8 in	203 mm
<b>OVERALL STROKE</b>	18 in	457 mm
<b>MAX. OPERATING TEMP (REG)</b>	275 °F	135 °C
<b>MAX. OPERATING TEMP (HIGH)</b>	400 °F	204 °C



**DMJ650**

<b>TOOL OD</b>	6.56 in	167 mm
<b>TOOL ID</b>	2.563 in	65 mm
<b>LENGTH (LATCHED)</b>	22.2 ft	6.78 m
<b>WEIGHT</b>	2100 lb	953 kg
<b>MAX. PULL WHILE METERING</b>	198000 lb	88,075 daN
<b>MAXIMUM OVERPULL</b>	901000 lb	400,785 daN
<b>YIELD TORQUE</b>	37500 ft-lb	50,910 Nm
<b>PUMP OPEN AREA</b>	4.47 in <sup>2</sup>	28.8 cm
<b>FREE STROKE</b>	8 in	203 mm
<b>OVERALL STROKE</b>	18 in	457 mm
<b>MAX. OPERATING TEMP (REG)</b>	275 °F	135 °C
<b>MAX. OPERATING TEMP (HIGH)</b>	400 °F	204 °C

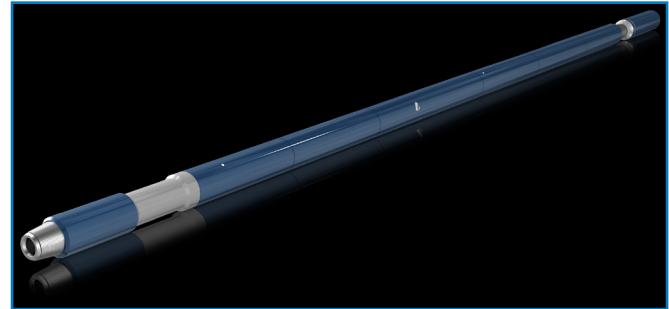
**DMJ675**

<b>TOOL OD</b>	6.81 in	173 mm
<b>TOOL ID</b>	2.563 in	65 mm
<b>LENGTH (LATCHED)</b>	22.2 ft	6.78 m
<b>WEIGHT</b>	2100 lb	953 kg
<b>MAX. PULL WHILE METERING</b>	198000 lb	88,075 daN
<b>MAXIMUM OVERPULL</b>	843000 lb	374,985 daN
<b>YIELD TORQUE</b>	36300 ft-lb	49,235 Nm
<b>PUMP OPEN AREA</b>	4.47 in <sup>2</sup>	28.8 cm
<b>FREE STROKE</b>	8 in	203 mm
<b>OVERALL STROKE</b>	18 in	457 mm
<b>MAX. OPERATING TEMP (REG)</b>	275 °F	135 °C
<b>MAX. OPERATING TEMP (HIGH)</b>	400 °F	204 °C



## DMJ800

<b>TOOL OD</b>	8.14 in	207 mm
<b>TOOL ID</b>	2.813 in	71 mm
<b>LENGTH (LATCHED)</b>	22.4 ft	6.83 m
<b>WEIGHT</b>	3100 lb	1,406 kg
<b>MAX. PULL WHILE METERING</b>	251000 lb	111,650 daN
<b>MAXIMUM OVERPULL</b>	1249000 lb	555,583 daN
<b>YIELD TORQUE</b>	64600 ft-lb	87,582 Nm
<b>PUMP OPEN AREA</b>	9.69 in <sup>2</sup>	62.5 cm
<b>FREE STROKE</b>	8 in	203 mm
<b>OVERALL STROKE</b>	18 in	457 mm
<b>MAX. OPERATING TEMP (REG)</b>	275 °F	135 °C
<b>MAX. OPERATING TEMP (HIGH)</b>	400 °F	204 °C



Torque Connections available on next page.



CONNECTION (ft·lb)	DMJ-488	DMJ-500	DMJ-650	DMJ-675	DMJ-800	DMJ-900	DMJ-950
Male Spline to Knocker Sub	5000	5000	9500	9500	21000	32000	32000
Knocker Sub to Hydraulic Mandrel	4000	4000	7000	7000	18000	32000	32000
Hydraulic Mandrel to Latch Mandrel	3500	3500	5000	5000	15000	30000	30000
Latch Mandrel to Washpipe	1000	1000	3000	3000	5000	10000	10000
Main Body Connection	10000	10000	22000	25000	40000	65500	80500

<b>CONNECTION (N·m)</b>	<b>DMJ-488</b>	<b>DMJ-500</b>	<b>DMJ-650</b>	<b>DMJ-675</b>	<b>DMJ-800</b>	<b>DMJ-900</b>	<b>DMJ-950</b>
Male Spline to Knocker Sub	6780	6780	12880	12880	28470	43390	43390
Knocker Sub to Hydraulic Mandrel	5420	5420	9490	9490	24400	43390	43390
Hydraulic Mandrel to Latch Mandrel	4750	4750	6780	6780	20340	40670	40670
Latch Mandrel to Washpipe	1360	1360	4070	4070	6780	13560	13560
Main Body Connection	13560	13560	29830	33900	54230	88810	109140



The **DYNOMAX Slide Reamer** was designed primarily for reaming during sliding, however the tool's design allows for a multitude of uses including:

**Stabilization:** The Slide Reamer can be utilized similar to a string stabilizer to centralize the bottom hole assembly.

**Friction Reduction:** In horizontal applications, the Slide Reamer can be used to reduce drill string surface contact on the well bore, acting as a friction reducing tool.

**Hole Cleaning:** The same unique rotating action that reams the hole also helps clean and condition the well bore.

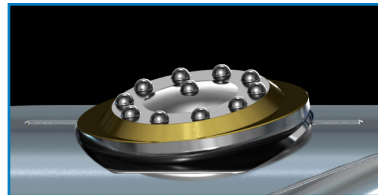
**Cuttings Removal:** The rotating action agitates cuttings that can settle on the low side of the well bore, therefore aiding in removing accumulated cuttings.

**NOTE:** Non-Mag Reamers are available upon request.

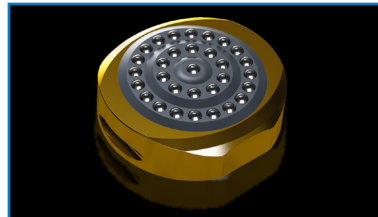
## **BENEFITS**

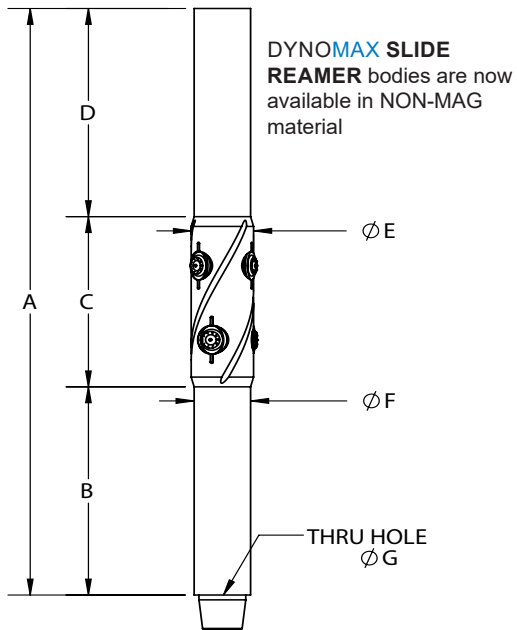
- Integral blade providing 360 degree wall contact
- Cutters turn with each movement of drill string, i.e. Rotating, Sliding, Tripping
- Allows optimal fluid passage
- Designed to minimize failures at high stress points
- Two tools in one. Many different variations can be run on the same tool
- Sealed Bearing design
- More cutting surface area than the competitors
- Reduces torque and drag

## **STANDARD REAMER CUTTER**



## **DOUBLE ROW REAMER CUTTER**





REAMER NOMINAL	A	B	C	D	E	F	G
<b>5<math>\frac{3}{4}</math> - 5<math>\frac{7}{8}</math></b>	56 in 1.42 m	18.9 in 0.48 m	14.5 in 0.37 m	22.8 in 0.58 m	5.16 in 131 mm	4.81 in 122 mm	2.00 in 51 mm
<b>5<math>\frac{7}{8}</math> - 6</b>	56 in 1.42 m	19.5 in 0.50 m	14.9 in 0.38 m	22.5 in 0.57 m	5.25 in 133 mm	4.81 in 122 mm	2.25 in 57 mm
<b>6 - 6<math>\frac{1}{8}</math></b>	56 in 1.42 m	19.4 in 0.49 m	13.4 in 0.34 m	23.4 in 0.59 m	5.25 in 133 mm	5.15 in 140 mm	2.25 in 57 mm
<b>6<math>\frac{1}{8}</math> - 6<math>\frac{1}{4}</math></b>	56 in 1.42 m	17.9 in 0.45 m	16.3 in 0.41 m	21.9 in 0.56 m	5.50 in 140 mm	4.81 in 122 mm	2.25 in 57 mm
<b>6<math>\frac{1}{2}</math> - 6<math>\frac{5}{8}</math></b>	56 in 1.42 m	16.9 in 0.43 m	18.1 in 0.46 m	20.9 in 0.53 m	6.13 in 156 mm	4.81 in 122 mm	2.25 in 57 mm
<b>7<math>\frac{3}{8}</math> - 7<math>\frac{7}{8}</math></b>	64 in 1.63 m	21.9 in 0.56 m	17 in 0.43 m	25 in 0.64 m	7.13 in 181 mm	6.25 in 159 mm	2.75 in 70 mm
<b>8<math>\frac{1}{4}</math> - 8<math>\frac{3}{4}</math></b>	67.5 in 1.71 m	23.9 in 0.61 m	20.1 in 0.51 m	23.1 in 0.59 m	7.50 in 191 mm	6.81 in 173 mm	2.50 in 70 mm
<b>9<math>\frac{5}{8}</math> - 9<math>\frac{7}{8}</math></b>	66.5 in 1.68 m	20.8 in 0.53 m	24 in 0.61 m	21.8 in 0.55 m	8.63 in 219 mm	6.81 in 173 mm	2.50 in 64 mm
<b>12 - 12<math>\frac{1}{4}</math></b>	77 in 1.96 m	25.8 in 0.65 m	25.5 in 0.65 m	25.6 in 0.65 m	10.75 in 273 mm	8.00 in 203 mm	3.00 in 76 mm
<b>17<math>\frac{1}{4}</math> - 17<math>\frac{1}{2}</math></b>	102.8 in 2.61 m	32.3 in 0.82 m	40 in 1.02 m	30.8 in 0.78 m	16.00 in 406 mm	9.50 in 241 mm	3.00 in 76 mm

## DYNOMAX SLIDE REAMER FISHING DIMENSIONS

## DYNOMAX SLIDE REAMERS

Today's drilling applications are becoming more challenging with deeper, longer and more complex wells being drilled faster than ever before. One challenge is keeping the hole clean while drilling, which is achieved with higher flow rates. These flow rates are limited by the power sections on the motors and quite often lead to premature failure due to over-pumping.

The **DYNOMAX REGULATOR™** employs a variable size exit orifice to actively moderate the flow that goes through the motor continuously – extra fluid is vented out the side. The exit orifice is controlled by a valve that measures the flow entering the motor. The valve mechanism responds in milliseconds so that flow to the motor is always regulated.

## **BENEFITS**

- Reduce stator failures due to over pumping
- Utilize optimal performance of the power section in motors
- Reduce washing out of components in the motor
- No need to drop balls or darts for activation
- Motor stalls are still visible at surface
- Applicable not only for conventional drilling, but also coil tubing, and completion operations



REGULATOR OPENING FLOW RATE** (gpm)						Tool Pressure Drop [psi]
ORIFICE SIZE [in]	Mud Weight (ppg)					
	8.3	9.1	10.0	10.8	11.6	
<b>0.31</b>	37	36	34	33	32	163
<b>0.33</b>	43	41	39	37	36	165
<b>0.35</b>	48	46	44	42	41	166
<b>0.37</b>	55	52	50	48	46	168
<b>0.39</b>	62	59	56	54	52	170
<b>0.41</b>	69	66	63	61	58	172
<b>0.44</b>	82	78	74	72	69	175
<b>0.47</b>	96	92	88	84	81	179
<b>0.50</b>	113	108	103	99	95	183
<b>0.53</b>	133	127	121	116	112	187

\*\*Average Values Listed, actual opening may vary +/-10% of the stated value

End Connections*	1-1/2 REG (1-1/2 MT)	
Tool OD	2-1/8 in	54 mm
Pin ID	1.00 in	25 mm
Length	43.5 in	1.10 m
Weight	32 lb	13.6 kg
Absolute Overpull	122,000 lbf	54,300 daN
Max Torque	1,700 ft-lbf	2,300 N-m

\*Alternate End Connections Available upon Request.

Minimum Motor Flow	30 gpm	110 lpm
Maximum Motor Flow	135 gpm	510 lpm
Maximum Bypass Rate	95 gpm	360 lpm

REGULATOR OPENING FLOW RATE** (lpm)						Tool Pressure Drop [kPa]
ORIFICE SIZE [in]	Mud Weight (kg/m <sup>3</sup> )					
	1000	1100	1200	1300	1400	
<b>0.31</b>	141	135	129	124	119	1127
<b>0.33</b>	161	154	147	142	137	1137
<b>0.35</b>	183	175	167	161	155	1148
<b>0.37</b>	207	198	189	182	175	1159
<b>0.39</b>	233	223	212	204	197	1172
<b>0.41</b>	262	250	238	229	221	1185
<b>0.44</b>	309	295	282	271	261	1207
<b>0.47</b>	364	347	331	319	308	1232
<b>0.50</b>	427	408	389	374	361	1259
<b>0.53</b>	502	480	457	440	425	187

\*\*Average Values Listed, actual opening may vary +/-10% of the stated value



2-1/8 in (54 mm) REGULATOR SERIES 1

DYNOMAX REGULATOR™

ORIFICE SIZE [in]	REGULATOR OPENING FLOW RATE** (gpm)					Tool Pressure Drop [psi]
	Mud Weight (ppg)					
	8.3	9.1	10.0	10.8	11.6	
<b>0.45</b>	82	78	74	72	69	177
<b>0.48</b>	94	90	85	82	79	179
<b>0.50</b>	102	98	93	90	87	180
<b>0.55</b>	126	121	115	111	107	184
<b>0.60</b>	154	147	140	135	130	188
<b>0.64</b>	179	171	163	157	152	192
<b>0.67</b>	200	191	183	176	170	195
<b>0.70</b>	224	214	204	196	189	198
<b>0.73</b>	249	238	227	219	211	202

\*\*Average Values Listed, actual opening may vary +/-10% of the stated value

End Connections*	2-3/8 PAC	
Tool OD	2-7/8 in	73 mm
Pin ID	1.38 in	35 mm
Length	43 in	1.1 m
Weight	58 lb	26.3 kg
Absolute Overpull	213,000 lbf	94,700 daN
Max Torque	3,800 ft-lbf	5,200 N-m

\*Alternate End Connections Available upon Request.

Minimum Motor Flow	70 gpm	260 lpm
Maximum Motor Flow	250 gpm	950 lpm
Maximum Bypass Rate	95 gpm	360 lpm

ORIFICE SIZE [in]	REGULATOR OPENING FLOW RATE** (lpm)					Tool Pressure Drop [kPa]
	Mud Weight (kg/m <sup>3</sup> )					
	1000	1100	1200	1300	1400	
<b>0.45</b>	309	295	282	271	262	1222
<b>0.48</b>	355	339	323	311	300	1235
<b>0.50</b>	388	370	353	340	328	1244
<b>0.55</b>	478	457	436	419	405	1269
<b>0.60</b>	583	557	531	511	493	1298
<b>0.64</b>	679	648	618	595	574	1324
<b>0.67</b>	759	724	691	665	642	1345
<b>0.70</b>	847	809	771	742	716	1368
<b>0.73</b>	944	902	860	828	799	1393

\*\*Average Values Listed, actual opening may vary +/-10% of the stated value



REGULATOR OPENING FLOW RATE** (gpm)						Tool Pressure Drop [psi]
ORIFICE SIZE [in]	Mud Weight (ppg)					
	8.3	9.1	10.0	10.8	11.6	
<b>0.45</b>	82	78	74	72	69	177
<b>0.48</b>	94	90	85	82	79	179
<b>0.50</b>	102	98	93	90	87	180
<b>0.55</b>	126	121	115	111	107	184
<b>0.60</b>	154	147	140	135	130	188
<b>0.64</b>	179	171	163	157	152	192
<b>0.67</b>	200	191	183	176	170	195
<b>0.70</b>	224	214	204	196	189	198
<b>0.73</b>	249	238	227	219	211	202

\*\*Average Values Listed, actual opening may vary +/-10% of the stated value

End Connections*	2-3/8 REG	
Tool OD	3-1/8 in	79 mm
Pin ID	1.38 in	35 mm
Length	43 in	1.1 m
Weight	71 lb	32.2 kg
Absolute Overpull	213,000 lbf	94,700 daN
Max Torque	3,900 ft-lbf	5,300 N-m

\*Alternate End Connections Available upon Request.

Minimum Motor Flow	70 gpm	260 lpm
Maximum Motor Flow	250 gpm	950 lpm
Maximum Bypass Rate	95 gpm	360 lpm

REGULATOR OPENING FLOW RATE** (lpm)						Tool Pressure Drop [kPa]
ORIFICE SIZE [in]	Mud Weight (kg/m <sup>3</sup> )					
	1000	1100	1200	1300	1400	
<b>0.45</b>	309	295	282	271	262	1222
<b>0.48</b>	355	339	323	311	300	1235
<b>0.50</b>	388	370	353	340	328	1244
<b>0.55</b>	478	457	436	419	405	1269
<b>0.60</b>	583	557	531	511	493	1298
<b>0.64</b>	679	648	618	595	574	1324
<b>0.67</b>	759	724	691	665	642	1345
<b>0.70</b>	847	809	771	742	716	1368
<b>0.73</b>	944	902	860	828	799	1393

\*\*Average Values Listed, actual opening may vary +/-10% of the stated value



**3-1/8 in (79 mm) REGULATOR SERIES 1**

**DYNOMAX REGULATOR™**

ORIFICE SIZE [in]	REGULATOR OPENING FLOW RATE** (gpm)					Tool Pressure Drop [psi]
	Mud Weight (ppg)					
	8.3	9.1	10.0	10.8	11.6	
<b>0.90</b>	247	236	225	217	209	94
<b>0.95</b>	281	268	256	246	238	96
<b>1.00</b>	318	304	290	279	269	97
<b>1.05</b>	360	344	328	316	305	98
<b>1.10</b>	407	389	371	357	344	100
<b>1.15</b>	461	440	420	404	390	102
<b>1.20</b>	522	499	476	458	442	103
<b>1.25</b>	595	568	542	522	503	105
<b>1.30</b>	682	651	621	598	577	107

\*\*Average Values Listed, actual opening may vary +/-10% of the stated value

End Connections*	3-1/2 IF	
Tool OD	4-3/4 in	121 mm
Pin ID	2.5 in	64 mm
Length	43 in	1 m
Weight	132 lb	59.9 kg
Absolute Overpull	663,000 lbf	294,900 daN
Max Torque	16,300 ft-lbf	22,100 N-m

\*Alternate End Connections Available upon Request.

Minimum Motor Flow	200 gpm	760 lpm
Maximum Motor Flow	550 gpm	2080 lpm
Maximum Bypass Rate	150 gpm	570 lpm

ORIFICE SIZE [in]	REGULATOR OPENING FLOW RATE** (lpm)					Tool Pressure Drop [kPa]
	Mud Weight (kg/m <sup>3</sup> )					
	1000	1100	1200	1300	1400	
<b>0.90</b>	937	895	853	821	792	651
<b>0.95</b>	1064	1016	969	932	900	659
<b>1.00</b>	1205	1151	1098	1056	1019	669
<b>1.05</b>	1363	1302	1242	1195	1153	678
<b>1.10</b>	1541	1472	1404	1351	1304	689
<b>1.15</b>	1744	1665	1589	1529	1475	700
<b>1.20</b>	1978	1889	1802	1734	1673	713
<b>1.25</b>	2252	2151	2052	1974	1905	726
<b>1.30</b>	2581	2465	2351	2263	2183	740

\*\*Average Values Listed, actual opening may vary +/-10% of the stated value



REGULATOR OPENING FLOW RATE** (gpm)						Tool Pressure Drop [psi]
ORIFICE SIZE [in]	Mud Weight (ppg)					
	8.3	9.1	10.0	10.8	11.6	
<b>0.90</b>	247	236	225	217	209	94
<b>0.95</b>	281	268	256	246	238	96
<b>1.00</b>	318	304	290	279	269	97
<b>1.05</b>	360	344	328	316	305	98
<b>1.10</b>	407	389	371	357	344	100
<b>1.15</b>	461	440	420	404	390	102
<b>1.20</b>	522	499	476	458	442	103
<b>1.25</b>	595	568	542	522	503	105
<b>1.30</b>	682	651	621	598	577	107

\*\*Average Values Listed, actual opening may vary +/-10% of the stated value

End Connections*	XT39	
Tool OD	5.15 in	131 mm
Pin ID	2.50 in	64 mm
Length	40 in	1.0 m
Weight	172 lb	78 kg
Absolute Overpull	768,000 lbf	341,600 daN
Max Torque	19,700 ft-lbf	26,700 N-m

\*Alternate End Connections Available upon Request.

Minimum Motor Flow	200 gpm	760 lpm
Maximum Motor Flow	550 gpm	2080 lpm
Maximum Bypass Rate	150 gpm	570 lpm

REGULATOR OPENING FLOW RATE** (lpm)						Tool Pressure Drop [kPa]
ORIFICE SIZE [in]	Mud Weight (kg/m <sup>3</sup> )					
	1000	1100	1200	1300	1400	
<b>0.90</b>	937	895	853	821	792	651
<b>0.95</b>	1064	1016	969	932	900	659
<b>1.00</b>	1205	1151	1098	1056	1019	669
<b>1.05</b>	1363	1302	1242	1195	1153	678
<b>1.10</b>	1541	1472	1404	1351	1304	689
<b>1.15</b>	1744	1665	1589	1529	1475	700
<b>1.20</b>	1978	1889	1802	1734	1673	713
<b>1.25</b>	2252	2151	2052	1974	1905	726
<b>1.30</b>	2581	2465	2351	2263	2183	740

\*\*Average Values Listed, actual opening may vary +/-10% of the stated value



\*Alternate End Connections Available upon Request.

\*\*Average Values Listed, actual opening may vary +/-10% of the stated value

**5.15 in (131 mm) REGULATOR SERIES 1**

**DYNOMAX REGULATOR™**

ORIFICE SIZE [in]	REGULATOR OPENING FLOW RATE** (gpm)					Tool Pressure Drop [psi]
	Mud Weight (ppg)					
	8.3	9.1	10.0	10.8	11.6	
<b>0.90</b>	247	236	225	217	209	94
<b>0.95</b>	281	268	256	246	238	96
<b>1.00</b>	318	304	290	279	269	97
<b>1.05</b>	360	344	328	316	305	98
<b>1.10</b>	407	389	371	357	344	100
<b>1.15</b>	461	440	420	404	390	102
<b>1.20</b>	522	499	476	458	442	103
<b>1.25</b>	595	568	542	522	503	105
<b>1.30</b>	682	651	621	598	577	107

\*\*Average Values Listed, actual opening may vary +/-10% of the stated value

End Connections*	DS40	
Tool OD	5-1/4 in	133 mm
Pin ID	2.5 in	64 mm
Length	40 in	1.0 m
Weight	181 lb	82.1 kg
Absolute Overpull	768,000 lbf	341,600 daN
Max Torque	19,700 ft-lbf	26,700 N-m

\*Alternate End Connections Available upon Request.

Minimum Motor Flow	200 gpm	760 lpm
Maximum Motor Flow	550 gpm	2080 lpm
Maximum Bypass Rate	150 gpm	570 lpm

ORIFICE SIZE [in]	REGULATOR OPENING FLOW RATE** (lpm)					Tool Pressure Drop [kPa]
	Mud Weight (kg/m <sup>3</sup> )					
	1000	1100	1200	1300	1400	
<b>0.90</b>	937	895	853	821	792	651
<b>0.95</b>	1064	1016	969	932	900	659
<b>1.00</b>	1205	1151	1098	1056	1019	669
<b>1.05</b>	1363	1302	1242	1195	1153	678
<b>1.10</b>	1541	1472	1404	1351	1304	689
<b>1.15</b>	1744	1665	1589	1529	1475	700
<b>1.20</b>	1978	1889	1802	1734	1673	713
<b>1.25</b>	2252	2151	2052	1974	1905	726
<b>1.30</b>	2581	2465	2351	2263	2183	740

\*\*Average Values Listed, actual opening may vary +/-10% of the stated value



REGULATOR OPENING FLOW RATE** (gpm)						Tool Pressure Drop [psi]
ORIFICE SIZE [in]	Mud Weight (ppg)					
	8.3	9.1	10.0	10.8	11.6	
<b>0.90</b>	264	252	241	232	224	113
<b>0.95</b>	298	285	272	261	252	114
<b>1.00</b>	335	320	305	293	283	115
<b>1.05</b>	375	358	341	328	317	116
<b>1.10</b>	418	399	381	367	354	118
<b>1.15</b>	466	445	425	409	394	119
<b>1.20</b>	519	496	473	455	439	121
<b>1.25</b>	578	552	526	506	489	123
<b>1.30</b>	643	614	586	564	544	124

\*\*Average Values Listed, actual opening may vary +/-10% of the stated value

End Connections*	4-1/2 XH	
Tool OD	6-1/2 in	165 mm
Pin ID	2.89 in	73 mm
Length	45 in	1.1 m
Weight	318 lb	144.2 kg
Absolute Overpull	1,209,000 lbf	537,800 daN
Max Torque	38,900 ft-lbf	52,700 N-m

\*Alternate End Connections Available upon Request.

Minimum Motor Flow	225 gpm	850 lpm
Maximum Motor Flow	650 gpm	2460 lpm
Maximum Bypass Rate	200 gpm	760 lpm

REGULATOR OPENING FLOW RATE** (lpm)						Tool Pressure Drop [kPa]
ORIFICE SIZE [in]	Mud Weight (kg/m <sup>3</sup> )					
	1000	1100	1200	1300	1400	
<b>0.90</b>	1001	956	912	877	846	777
<b>0.95</b>	1128	1077	1028	989	954	785
<b>1.00</b>	1267	1210	1154	1111	1072	793
<b>1.05</b>	1418	1354	1292	1243	1200	802
<b>1.10</b>	1583	1512	1443	1388	1339	812
<b>1.15</b>	1765	1686	1608	1547	1493	822
<b>1.20</b>	1965	1877	1790	1723	1662	833
<b>1.25</b>	2187	2088	1992	1917	1850	845
<b>1.30</b>	2434	2325	2218	2134	2059	858

\*\*Average Values Listed, actual opening may vary +/-10% of the stated value



\*Alternate End Connections Available upon Request.

\*\*Average Values Listed, actual opening may vary +/-10% of the stated value

**6-1/2 in (165 mm) REGULATOR SERIES 1**

**DYNOMAX REGULATOR™**

ORIFICE SIZE [in]	REGULATOR OPENING FLOW RATE** (gpm)					Tool Pressure Drop [psi]
	Mud Weight (ppg)					
	8.3	9.1	10.0	10.8	11.6	
<b>0.90</b>	264	252	241	232	224	113
<b>0.95</b>	298	285	272	261	252	114
<b>1.00</b>	335	320	305	293	283	115
<b>1.05</b>	375	358	341	328	317	116
<b>1.10</b>	418	399	381	367	354	118
<b>1.15</b>	466	445	425	409	394	119
<b>1.20</b>	519	496	473	455	439	121
<b>1.25</b>	578	552	526	506	489	123
<b>1.30</b>	643	614	586	564	544	124

\*\*Average Values Listed, actual opening may vary +/-10% of the stated value

End Connections*	4-1/2 IF	
Tool OD	6-3/4 in	171 mm
Pin ID	2.89 in	73 mm
Length	45 in	1.1 m
Weight	351 lb	159.2 kg
Absolute Overpull	1,476,000 lbf	656,600 daN
Max Torque	46,600 ft-lbf	63,200 N-m

\*Alternate End Connections Available upon Request.

Minimum Motor Flow	225 gpm	850 lpm
Maximum Motor Flow	650 gpm	2460 lpm
Maximum Bypass Rate	200 gpm	760 lpm

ORIFICE SIZE [in]	REGULATOR OPENING FLOW RATE** (lpm)					Tool Pressure Drop [kPa]
	Mud Weight (kg/m <sup>3</sup> )					
	1000	1100	1200	1300	1400	
<b>0.90</b>	1001	956	912	877	846	777
<b>0.95</b>	1128	1077	1028	989	954	785
<b>1.00</b>	1267	1210	1154	1111	1072	793
<b>1.05</b>	1418	1354	1292	1243	1200	802
<b>1.10</b>	1583	1512	1443	1388	1339	812
<b>1.15</b>	1765	1686	1608	1547	1493	822
<b>1.20</b>	1965	1877	1790	1723	1662	833
<b>1.25</b>	2187	2088	1992	1917	1850	845
<b>1.30</b>	2434	2325	2218	2134	2059	858

\*\*Average Values Listed, actual opening may vary +/-10% of the stated value



REGULATOR OPENING FLOW RATE** (gpm)						Tool Pressure Drop [psi]
ORIFICE SIZE [in]	Mud Weight (ppg)					
	8.3	9.1	10.0	10.8	11.6	
<b>1.55</b>	713	681	649	625	603	88
<b>1.60</b>	769	735	701	674	651	89
<b>1.65</b>	829	792	756	727	702	90
<b>1.70</b>	894	853	814	783	756	91
<b>1.75</b>	963	919	877	844	814	92
<b>1.80</b>	1037	990	944	909	877	93
<b>1.85</b>	1117	1066	1017	979	944	95
<b>1.90</b>	1203	1149	1096	1055	1018	96
<b>1.95</b>	1297	1238	1181	1137	1097	97

\*\*Average Values Listed, actual opening may vary +/-10% of the stated value

End Connections*	6-5/8 REG	
Tool OD	8 in	203 mm
Pin ID	3.12 in	79 mm
Length	59.3 in	1.5 m
Weight	598 lb	271.2 kg
Absolute Overpull	1,299,000 lbf	577,800 daN
Max Torque	61,050 ft-lbf	82,800 N-m

\*Alternate End Connections Available upon Request.

Minimum Motor Flow	600 gpm	2270 lpm
Maximum Motor Flow	1300 gpm	4920 lpm
Maximum Bypass Rate	450 gpm	1700 lpm

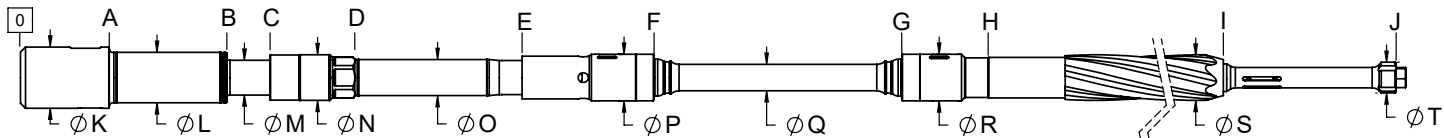
REGULATOR OPENING FLOW RATE** (lpm)						Tool Pressure Drop [kPa]
ORIFICE SIZE [in]	Mud Weight (kg/m <sup>3</sup> )					
	1000	1100	1200	1300	1400	
<b>1.55</b>	2698	2576	2458	2365	2282	609
<b>1.60</b>	2911	2780	2652	2552	2463	616
<b>1.65</b>	3139	2998	2860	2752	2655	622
<b>1.70</b>	3383	3231	3082	2966	2862	629
<b>1.75</b>	3644	3480	3320	3194	3082	636
<b>1.80</b>	3924	3748	3575	3440	3320	644
<b>1.85</b>	4227	4037	3851	3705	3575	652
<b>1.90</b>	4553	4349	4148	3992	3852	660
<b>1.95</b>	4909	4688	4472	4303	4152	669

\*\*Average Values Listed, actual opening may vary +/-10% of the stated value



8 in (203 mm) REGULATOR SERIES 1

DYNOMAX REGULATOR™

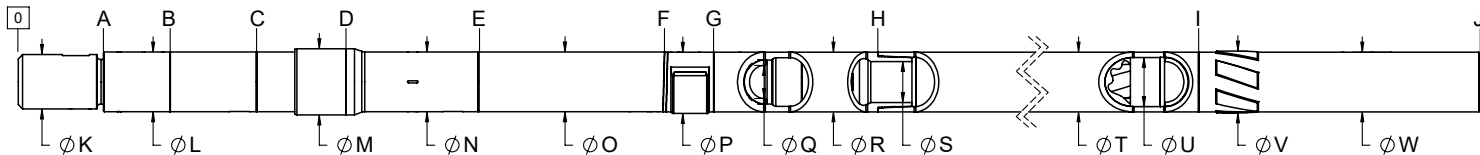


	BIT BOX	THRUST SHOULDER	WASHPIPE START	HEX END	BRG ASSEMBLY ADAPTOR	BAA CAP	ROTOR ADAPTOR CAP	ROTOR START	BIT BOX Ø	MANDREL Ø	THRUST Ø	WASHPIPE LARGE Ø	WASHPIPE SMALL Ø	BRG ASSEMBLY ADAPTOR Ø	DRIVESHAFT Ø	ROTOR ADAPTOR Ø	ROTOR CATCH STEM Ø
	A	B	C	D	E	F	G	H	K	L	M	N	O	P	Q	R	T
<b>BEARING PACK</b>	<b>IMPERIAL - USC (Lengths = in, Diameters = in)</b>																
<b>2-3/8" S1</b>	5.5	11.2	13.2	17.9	23.9	30.4	48.4	51.9	2.25	1.38	1.19	1.38	1.25	1.80	0.87	1.70	--
<b>2-7/8" S1</b>	4.5	10.5	12.7	17.4	26.6	34.4	52.6	57.3	2.88	1.88	1.63	1.88	1.63	2.13	1.00	1.67	1.70
<b>3-1/8" S1</b>	4.5	9.9	12.1	17.1	28.1	35.6	54.0	59.6	3.09	2.25	1.63	2.13	1.75	2.35	1.06	2.35	1.70
<b>3-3/8" S1</b>	4.5	10.2	12.3	17.3	25.8	33.7	52.8	57.5	3.34	2.25	2.00	2.50	2.00	2.45	1.09	2.45	1.80
<b>3-1/2" S1</b>	4.5	10.2	12.3	17.3	25.8	33.7	52.8	57.5	3.34	2.25	2.00	2.50	2.00	2.45	1.09	2.45	1.80
<b>3-3/4" S1</b>	5.5	13.8	15.9	22.2	34.9	43.4	61.8	67.4	3.63	2.75	2.00	2.63	2.13	2.70	1.40	2.70	1.80
<b>5" S2</b>	8.0	16.2	20.4	25.7	37.5	47.9	70.9	76.9	4.63	3.63	3.13	4.00	3.00	3.58	1.93	3.60	2.13
<b>5-1/2" S1</b>	7.9	16.7	20.2	24.5	36.5	49.0	80.8	86.9	4.70	4.13	3.60	4.38	3.50	3.90	2.16	3.90	2.13

\*For Power Section Dimensions (I, J, and S) See Next Page

## MOTOR FISHING DIMENSIONS

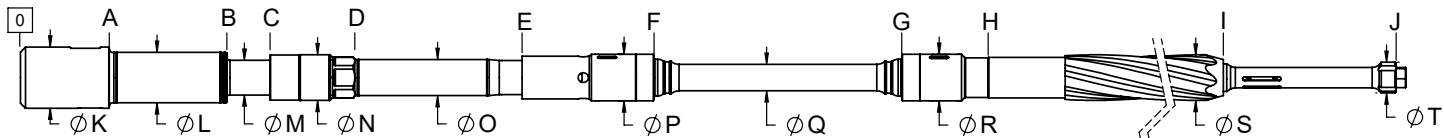
POWER SECTION		I	J	S
IMPERIAL - USC (Len, Dia = in)				
5-1/2"	6/7 Lobe 10.9 Stage HR	355.9	374.8	3.42
5-1/2"	7/8 Lobe 8.3 Stage HR	339.9	358.8	3.42
4-3/4"	7/8 Lobe 3.8 Stage HR	254.9	270.3	2.95
4-3/4"	7/8 Lobe 4.5 Stage HR	296.9	312.3	3.09
5"	4/5 Lobe 6.0 Stage HR	254.9	270.3	2.91
5"	5/6 Lobe 4.0 Stage HR	212.4	227.8	3
5"	5/6 Lobe 6.7 Stage HR	317.9	333.3	3.12
5"	5/6 Lobe 8.3 Stage HR	306.4	321.8	2.92
5"	5/6 Lobe 8.4 Stage HR	349.9	365.3	3.3
5"	6/7 Lobe 6.0 Stage HR	256.4	271.8	3.02
5"	6/7 Lobe 7.0 Stage HR	281.9	297.3	3.02
5"	6/7 Lobe 8.0 Stage HR	317.9	333.3	3.02
5"	6/7 Lobe 8.8 Stage HR	341.9	357.3	3.3
5"	7/8 Lobe 2.6 Stage HR NP	267.1	282.5	3.1
5"	7/8 Lobe 2.6 Stage HR	296.9	312.3	3.1
5"	7/8 Lobe 3.7 Stage HR	291.7	307.1	3.12
5"	7/8 Lobe 3.8 Stage HR	254.9	270.3	2.95
5"	7/8 Lobe 4.5 Stage HR	296.9	312.3	3.09
5"	7/8 Lobe 5.0 Stage HR	262.9	278.3	3.04
5"	7/8 Lobe 5.7 Stage HR	316.9	332.3	3.14
5"	7/8 Lobe 6.4 Stage HR	302.9	318.3	3.03
5"	8/9 Lobe 6.0 Stage HR	317.9	333.3	3.2
3-3/4"	4/5 Lobe 3.5 Stage HR	196.4	205.9	2.16
3-3/4"	6/7 Lobe 1.7 Stage	140.4	149.9	2.5
3-3/4"	6/7 Lobe 3.0 Stage	221.4	230.9	2.5
3-3/4"	7/8 Lobe 2.3 Stage HR	196.4	205.9	2.25
3-1/2"	4/5 Lobe 3.2 Stage HR	154.5	164	2.25
3-1/2"	5/6 Lobe 3.0 Stage HR	133.8	143.3	2.16
3-3/8"	5/6 Lobe 3.2 Stage HR	147.5	157	2.23
3-1/8"	5/6 Lobe 3.2 Stage PVXT	136	145.5	2.1
3-1/8"	5/6 Lobe 3.5 Stage HR	145.6	155.1	2.17
3-1/8"	7/8 Lobe 3.0 Stage HR	160.6	170.1	1.97
3-1/8"	7/8 Lobe 4.0 Stage	122.5	132	2.1
2-7/8"	2/3 Lobe 7.0 Stage	95.8	95.8	1.7
2-7/8"	5/6 Lobe 3.5 Stage HR	148.3	148.3	1.68
2-7/8"	5/6 Lobe 4.7 Stage HR	149.3	149.3	1.91
2-3/8"	7/8 Lobe 4.0 Stage HR	131.1	--	1.5
2-3/8"	5/6 Lobe 4.0 Stage HR	119.9	--	1.46
POWER SECTION		IMPERIAL - USC (Len, Dia = in)		
I	ROTOR	J	CATCH STEM $\varnothing$ S	



	END CAP	BEARING HOUSING	PISTON HOUSING	STABILIZER SHOULDER	KICK/FIXED HOUSING	BIT TO BEND (ADJUSTABLE)	ADAPTOR HSG (ADJUSTABLE)	BIT TO BEND (FIXED)	ADAPTOR HSG (FIXED)	STATOR START	BIT BOX Ø	END CAP/BRG HSG. Ø	THREAD PROTECTOR Ø	PISTON HOUSING Ø	KICK/FIXED HOUSING Ø	PAD Ø (ADJUSTABLE)	PAD Ø (FIXED)	ADJ. MANDREL PIN Ø	ADAPTOR HOUSING Ø
	A	B	C	D	E	F1	G1	F2	G2	H	K	L	M	N	O	P1	P2	Q	R
<b>BEARING PACK</b>	<b>IMPERIAL - USC (Lengths, Diameters = in)</b>																		
<b>2-1/8" S1</b>																	--		2.13
<b>2-3/8" S1</b>	6.1	8.0	14.0	--	24.5	35.0	40.0	35.0	40.0	51.9	2.30	2.38	--	2.38	2.38	2.64	2.64	1.42	2.38
<b>2-7/8" S1</b>	5.1	7.1	14.0	--	27.6	40.0	45.0	--	42.7	57.3	2.88	2.88	--	2.88	2.88	3.10	--	1.71	2.88
<b>3-1/8" S1</b>	5.0	8.2	13.5	--	28.7	42.6	47.4	--	--	59.7	3.09	3.12	--	3.12	3.12	3.38	--	1.82	3.12
<b>3-3/8" S1</b>	5.1	7.8	15.2	--	26.3	41.0	45.9	--	--	57.6	3.34	3.38	--	3.38	3.38	3.63	--	1.85	3.38
<b>3-1/2" S1</b>	5.1	7.8	15.2	--	26.3	41.0	45.9	--	--	57.6	3.34	3.50	--	3.50	3.50	3.75	--	1.85	3.50
<b>3-3/4" S1</b>	5.8	12.0	18.7	26.2	36.0	50.3	55.0	41.6	55.0	66.8	3.60	3.75	4.25	3.75	3.75	4.00	4.00	2.10	3.75
<b>5" S2</b>	8.5	--	11.5	26.2	38.6	55.8	60.8	45.6	52.3	77.0	4.63	5.15	5.75	5.15	5.06	5.50	5.38	2.81	5.06
<b>5-1/2" S1</b>	8.5	--	12.3	25.7	37.8	57.0	70.0	46.6	56.3	86.9	4.70	5.50	6.00	5.50	5.50	5.88	5.88	3.31	5.50

\*For Power Section Dimensions See Next Page

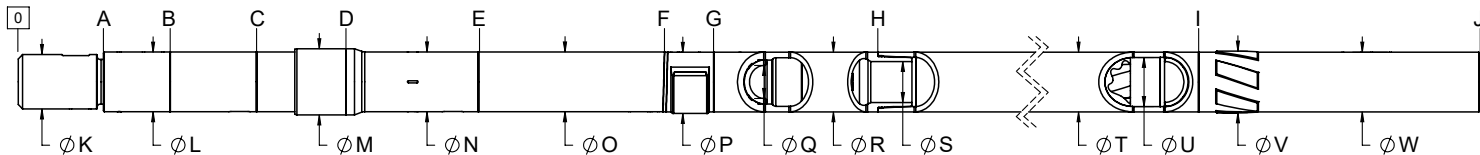
POWER SECTION DIMENSIONS	IMPERIAL - USC (Len, Dia = in)							
	I	J	S	T	U	V	W	
5-1/2"	5-1/2" 6/7 Lobe 10.9 Stage HR	361.9	392.7	4.02	5.5	4	5.75	5.5
	5-1/2" 7/8 Lobe 8.3 Stage HR	361.9	392.7	4.02	5.5	4.25	5.75	5.5
	4-3/4" 7/8 Lobe 3.8 Stage HR	264	295.1	3.35	4.75	3.75	5	4.75
	4-3/4" 7/8 Lobe 4.5 Stage HR	306.3	337.4	3.35	4.75	3.75	5	4.75
	5" 4/5 Lobe 6.0 Stage HR	264	295.1	3.35	5	3.75	5.25	5
	5" 5/6 Lobe 4.0 Stage HR	217	248.1	3.35	5	3.75	5.25	5
	5" 5/6 Lobe 6.7 Stage HR	327	358.1	3.35	5	4	5.25	5
	5" 5/6 Lobe 8.3 Stage HR	319.5	350.6	3.35	5	3.75	5.25	5
	5" 5/6 Lobe 8.4 Stage HR	357	388.1	3.35	5	4.2	5.25	5
	5" 6/7 Lobe 6.0 Stage HR	262	293.1	3.35	5	4	5.25	5
	5" 6/7 Lobe 7.0 Stage HR	289	320.1	3.35	5	4	5.25	5
	5" 6/7 Lobe 8.0 Stage HR	327	358.1	3.35	5	4	5.25	5
5" S2	5" 6/7 Lobe 8.8 Stage HR	352	383.1	3.35	5	4	5.25	5
	5" 7/8 Lobe 2.6 Stage HR NP	270.7	301.8	3.35	5	3.78	5.25	5
	5" 7/8 Lobe 2.6 Stage HR	306.3	337.4	3.35	5	3.75	5.25	5
	5" 7/8 Lobe 3.7 Stage HR	312	343.1	3.35	5	3.88	5.25	5
	5" 7/8 Lobe 3.8 Stage HR	264	295.1	3.35	5	3.75	5.25	5
	5" 7/8 Lobe 4.5 Stage HR	306.3	337.4	3.35	5	3.75	5.25	5
	5" 7/8 Lobe 5.0 Stage HR	275	306.1	3.35	5	3.88	5.25	5
	5" 7/8 Lobe 5.7 Stage HR	327	358.1	3.35	5	4	5.25	5
	5" 7/8 Lobe 6.4 Stage HR	312	343.1	3.35	5	3.88	5.25	5
	5" 8/9 Lobe 6.0 Stage HR	327	358.1	3.35	5	4	5.25	5
	3-3/4" 4/5 Lobe 3.5 Stage HR	201.8	223	2.56	3.75	3	4	3.75
	3-3/4" 6/7 Lobe 1.7 Stage	145.8	167	2.56	3.75	3	4	3.75
3-3/4" S1	3-3/4" 6/7 Lobe 3.0 Stage	226.8	248	2.56	3.75	3	4	3.75
	3-3/4" 7/8 Lobe 2.3 Stage HR	207.8	229	2.56	3.75	3	4	3.75
	3-1/2" 4/5 Lobe 3.2 Stage HR	157.6	171.7	2.53	3.5	2.88	3.75	3.5
3-1/2" S1	3-1/2" 5/6 Lobe 3.0 Stage HR	137.6	151.7	2.53	3.5	2.75	3.75	3.5
3-3/8" S1	3-3/8" 5/6 Lobe 3.2 Stage HR	151.6	165.7	2.53	3.38	2.75	3.63	3.38
3-1/8" S1								
	3-1/8" 5/6 Lobe 3.2 Stage XT	142.1	164.6	2.25	3.13	2.63	3.38	3.13
	3-1/8" 5/6 Lobe 3.5 Stage HR	147.7	170.2	2.25	3.13	2.63	3.38	3.13
	3-1/8" 7/8 Lobe 3.0 Stage HR	165.7	188.2	2.25	3.13	2.63	3.38	3.13
	3-1/8" 7/8 Lobe 4.0 Stage	128.6	151.1	2.25	3.13	2.63	3.38	3.13
	2-7/8" 2/3 Lobe 7.0 Stage	101.8	101.8	2.04	2.78	2.38	3.03	2.78
2-7/8" S1	2-7/8" 5/6 Lobe 3.5 Stage HR	155.9	155.9	2.04	2.78	2.38	3.03	2.78
	2-7/8" 5/6 Lobe 4.7 Stage HR	162.9	162.9	2.04	2.78	2.38	3.03	2.78
	2-3/8" 7/8 Lobe 4.0 Stage HR	133.9	143.4	1.64	2.38	1.88	2.63	2.38
2-3/8	2-3/8" 5/6 Lobe 4.0 Stage HR	123.5	133	1.64	2.38	1.87	2.63	2.38
POWER SECTION DIMENSIONS	STATOR END	I	J	S	T	U	V	W
	OVERALL LENGTH							
	ADAPTOR PIN Ø							
	STATOR TUBE OUTER Ø							
	STATOR TUBE INNER Ø							
	ROTOR CATCH SUB BLADE Ø							
	ROTOR CATCH SUB Ø							



	BIT BOX	THRUST SHOULDER	WASHPIPE START	HEX END	BRG ASSEMBLY ADAPTOR	BAA CAP	ROTOR ADAPTOR CAP	ROTOR START	BIT BOX Ø	MANDREL Ø	THRUST Ø	WASHPIPE LARGE Ø	WASHPIPE SMALL Ø	BRG ASSEMBLY ADAPTOR Ø	DRIVESHAFT Ø	ROTOR ADAPTOR Ø	ROTOR CATCH STEM Ø
	A	B	C	D	E	F	G	H	K	L	M	N	O	P	Q	R	T
<b>BEARING PACK</b>	<b>IMPERIAL - USC (Lengths = in, Diameters = in)</b>																
<b>6-1/2" S1</b>	9.3	21.3	25.4	33.5	49.6	63.4	89.1	98.2	6.38	4.75	3.38	4.38	3.63	4.86	2.76	4.86	3.19
<b>6-1/2" S2</b>	10.0	24.9	28.6	34.3	43.0	55.8	81.5	90.5	6.50	4.38	3.78	4.38	3.75	4.86	2.80	4.86	3.19
<b>6-1/2" S3</b>	10.0	20.9	26.0	32.2	42.1	54.9	80.7	89.7	6.38	4.50	3.78	4.50	3.75	4.90	2.80	4.90	3.19
<b>6-3/4" S1</b>	9.3	21.3	25.4	33.5	49.6	63.4	89.1	98.2	6.38	4.75	3.38	4.38	3.63	4.86	2.76	4.86	3.19
<b>6-3/4" S3</b>	10.0	20.9	26.0	32.2	42.1	54.9	80.7	89.7	6.38	4.50	3.78	4.50	3.75	4.90	2.80	4.90	3.19
<b>7" S1</b>	9.3	21.5	26.0	34.6	52.3	66.0	91.8	100.8	6.38	5.25	3.63	4.75	3.75	4.86	2.76	4.86	3.19
<b>7" S2</b>	9.3	18.3	22.8	31.0	42.6	56.4	82.2	91.2	6.38	5.25	3.63	4.75	3.75	4.86	2.76	4.86	3.19

\*For Power Section Dimensions See Next Page

POWER SECTION DIMENSIONS	IMPERIAL - USC (Len, Dia = in)		
	I	J	S
6-3/4" 7/8 Lobe 2.9 Stage HR	293.7	316.1	4.3
6-3/4" 7/8 Lobe 5.0 Stage HR	343.2	365.6	4.22
6-3/4" 7/8 Lobe 5.7 Stage HR	343.2	365.6	4.65
7" 5/6 Lobe 5.3 Stage HR	319.2	341.6	5.08
7" 5/6 Lobe 8.1 Stage HR	344.2	366.6	5.08
7" 6/7 Lobe 6.5 Stage HR	358.2	380.6	4.75
7" 6/7 Lobe 8.4 Stage HR	358.2	380.6	4.75
7" 6/7 Lobe 11.4 Stage HR	358.2	380.6	4.69
7" 7/8 Lobe 8.5 Stage HR	385.2	407.6	5.02
6-3/4" 7/8 Lobe 2.9 Stage HR	303.3	321.3	4.3
6-3/4" 7/8 Lobe 5.0 Stage HR	352.8	370.8	4.22
6-3/4" 7/8 Lobe 5.7 Stage HR	352.8	370.8	4.65
7" 5/6 Lobe 5.3 Stage HR	328.8	346.8	5.08
7" 5/6 Lobe 8.1 Stage HR	353.8	371.8	5.08
7" 6/7 Lobe 6.5 Stage HR	367.8	385.8	4.75
7" 6/7 Lobe 8.4 Stage HR	367.8	385.8	4.75
7" 6/7 Lobe 11.4 Stage HR	367.8	385.8	4.69
7" 7/8 Lobe 8.5 Stage HR	394.8	412.8	5.02
6-3/4" 4/5 Lobe 7.0 Stage HR	292.2	309.7	4.22
6-3/4" 6/7 Lobe 5.0 Stage HR	283.7	301.2	4.32
6-3/4" 7/8 Lobe 2.0 Stage HR	235.2	252.7	4.32
6-3/4" 7/8 Lobe 2.9 Stage HR	292.2	309.7	4.3
6-3/4" 7/8 Lobe 3.0 Stage HR	208.2	225.7	4.52
6-3/4" 7/8 Lobe 3.0 Stage HR SLOW	287.2	304.7	4.57
6-3/4" 7/8 Lobe 3.3 Stage HR	328.2	345.7	4.5
6-3/4" 7/8 Lobe 5.0 Stage HR	341.7	359.2	4.22
6-3/4" 7/8 Lobe 5.7 Stage HR	341.7	359.2	4.65
6-3/4" 9/10 Lobe 8.0 Stage HR	341.7	359.2	4.83
6-3/4" 4/5 Lobe 7.0 Stage HR	300.7	323.2	4.22
6-3/4" 6/7 Lobe 5.0 Stage HR	292.2	314.7	4.32
6-3/4" 7/8 Lobe 2.0 Stage HR	243.7	266.2	4.32
6-3/4" 7/8 Lobe 2.9 Stage HR	300.7	323.2	4.3
6-3/4" 7/8 Lobe 3.0 Stage HR	216.7	239.2	4.52
6-3/4" 7/8 Lobe 3.0 Stage HR SLOW	295.7	318.2	4.57
6-3/4" 7/8 Lobe 3.3 Stage HR	336.7	359.2	4.5
6-3/4" 7/8 Lobe 5.0 Stage HR	350.2	372.7	4.22
6-3/4" 7/8 Lobe 5.7 Stage HR	350.2	372.7	4.65
6-3/4" 9/10 Lobe 8.0 Stage HR	350.2	372.7	4.83
6-1/2" 7/8 Lobe 3.5 Stage HR	312	329.5	4.07
6-1/2" 7/8 Lobe 4.8 Stage HR	277.5	295	3.98
6-1/2" 7/8 Lobe 5.0 Stage HR	277.5	295.2	4.52
6-1/2" 7/8 Lobe 3.5 Stage HR	312.8	335.3	4.07
6-1/2" 7/8 Lobe 4.8 Stage HR	278.3	300.8	3.98
6-1/2" 7/8 Lobe 5.0 Stage HR	278.5	301	4.52
6-1/2" 7/8 Lobe 3.5 Stage HR	320.5	343	4.07
6-1/2" 7/8 Lobe 4.8 Stage HR	285.9	308.4	3.98
6-1/2" 7/8 Lobe 5.0 Stage HR	286.2	308.7	4.52
6-1/2" 51			
6-1/2" 52			
6-1/2" 53			
6-3/4" 51			
6-3/4" 53			
POWER SECTION DIMENSIONS	I	J	S
IMPERIAL - USC (Len, Dia = in)			
ROTOR	I	J	S
CATCH STEM			
ROTOR MAJOR Ø			S



	END CAP	BEARING HOUSING	PISTON HOUSING	STABILIZER SHOULDER	KICK/FIXED HOUSING	BIT TO BEND (ADJUSTABLE)	ADAPTOR HSG (ADJUSTABLE)	BIT TO BEND (FIXED)	ADAPTOR HSG (FIXED)	STATOR START	BIT BOX Ø	END CAP/BRG HSG. Ø	THREAD PROTECTOR Ø	PISTON HOUSING Ø	KICK/FIXED HOUSING Ø	PAD Ø (ADJUSTABLE)	PAD Ø (FIXED)	ADJ. MANDREL PIN Ø	ADAPTOR HOUSING Ø
	A	B	C	D	E	F1	G1	F2	G2	H	K	L	M	N	O	P1	P2	Q	R
<b>BEARING PACK</b>	<b>IMPERIAL - USC (Lengths, Diameters = in)</b>																		
<b>6-1/2" S1</b>	9.9	17.5	27.3	37.9	51.3	73.0	78.8	61.1	73.5	98.1	6.38	6.56	7.13	6.56	6.81	7.13	7.13	3.88	6.81
<b>6-1/2" S2</b>	11.3	20.3	29.6	34.7	44.8	62.3	71.2	53.7	65.6	90.5	6.50	6.56	7.13	6.56	6.50	6.88	6.88	3.88	6.50
<b>6-1/2" S3</b>	10.8	16.6	27.3	36.7	44.0	64.5	70.4			89.7	6.38	6.56	7.10	6.81	6.81	7.13	7.13	3.88	6.81
<b>6-3/4" S1</b>	9.9	17.5	27.3	37.9	51.3	73.0	78.8	61.1	73.5	98.1	6.38	6.56	7.13	6.81	6.81	7.13	7.13	3.88	6.81
<b>6-3/4" S3</b>	10.8	16.6	27.3	36.7	44.0	64.5	70.4			89.7	6.38	6.56	7.10	6.81	6.81	7.13	7.13	3.88	6.81
<b>7" S1</b>	10.0	17.8	27.9	38.4	53.9	75.8	81.5	63.7	80.8	100.7	6.38	7.00	7.75	7.00	7.00	7.38	7.30	3.88	7.00
<b>7" S2</b>	10.0	14.6	24.2	34.7	44.3	66.0	71.9	54.1	17.2	91.1	6.38	7.00	7.75	7.00	7.00	7.38	7.30	3.88	7.00

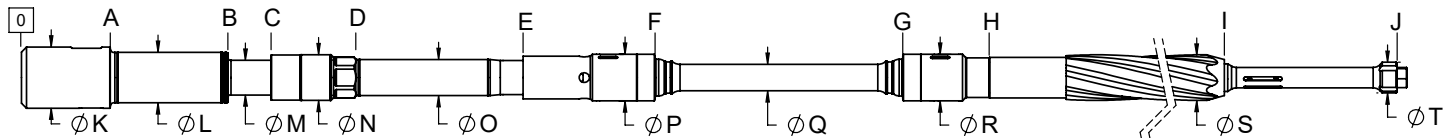
\*For Power Section Dimensions See Next Page

POWER SECTION DIMENSIONS	IMPERIAL - USC (Len, Dia = in)						
	I	J	S	T	U	V	W
6-3/4" 7/8 Lobe 2.9 Stage HR	301.1	334.1	4.8	6.75	5.5	7	6.75
6-3/4" 7/8 Lobe 5.0 Stage HR	343.1	376.1	4.8	6.75	5.5	7	6.75
6-3/4" 7/8 Lobe 5.7 Stage HR	343.1	376.1	4.8	6.75	5.5	7	6.75
7" 5/6 Lobe 5.3 Stage HR	326.9	359.9	4.8	7	5.75	7.25	7
7" 5/6 Lobe 8.1 Stage HR	351.1	384.1	4.8	7	5.75	7.25	7
7" 6/7 Lobe 6.5 Stage HR	366.1	399.1	4.8	7	5.75	7.25	7
7" 6/7 Lobe 8.4 Stage HR	366.1	399.1	4.8	7	5.75	7.25	7
7" 6/7 Lobe 11.4 Stage HR	366.1	399.1	4.8	7	5.75	7.25	7
7" 7/8 Lobe 8.5 Stage HR	391.1	424.1	4.8	7	5.75	7.25	7
6-3/4" 7/8 Lobe 2.9 Stage HR	310.7	343.7	4.8	6.75	5.5	7	6.75
6-3/4" 7/8 Lobe 5.0 Stage HR	352.7	385.7	4.8	6.75	5.5	7	6.75
6-3/4" 7/8 Lobe 5.7 Stage HR	352.7	385.7	4.8	6.75	5.5	7	6.75
7" 5/6 Lobe 5.3 Stage HR	336.5	369.5	4.8	7	5.75	7.25	7
7" 5/6 Lobe 8.1 Stage HR	360.7	393.7	4.8	7	5.75	7.25	7
7" 6/7 Lobe 6.5 Stage HR	375.7	408.7	4.8	7	5.75	7.25	7
7" 6/7 Lobe 8.4 Stage HR	375.7	408.7	4.8	7	5.75	7.25	7
7" 6/7 Lobe 11.4 Stage HR	375.7	408.7	4.8	7	5.75	7.25	7
7" 7/8 Lobe 8.5 Stage HR	400.7	433.7	4.8	7	5.75	7.25	7
6-3/4" 4/5 Lobe 7.0 Stage HR	299.7	332.7	4.8	6.75	5.5	7	6.75
6-3/4" 6/7 Lobe 5.0 Stage HR	289.7	322.7	4.8	6.75	5.5	7	6.75
6-3/4" 7/8 Lobe 2.0 Stage HR	243.2	276.2	4.8	6.75	5.5	7	6.75
6-3/4" 7/8 Lobe 2.9 Stage HR	299.7	332.7	4.8	6.75	5.5	7	6.75
6-3/4" 7/8 Lobe 3.0 Stage HR	214.7	247.7	4.8	6.75	5.5	7	6.75
6-3/4" 7/8 Lobe 3.0 Stage HR SLOW	293.7	326.7	4.8	6.75	5.5	7	6.75
6-3/4" 7/8 Lobe 3.3 Stage HR	334.7	367.7	4.8	6.75	5.5	7	6.75
6-3/4" 7/8 Lobe 5.0 Stage HR	341.7	374.7	4.8	6.75	5.5	7	6.75
6-3/4" 7/8 Lobe 5.7 Stage HR	341.7	374.7	4.8	6.75	5.5	7	6.75
6-3/4" 9/10 Lobe 8.0 Stage HR	349.7	382.7	4.8	6.75	5.5	7	6.75
6-3/4" 4/5 Lobe 7.0 Stage HR	308.1	341.1	4.8	6.75	5.5	7	6.75
6-3/4" 6/7 Lobe 5.7 Stage HR	298.1	331.1	4.8	6.75	5.5	7	6.75
6-3/4" 7/8 Lobe 2.0 Stage HR	251.6	284.6	4.8	6.75	5.5	7	6.75
6-3/4" 7/8 Lobe 2.9 Stage HR	308.1	341.1	4.8	6.75	5.5	7	6.75
6-3/4" 7/8 Lobe 3.0 Stage HR	223.1	256.1	4.8	6.75	5.5	7	6.75
6-3/4" 7/8 Lobe 3.0 Stage HR SLOW	302.1	335.1	4.8	6.75	5.5	7	6.75
6-3/4" 7/8 Lobe 3.3 Stage HR	343.1	376.1	4.8	6.75	5.5	7	6.75
6-3/4" 7/8 Lobe 5.0 Stage HR	350.1	383.1	4.8	6.75	5.5	7	6.75
6-3/4" 7/8 Lobe 5.7 Stage HR	350.1	383.1	4.8	6.75	5.5	7	6.75
6-3/4" 9/10 Lobe 8.0 Stage HR	358.1	391.1	4.8	6.75	5.5	7	6.75
6-1/2" 7/8 Lobe 3.5 Stage HR	321	354	4.8	6.5	5	6.75	6.5
6-1/2" 7/8 Lobe 4.8 Stage HR	293.2	326.2	4.8	6.5	5	6.75	6.5
6-1/2" 7/8 Lobe 5.0 Stage HR	284.2	317.2	4.8	6.5	5.5	6.75	6.5
6-1/2" 7/8 Lobe 3.5 Stage HR	321.8	354.8	4.8	6.5	5	6.75	6.5
6-1/2" 7/8 Lobe 4.8 Stage HR	294	327	4.8	6.5	5	6.75	6.5
6-1/2" 7/8 Lobe 5.0 Stage HR	285	318	4.8	6.5	5.5	6.75	6.5
6-1/2" 7/8 Lobe 3.5 Stage HR	329.4	362.4	4.8	6.5	5	6.75	6.5
6-1/2" 7/8 Lobe 4.8 Stage HR	301.6	334.6	4.8	6.5	5	6.75	6.5
6-1/2" 7/8 Lobe 5.0 Stage HR	292.6	325.6	4.8	6.5	5.5	6.75	6.5

## POWER SECTION DIMENSIONS

## IMPERIAL - USC (Len, Dia = in)

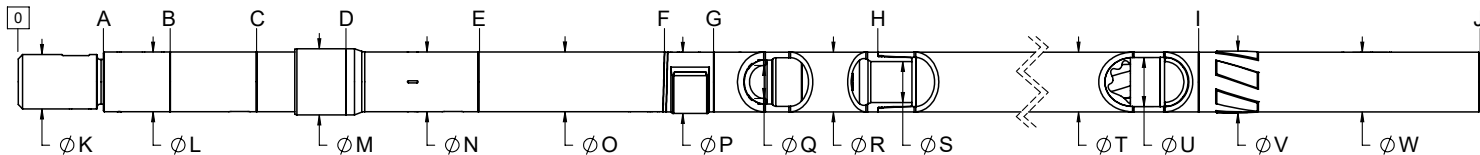
	I	J	S	T	U	V	W
STATOR END							
OVERALL LENGTH							
ADAPTOR PIN Ø							
STATOR TUBE OUTER Ø							
STATOR TUBE INNER Ø							
ROTOR CATCH SUB BLADE Ø							
ROTOR CATCH SUB Ø							



	BIT BOX	THRUST SHOULDER	WASHPIPE START	HEX END	BRG ASSEMBLY ADAPTOR	BAA CAP	ROTOR ADAPTOR CAP	ROTOR START	BIT BOX Ø	MANDREL Ø	THRUST Ø	WASHPIPE LARGE Ø	WASHPIPE SMALL Ø	BRG ASSEMBLY ADAPTOR Ø	DRIVESHAFT Ø	ROTOR ADAPTOR Ø	ROTOR CATCH STEM Ø
	A	B	C	D	E	F	G	H	K	L	M	N	O	P	Q	R	T
<b>BEARING PACK</b>	<b>IMPERIAL - USC (Lengths = in, Diameters = in)</b>																
<b>7" S3</b>	10.0	22.9	28.0	34.2	43.1	58.8	90.6	99.2	6.38	5.25	4.49	5.50	4.25	5.00	3.00	5.00	3.19
<b>8" S1</b>	8.8	24.1	29.4	40.3	59.2	75.0	105.2	114.0	7.75	6.25	4.75	5.75	5.00	5.81	3.38	5.81	4.38
<b>8" S2</b>	8.8	20.0	25.4	33.8	46.9	62.9	93.1	102.0	7.75	6.25	4.75	5.75	5.00	5.81	3.38	5.81	4.38
<b>9-5/8" S1</b>	10.0	25.1	30.8	39.7	57.3	75.8	109.3	119.1	9.00	7.75	5.53	7.00	5.75	7.10	3.89	7.10	4.38
<b>11-1/4" S1</b>	10.2	25.6	32.3	44.0	62.6	81.2	114.6	124.6	10.50	9.00	6.68	8.50	7.25	8.31	3.89	7.10	4.38

\*For Power Section Dimensions See Next Page

POWER SECTION DIMENSIONS	IMPERIAL - USC (Len, Dia = in)	I	J	S
		1	J	S
11-1/4" S1	11-1/4" 5/6 Lobe 4.6 Stage HR	354.6	377.6	7.50
	11-1/4" 6/7 Lobe 5.0 Stage HR	342.6	365.6	6.40
	11-1/4" 6/7 Lobe 5.5 Stage HR	374.6	397.6	7.68
	11-1/4" 7/8 Lobe 5.7 Stage HR	364.6	387.6	6.37
	8" 6/7 Lobe 4.0 Stage HR	318.1	338.1	4.96
	8" 7/8 Lobe 3.0 Stage HR	272.7	292.7	5.19
	8" 7/8 Lobe 3.4 Stage HR	412.1	432.1	5.31
	8" 7/8 Lobe 4.0 Stage HR	315.6	335.6	4.75
	8" 7/8 Lobe 5.9 Stage	403.6	423.6	4.75
	9-5/8" 3/4 Lobe 6.0 Stage	338.1	358.1	5.98
	9-5/8" 6/7 Lobe 5.0 Stage HR	321.1	341.1	6.4
	9-5/8" 6/7 Lobe 6.0 Stage HR	359.1	379.1	6.43
8" S2	9-5/8" 7/8 Lobe 5.7 Stage HR	350	370	6.43
	8" 4/5 Lobe 5.3 Stage HR	323	343	4.94
	8" 5/6 Lobe 3.0 Stage HR	207	227	4.87
	8" 6/7 Lobe 4.0 Stage HR	301	321	4.96
	8" 6/7 Lobe 5.0 Stage HR	346	366	4.96
	8" 7/8 Lobe 2.0 Stage	255.5	275.5	4.92
	8" 7/8 Lobe 3.0 Stage HR	255.6	275.6	5.19
	8" 7/8 Lobe 3.4 Stage HR	395	415	5.31
	8" 7/8 Lobe 4.0 Stage HR	298.5	318.5	4.75
	8" 7/8 Lobe 5.9 Stage	386.5	406.5	4.75
	8" 4/5 Lobe 5.3 Stage HR	335	355	4.94
	8" 5/6 Lobe 3.0 Stage HR	219	239	4.87
8" S1	8" 6/7 Lobe 4.0 Stage HR	313	333	4.96
	8" 6/7 Lobe 5.0 Stage HR	358	378	4.96
	8" 7/8 Lobe 2.0 Stage	267.6	287.6	4.92
	8" 7/8 Lobe 3.0 Stage HR	267.6	287.6	5.19
	8" 7/8 Lobe 3.4 Stage HR	407	427	5.31
	8" 7/8 Lobe 4.0 Stage HR	310.5	330.5	4.75
	8" 7/8 Lobe 5.9 Stage	398.5	418.5	4.75
	6-3/4" 7/8 Lobe 2.9 Stage HR	301.7	319.7	4.3
	6-3/4" 7/8 Lobe 5.0 Stage HR	351.2	369.2	4.22
	6-3/4" 7/8 Lobe 5.7 Stage HR	351.2	369.2	4.65
	7" 5/6 Lobe 5.3 Stage HR	327.2	345.2	5.08
	7" 5/6 Lobe 8.1 Stage HR	352.2	370.2	5.08
7" 6/7 Lobe 6.5 Stage HR	366.2	384.2	4.75	
7" 6/7 Lobe 8.4 Stage HR	366.2	384.2	4.75	
7" 6/7 Lobe 11.4 Stage HR	366.2	384.2	4.69	
7" 7/8 Lobe 8.5 Stage HR	393.2	411.2	5.02	
POWER SECTION DIMENSIONS	IMPERIAL - USC (Len, Dia = in)	I	J	S
		1	J	S
		ROTOR	CATCH STEM	ROTOR MAJOR Ø



	END CAP	BEARING HOUSING	PISTON HOUSING	STABILIZER SHOULDER	KICK/FIXED HOUSING	BIT TO BEND (ADJUSTABLE)	ADAPTOR HSG (ADJUSTABLE)	BIT TO BEND (FIXED)	ADAPTOR HSG (FIXED)	STATOR START	BIT BOX Ø	END CAP/BRG HSG. Ø	THREAD PROTECTOR Ø	PISTON HOUSING Ø	KICK/FIXED HOUSING Ø	PAD Ø (ADJUSTABLE)	PAD Ø (FIXED)	ADJ. MANDREL PIN Ø	ADAPTOR HOUSING Ø
	A	B	C	D	E	F1	G1	F2	G2	H	K	L	M	N	O	P1	P2	Q	R
<b>BEARING PACK</b>	<b>IMPERIAL - USC (Lengths, Diameters = in)</b>																		
<b>7" S3</b>	11.2	--	17.8	34.3	44.9	68.0	73.9	56.3	66.5	98.5	6.38	7.00	7.75	7.15	7.15	7.38	7.38	4.22	7.15
<b>8" S1</b>	9.6	20.2	32.9	44.6	62.7	86.7	93.7	72.3	93.7	115.2	7.75	8.00	8.75	8.00	8.00	8.50	8.40	4.81	8.00
<b>8" S2</b>	9.6	16.2	27.4	38.4	50.4	74.4	81.4	60.1	81.5	102.9	7.75	8.00	8.75	8.00	8.00	8.50	8.40	4.81	8.00
<b>9-5/8" S1</b>	10.8	21.3	32.1	44.6	59.5	87.4	95.5	87.3	95.4	119.6	9.00	9.62	10.75	9.62	9.62	10.13	10.13	5.60	9.62
<b>11-1/4" S1</b>	11.1	21.8	36.0	49.4	65.9	93.5	101.8	--	--	124.8	10.50	11.25	12.25	11.25	11.25	11.75	--	7.25	11.25

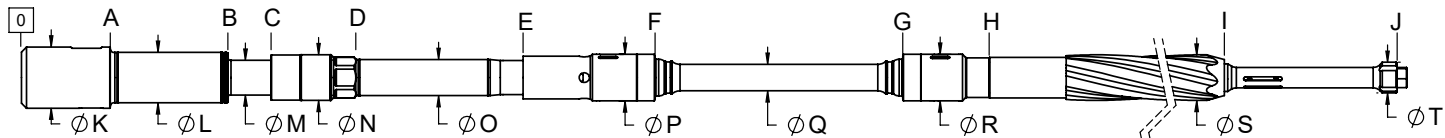
\*For Power Section Dimensions See Next Page

POWER SECTION DIMENSIONS	IMPERIAL - USC (Len, Dia = in)						
	I	J	S	T	U	V	W
11-1/4" 5/6 Lobe 4.6 Stage HR	344.3	386.8	8.25	11.25	9.25	11.5	11.25
11-1/4" 6/7 Lobe 5.0 Stage HR	326.8	369.3	8.25	11.25	7.88	11.5	11.25
11-1/4" 6/7 Lobe 5.5 Stage HR	364.8	407.3	8.25	11.25	9.25	11.5	11.25
11-1/4" 7/8 Lobe 5.7 Stage HR	355.7	398.2	8.25	11.25	7.88	11.5	11.25
8" 6/7 Lobe 4.0 Stage HR	325.6	364.6	7	8	6.75	8.25	8
8" 7/8 Lobe 3.0 Stage HR	279.6	318.6	7	8	6.75	8.25	8
8" 7/8 Lobe 3.4 Stage HR	419.6	458.6	7	8	6.75	8.25	8
8" 7/8 Lobe 4.0 Stage HR	325.6	364.6	7	8	6.75	8.25	8
8" 7/8 Lobe 5.9 Stage	419.6	458.6	7	8	6.75	8.25	8
9-5/8" 3/4 Lobe 6.0 Stage HR	347.6	386.6	7	9.62	7.88	9.87	9.62
9-5/8" 6/7 Lobe 5.0 Stage HR	327.6	366.6	7	9.62	7.88	9.87	9.62
9-5/8" 6/7 Lobe 6.0 Stage HR	369.6	408.6	7	9.62	7.88	9.87	9.62
9-5/8" 7/8 Lobe 5.7 Stage HR	359.6	398.6	7	9.62	7.88	9.87	9.62
8" 4/5 Lobe 5.3 Stage HR	330.9	368.4	5.65	8	6.75	8.25	8
8" 5/6 Lobe 3.0 Stage HR	214.4	251.9	5.65	8	6.75	8.25	8
8" 6/7 Lobe 4.0 Stage HR	308.9	346.4	5.65	8	6.75	8.25	8
8" 6/7 Lobe 5.0 Stage HR	352.9	390.4	5.65	8	6.75	8.25	8
8" 7/8 Lobe 2.0 Stage	270.9	308.4	5.65	8	6.75	8.25	8
8" 7/8 Lobe 3.0 Stage HR	262.9	300.4	5.65	8	6.75	8.25	8
8" 7/8 Lobe 3.4 Stage HR	402.9	440.4	5.65	8	6.75	8.25	8
8" 7/8 Lobe 4.0 Stage HR	308.9	346.4	5.65	8	6.75	8.25	8
8" 7/8 Lobe 5.9 Stage	402.9	440.4	5.65	8	6.75	8.25	8
8" 4/5 Lobe 5.3 Stage HR	343.2	380.7	5.65	8	6.75	8.25	8
8" 5/6 Lobe 3.0 Stage HR	226.7	264.2	5.65	8	6.75	8.25	8
8" 6/7 Lobe 4.0 Stage HR	321.2	358.7	5.65	8	6.75	8.25	8
8" 6/7 Lobe 5.0 Stage HR	365.2	402.7	5.65	8	6.75	8.25	8
8" 7/8 Lobe 2.0 Stage	283.2	320.7	5.65	8	6.75	8.25	8
8" 7/8 Lobe 3.0 Stage HR	275.2	312.7	5.65	8	6.75	8.25	8
8" 7/8 Lobe 3.4 Stage HR	415.2	452.7	5.65	8	6.75	8.25	8
8" 7/8 Lobe 4.0 Stage HR	321.2	358.7	5.65	8	6.75	8.25	8
8" 7/8 Lobe 5.9 Stage	415.2	452.7	5.65	8	6.75	8.25	8
6-3/4" 7/8 Lobe 2.9 Stage HR	308.5	341.5	5.04	6.75	5.5	7	6.75
6-3/4" 7/8 Lobe 5.0 Stage HR	350.5	383.5	5.04	6.75	5.5	7	6.75
6-3/4" 7/8 Lobe 5.7 Stage HR	350.5	383.5	5.04	6.75	5.5	7	6.75
7" 5/6 Lobe 5.3 Stage HR	334.3	367.3	5.04	7	5.75	7.25	7
7" 5/6 Lobe 8.1 Stage HR	358.5	391.5	5.04	7	5.75	7.25	7
7" 6/7 Lobe 6.5 Stage HR	373.5	406.5	5.04	7	5.75	7.25	7
7" 6/7 Lobe 8.4 Stage HR	373.5	406.5	5.04	7	5.75	7.25	7
7" 6/7 Lobe 11.4 Stage HR	373.5	406.5	5.04	7	5.75	7.25	7
7" 7/8 Lobe 8.5 Stage HR	398.5	431.5	5.04	7	5.75	7.25	7

## POWER SECTION DIMENSIONS

## IMPERIAL - USC (Len, Dia = in)

	I	J	S	T	U	V	W
STATOR END							
OVERALL LENGTH							
ADAPTOR PIN Ø							
STATOR TUBE OUTER Ø							
STATOR TUBE INNER Ø							
ROTOR CATCH SUB BLADE Ø							
ROTOR CATCH SUB Ø							

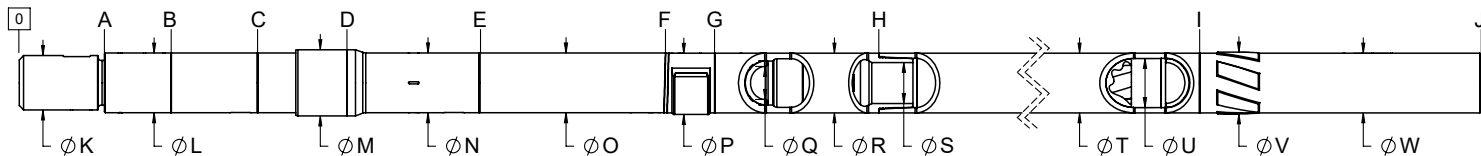


	BIT BOX	THRUST SHOULDER	WASHPIPE START	HEX END	BRG ASSEMBLY ADAPTOR	BAA CAP	ROTOR ADAPTOR CAP	ROTOR START	BIT BOX $\phi$	MANDREL $\phi$	THRUST $\phi$	WASHPIPE LARGE $\phi$	WASHPIPE SMALL $\phi$	BRG ASSEMBLY ADAPTOR $\phi$	DRIVESHAFT $\phi$	ROTOR ADAPTOR $\phi$	ROTOR CATCH STEM $\phi$
	A	B	C	D	E	F	G	H	K	L	M	N	O	P	Q	R	T
<b>BEARING PACK</b>	<b>METRIC - SI (Lengths = m, Diameters = mm)</b>																
<b>2-1/8" S1</b>																	
<b>2-3/8" S1</b>	0.14	0.28	0.34	0.45	0.61	0.77	1.23	1.32	57.2	35.1	30.2	35.1	31.8	45.7	22.0	43.2	--
<b>2-7/8" S1</b>	0.11	0.27	0.32	0.44	0.68	0.87	1.34	1.46	73.2	47.6	41.3	47.6	41.3	54.1	25.4	42.4	0.0
<b>3-1/8" S1</b>	0.11	0.25	0.31	0.43	0.71	0.90	1.37	1.51	78.5	57.2	41.3	54.0	44.5	59.7	26.9	59.7	43.2
<b>3-3/8" S1</b>	0.11	0.26	0.31	0.44	0.65	0.86	1.34	1.46	84.8	57.2	50.8	63.5	50.8	62.2	27.7	62.2	45.7
<b>3-1/2" S1</b>	0.11	0.26	0.31	0.44	0.65	0.86	1.34	1.46	84.8	57.2	50.8	63.5	50.8	62.2	27.7	62.2	45.7
<b>3-3/4" S1</b>	0.14	0.35	0.40	0.56	0.89	1.10	1.57	1.71	92.1	69.9	50.8	66.7	54.0	68.6	35.6	68.6	45.7
<b>5" S2</b>	0.20	0.41	0.52	0.65	0.95	1.22	1.80	1.95	117.6	92.1	79.4	101.6	76.2	90.9	49.0	91.4	54.0
<b>5-1/2" S1</b>	0.20	0.42	0.51	0.62	0.93	1.24	2.05	2.21	119.4	104.8	91.4	111.1	88.9	99.1	54.9	99.1	54.0

\*For Power Section Dimensions (I, J, and S) See Next Page

## MOTOR FISHING DIMENSIONS

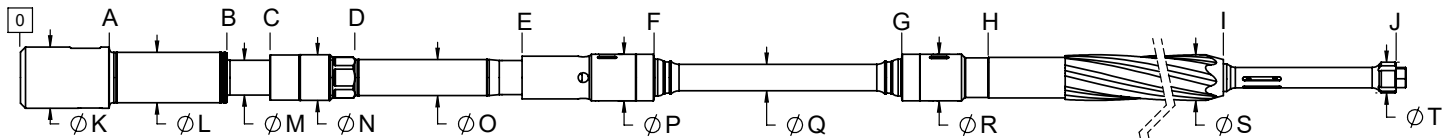
	I	J	S
<b>POWER SECTION</b>	<b>METRIC - SI</b>		
	Len = m, Ø = mm		
5-1/2"	9.04	9.52	87
5-1/2" 6/7 Lobe 10.9 Stage HR			
5-1/2" 7/8 Lobe 8.3 Stage HR	8.63	9.11	87
4-3/4" 7/8 Lobe 3.8 Stage HR	6.47	6.87	75
4-3/4" 7/8 Lobe 4.5 Stage HR	7.54	7.93	78
5" 4/5 Lobe 6.0 Stage HR	6.47	6.87	74
5" 5/6 Lobe 4.0 Stage HR	5.39	5.79	76
5" 5/6 Lobe 6.7 Stage HR	8.07	8.47	79
5" 5/6 Lobe 8.3 Stage HR	7.78	8.17	74
5" 5/6 Lobe 8.4 Stage HR	8.89	9.28	84
5" 6/7 Lobe 6.0 Stage HR	6.51	6.9	77
5" 6/7 Lobe 7.0 Stage HR	7.16	7.55	77
5" 6/7 Lobe 8.0 Stage HR	8.07	8.47	77
5" 6/7 Lobe 8.8 Stage HR	8.68	9.08	84
5" 7/8 Lobe 2.6 Stage HR NP	6.78	7.18	79
5" 7/8 Lobe 2.6 Stage HR	7.54	7.93	79
5" 7/8 Lobe 3.7 Stage HR	7.41	7.8	79
5" 7/8 Lobe 3.8 Stage HR	6.47	6.87	75
5" 7/8 Lobe 4.5 Stage HR	7.54	7.93	78
5" 7/8 Lobe 5.0 Stage HR	6.68	7.07	77
5" 7/8 Lobe 5.7 Stage HR	8.05	8.44	80
5" 7/8 Lobe 6.4 Stage HR	7.69	8.08	77
5" 8/9 Lobe 6.0 Stage HR	8.07	8.47	81
3-3/4" 4/5 Lobe 3.5 Stage HR	4.99	5.23	55
3-3/4" 6/7 Lobe 1.7 Stage	3.57	3.81	64
3-3/4" 6/7 Lobe 3.0 Stage	5.62	5.86	64
3-3/4" 7/8 Lobe 2.3 Stage HR	4.99	5.23	57
3-1/2" 4/5 Lobe 3.2 Stage HR	3.92	4.17	57
3-1/2" 5/6 Lobe 3.0 Stage HR	3.4	3.64	55
3-3/8" 5/6 Lobe 3.2 Stage HR	3.75	3.99	57
3-1/8" 5/6 Lobe 3.2 Stage PVXT	3.45	3.7	53
3-1/8" 5/6 Lobe 3.5 Stage HR	3.7	3.94	55
3-1/8" 7/8 Lobe 3.0 Stage HR	4.08	4.32	50
3-1/8" 7/8 Lobe 4.0 Stage	3.11	3.35	53
2-7/8" 2/3 Lobe 7.0 Stage	2.43	2.43	43
2-7/8" 5/6 Lobe 3.5 Stage HR	3.77	3.77	43
2-7/8" 5/6 Lobe 4.7 Stage HR	3.79	3.79	49
2-3/8" 7/8 Lobe 4.0 Stage HR	3.33	--	38
2-3/8" 5/6 Lobe 4.0 Stage HR	3.05	--	37
2-1/8" 5/6 LOBE 6.0 STAGE HR			
<b>POWER SECTION</b>	<b>METRIC - SI</b>		
	Len = m, Ø = mm		
I	J	S	
<b>ROTOR</b>	<b>J</b>	<b>S</b>	
<b>CATCH STEM</b>			
<b>CATCH STEM Ø</b>			



	END CAP	BEARING HOUSING	PISTON HOUSING	STABILIZER SHOULDER	KICK/FIXED HOUSING	BIT TO BEND (ADJUSTABLE)	ADAPTOR HSG (ADJUSTABLE)	BIT TO BEND (FIXED)	ADAPTOR HSG (FIXED)	STATOR START	BIT BOX $\phi$	END CAP/BRG HSG. $\phi$	THREAD PROTECTOR $\phi$	PISTON HOUSING $\phi$	KICK/FIXED HOUSING $\phi$	PAD $\phi$ (ADJUSTABLE)	PAD $\phi$ (FIXED)	ADJ. MANDREL PIN $\phi$	ADAPTOR HOUSING $\phi$
	A	B	C	D	E	F1	G1	F2	G2	H	K	L	M	N	O	P1	P2	Q	R
<b>BEARING PACK</b>	<b>METRIC - SI (Lengths = m, Diameters = mm)</b>																		
<b>2-1/8" S1</b>																	--		2.13
<b>2-3/8" S1</b>	0.16	0.20	0.36	--	0.62	0.89	1.02	0.89	1.02	1.32	58.4	60.5	--	60.5	60.5	67.1	67.1	36.1	60.5
<b>2-7/8" S1</b>	0.13	0.18	0.35	--	0.70	1.02	1.14	--	1.08	1.46	73.2	73.2	--	73.2	73.2	78.7	--	43.4	73.2
<b>3-1/8" S1</b>	0.13	0.21	0.34	--	0.73	1.08	1.20	--	--	1.52	78.5	79.2	--	79.2	79.2	85.9	--	46.2	79.2
<b>3-3/8" S1</b>	0.13	0.20	0.39	--	0.67	1.04	1.16	--	--	1.46	84.8	85.9	--	85.9	85.9	92.2	--	47.0	85.9
<b>3-1/2" S1</b>	0.13	0.20	0.39	--	0.67	1.04	1.16	--	--	1.46	84.8	88.9	--	88.9	88.9	95.3	--	47.0	88.9
<b>3-3/4" S1</b>	0.15	0.30	0.47	0.67	0.91	1.28	1.40	1.06	1.40	1.70	91.4	95.3	108.0	95.3	95.3	101.6	101.6	53.3	95.3
<b>5" S2</b>	0.22	--	0.29	0.66	0.98	1.42	1.54	1.16	1.33	1.96	117.6	130.8	146.1	130.8	128.5	139.7	136.7	71.4	128.5
<b>5-1/2" S1</b>	0.22	--	0.31	0.65	0.96	1.45	1.78	1.18	1.43	2.21	119.4	139.7	152.4	139.7	139.7	149.4	149.4	84.1	139.7

\*For Power Section Dimensions See Next Page

POWER SECTION DIMENSIONS	METRIC - SI (Len=m, Ø = mm)							
	I	J	S	T	U	V	W	
5" S2	5-1/2" 6/7 Lobe 10.9 Stage HR	9.19	9.97	102	140	102	146	140
	5-1/2" 7/8 Lobe 8.3 Stage HR	9.19	9.97	102	140	108	146	140
	4-3/4" 7/8 Lobe 3.8 Stage HR	6.71	7.5	85	121	95	127	121
	4-3/4" 7/8 Lobe 4.5 Stage HR	7.78	8.57	85	121	95	127	121
	5" 4/5 Lobe 6.0 Stage HR	6.71	7.5	85	127	95	133	127
	5" 5/6 Lobe 4.0 Stage HR	5.51	6.3	85	127	95	133	127
	5" 5/6 Lobe 6.7 Stage HR	8.31	9.1	85	127	102	133	127
	5" 5/6 Lobe 8.3 Stage HR	8.12	8.91	85	127	95	133	127
	5" 5/6 Lobe 8.4 Stage HR	9.07	9.86	85	127	107	133	127
	5" 6/7 Lobe 6.0 Stage HR	6.65	7.44	85	127	102	133	127
	5" 6/7 Lobe 7.0 Stage HR	7.34	8.13	85	127	102	133	127
	5" 6/7 Lobe 8.0 Stage HR	8.31	9.1	85	127	102	133	127
	5" 6/7 Lobe 8.8 Stage HR	8.94	9.73	85	127	102	133	127
	5" 7/8 Lobe 2.6 Stage HR NP	6.88	7.67	85	127	96	133	127
5" 7/8 Lobe 2.6 Stage HR	7.78	8.57	85	127	95	133	127	
5" 7/8 Lobe 3.7 Stage HR	7.92	8.71	85	127	99	133	127	
5" 7/8 Lobe 3.8 Stage HR	6.71	7.5	85	127	95	133	127	
5" 7/8 Lobe 4.5 Stage HR	7.78	8.57	85	127	95	133	127	
5" 7/8 Lobe 5.0 Stage HR	6.99	7.77	85	127	99	133	127	
5" 7/8 Lobe 5.7 Stage HR	8.31	9.1	85	127	102	133	127	
5" 7/8 Lobe 6.4 Stage HR	7.92	8.71	85	127	99	133	127	
5" 8/9 Lobe 6.0 Stage HR	8.31	9.1	85	127	102	133	127	
3-3/4" 4/5 Lobe 3.5 Stage HR	5.13	5.66	65	95	76	102	95	
3-3/4" 6/7 Lobe 1.7 Stage	3.7	4.24	65	95	76	102	95	
3-3/4" 6/7 Lobe 3.0 Stage	5.76	6.3	65	95	76	102	95	
3-3/4" 7/8 Lobe 2.3 Stage HR	5.28	5.82	65	95	76	102	95	
3-1/2" 4/5 Lobe 3.2 Stage HR	4	4.36	64	89	73	95	89	
3-1/2" 5/6 Lobe 3.0 Stage HR	3.5	3.85	64	89	70	95	89	
3-3/8" 5/6 Lobe 3.2 Stage HR	3.85	4.21	64	86	70	92	86	
3-1/8" 5/6 Lobe 3.2 Stage XT	3.61	4.18	57	80	67	86	80	
3-1/8" 5/6 Lobe 3.5 Stage HR	3.75	4.32	57	80	67	86	80	
3-1/8" 7/8 Lobe 3.0 Stage HR	4.21	4.78	57	80	67	86	80	
3-1/8" 7/8 Lobe 4.0 Stage	3.27	3.84	57	80	67	86	80	
2-7/8" 2/3 Lobe 7.0 Stage	2.59	2.59	52	71	60	77	71	
2-7/8" 5/6 Lobe 3.5 Stage HR	3.96	3.96	52	71	60	77	71	
2-7/8" 5/6 Lobe 4.7 Stage HR	4.14	4.14	52	71	60	77	71	
2-3/8" 7/8 Lobe 4.0 Stage HR	3.4	3.64	42	60	48	67	60	
2-3/8" 5/6 Lobe 4.0 Stage HR	3.14	3.38	42	60	47	67	60	
POWER SECTION DIMENSIONS	METRIC - SI (Len=m, Ø = mm)	I	J	S	T	U	V	W
		STATOR END	OVERALL LENGTH	ADAPTOR PIN Ø	STATOR TUBE OUTER Ø	STATOR TUBE INNER Ø	ROTOR CATCH SUB BLADE Ø	ROTOR CATCH SUB Ø

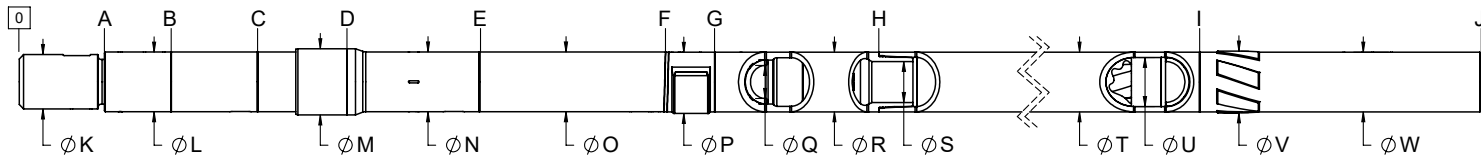


	BIT BOX	THRUST SHOULDER	WASHPIPE START	HEX END	BRG ASSEMBLY ADAPTOR	BAA CAP	ROTOR ADAPTOR CAP	ROTOR START	BIT BOX Ø	MANDREL Ø	THRUST Ø	WASHPIPE LARGE Ø	WASHPIPE SMALL Ø	BRG ASSEMBLY ADAPTOR Ø	DRIVESHAFT Ø	ROTOR ADAPTOR Ø	ROTOR CATCH STEM Ø
	A	B	C	D	E	F	G	H	K	L	M	N	O	P	Q	R	T
<b>BEARING PACK</b>	<b>METRIC - SI (Lengths = m, Diameters = mm)</b>																
<b>6-1/2" S1</b>	0.23	0.54	0.64	0.85	1.26	1.61	2.26	2.49	161.9	120.7	85.7	111.1	92.1	123.4	70.1	123.4	81.0
<b>6-1/2" S2</b>	0.25	0.63	0.73	0.87	1.09	1.42	2.07	2.30	165.1	111.1	96.0	111.1	95.3	123.4	71.1	123.4	81.0
<b>6-1/2" S3</b>	0.25	0.53	0.66	0.82	1.07	1.39	2.05	2.28	162.1	114.3	96.0	114.3	95.3	124.5	71.1	124.5	81.0
<b>6-3/4" S1</b>	0.23	0.54	0.64	0.85	1.26	1.61	2.26	2.49	161.9	120.7	85.7	111.1	92.1	123.4	70.1	123.4	81.0
<b>6-3/4" S3</b>	0.25	0.53	0.66	0.82	1.07	1.39	2.05	2.28	162.1	114.3	96.0	114.3	95.3	124.5	71.1	124.5	81.0
<b>7" S1</b>	0.23	0.55	0.66	0.88	1.33	1.68	2.33	2.56	161.9	133.4	92.1	120.7	95.3	123.4	70.1	123.4	81.0
<b>7" S2</b>	0.23	0.46	0.58	0.79	1.08	1.43	2.09	2.32	161.9	133.4	92.2	120.7	95.3	123.4	70.1	123.4	81.0

\*For Power Section Dimensions See Next Page

## MOTOR FISHING DIMENSIONS

POWER SECTION DIMENSIONS	METRIC - SI		
	I	J	S
6-3/4" 7/8 Lobe 2.9 Stage HR	7.46	8.03	109
6-3/4" 7/8 Lobe 5.0 Stage HR	8.72	9.29	107
6-3/4" 7/8 Lobe 5.7 Stage HR	8.72	9.29	118
7" 5/6 Lobe 5.3 Stage HR	8.11	8.68	129
7" 5/6 Lobe 8.1 Stage HR	8.74	9.31	129
7" 6/7 Lobe 6.5 Stage HR	9.1	9.67	121
7" 6/7 Lobe 8.4 Stage HR	9.1	9.67	121
7" 6/7 Lobe 11.4 Stage HR	9.1	9.67	119
7" 7/8 Lobe 8.5 Stage HR	9.78	10.35	128
6-3/4" 7/8 Lobe 2.9 Stage HR	7.7	8.16	109
6-3/4" 7/8 Lobe 5.0 Stage HR	8.96	9.42	107
6-3/4" 7/8 Lobe 5.7 Stage HR	8.96	9.42	118
7" 5/6 Lobe 5.3 Stage HR	8.35	8.81	129
7" 5/6 Lobe 8.1 Stage HR	8.99	9.44	129
7" 6/7 Lobe 6.5 Stage HR	9.34	9.8	121
7" 6/7 Lobe 8.4 Stage HR	9.34	9.8	121
7" 6/7 Lobe 11.4 Stage HR	9.34	9.8	119
7" 7/8 Lobe 8.5 Stage HR	10.03	10.49	128
6-3/4" 4/5 Lobe 7.0 Stage HR	7.42	7.87	107
6-3/4" 6/7 Lobe 5.0 Stage HR	7.21	7.65	110
6-3/4" 7/8 Lobe 2.0 Stage HR	5.97	6.42	110
6-3/4" 7/8 Lobe 2.9 Stage HR	7.42	7.87	109
6-3/4" 7/8 Lobe 3.0 Stage HR	5.29	5.73	115
6-3/4" 7/8 Lobe 3.0 Stage HR SLOW	7.29	7.74	116
6-3/4" 7/8 Lobe 3.3 Stage HR	8.34	8.78	114
6-3/4" 7/8 Lobe 5.0 Stage HR	8.68	9.12	107
6-3/4" 7/8 Lobe 5.7 Stage HR	8.68	9.12	118
6-3/4" 9/10 Lobe 8.0 Stage HR	8.68	9.12	123
6-3/4" 4/5 Lobe 7.0 Stage HR	7.64	8.21	107
6-3/4" 6/7 Lobe 5.0 Stage HR	7.42	7.99	110
6-3/4" 7/8 Lobe 2.0 Stage HR	6.19	6.76	110
6-3/4" 7/8 Lobe 2.9 Stage HR	7.64	8.21	109
6-3/4" 7/8 Lobe 3.0 Stage HR	5.5	6.08	115
6-3/4" 7/8 Lobe 3.0 Stage HR SLOW	7.51	8.08	116
6-3/4" 7/8 Lobe 3.3 Stage HR	8.55	9.12	114
6-3/4" 7/8 Lobe 5.0 Stage HR	8.9	9.47	107
6-3/4" 7/8 Lobe 5.7 Stage HR	8.9	9.47	118
6-3/4" 9/10 Lobe 8.0 Stage HR	8.9	9.47	123
6-1/2" 7/8 Lobe 3.5 Stage HR	7.92	8.37	103
6-1/2" 7/8 Lobe 4.8 Stage HR	7.05	7.49	101
6-1/2" 7/8 Lobe 5.0 Stage HR	7.05	7.5	115
6-1/2" 7/8 Lobe 3.5 Stage HR	7.95	8.52	103
6-1/2" 7/8 Lobe 4.8 Stage HR	7.07	7.64	101
6-1/2" 7/8 Lobe 5.0 Stage HR	7.07	7.65	115
6-1/2" 7/8 Lobe 3.5 Stage HR	8.14	8.71	103
6-1/2" 7/8 Lobe 4.8 Stage HR	7.26	7.83	101
6-1/2" 7/8 Lobe 5.0 Stage HR	7.27	7.84	115
<b>POWER SECTION DIMENSIONS</b>	<b>I</b>	<b>J</b>	<b>S</b>
	<b>METRIC - SI</b>		
	<b>Len = m, Ø = mm</b>		
<b>ROTOR</b>	<b>I</b>	<b>J</b>	<b>S</b>
<b>CATCH STEM</b>			
<b>ROTOR MAJOR Ø</b>			



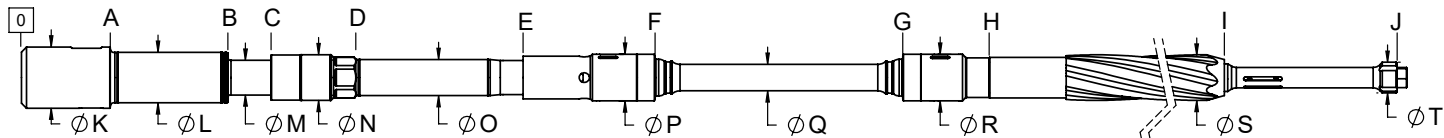
	END CAP	BEARING HOUSING	PISTON HOUSING	STABILIZER SHOULDER	KICK/FIXED HOUSING	BIT TO BEND (ADJUSTABLE)	ADAPTOR HSG (ADJUSTABLE)	BIT TO BEND (FIXED)	ADAPTOR HSG (FIXED)	STATOR START	BIT BOX Ø	END CAP/BRG HSG. Ø	THREAD PROTECTOR Ø	PISTON HOUSING Ø	KICK/FIXED HOUSING Ø	PAD Ø (ADJUSTABLE)	PAD Ø (FIXED)	ADJ. MANDREL PIN Ø	ADAPTOR HOUSING Ø
	A	B	C	D	E	F1	G1	F2	G2	H	K	L	M	N	O	P1	P2	Q	R
<b>BEARING PACK</b>	<b>METRIC - SI (Lengths = m, Diameters = mm)</b>																		
<b>6-1/2" S1</b>	0.25	0.44	0.69	0.96	1.30	1.85	2.00	1.55	1.87	2.49	161.9	166.6	181.0	166.6	173.0	181.0	181.1	98.4	173.0
<b>6-1/2" S2</b>	0.29	0.52	0.75	0.88	1.14	1.58	1.81	1.36	1.67	2.30	165.1	166.6	181.1	166.6	165.1	174.8	174.8	98.4	165.1
<b>6-1/2" S3</b>	0.27	0.42	0.69	0.93	1.12	1.64	1.79			2.28	162.1	166.6	180.3	173.0	173.0	181.1	181.1	98.4	173.0
<b>6-3/4" S1</b>	0.25	0.44	0.69	0.96	1.30	1.85	2.00	1.55	1.87	2.49	161.9	166.6	181.0	173.0	173.0	181.0	181.1	98.4	173.0
<b>6-3/4" S3</b>	0.27	0.42	0.69	0.93	1.12	1.64	1.79			2.28	162.1	166.6	180.3	173.0	173.0	181.1	181.1	98.4	173.0
<b>7" S1</b>	0.25	0.45	0.71	0.98	1.37	1.92	2.07	1.62	2.05	2.56	161.9	177.8	196.9	177.8	177.8	187.3	185.4	98.4	177.8
<b>7" S2</b>	0.25	0.37	0.61	0.88	1.13	1.68	1.83	1.37	0.44	2.31	161.9	177.8	196.9	177.8	177.8	187.3	185.4	98.4	177.8

\*For Power Section Dimensions See Next Page

POWER SECTION DIMENSIONS	I	J	S	T	U	V	W	METRIC - SI (Len= m, Ø =mm)										
								I	J	S	T	U	V	W				
7" S2	6-3/4" 7/8 Lobe 2.9 Stage HR	7.65	8.49	122	171	140	178	171										
	6-3/4" 7/8 Lobe 5.0 Stage HR	8.71	9.55	122	171	140	178	171										
	6-3/4" 7/8 Lobe 5.7 Stage HR	8.71	9.55	122	171	140	178	171										
	7" 5/6 Lobe 5.3 Stage HR	8.3	9.14	122	178	146	184	178										
	7" 5/6 Lobe 8.1 Stage HR	8.92	9.76	122	178	146	184	178										
	7" 6/7 Lobe 6.5 Stage HR	9.3	10.14	122	178	146	184	178										
	7" 6/7 Lobe 8.4 Stage HR	9.3	10.14	122	178	146	184	178										
	7" 6/7 Lobe 11.4 Stage HR	9.3	10.14	122	178	146	184	178										
	7" 7/8 Lobe 8.5 Stage HR	9.93	10.77	122	178	146	184	178										
	6-3/4" 7/8 Lobe 2.9 Stage HR	7.89	8.73	122	171	140	178	171										
	6-3/4" 7/8 Lobe 5.0 Stage HR	8.96	9.8	122	171	140	178	171										
	6-3/4" 7/8 Lobe 5.7 Stage HR	8.96	9.8	122	171	140	178	171										
7" S1	7" 5/6 Lobe 5.3 Stage HR	8.55	9.39	122	178	146	184	178										
	7" 5/6 Lobe 8.1 Stage HR	9.16	10	122	178	146	184	178										
	7" 6/7 Lobe 6.5 Stage HR	9.54	10.38	122	178	146	184	178										
	7" 6/7 Lobe 8.4 Stage HR	9.54	10.38	122	178	146	184	178										
	7" 6/7 Lobe 11.4 Stage HR	9.54	10.38	122	178	146	184	178										
	7" 7/8 Lobe 8.5 Stage HR	10.18	11.02	122	178	146	184	178										
	6-3/4" 4/5 Lobe 7.0 Stage HR	7.61	8.45	122	171	140	178	171										
	6-3/4" 6/7 Lobe 5.0 Stage HR	7.36	8.2	122	171	140	178	171										
	6-3/4" 7/8 Lobe 2.0 Stage HR	6.18	7.02	122	171	140	178	171										
	6-3/4" 7/8 Lobe 2.9 Stage HR	7.61	8.45	122	171	140	178	171										
	6-3/4" 7/8 Lobe 3.0 Stage HR	5.45	6.29	122	171	140	178	171										
	6-3/4" 7/8 Lobe 3.0 Stage HR SLOW	7.46	8.3	122	171	140	178	171										
6-3/4" S3	6-3/4" 7/8 Lobe 3.3 Stage HR	8.5	9.34	122	171	140	178	171										
	6-3/4" 7/8 Lobe 5.0 Stage HR	8.68	9.52	122	171	140	178	171										
	6-3/4" 7/8 Lobe 5.7 Stage HR	8.68	9.52	122	171	140	178	171										
	6-3/4" 9/10 Lobe 8.0 Stage HR	8.88	9.72	122	171	140	178	171										
	6-3/4" 4/5 Lobe 7.0 Stage HR	7.83	8.66	122	171	140	178	171										
	6-3/4" 6/7 Lobe 2.0 Stage HR	7.57	8.41	122	171	140	178	171										
	6-3/4" 7/8 Lobe 2.0 Stage HR	6.39	7.23	122	171	140	178	171										
	6-3/4" 7/8 Lobe 2.9 Stage HR	7.83	8.66	122	171	140	178	171										
	6-3/4" 7/8 Lobe 3.0 Stage HR	5.67	6.5	122	171	140	178	171										
	6-3/4" 7/8 Lobe 3.0 Stage HR SLOW	7.67	8.51	122	171	140	178	171										
	6-3/4" 7/8 Lobe 3.3 Stage HR	8.71	9.55	122	171	140	178	171										
	6-3/4" 7/8 Lobe 5.0 Stage HR	8.89	9.73	122	171	140	178	171										
6-3/4" 7/8 Lobe 5.7 Stage HR	8.89	9.73	122	171	140	178	171											
6-3/4" S1	6-3/4" 9/10 Lobe 8.0 Stage HR	9.1	9.93	122	171	140	178	171										
	6-1/2" 7/8 Lobe 3.5 Stage HR	8.15	8.99	122	165	127	171	165										
	6-1/2" 7/8 Lobe 4.8 Stage HR	7.45	8.29	122	165	127	171	165										
	6-1/2" 7/8 Lobe 5.0 Stage HR	7.22	8.06	122	165	140	171	165										
	6-1/2" 7/8 Lobe 3.5 Stage HR	8.17	9.01	122	165	127	171	165										
	6-1/2" 7/8 Lobe 4.8 Stage HR	7.47	8.31	122	165	127	171	165										
	6-1/2" 7/8 Lobe 5.0 Stage HR	7.24	8.08	122	165	140	171	165										
	6-1/2" 7/8 Lobe 3.5 Stage HR	8.37	9.2	122	165	127	171	165										
	6-1/2" 7/8 Lobe 4.8 Stage HR	7.66	8.5	122	165	127	171	165										
	6-1/2" 7/8 Lobe 5.0 Stage HR	7.43	8.27	122	165	140	171	165										
	POWER SECTION DIMENSIONS	I	METRIC - SI (Len= m, Ø =mm)															
		STATOR END	J	S	T	U	V	W										
OVERALL LENGTH																		
ADAPTOR PIN Ø																		
STATOR TUBE OUTER Ø																		
STATOR TUBE INNER Ø																		
ROTOR CATCH SUB BLADE Ø																		
ROTOR CATCH SUB Ø																		

# OIL SEALED MOTOR FISHING DIMENSIONS - INTERNALS - METRIC (SI)

7501 42 STREET LEDUC, ALBERTA T9E 0R8 T: 780.986.3070 F: 780.986.3536

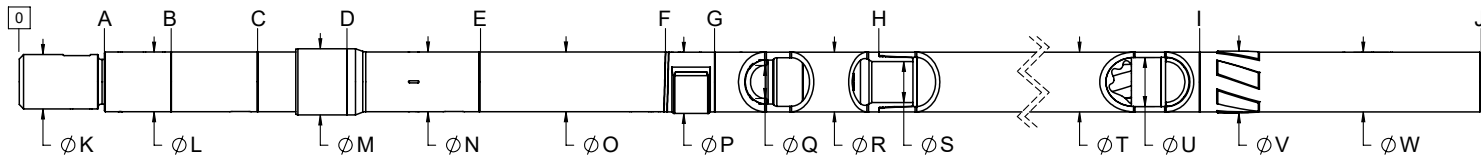
[www.dynomaxdrillingtools.com](http://www.dynomaxdrillingtools.com)
[sales@dynomaxdrillingtools.com](mailto:sales@dynomaxdrillingtools.com)


	BIT BOX	THRUST SHOULDER	WASHPIPE START	HEX END	BRG ASSEMBLY ADAPTOR	BAA CAP	ROTOR ADAPTOR CAP	ROTOR START	BIT BOX Ø	MANDREL Ø	THRUST Ø	WASHPIPE LARGE Ø	WASHPIPE SMALL Ø	BRG ASSEMBLY ADAPTOR Ø	DRIVESHAFT Ø	ROTOR ADAPTOR Ø	ROTOR CATCH STEM Ø
	A	B	C	D	E	F	G	H	K	L	M	N	O	P	Q	R	T
<b>BEARING PACK</b>	<b>METRIC - SI (Lengths = m, Diameters = mm)</b>																
<b>7" S3</b>	0.25	0.58	0.71	0.87	1.09	1.49	2.30	2.52	162.1	133.4	114.0	139.7	108.0	127.0	76.2	127.0	81.0
<b>8" S1</b>	0.22	0.61	0.75	1.02	1.50	1.90	2.67	2.90	196.9	158.8	120.7	146.1	127.0	147.6	85.7	147.6	111.3
<b>8" S2</b>	0.22	0.51	0.64	0.86	1.19	1.60	2.37	2.59	196.9	158.8	120.7	146.1	127.0	147.6	85.7	147.6	111.3
<b>9-5/8" S1</b>	0.25	0.64	0.78	1.01	1.45	1.93	2.78	3.03	228.6	196.9	140.3	177.8	146.1	180.3	98.8	180.3	111.3
<b>11-1/4" S1</b>	0.26	0.65	0.82	1.12	1.59	2.06	2.91	3.16	266.7	228.6	169.7	215.9	184.2	211.1	98.8	180.3	111.3

\*For Power Section Dimensions See Next Page

## MOTOR FISHING DIMENSIONS

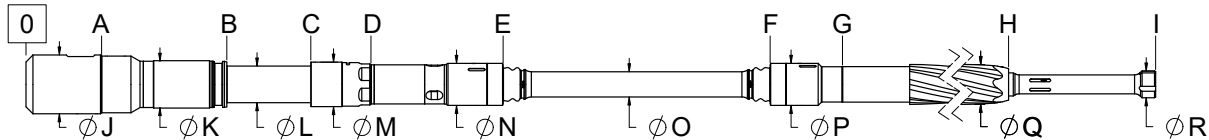
POWER SECTION DIMENSIONS	METRIC - SI			
	I	J	S	
11-1/4" S1	11-1/4" 5/6 Lobe 4.6 Stage HR	9.01	9.59	191
	11-1/4" 6/7 Lobe 5.0 Stage HR	8.7	9.29	191
	11-1/4" 6/7 Lobe 5.5 Stage HR	9.51	10.1	195
	11-1/4" 7/8 Lobe 5.7 Stage HR	9.26	9.85	195
	8" 6/7 Lobe 4.0 Stage HR	8.08	8.59	126
	8" 7/8 Lobe 3.0 Stage HR	6.93	7.43	132
	8" 7/8 Lobe 3.4 Stage HR	10.47	10.98	135
	8" 7/8 Lobe 4.0 Stage HR	8.02	8.52	121
	8" 7/8 Lobe 5.9 Stage	10.25	10.76	121
	9-5/8" 3/4 Lobe 6.0 Stage	8.59	9.1	152
	9-5/8" 6/7 Lobe 5.0 Stage HR	8.16	8.66	163
	9-5/8" 6/7 Lobe 6.0 Stage HR	9.12	9.63	163
8" S2	9-5/8" 7/8 Lobe 5.7 Stage HR	8.89	9.4	163
	8" 4/5 Lobe 5.3 Stage HR	8.2	8.71	125
	8" 5/6 Lobe 3.0 Stage HR	5.26	5.77	124
	8" 6/7 Lobe 4.0 Stage HR	7.65	8.15	126
	8" 6/7 Lobe 5.0 Stage HR	8.79	9.3	126
	8" 7/8 Lobe 2.0 Stage	6.49	7	125
	8" 7/8 Lobe 3.0 Stage HR	6.49	7	132
	8" 7/8 Lobe 3.4 Stage HR	10.03	10.54	135
	8" 7/8 Lobe 4.0 Stage HR	7.58	8.09	121
	8" 7/8 Lobe 5.9 Stage	9.82	10.33	121
	8" 4/5 Lobe 5.3 Stage HR	8.51	9.02	125
	8" 5/6 Lobe 3.0 Stage HR	5.56	6.07	124
8" 6/7 Lobe 4.0 Stage HR	7.95	8.46	126	
8" 6/7 Lobe 5.0 Stage HR	9.09	9.6	126	
8" S1	8" 7/8 Lobe 2.0 Stage	6.8	7.31	125
	8" 7/8 Lobe 3.0 Stage HR	6.8	7.31	132
	8" 7/8 Lobe 3.4 Stage HR	10.34	10.85	135
	8" 7/8 Lobe 4.0 Stage HR	7.89	8.39	121
	8" 7/8 Lobe 5.9 Stage	10.12	10.63	121
	6-3/4" 7/8 Lobe 2.9 Stage HR	7.66	8.12	109
	6-3/4" 7/8 Lobe 5.0 Stage HR	8.92	9.38	107
	6-3/4" 7/8 Lobe 5.7 Stage HR	8.92	9.38	118
	7" 5/6 Lobe 5.3 Stage HR	8.31	8.77	129
	7" 5/6 Lobe 8.1 Stage HR	8.95	9.4	129
	7" 6/7 Lobe 6.5 Stage HR	9.3	9.76	121
	7" 6/7 Lobe 8.4 Stage HR	9.3	9.76	121
7" 6/7 Lobe 11.4 Stage HR	9.3	9.76	119	
7" 7/8 Lobe 8.5 Stage HR	9.99	10.44	128	
POWER SECTION DIMENSIONS	METRIC - SI			
	I	J	S	
ROTOR	I	J	S	
CATCH STEM	J	J	S	
ROTOR MAJOR Ø	S	S	S	



	END CAP	BEARING HOUSING	PISTON HOUSING	STABILIZER SHOULDER	KICK/FIXED HOUSING	BIT TO BEND (ADJUSTABLE)	ADAPTOR HSG (ADJUSTABLE)	BIT TO BEND (FIXED)	ADAPTOR HSG (FIXED)	STATOR START	BIT BOX Ø	END CAP/BRG HSG. Ø	THREAD PROTECTOR Ø	PISTON HOUSING Ø	KICK/FIXED HOUSING Ø	PAD Ø (ADJUSTABLE)	PAD Ø (FIXED)	ADJ. MANDREL PIN Ø	ADAPTOR HOUSING Ø
	A	B	C	D	E	F1	G1	F2	G2	H	K	L	M	N	O	P1	P2	Q	R
<b>BEARING PACK</b>	<b>METRIC - SI (Lengths = m, Diameters = mm)</b>																		
<b>7" S3</b>	0.28	--	0.45	0.87	1.14	1.73	1.88	1.43	1.69	2.50	162.1	177.8	196.9	181.6	181.6	187.3	187.3	107.1	181.6
<b>8" S1</b>	0.24	0.51	0.83	1.13	1.59	2.20	2.38	1.84	2.38	2.92	196.9	203.2	222.3	203.2	203.2	215.9	213.4	122.2	203.2
<b>8" S2</b>	0.24	0.41	0.69	0.97	1.28	1.89	2.07	1.53	2.07	2.61	196.9	203.2	222.3	203.2	203.2	215.9	213.4	122.2	203.2
<b>9-5/8" S1</b>	0.27	0.54	0.81	1.13	1.51	2.22	2.43	2.22	2.42	3.04	228.6	244.3	273.1	244.3	244.3	257.2	257.2	142.2	244.3
<b>11-1/4" S1</b>	0.28	0.55	0.91	1.25	1.67	2.38	2.58	--	--	3.17	266.7	285.8	311.2	285.8	285.8	298.5	--	184.2	285.8

\*For Power Section Dimensions See Next Page

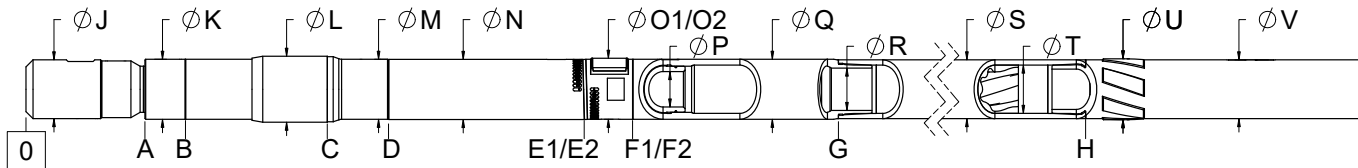
POWER SECTION DIMENSIONS	METRIC - SI (Len=m, Ø =mm)						
	I	J	S	T	U	V	W
11-1/4" 5/6 Lobe 4.6 Stage HR	8.75	9.82	210	286	235	292	286
11-1/4" 6/7 Lobe 5.0 Stage HR	8.3	9.38	210	286	200	292	286
11-1/4" 6/7 Lobe 5.5 Stage HR	9.27	10.35	210	286	235	292	286
11-1/4" 7/8 Lobe 5.7 Stage HR	9.03	10.11	210	286	200	292	286
8" 6/7 Lobe 4.0 Stage HR	8.27	9.26	178	203	171	210	203
8" 7/8 Lobe 3.0 Stage HR	7.1	8.09	178	203	171	210	203
8" 7/8 Lobe 3.4 Stage HR	10.66	11.65	178	203	171	210	203
8" 7/8 Lobe 4.0 Stage HR	8.27	9.26	178	203	171	210	203
8" 7/8 Lobe 5.9 Stage	10.66	11.65	178	203	171	210	203
9-5/8" 3/4 Lobe 6.0 Stage HR	8.83	9.82	178	244	200	251	244
9-5/8" 6/7 Lobe 5.0 Stage HR	8.32	9.31	178	244	200	251	244
9-5/8" 6/7 Lobe 6.0 Stage HR	9.39	10.38	178	244	200	251	244
9-5/8" 7/8 Lobe 5.7 Stage HR	9.13	10.12	178	244	200	251	244
8" 4/5 Lobe 5.3 Stage HR	8.4	9.36	144	203	171	210	203
8" 5/6 Lobe 3.0 Stage HR	5.45	6.4	144	203	171	210	203
8" 6/7 Lobe 4.0 Stage HR	7.85	8.8	144	203	171	210	203
8" 6/7 Lobe 5.0 Stage HR	8.96	9.92	144	203	171	210	203
8" 7/8 Lobe 2.0 Stage	6.88	7.83	144	203	171	210	203
8" 7/8 Lobe 3.0 Stage HR	6.68	7.63	144	203	171	210	203
8" 7/8 Lobe 3.4 Stage HR	10.23	11.19	144	203	171	210	203
8" 7/8 Lobe 4.0 Stage HR	7.85	8.8	144	203	171	210	203
8" 7/8 Lobe 5.9 Stage	10.23	11.19	144	203	171	210	203
8" 4/5 Lobe 5.3 Stage HR	8.72	9.67	144	203	171	210	203
8" 5/6 Lobe 3.0 Stage HR	5.76	6.71	144	203	171	210	203
8" 6/7 Lobe 4.0 Stage HR	8.16	9.11	144	203	171	210	203
8" 6/7 Lobe 5.0 Stage HR	9.28	10.23	144	203	171	210	203
8" 7/8 Lobe 2.0 Stage	7.19	8.15	144	203	171	210	203
8" 7/8 Lobe 3.0 Stage HR	6.99	7.94	144	203	171	210	203
8" 7/8 Lobe 3.4 Stage HR	10.55	11.5	144	203	171	210	203
8" 7/8 Lobe 4.0 Stage HR	8.16	9.11	144	203	171	210	203
8" 7/8 Lobe 5.9 Stage	10.55	11.5	144	203	171	210	203
6-3/4" 7/8 Lobe 2.9 Stage HR	7.84	8.67	128	171	140	178	171
6-3/4" 7/8 Lobe 5.0 Stage HR	8.9	9.74	128	171	140	178	171
6-3/4" 7/8 Lobe 5.7 Stage HR	8.9	9.74	128	171	140	178	171
7" 5/6 Lobe 5.3 Stage HR	8.49	9.33	128	178	146	184	178
7" 5/6 Lobe 8.1 Stage HR	9.11	9.94	128	178	146	184	178
7" 6/7 Lobe 6.5 Stage HR	9.49	10.33	128	178	146	184	178
7" 6/7 Lobe 8.4 Stage HR	9.49	10.33	128	178	146	184	178
7" 6/7 Lobe 11.4 Stage HR	9.49	10.33	128	178	146	184	178
7" 7/8 Lobe 8.5 Stage HR	10.12	10.96	128	178	146	184	178



	BIT BOX	LOWER SHAFT FLOW REST.	COMPRESSION NUT	BEARING AS- SEMBLY ADP.	BAA CAP	ROTOR ADAP- TOR CAP	ROTOR	BIT BOX Ø	FLOW RE- STRICTOR Ø	MANDREL Ø	COMPRESSION NUT Ø	BAA Ø	DRIVESHAFT Ø	ROTOR ADAP- TOR Ø	ROTOR CATCH STEM Ø
	A	B	C	D	E	F	G	J	K	L	M	N	O	P	R
<b>BEARING PACK</b>	<b>METRIC - SI (Lengths = m, Diameters = mm)</b>														
<b>4-3/4" ML</b>	8.0	18.1	25.6	33.2	47.1	70.1	76.0	4.71	3.66	3.03	3.61	3.58	1.93	3.58	2.13
<b>5-1/4" ML</b>	9.0	20.1	28.6	35.9	48.9	80.6	86.7	5.15	3.95	3.22	3.89	4.05	2.16	3.90	2.13
<b>6-1/2" ML</b>	9.0	22.5	33.5	42.2	54.9	80.7	89.7	6.38	4.88	3.74	4.63	4.86	2.76	4.86	3.19
<b>7" ML</b>	9.0	23.9	33.9	41.1	56.8	88.6	97.2	7.00	5.50	4.36	5.30	5.00	3.00	5.00	3.19
<b>8" ML</b>	9.1	26.5	38.8	47.8	63.8	94.0	102.9	8.00	6.00	4.85	5.83	5.81	3.38	5.81	4.38
<b>9-5/8" ML</b>	11.0	29.1	45.1	53.7	75.7	109.2	119.0	9.00	7.06	5.71	6.79	7.10	3.89	7.10	4.38
<b>11-1/4" ML</b>	11.0	30.4	46.4	58.1	81.2	114.6	124.6	10.50	8.20	6.62	7.94	8.00	3.89	7.10	4.38

\*For Power Section Dimensions See Next Page

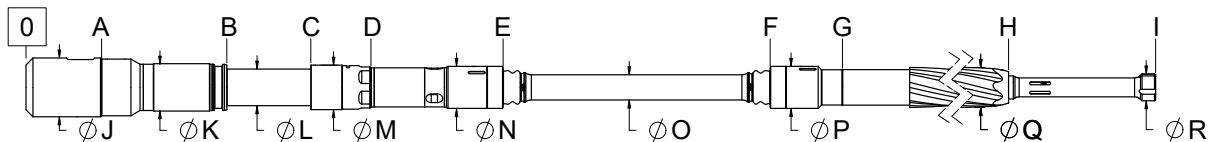
POWER SECTION DIMENSIONS	H	I	Q	
				IMPERIAL - USC (Len, Dia = in)
6-1/2"	6-3/4" 7/8 Lobe 2.9 Stage HR	300	317	4.30
	6-3/4" 7/8 Lobe 5.0 Stage HR	349	367	4.22
	6-3/4" 7/8 Lobe 5.7 Stage HR	349	367	4.65
	7" 5/6 Lobe 5.3 Stage HR	325	343	5.08
	7" 5/6 Lobe 8.1 Stage HR	350	368	5.08
	7" 6/7 Lobe 6.5 Stage HR	364	382	4.75
	7" 6/7 Lobe 8.4 Stage HR	364	382	4.75
	7" 6/7 Lobe 11.4 Stage HR	364	382	4.69
	7" 7/8 Lobe 8.5 Stage HR	391	409	5.02
	6-1/2" 7/8 Lobe 3.5 Stage HR	312	330	4.07
	6-1/2" 7/8 Lobe 4.8 Stage HR	278	295	3.98
	6-1/2" 7/8 Lobe 5.0 Stage HR	278	295	4.52
7"	6-3/4" 4/5 Lobe 7.0 Stage HR	292	310	4.22
	6-3/4" 6/7 Lobe 5.0 Stage HR	284	301	4.32
	6-3/4" 7/8 Lobe 2.0 Stage HR	235	253	4.32
	6-3/4" 7/8 Lobe 2.9 Stage HR	292	310	4.30
	6-3/4" 7/8 Lobe 3.0 Stage HR	208	226	4.52
	6-3/4" 7/8 Lobe 3.0 Stage HR SLOW	287	305	4.57
	6-3/4" 7/8 Lobe 3.3 Stage HR	328	346	4.50
	6-3/4" 7/8 Lobe 5.0 Stage HR	342	359	4.22
	6-3/4" 7/8 Lobe 5.7 Stage HR	342	359	4.65
	6-3/4" 9/10 Lobe 8.0 Stage HR	342	359	4.83
	5" 8/9 Lobe 6.0 Stage HR	327	338.9	3.20
	5" 7/8 Lobe 6.4 Stage HR	312	323.9	3.03
5-1/4"	5" 7/8 Lobe 5.7 Stage HR	326	337.9	3.14
	5" 7/8 Lobe 5.0 Stage HR	272	283.9	3.04
	5" 7/8 Lobe 3.8 Stage HR	264	275.9	2.95
	5" 7/8 Lobe 3.7 Stage HR	300.8	312.6	3.12
	5" 7/8 Lobe 3.1 Stage HR	315	326.9	3.10
	5" 7/8 Lobe 3.0 Stage HR	319.5	331.4	3.10
	5" 7/8 Lobe 2.6 Stage HR	306	317.9	3.10
	5" 6/7 Lobe 8.8 Stage HR	351	362.9	3.30
	5" 6/7 Lobe 8.0 Stage HR	327	338.9	3.02
	5" 5/6 Lobe 8.4 Stage HR	359	370.9	3.30
	5" 5/6 Lobe 8.3 Stage HR	315.5	327.4	2.92
	5" 5/6 Lobe 6.7 Stage HR	327	338.9	3.12
4-3/4"	5" 2/3 Lobe 9.0 Stage HR	280.0	291.9	2.54
	5-1/4" 5/6 Lobe 9.9 Stage HR	355	366.9	3.44
	5-1/4" 6/7 Lobe 10.9 Stage HR	355	366.9	3.42
	5-1/4" 7/8 Lobe 8.3 Stage HR	339	350.9	3.42
	5-1/4" 7/8 Lobe 8.5 Stage HR	348.3	360.2	3.61
	4-3/4" 2/3 Lobe 9.0 Stage HR	270.0	281.9	2.54
	4-3/4" 7/8 Lobe 3.8 Stage HR	254.0	265.9	2.95
	5" 2/3 Lobe 9.0 Stage HR	270.0	281.9	2.54
	5" 5/6 Lobe 4.0 Stage HR	211.5	223.4	3.00
	POWER SECTION DIMENSIONS	IMPERIAL - USC (Len, Dia = in)		
	ROTOR	H	I	Q
	CATCH STEM			
ROTOR MAJOR Ø				



	LOWER HSG. FLOW REST.	BEARING HOUSING	STABILIZER SHOULDER	BEARING HOUSING END	BIT TO BEND (ADJUSTABLE)	ADAPTOR HSG (ADJUSTABLE)	BIT TO BEND (FIXED)	ADAPTOR HSG (FIXED)	STATOR START	BIT BOX Ø	LOWER HSG. FLOW REST. Ø	THREAD PROTECTOR Ø	BEARING HOUSING Ø	KICK/FIXED HOUSING Ø	PAD Ø (ADJUSTABLE)	PAD Ø (FIXED)	ADJ. MANDREL PIN Ø	ADAPTOR HOUSING Ø
	A	B	C	D	E1	F1	E2	F2	G	J	K	L	M	N	O1	O2	P	Q
<b>BEARING PACK</b>	<b>METRIC - SI (Lengths = m, Diameters = mm)</b>																	
<b>4-3/4" ML</b>	11.3	14.0	26.0	38	55.6	60.2	46.8	56.3	76.2	4.71	4.81	5.50	4.81	4.81	5.13	5.13	2.81	4.81
<b>5-1/4" ML</b>	12.3	16.0	33.1	39.5	57.2	62.1	48.2	56.8	86.7	5.15	5.25	6.00	5.25	5.25	5.57	5.57	3.15	5.25
<b>6-1/2" ML</b>	12.8	17.6	38.6	44.0	65.6	71.6	0.0	0.0	90.8	6.38	6.56	7.13	7.13	6.81	7.13	0.00	3.88	6.81
<b>7" ML</b>	14.2	19.0	35.9	43.2	66.3	72.2	0.0	0.0	96.7	7.00	7.15	7.85	7.15	7.15	7.38	0.00	4.22	7.15
<b>8" ML</b>	14.6	21.1	42.1	50.3	74.7	81.1	60.0	81.3	102.0	8.00	8.25	9.00	8.25	8.00	0.00	8.38	0.00	8.00
<b>9-5/8" ML</b>	16.0	23.1	49.1	59.5	87.5	95.5	0.0	0.0	119.6	6.00	6.62	10.75	9.62	9.62	0.00	10.13	5.60	9.62
<b>11-1/4" ML</b>	16.0	24.4	49.4	65.9	93.5	101.8	--	--	124.8	10.50	11.25	12.25	11.25	11.25	11.75	--	7.25	11.25

\*For Power Section Dimensions See Next Page

POWER SECTION DIMENSIONS	IMPERIAL - USC (Len, Dia = in)							
	H	I	R	S	T	U	V	
7"	6-3/4" 7/8 Lobe 2.9 Stage HR	307	340	5.04	6.75	5.50	7.00	6.75
	6-3/4" 7/8 Lobe 5.0 Stage HR	349	382	5.04	6.75	5.50	7.00	6.75
	6-3/4" 7/8 Lobe 5.7 Stage HR	349	382	5.04	6.75	5.50	7.00	6.75
	7" 5/6 Lobe 5.3 Stage HR	333	366	5.04	7.00	5.75	7.25	7.00
	7" 5/6 Lobe 8.1 Stage HR	357	390	5.04	7.00	5.75	7.25	7.00
	7" 6/7 Lobe 6.5 Stage HR	372	405	5.04	7.00	5.75	7.25	7.00
	7" 6/7 Lobe 8.4 Stage HR	372	405	5.04	7.00	5.75	7.25	7.00
	7" 6/7 Lobe 11.4 Stage HR	372	405	5.04	7.00	5.75	7.25	7.00
	7" 7/8 Lobe 8.5 Stage HR	397	430	5.04	7.00	5.75	7.25	7.00
	6-1/2" 7/8 Lobe 3.5 Stage HR	322	355	4.80	6.50	5.00	6.75	6.50
	6-1/2" 7/8 Lobe 4.8 Stage HR	294	327	4.80	6.50	5.00	6.75	6.50
	6-1/2" 7/8 Lobe 5.0 Stage HR	285	318	4.80	6.50	5.00	6.75	6.50
	6-3/4" 4/5 Lobe 7.0 Stage HR	301	334	4.80	6.75	5.50	7.00	6.75
	6-3/4" 6/7 Lobe 5.0 Stage HR	291	324	4.80	6.75	5.50	7.00	6.75
6-1/2"	6-3/4" 7/8 Lobe 2.0 Stage HR	244	277	4.80	6.75	5.50	7.00	6.75
	6-3/4" 7/8 Lobe 2.9 Stage HR	301	334	4.80	6.75	5.50	7.00	6.75
	6-3/4" 7/8 Lobe 3.0 Stage HR	216	249	4.80	6.75	5.50	7.00	6.75
	6-3/4" 7/8 Lobe 3.0 Stage HR SLOW	295	328	4.80	6.75	5.50	7.00	6.75
	6-3/4" 7/8 Lobe 3.3 Stage HR	336	369	4.80	6.75	5.50	7.00	6.75
	6-3/4" 7/8 Lobe 5.0 Stage HR	343	376	4.80	6.75	5.50	7.00	6.75
	6-3/4" 7/8 Lobe 5.7 Stage HR	343	376	4.80	6.75	5.50	7.00	6.75
	6-3/4" 9/10 Lobe 8.0 Stage HR	351	384	4.80	6.75	5.50	7.00	6.75
	5" 8/9 Lobe 6.0 Stage HR	335.9	367.0	3.35	5.00	4.00	5.25	5.00
	5" 7/8 Lobe 6.4 Stage HR	320.9	352.0	3.35	5.00	3.88	5.25	5.00
	5" 7/8 Lobe 5.7 Stage HR	335.9	367.0	3.35	5.00	4.00	5.25	5.00
	5" 7/8 Lobe 5.0 Stage HR	283.9	315.0	3.35	5.00	3.88	5.25	5.00
	5" 7/8 Lobe 3.8 Stage HR	272.9	304.0	3.35	5.00	3.75	5.25	5.00
	5" 7/8 Lobe 3.7 Stage HR	320.9	352.0	3.35	5.00	3.88	5.25	5.00
5" 7/8 Lobe 3.1 Stage HR	323.9	355.0	3.35	5.00	3.75	5.25	5.00	
5-1/4"	5" 7/8 Lobe 3.0 Stage HR	335.9	367.0	3.35	5.00	4.00	5.25	5.00
	5" 7/8 Lobe 2.6 Stage HR	315.2	346.3	3.35	5.00	3.75	5.25	5.00
	5" 6/7 Lobe 8.8 Stage HR	360.9	392.0	3.35	5.00	4.00	5.25	5.00
	5" 6/7 Lobe 8.0 Stage HR	335.9	367.0	3.35	5.00	4.00	5.25	5.00
	5" 5/6 Lobe 8.4 Stage HR	365.9	397.0	3.35	5.00	4.20	5.25	5.00
	5" 5/6 Lobe 8.3 Stage HR	328.4	359.5	3.35	5.00	3.75	5.25	5.00
	5" 5/6 Lobe 6.7 Stage HR	335.9	367.0	3.35	5.00	4.00	5.25	5.00
	5" 2/3 Lobe 9.0 Stage HR	285.9	317.0	3.35	5.00	3.75	5.25	5.00
	5-1/4" 5/6 Lobe 9.9 Stage HR	360.9	392.0	3.74	5.25	4.25	5.50	5.25
	5-1/4" 6/7 Lobe 10.9 Stage HR	360.9	392.0	3.74	5.25	4.00	5.50	5.25
	5-1/4" 7/8 Lobe 8.3 Stage HR	360.9	392.0	3.74	5.25	4.00	5.50	5.25
	5-1/4" 7/8 Lobe 8.5 Stage HR	360.9	392.0	3.74	5.25	4.00	5.50	5.25
	4-3/4" 2/3 Lobe 9.0 Stage HR	276.2	307.3	3.35	4.75	3.75	5.00	4.75
	4-3/4" 7/8 Lobe 3.8 Stage HR	263.2	294.3	3.35	4.75	3.75	5.00	4.75
4-3/4"	5" 2/3 Lobe 9.0 Stage HR	276.2	307.3	3.35	5.00	3.75	5.25	5.00
	5" 5/6 Lobe 4.0 Stage HR	216.4	247.5	3.35	5.00	3.75	5.25	5.00

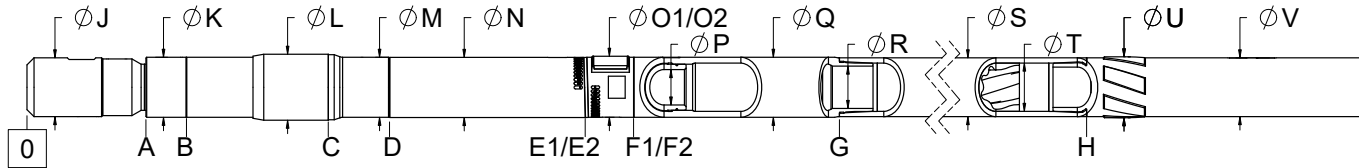


	BIT BOX	LOWER SHAFT FLOW REST.	COMPRESSION NUT	BEARING AS- SEMBLY ADP.	BAA CAP	ROTOR ADAP- TOR CAP	ROTOR	BIT BOX Ø	FLOW RE- STRICTOR Ø	MANDREL Ø	COMPRESSION NUT Ø	BAA Ø	DRIVESHAFT Ø	ROTOR ADAP- TOR Ø	ROTOR CATCH STEM Ø
	A	B	C	D	E	F	G	J	K	L	M	N	O	P	R
<b>BEARING PACK</b>	<b>METRIC - SI (Lengths = m, Diameters = mm)</b>														
<b>5-1/4" ML</b>	9.0	20.1	28.6	35.9	48.9	80.6	86.7	5.15	3.95	3.22	3.89	4.05	2.16	3.90	2.13
<b>6-1/2" ML</b>	9.0	22.5	33.5	42.2	54.9	80.7	89.7	6.38	4.88	3.74	4.63	4.86	2.76	4.86	3.19
<b>7" ML</b>	9.0	23.9	33.9	41.1	56.8	88.6	97.2	7.00	5.50	4.36	5.30	5.00	3.00	5.00	3.19
<b>8" ML</b>	9.1	26.5	38.8	47.8	63.8	94.0	102.9	8.00	6.00	4.85	5.83	5.81	3.38	5.81	4.38
<b>9-5/8" ML</b>	11.0	29.1	45.1	53.7	75.7	109.2	119.0	9.00	7.06	5.71	6.79	7.10	3.89	7.10	4.38
<b>11-1/4" ML</b>	11.0	30.4	46.4	58.1	81.2	114.6	124.6	10.50	8.20	6.62	7.94	8.00	3.89	7.10	4.38

\*For Power Section Dimensions See Next Page

## MOTOR FISHING DIMENSIONS

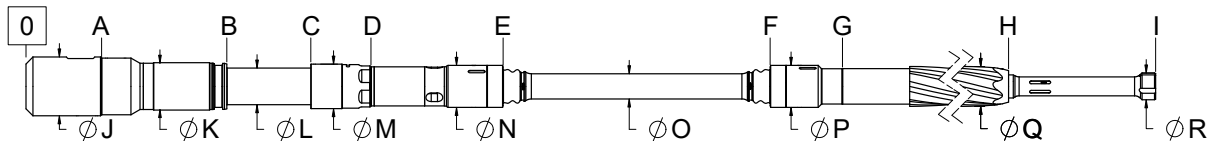
POWER SECTION DIMENSIONS	IMPERIAL - USC (Len, Dia = in)			
	I	J	S	
11-1/4"	11-1/4" 5/6 Lobe 4.6 Stage HR	355	378	7.50
	11-1/4" 6/7 Lobe 5.0 Stage HR	343	366	7.50
	11-1/4" 6/7 Lobe 5.5 Stage HR	375	398	7.68
	11-1/4" 7/8 Lobe 5.7 Stage HR	365	388	7.68
	8" 6/7 Lobe 4.0 Stage HR	318	334	4.96
	8" 7/8 Lobe 3.0 Stage HR	273	289	5.19
	8" 7/8 Lobe 3.4 Stage HR	412	428	5.31
	8" 7/8 Lobe 4.0 Stage HR	316	332	4.75
	8" 7/8 Lobe 5.9 Stage	404	420	4.75
	9-5/8" 3/4 Lobe 6.0 Stage HR	338	354	5.98
	9-5/8" 6/7 Lobe 5.0 Stage HR	321	337	6.40
	9-5/8" 6/7 Lobe 6.0 Stage HR	359	375	6.43
9-5/8"	9-5/8" 7/8 Lobe 5.7 Stage HR	350	366	6.43
	8" 4/5 Lobe 5.3 Stage HR	324	340	4.94
	8" 5/6 Lobe 3.0 Stage HR	208	224	4.87
	8" 6/7 Lobe 4.0 Stage HR	302	318	4.96
	8" 6/7 Lobe 5.0 Stage HR	347	363	4.96
	8" 7/8 Lobe 2.0 Stage	256	272	4.92
	8" 7/8 Lobe 3.0 Stage HR	257	273	5.19
	8" 7/8 Lobe 3.4 Stage HR	396	412	5.31
	8" 7/8 Lobe 4.0 Stage HR	299	315	4.75
	8" 7/8 Lobe 5.9 Stage	387	403	4.75
	6-3/4" 7/8 Lobe 2.9 Stage HR	300	317	4.30
	6-3/4" 7/8 Lobe 5.0 Stage HR	349	367	4.22
6-3/4" 7/8 Lobe 5.7 Stage HR	349	367	4.65	
7" 5/6 Lobe 5.3 Stage HR	325	343	5.08	
7" 5/6 Lobe 8.1 Stage HR	350	368	5.08	
7" 6/7 Lobe 6.5 Stage HR	364	382	4.75	
7" 6/7 Lobe 8.4 Stage HR	364	382	4.75	
7" 6/7 Lobe 11.4 Stage HR	364	382	4.69	
7" 7/8 Lobe 8.5 Stage HR	391	409	5.02	
6-1/2" 7/8 Lobe 3.5 Stage HR	312	330	4.07	
6-1/2" 7/8 Lobe 4.8 Stage HR	278	295	3.98	
6-1/2" 7/8 Lobe 5.0 Stage HR	278	295	4.52	
6-3/4" 4/5 Lobe 7.0 Stage HR	292	310	4.22	
6-3/4" 6/7 Lobe 5.0 Stage HR	284	301	4.32	
6-3/4" 7/8 Lobe 2.0 Stage HR	235	253	4.32	
6-3/4" 7/8 Lobe 2.9 Stage HR	292	310	4.30	
6-3/4" 7/8 Lobe 3.0 Stage HR	208	226	4.52	
6-3/4" 7/8 Lobe 3.0 Stage HR SLOW	287	305	4.57	
6-3/4" 7/8 Lobe 3.3 Stage HR	328	346	4.50	
6-3/4" 7/8 Lobe 5.0 Stage HR	342	359	4.22	
6-3/4" 7/8 Lobe 5.7 Stage HR	342	359	4.65	
6-3/4" 9/10 Lobe 8.0 Stage HR	342	359	4.83	
5-1/4" 6/7 Lobe 10.9 Stage HR	356	371	3.42	
5-1/4" 7/8 Lobe 8.3 Stage HR	340	355	3.42	
POWER SECTION DIMENSIONS	IMPERIAL - USC (Len, Dia = in)			
	I	J	S	
	ROTOR	CATCH STEM	ROTOR MAJOR Ø	



	LOWER HSG. FLOW REST.	BEARING HOUSING	STABILIZER SHOULDER	BEARING HOUSING END	BIT TO BEND (ADJUSTABLE)	ADAPTOR HSG (ADJUSTABLE)	BIT TO BEND (FIXED)	ADAPTOR HSG (FIXED)	STATOR START	BIT BOX $\phi$	LOWER HSG. FLOW REST. $\phi$	THREAD PROTECTOR $\phi$	BEARING HOUSING $\phi$	KICK/FIXED HOUSING $\phi$	PAD $\phi$ (ADJUSTABLE)	PAD $\phi$ (FIXED)	ADJ. MANDREL PIN $\phi$	ADAPTOR HOUSING $\phi$
	A	B	C	D	E1	F1	E2	F2	G	J	K	L	M	N	O1	O2	P	Q
<b>BEARING PACK</b>	<b>METRIC - SI (Lengths = m, Diameters = mm)</b>																	
<b>5-1/4" ML</b>	12.3	16.0	33.1	39.5	57.2	62.1	48.2	56.8	86.7	5.15	5.25	6.00	5.25	5.25	5.57	5.57	3.15	5.25
<b>6-1/2" ML</b>	12.8	17.6	38.6	44.0	65.6	71.6	0.0	0.0	90.8	6.38	6.56	7.13	7.13	6.81	7.13	0.00	3.88	6.81
<b>7" ML</b>	14.2	19.0	35.9	43.2	66.3	72.2	0.0	0.0	96.7	7.00	7.15	7.85	7.15	7.15	7.38	0.00	4.22	7.15
<b>8" ML</b>	14.6	21.1	42.1	50.3	74.7	81.1	60.0	81.3	102.0	8.00	8.25	9.00	8.25	8.00	0.00	8.38	0.00	8.00
<b>9-5/8" ML</b>	16.0	23.1	49.1	59.5	87.5	95.5	0.0	0.0	119.6	6.00	6.62	10.75	9.62	9.62	0.00	10.13	5.60	9.62
<b>11-1/4" ML</b>	16.0	24.4	49.4	65.9	93.5	101.8	--	--	124.8	10.50	11.25	12.25	11.25	11.25	11.75	--	7.25	11.25

\*For Power Section Dimensions See Next Page

POWER SECTION DIMENSIONS	IMPERIAL - USC (Len, Dia = in)								
	H	I	R	S	T	U	V		
11-1/4"	11-1/4" 5/6 Lobe 4.6 Stage HR	344	387	8.25	11.25	9.25	11.50	11.25	
	11-1/4" 6/7 Lobe 5.0 Stage HR	327	369	8.25	11.25	7.88	11.50	11.25	
	11-1/4" 6/7 Lobe 5.5 Stage HR	365	407	8.25	11.25	9.25	11.50	11.25	
	11-1/4" 7/8 Lobe 5.7 Stage HR	356	398	8.25	11.25	7.88	11.50	11.25	
	8" 6/7 Lobe 4.0 Stage HR	326	365	7.00	8.00	6.75	8.25	8.00	
	8" 7/8 Lobe 3.0 Stage HR	280	319	7.00	8.00	6.75	8.25	8.00	
	8" 7/8 Lobe 3.4 Stage HR	420	459	7.00	8.00	6.75	8.25	8.00	
	8" 7/8 Lobe 4.0 Stage HR	326	365	7.00	8.00	6.75	8.25	8.00	
	8" 7/8 Lobe 5.9 Stage HR	420	459	7.00	8.00	6.75	8.25	8.00	
	9-5/8" 3/4 Lobe 6.0 Stage HR	348	387	7.00	9.62	7.88	9.87	9.62	
	9-5/8" 6/7 Lobe 6.0 Stage HR	328	367	7.00	9.62	7.88	9.87	9.62	
	9-5/8" 6/7 Lobe 6.0 Stage HR	370	409	7.00	9.62	7.88	9.87	9.62	
9-5/8"	9-5/8" 7/8 Lobe 5.7 Stage HR	360	399	7.00	9.62	7.88	9.87	9.62	
	8" 4/5 Lobe 5.3 Stage HR	330	368	5.65	8.00	6.75	8.25	8.00	
	8" 5/6 Lobe 3.0 Stage HR	214	251	5.65	8.00	6.75	8.25	8.00	
	8" 6/7 Lobe 4.0 Stage HR	308	346	5.65	8.00	6.75	8.25	8.00	
	8" 6/7 Lobe 5.0 Stage HR	352	390	5.65	8.00	6.75	8.25	8.00	
	8" 7/8 Lobe 2.0 Stage HR	270	308	5.65	8.00	6.75	8.25	8.00	
	8" 7/8 Lobe 3.0 Stage HR	262	300	5.65	8.00	6.75	8.25	8.00	
	8" 7/8 Lobe 3.4 Stage HR	402	440	5.65	8.00	6.75	8.25	8.00	
	8" 7/8 Lobe 4.0 Stage HR	308	346	5.65	8.00	6.75	8.25	8.00	
	8" 7/8 Lobe 5.9 Stage HR	402	440	5.65	8.00	6.75	8.25	8.00	
	8"	6-3/4" 7/8 Lobe 2.9 Stage HR	307	340	5.04	6.75	5.50	7.00	6.75
		6-3/4" 7/8 Lobe 5.0 Stage HR	349	382	5.04	6.75	5.50	7.00	6.75
6-3/4" 7/8 Lobe 5.7 Stage HR		349	382	5.04	6.75	5.50	7.00	6.75	
7" 5/6 Lobe 5.3 Stage HR		333	366	5.04	7.00	5.75	7.25	7.00	
7" 5/6 Lobe 8.1 Stage HR		357	390	5.04	7.00	5.75	7.25	7.00	
7" 6/7 Lobe 6.5 Stage HR		372	405	5.04	7.00	5.75	7.25	7.00	
7" 6/7 Lobe 8.4 Stage HR		372	405	5.04	7.00	5.75	7.25	7.00	
7" 6/7 Lobe 11.4 Stage HR		372	405	5.04	7.00	5.75	7.25	7.00	
7" 7/8 Lobe 8.5 Stage HR		397	430	5.04	7.00	5.75	7.25	7.00	
6-1/2" 7/8 Lobe 3.5 Stage HR		322	355	4.80	6.50	5.00	6.75	6.50	
6-1/2" 7/8 Lobe 4.8 Stage HR		294	327	4.80	6.50	5.00	6.75	6.50	
6-1/2" 7/8 Lobe 5.0 Stage HR		285	318	4.80	6.50	5.50	6.75	6.50	
7"	6-3/4" 4/5 Lobe 7.0 Stage HR	301	334	4.80	6.75	5.50	7.00	6.75	
	6-3/4" 6/7 Lobe 5.0 Stage HR	291	324	4.80	6.75	5.50	7.00	6.75	
	6-3/4" 7/8 Lobe 2.0 Stage HR	244	277	4.80	6.75	5.50	7.00	6.75	
	6-3/4" 7/8 Lobe 2.9 Stage HR	301	334	4.80	6.75	5.50	7.00	6.75	
	6-3/4" 7/8 Lobe 3.0 Stage HR	216	249	4.80	6.75	5.50	7.00	6.75	
	6-3/4" 7/8 Lobe 3.0 Stage HR SLOW	295	328	4.80	6.75	5.50	7.00	6.75	
	6-3/4" 7/8 Lobe 3.3 Stage HR	336	369	4.80	6.75	5.50	7.00	6.75	
	6-3/4" 7/8 Lobe 5.0 Stage HR	343	376	4.80	6.75	5.50	7.00	6.75	
	6-3/4" 7/8 Lobe 5.7 Stage HR	343	376	4.80	6.75	5.50	7.00	6.75	
	6-3/4" 9/10 Lobe 8.0 Stage HR	351	384	4.80	6.75	5.50	7.00	6.75	
	5-1/4" 6/7 Lobe 10.9 Stage HR	362	394	3.74	5.25	4.00	5.50	5.25	
	5-1/4" 7/8 Lobe 8.3 Stage HR	362	394	3.74	5.25	4.25	5.50	5.25	
5-1/4"	POWER SECTION DIMENSIONS	I	J	S	T	U	V	W	
		IMPERIAL - USC (Len, Dia = in)							
		STATOR END	OVERALL LENGTH	ADAPTOR PIN Ø	STATOR TUBE OUTER Ø	STATOR TUBE INNER Ø	ROTOR CATCH SUB BLADE Ø	ROTOR CATCH SUB Ø	



	BIT BOX	LOWER SHAFT FLOW REST.	COMPRESSION NUT	BEARING AS- SEMBLY ADP.	BAA CAP	ROTOR ADAP- TOR CAP	ROTOR	BIT BOX $\phi$	FLOW RE- STRICTOR $\phi$	MANDREL $\phi$	COMPRESSION NUT $\phi$	BAA $\phi$	DRIVESHAFT $\phi$	ROTOR ADAP- TOR $\phi$	ROTOR CATCH STEM $\phi$
	A	B	C	D	E	F	G	J	K	L	M	N	O	P	R
<b>BEARING PACK</b>	<b>METRIC - SI (Lengths = m, Diameters = mm)</b>														
<b>5-1/4" ML</b>	0.23	0.51	0.73	0.91	1.24	2.05	2.20	131	100	82	99	103	55	99	54
<b>6-1/2" ML</b>	0.23	0.57	0.85	1.07	1.39	2.05	2.28	162	124	95	118	123	70	123	81
<b>7" ML</b>	0.23	0.61	0.86	1.04	1.44	2.25	2.47	178	140	111	135	127	76	127	81
<b>8" ML</b>	0.23	0.67	0.99	1.21	1.62	2.39	2.61	203	152	123	148	148	86	148	111
<b>9-5/8" ML</b>	0.28	0.74	1.15	1.36	1.92	2.77	3.02	229	179	145	172	180	99	180	111
<b>11-1/4" ML</b>	0.28	0.77	1.18	1.48	2.06	2.91	3.16	267	208	168	202	203	99	180	111

\*For Power Section Dimensions See Next Page

## MOTOR FISHING DIMENSIONS

POWER SECTION DIMENSIONS	METRIC - SI		
	I	J	S
11-1/4" 5/6 Lobe 4.6 Stage HR	9.02	9.6	191
11-1/4" 6/7 Lobe 5.0 Stage HR	8.71	9.3	191
11-1/4" 6/7 Lobe 5.5 Stage HR	9.53	10.11	195
11-1/4" 7/8 Lobe 5.7 Stage HR	9.27	9.86	195
8" 6/7 Lobe 4.0 Stage HR	8.08	8.48	126
8" 7/8 Lobe 3.0 Stage HR	6.93	7.34	132
8" 7/8 Lobe 3.4 Stage HR	10.46	10.87	135
8" 7/8 Lobe 4.0 Stage HR	8.03	8.43	121
8" 7/8 Lobe 5.9 Stage	10.26	10.67	121
9-5/8" 3/4 Lobe 6.0 Stage HR	8.59	8.99	152
9-5/8" 6/7 Lobe 5.0 Stage HR	8.15	8.56	163
9-5/8" 6/7 Lobe 6.0 Stage HR	9.12	9.53	163
9-5/8" 7/8 Lobe 5.7 Stage HR	8.89	9.3	163
8" 4/5 Lobe 5.3 Stage HR	8.23	8.64	125
8" 5/6 Lobe 3.0 Stage HR	5.28	5.69	124
8" 6/7 Lobe 4.0 Stage HR	7.67	8.08	126
8" 6/7 Lobe 5.0 Stage HR	8.81	9.22	126
8" 7/8 Lobe 2.0 Stage	6.5	6.91	125
8" 7/8 Lobe 3.0 Stage HR	6.53	6.93	132
8" 7/8 Lobe 3.4 Stage HR	10.06	10.46	135
8" 7/8 Lobe 4.0 Stage HR	7.59	8	121
8" 7/8 Lobe 5.9 Stage	9.83	10.24	121
6-3/4" 7/8 Lobe 2.9 Stage HR	7.62	8.05	109
6-3/4" 7/8 Lobe 5.0 Stage HR	8.86	9.32	107
6-3/4" 7/8 Lobe 5.7 Stage HR	8.86	9.32	118
7" 5/6 Lobe 5.3 Stage HR	8.26	8.71	129
7" 5/6 Lobe 8.1 Stage HR	8.89	9.35	129
7" 6/7 Lobe 6.5 Stage HR	9.25	9.7	121
7" 6/7 Lobe 8.4 Stage HR	9.25	9.7	121
7" 6/7 Lobe 11.4 Stage HR	9.25	9.7	119
7" 7/8 Lobe 8.5 Stage HR	9.93	10.39	128
6-1/2" 7/8 Lobe 3.5 Stage HR	7.92	8.38	103
6-1/2" 7/8 Lobe 4.8 Stage HR	7.06	7.49	101
6-1/2" 7/8 Lobe 5.0 Stage HR	7.06	7.49	115
6-3/4" 4/5 Lobe 7.0 Stage HR	7.42	7.87	107
6-3/4" 6/7 Lobe 5.0 Stage HR	7.21	7.65	110
6-3/4" 7/8 Lobe 2.0 Stage HR	5.97	6.43	110
6-3/4" 7/8 Lobe 2.9 Stage HR	7.42	7.87	109
6-3/4" 7/8 Lobe 3.0 Stage HR	5.28	5.74	115
6-3/4" 7/8 Lobe 3.0 Stage HR SLOW	7.29	7.75	116
6-3/4" 7/8 Lobe 3.3 Stage HR	8.33	8.79	114
6-3/4" 7/8 Lobe 5.0 Stage HR	8.69	9.12	107
6-3/4" 7/8 Lobe 5.7 Stage HR	8.69	9.12	118
6-3/4" 9/10 Lobe 8.0 Stage HR	8.69	9.12	123
5-1/4" 6/7 Lobe 10.9 Stage HR	9.04	9.42	87
5-1/4" 7/8 Lobe 8.3 Stage HR	8.64	9.02	87

## POWER SECTION DIMENSIONS

METRIC - SI  
Len = m, Ø = mm

ROTOR

CATCH STEM

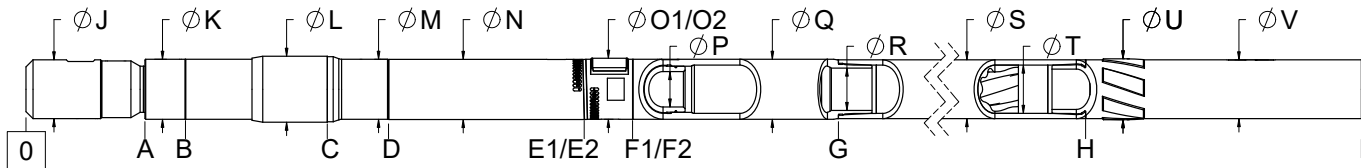
ROTOR MAJOR Ø

# MUD LUBE FISHING DIMENSIONS - EXTERNALS - METRIC (SI)

7501 42 STREET LEDUC, ALBERTA T9E 0R8 T: 780.986.3070 F: 780.986.3536

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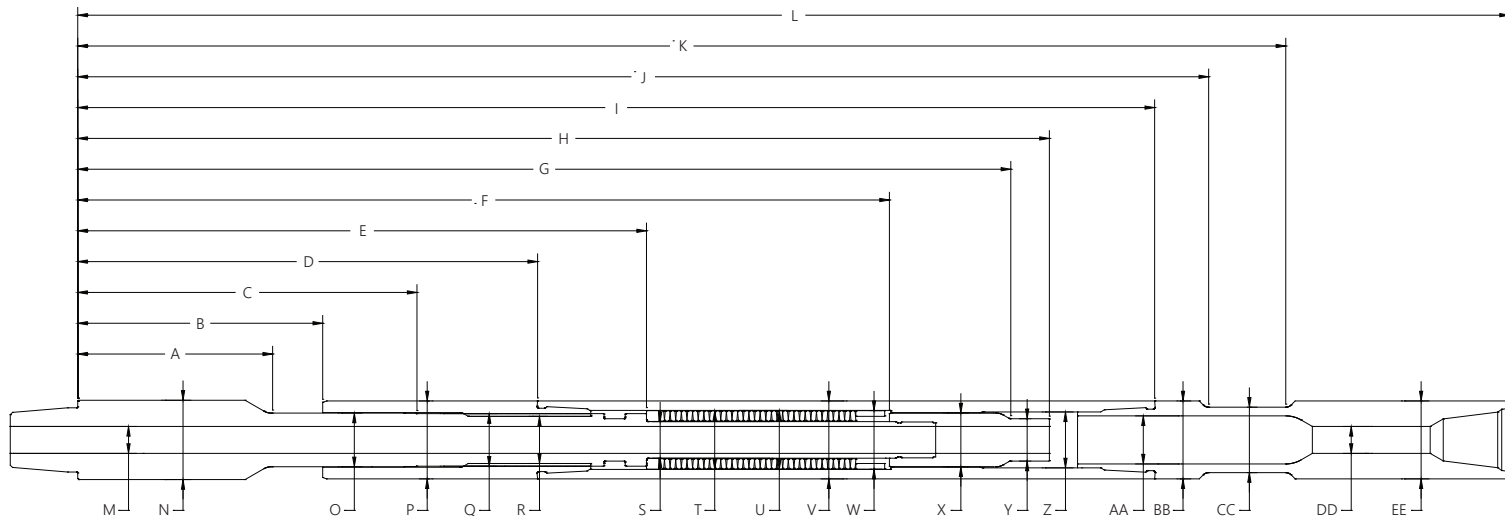
sales@dynomaxdrillingtools.com



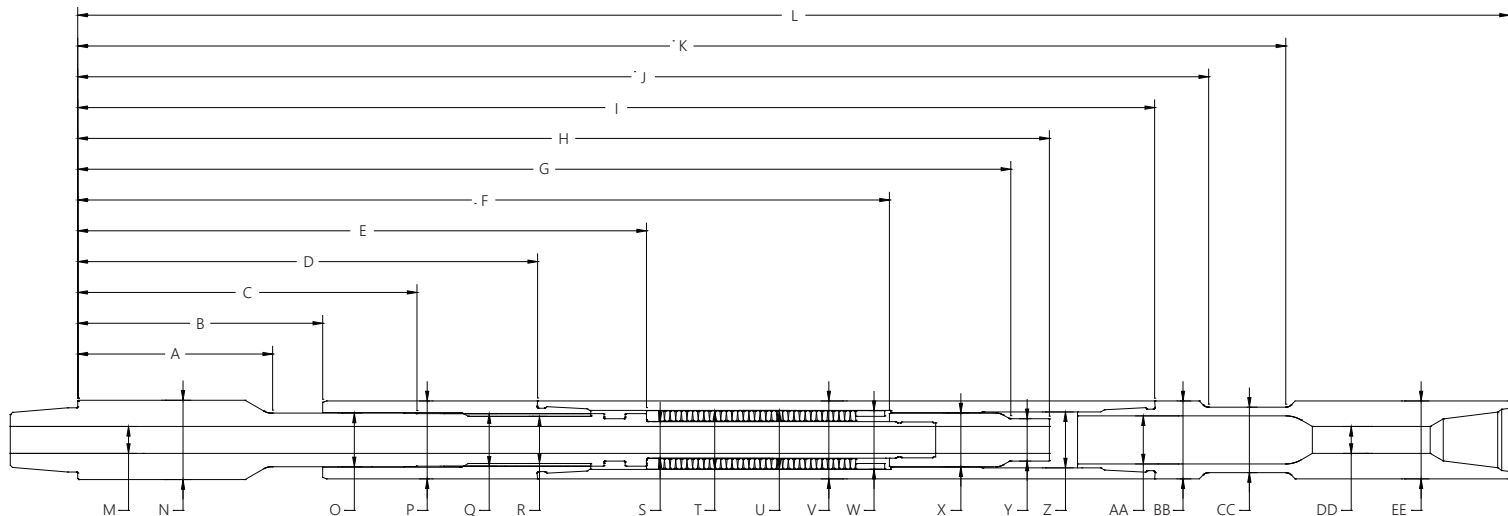
	LOWER HSG. FLOW REST.	BEARING HOUSING	STABILIZER SHOULDER	BEARING HOUSING END	BIT TO BEND (ADJUSTABLE)	ADAPTOR HSG (ADJUSTABLE)	BIT TO BEND (FIXED)	ADAPTOR HSG (FIXED)	STATOR START	BIT BOX Ø	LOWER HSG. FLOW REST. Ø	THREAD PROTECTOR Ø	BEARING HOUSING Ø	KICK/FIXED HOUSING Ø	PAD Ø (ADJUSTABLE)	PAD Ø (FIXED)	ADJ. MANDREL PIN Ø	ADAPTOR HOUSING Ø
	A	B	C	D	E1	F1	E2	F2	G	J	K	L	M	N	O1	O2	P	Q
<b>BEARING PACK</b>	<b>METRIC - SI (Lengths = m, Diameters = mm)</b>																	
<b>5-1/4" ML</b>	0.31	0.41	0.84	1.00	1.45	1.58	1.22	1.44	2.20	131	133	152	133	133	141	141	80	133
<b>6-1/2" ML</b>	0.33	0.45	0.98	1.12	1.67	1.82			2.31	162	167	181	181	173	181		99	173
<b>7" ML</b>	0.36	0.48	0.91	1.10	1.68	1.83			2.46	178	182	199	182	182	187		107	182
<b>8" ML</b>	0.37	0.54	1.07	1.28	1.90	2.06	1.52	2.07	2.59	203	210	229	210	203		213		203
<b>9-5/8" ML</b>	0.41	0.59	1.25	1.51	2.22	2.43			3.04	152	168	273	244	244		257	142	244
<b>11-1/4" ML</b>	0.41	0.62	1.25	1.67	2.37	2.59	--	--	3.17	267	286	311	286	286	298	--	184	286

\*For Power Section Dimensions See Next Page

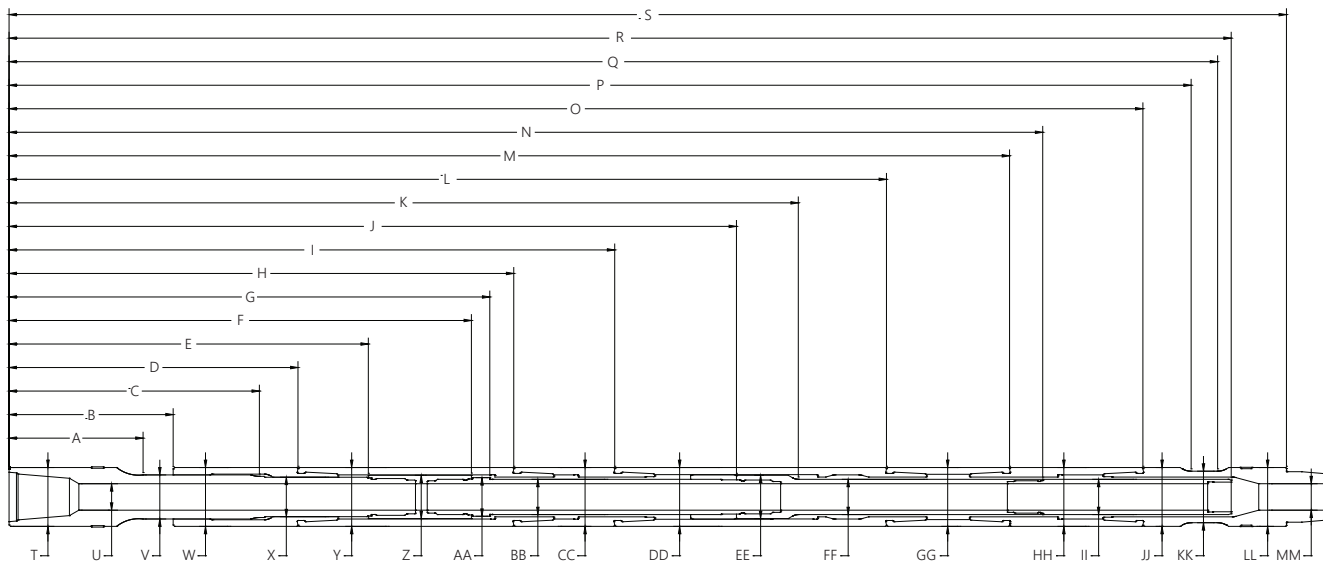
POWER SECTION DIMENSIONS	H	I	R	S	T	U	V	METRIC - SI (Len= m, Ø = mm)									
								I	J	S	T	U	V	W			
11-1/4"	11-1/4" 5/6 Lobe 4.6 Stage HR	8.74	9.83	2.10	286	235	292	286									
	11-1/4" 6/7 Lobe 5.0 Stage HR	8.31	9.37	2.10	286	200	292	286									
	11-1/4" 6/7 Lobe 5.5 Stage HR	9.27	10.34	2.10	286	235	292	286									
	11-1/4" 7/8 Lobe 5.7 Stage HR	9.04	10.11	2.10	286	200	292	286									
	8" 6/7 Lobe 4.0 Stage HR	8.28	9.27	1.78	203	171	210	203									
	8" 7/8 Lobe 3.0 Stage HR	7.11	8.1	1.78	203	171	210	203									
	8" 7/8 Lobe 3.4 Stage HR	10.67	11.66	1.78	203	171	210	203									
	8" 7/8 Lobe 4.0 Stage HR	8.28	9.27	1.78	203	171	210	203									
	8" 7/8 Lobe 5.9 Stage	10.67	11.66	1.78	203	171	210	203									
	9-5/8" 3/4 Lobe 6.0 Stage	8.84	9.83	1.78	244	200	251	244									
	9-5/8" 6/7 Lobe 6.0 Stage HR	8.33	9.32	1.78	244	200	251	244									
	9-5/8" 6/7 Lobe 6.0 Stage HR	9.4	10.39	1.78	244	200	251	244									
9-5/8" 7/8 Lobe 5.7 Stage HR	9.14	10.13	1.78	244	200	251	244										
8" 4/5 Lobe 5.3 Stage HR	8.38	9.35	1.44	203	171	210	203										
8" 5/6 Lobe 3.0 Stage HR	5.44	6.38	1.44	203	171	210	203										
8" 6/7 Lobe 4.0 Stage HR	7.82	8.79	1.44	203	171	210	203										
8" 6/7 Lobe 5.0 Stage HR	8.94	9.91	1.44	203	171	210	203										
8" 7/8 Lobe 2.0 Stage	6.86	7.82	1.44	203	171	210	203										
8" 7/8 Lobe 3.0 Stage HR	6.65	7.62	1.44	203	171	210	203										
8" 7/8 Lobe 3.4 Stage HR	10.21	11.18	1.44	203	171	210	203										
8" 7/8 Lobe 4.0 Stage HR	7.82	8.79	1.44	203	171	210	203										
8" 7/8 Lobe 5.9 Stage	10.21	11.18	1.44	203	171	210	203										
6-3/4" 7/8 Lobe 2.9 Stage HR	7.8	8.64	1.28	171	140	178	171										
6-3/4" 7/8 Lobe 5.0 Stage HR	8.86	9.7	1.28	171	140	178	171										
6-3/4" 7/8 Lobe 5.7 Stage HR	8.86	9.7	1.28	171	140	178	171										
7" 5/6 Lobe 5.3 Stage HR	8.46	9.3	1.28	178	146	184	178										
7" 5/6 Lobe 8.1 Stage HR	9.07	9.91	1.28	178	146	184	178										
7" 6/7 Lobe 6.5 Stage HR	9.45	10.29	1.28	178	146	184	178										
7" 6/7 Lobe 8.4 Stage HR	9.45	10.29	1.28	178	146	184	178										
7" 6/7 Lobe 11.4 Stage HR	9.45	10.29	1.28	178	146	184	178										
7" 7/8 Lobe 8.5 Stage HR	10.08	10.92	1.28	178	146	184	178										
6-1/2" 7/8 Lobe 3.5 Stage HR	8.18	9.02	1.22	165	127	171	165										
6-1/2" 7/8 Lobe 4.8 Stage HR	7.47	8.31	1.22	165	127	171	165										
6-1/2" 7/8 Lobe 5.0 Stage HR	7.24	8.08	1.22	165	140	171	165										
6-3/4" 4/5 Lobe 7.0 Stage HR	7.65	8.48	1.22	171	140	178	171										
6-3/4" 6/7 Lobe 5.0 Stage HR	7.39	8.23	1.22	171	140	178	171										
6-3/4" 7/8 Lobe 2.0 Stage HR	6.2	7.04	1.22	171	140	178	171										
6-3/4" 7/8 Lobe 2.9 Stage HR	7.65	8.48	1.22	171	140	178	171										
6-3/4" 7/8 Lobe 3.0 Stage HR	5.49	6.32	1.22	171	140	178	171										
6-3/4" 7/8 Lobe 3.0 Stage HR SLOW	7.49	8.33	1.22	171	140	178	171										
6-3/4" 7/8 Lobe 3.3 Stage HR	8.53	9.37	1.22	171	140	178	171										
6-3/4" 7/8 Lobe 5.0 Stage HR	8.71	9.55	1.22	171	140	178	171										
6-3/4" 7/8 Lobe 5.7 Stage HR	8.71	9.55	1.22	171	140	178	171										
6-3/4" 9/10 Lobe 8.0 Stage HR	8.92	9.75	1.22	171	140	178	171										
5-1/4" 6/7 Lobe 10.9 Stage HR	9.19	10.01	95	133	102	140	133										
5-1/4" 7/8 Lobe 8.3 Stage HR	9.19	10.01	95	133	108	140	133										



	MANDREL HEAD END	SPLINE HOUSING START	MANDREL BEARING END	SPLINE HOUSING END	MANDREL SPLINE END	LOCK NUT START	LOCK NUT UPSET START	LOCK NUT END	SPRING HOUSING END	TOP SUB UPSET START	TOP SUB UPSET END	TOP SUB END	BORE Ø	MANDREL HEAD Ø	MANDREL BEARING Ø	SPLINE HOUSING Ø	MANDREL SPLINE Ø	SPLINE HOUSING INSIDE Ø	MANDREL SPRING Ø	SPRING Ø	SPRING HOUSING INSIDE Ø	SPRING HOUSING Ø	SPACER Ø	LOCK NUT Ø	LOCK NUT UPSET Ø	SPRING HOUSING BORE Ø	TOP SUB INSIDE Ø	LOWER TOP SUB Ø	TOP SUB UPSET Ø	TOP SUB BORE Ø	UPPER TOP SUB Ø
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	BB	CC	DD	EE
Shock	IMPERIAL - USC (Lengths, Diameters = in.)																														
287SS02	6.3	8.2	12.9	17.8	22.5	30.8	36.0	37.8	41.4	-	-	51.4	0.88	2.88	2.00	2.88	1.89	1.67	1.50	2.20	2.24	2.88	2.20	1.99	1.63	2.13	1.70	2.88	-	0.88	2.88
312SS02	7.0	9.1	10.9	20.1	25.2	34.7	40.5	42.3	47.5	-	-	59.3	1.00	3.13	2.25	2.30	2.16	1.90	1.63	2.37	2.41	3.13	2.37	2.10	1.78	2.32	1.85	3.13	-	1.00	3.13
375SS02	14.3	16.4	22.6	31.8	37.9	47.6	53.1	55.6	62.8	-	-	83.1	1.25	3.75	2.75	3.75	2.71	2.40	2.13	3.10	3.13	3.75	3.09	2.75	2.25	3.06	2.63	3.75	-	1.25	3.75
475SS02	13.2	16.3	21.6	30.2	37.4	53.1	61.0	63.5	70.2	73.7	77.7	93.2	1.75	4.81	3.50	4.81	3.45	3.06	2.38	3.80	3.83	4.81	3.80	3.50	2.75	3.63	3.12	4.81	4.25	1.75	4.81
500SS02	12.7	15.8	21.1	29.7	36.9	52.6	60.5	63.0	69.7	73.2	78.2	92.7	1.75	5.15	3.50	5.06	3.45	3.06	2.38	3.80	3.83	5.06	3.80	3.50	2.75	3.63	3.12	5.06	4.25	1.75	5.06
650SS02	17.6	21.0	27.4	37.9	46.1	65.8	75.0	77.5	85.4	89.4	94.4	109.9	2.50	6.56	5.00	6.56	4.81	4.22	3.75	5.36	5.40	6.56	5.35	5.00	4.13	5.25	4.63	6.56	6.06	2.81	6.56
675SS02	17.6	21.0	27.4	37.9	46.1	65.8	75.0	77.5	85.4	89.4	94.4	109.9	2.50	6.75	5.00	6.75	4.81	4.22	3.75	5.36	5.40	6.75	5.35	5.00	4.13	5.25	4.63	6.75	6.06	2.81	6.75
800SS02	19.9	23.5	25.5	40.4	49.0	71.4	80.6	85.4	95.0	103.0	109.0	129.0	2.81	8.00	6.25	8.00	6.03	5.25	4.75	6.49	6.63	8.00	6.50	6.26	5.25	6.25	5.63	8.00	7.12	2.81	8.00
950SS02	28.1	33.5	41.7	58.0	68.9	97.3	110.5	115.3	122.9	130.9	138.9	160.3	3.00	9.50	7.25	9.50	7.18	6.20	5.25	7.84	7.90	9.50	7.75	7.26	5.25	7.50	6.56	9.50	8.38	3.00	9.50
1125SS02	27.6	33.6	44.1	60.6	72.4	106.3	121.5	126.3	135.5	143.5	153.5	178.4	3.50	11.25	8.25	11.25	8.08	7.08	6.25	9.63	9.69	11.25	9.55	8.26	6.25	9.00	8.00	11.25	10.00	3.50	11.25
1200SS02	19.2	24.6	52.9	52.9	63.9	90.8	106.0	110.8	120.4	133.1	-	153.3	3.25	12.00	9.00	12.00	8.51	7.57	6.66	9.65	9.69	12.00	9.55	8.50	7.00	9.00	8.00	12.00	10.00	3.50	-
1400SS02	27.1	32.5	42.3	60.8	72.8	107.7	122.9	127.7	137.3	152.4	-	174.2	3.25	14.00	11.00	14.00	9.96	8.86	7.75	11.64	11.69	14.00	11.54	12.25	9.00	11.00	10.00	14.00	11.00	3.50	-



	MANDREL HEAD END	SPLINE HOUSING START	MANDREL BEARING END	SPLINE HOUSING END	MANDREL SPLINE END	LOCK NUT START	LOCK NUT UPSET START	LOCK NUT END	SPRING HOUSING END	TOP SUB UPSET START	TOP SUB UPSET END	TOP SUB END	BORE Ø	MANDREL HEAD Ø	MANDREL BEARING Ø	SPLINE HOUSING Ø	MANDREL SPLINE Ø	SPLINE HOUSING INSIDE Ø	MANDREL SPRING Ø	SPRING Ø	SPRING HOUSING INSIDE Ø	SPRING HOUSING Ø	SPACER Ø	LOCK NUT Ø	LOCK NUT UPSET Ø	SPRING HOUSING BORE Ø	TOP SUB INSIDE Ø	LOWER TOP SUB Ø	TOP SUB UPSET Ø	TOP SUB BORE Ø	UPPER TOP SUB Ø
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	BB	CC	DD	EE
Shock	METRIC - SI (Lengths = m) (Diameters = mm)																														
287SS02	0.16	0.21	0.33	0.45	0.57	0.78	0.91	0.96	1.05	-	-	1.31	22	73	51	73	48	42	38	56	57	73	56	51	41	54	43	73	-	22	73
312SS02	0.18	0.23	0.28	0.51	0.88	1.03	1.03	1.03	1.21	-	-	1.51	25	79	57	58	55	48	41	60	61	79	60	53	45	59	47	79	-	25	79
375SS02	0.36	0.42	0.57	0.81	0.96	1.21	1.35	1.41	1.6	-	-	2.11	32	95	70	95	69	61	54	79	80	95	78	70	57	78	67	95	-	32	95
475SS02	0.34	0.41	0.55	0.77	0.95	1.35	1.55	1.61	1.78	1.87	1.97	2.37	44	122	89	122	88	78	60	97	97	122	97	89	70	92	79	122	108	44	122
500SS02	0.32	0.4	0.54	0.75	0.94	1.34	1.54	1.6	1.77	1.86	1.99	2.35	44	131	89	129	88	78	60	97	97	129	97	89	70	92	79	129	108	44	129
650SS02	0.45	0.53	0.7	0.96	1.17	1.67	1.91	1.97	2.17	2.27	2.4	2.79	64	167	127	167	122	107	95	136	137	167	136	127	105	133	118	167	154	71	167
675SS02	0.45	0.53	0.7	0.96	1.17	1.67	1.91	1.97	2.17	2.27	2.4	2.79	64	171	127	171	122	107	95	136	137	171	136	127	105	133	118	171	154	71	171
800SS02	0.51	0.6	0.65	1.03	1.24	1.81	2.05	2.17	2.41	2.62	2.77	3.28	71	203	159	203	153	133	121	165	168	203	165	159	133	159	143	203	181	71	203
950SS02	0.71	0.85	1.06	1.47	1.75	2.47	2.81	2.93	3.12	3.32	3.53	4.07	76	241	184	241	182	157	133	199	201	241	197	184	133	191	167	241	213	76	241
1125SS02	0.7	0.85	1.12	1.54	1.84	2.7	3.09	3.21	3.44	3.64	3.9	4.53	89	286	210	286	205	180	159	245	246	286	243	210	159	229	203	286	254	89	286
1200SS02	0.49	0.62	1.34	1.34	1.62	2.31	2.69	2.81	3.06	3.38	-	3.89	83	305	229	305	216	192	169	245	246	305	243	216	178	229	203	305	254	89	-
1400SS02	0.69	0.83	1.07	1.54	1.85	2.73	3.12	3.24	3.49	3.87	-	4.42	83	356	279	356	253	225	197	296	297	356	293	311	229	279	254	356	279	89	-



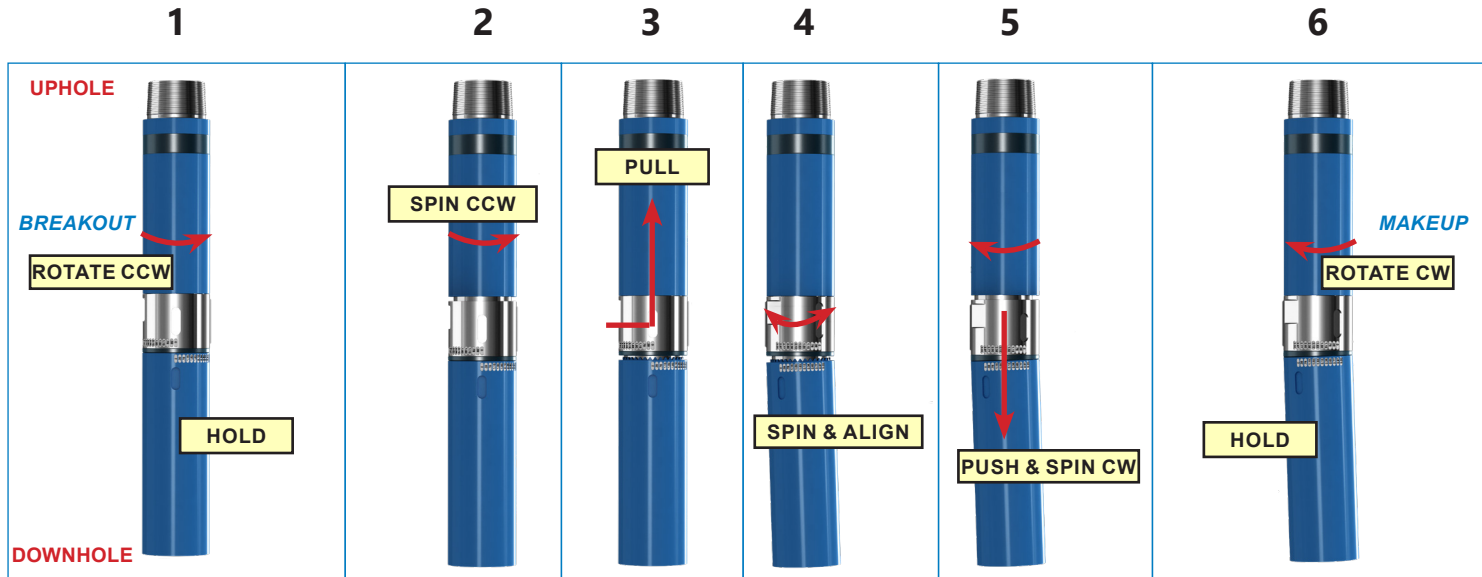
	MANDREL HEAD END	SPLINE HOUSING START	MANDREL BEARING END	SPLINE HOUSING END	KNOCKER SUB START	KNOCKER SUB END	HYDRAULIC MANDREL HEAD END	KNOCKER HOUSING END	COMPENSATION HOUSING END	LATCH MANDREL START	LATCH MANDREL HEAD END	HYDRAULIC HOUSING END	LATCH HOUSING END	WASH PIPE START	PISTON HOUSING END	BOTTOM SUB UPSET START	BOTTOM SUB UPSET END	WASH PIPE END	BOTTOM SUB END	SPLINE MANDREL HEAD Ø	SPLINE MANDREL BORE Ø	SPLINE MANDREL BEARING Ø	SPLINE HOUSING Ø	SPLINE MANDREL Ø	KNOCKER HOUSING Ø	KNOCKER SUB Ø	HYDRAULIC MANDREL HEAD Ø	HYDRAULIC MANDREL Ø	COMPENSATION HOUSING Ø	HYDRAULIC HOUSING Ø	LATCH MANDREL HEAD Ø	LATCH MANDREL Ø	LATCH HOUSING Ø	PISTON HOUSING Ø	WASH PIPE Ø	UPPER BOTTOM SUB Ø	BOTTOM SUB UPSET Ø	LOWER BOTTOM SUB Ø	BOTTOM SUB BORE Ø	
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	BB	CC	DD	EE	FF	GG	HH	II	JJ	KK	LL	MM	
<b>Jar</b>	<b>IMPERIAL - USC (Lengths, Diameters = in.)</b>																																							
DMJ-500	31.4	36.1	54.7	64.6	80.5	89.3	90.8	96.0	125.5	149.8	155.0	169.6	200.1	198.8	227.4	231.5	241.7	237.8	269.6	5.00	2.25	3.75	5.00	3.50	5.00	3.68	3.28	3.00	5.00	5.00	3.68	3.00	5.00	5.00	3.00	5.00	4.38	5.00	2.25	
DMJ-650	35.2	40.2	59.9	69.0	86.5	95.3	96.8	101.9	133.8	160.9	166.1	180.9	211.2	210.9	238.0	241.6	251.9	249.9	278.9	6.56	2.56	4.75	6.56	4.34	6.56	4.68	3.81	3.50	6.56	6.56	4.68	3.50	6.56	6.56	3.50	6.56	5.75	6.56	2.56	
DMJ-675	35.2	40.2	59.9	69.0	86.5	95.3	96.8	101.9	133.8	160.9	166.1	180.9	211.2	210.9	238.0	241.6	251.9	249.9	278.9	6.81	2.56	4.75	6.81	4.34	6.81	4.68	3.81	3.50	6.81	6.81	4.68	3.50	6.81	6.81	3.50	6.81	5.75	6.81	2.56	
DMJ-800	34.7	39.1	59.4	67.2	86.0	96.0	97.6	101.4	133.2	161.6	167.4	182.0	214.1	213.6	240.8	244.5	254.8	252.6	279.9	8.00	2.81	6.00	8.14	5.37	8.14	5.93	5.00	4.50	8.14	8.14	5.93	4.50	8.14	8.14	4.50	8.14	7.25	8.14	2.81	
<b>Jar</b>	<b>METRIC - SI (Lengths = m) (Diameters = mm)</b>																																							
DMJ-500	0.8	0.92	1.39	1.64	2.04	2.27	2.31	2.44	3.19	3.8	3.94	4.31	5.08	5.05	5.78	5.88	6.14	6.04	6.85	127	57	95	127	89	127	93	83	76	127	127	93	76	127	127	76	127	111	127	57	
DMJ-650	0.89	1.02	1.52	1.75	2.2	2.42	2.46	2.59	3.4	4.09	4.22	4.59	5.36	5.36	6.05	6.14	6.4	6.35	7.08	167	65	121	167	110	167	119	97	89	167	167	119	89	167	167	89	167	146	167	65	
DMJ-675	0.89	1.02	1.52	1.75	2.2	2.42	2.46	2.59	3.4	4.09	4.22	4.59	5.36	5.36	6.05	6.14	6.4	6.35	7.08	173	65	121	173	110	173	119	97	89	173	173	119	89	173	173	89	173	146	173	65	
DMJ-800	0.88	0.99	1.51	1.71	2.18	2.44	2.48	2.58	3.38	4.1	4.25	4.62	5.44	5.43	6.12	6.21	6.47	6.42	7.11	203	71	152	207	136	207	151	127	114	207	207	151	114	207	207	114	207	184	207	71	

NC	Internal Flush	Full Hole	Extra Hole	Slim Hole	Wide Open
<b>NC26</b>	2-3/8 IF	-	-	2-7/8 SH	-
<b>NC31</b>	2-7/8 IF	-	-	3-1/2 SH	-
-	-	-	3-1/2 XH	4 SH	-
<b>NC38</b>	3-1/2 IF	-	-	4-1/2 SH	3-1/2 WO
<b>NC40</b>	-	4 FH	-	-	-
<b>NC46</b>	4 IF	-	4-1/2 XH	-	4 WO
<b>NC50</b>	4-1/2 IF	-	5 XH	-	-

Motor Size		Connection	Float Valve Size
2-3/8" (60 mm) SERIES 1		1-1/2" REG	1F-2R
2-7/8 in (73 mm) SERIES 2		2-3/8 PAC	1F-2R
3-1/8 in (79 mm) SERIES 1		2-3/8 PAC	1F-2R
3-3/8 in (86 mm) SERIES 1		2-3/8 IF (NC26)	1F-2R
3-1/2 in (89 mm) SERIES 1		2-3/8 IF (NC26)	1F-2R
3-3/4 in (95 mm) SERIES 1		2-3/8 IF (NC26)	1F-2R
3-3/4 in (95 mm) SERIES 1	optional	2-7/8 REG	1F-2R
4-3/4 in (121 mm) MUD LUBE		3-1/2 IF (NC38)	2F-3R
5" (127 mm) SERIES 2		3-1/2 IF (NC38)	2F-3R
5-1/4" (133 mm) MUD LUBE		3-1/2 IF (NC38)	2F-3R
5-1/2" (140 mm) SERIES 1		3-1/2 IF (NC38)	2F-3R
6-1/2 in (165 mm) SERIES 1		4-1/2 IF (NC50)	4R
6-1/2 in (165 mm) SERIES 1	optional	4-1/2 XH (NC46)	4R
6-1/2 in (165 mm) SERIES 3		4-1/2 IF (NC50)	4R
6-1/2 in (165 mm) SERIES 3	optional	4-1/2 XH (NC46)	4R
6-1/2 in (165 mm) MUD LUBE		4-1/2 IF (NC50)	4R
6-1/2 in (165 mm) MUD LUBE	optional	4-1/2 XH (NC46)	4R
6-3/4 in (171 mm) SERIES 1		4-1/2 IF (NC50)	4R
6-3/4 in (171 mm) SERIES 1	optional	4-1/2 XH (NC46)	4R
6-3/4 in (171 mm) SERIES 3		4-1/2 IF (NC50)	4R
6-3/4 in (171 mm) SERIES 3	optional	4-1/2 XH (NC46)	4R

Motor Size		Connection	Float Valve Size
7 in (178 mm) SERIES 2		4-1/2 IF (NC50)	4R
7 in (178 mm) SERIES 2	optional	5-1/2 REG	4R
7 in (178 mm) SERIES 3		4-1/2 IF (NC50)	4R
7 in (178 mm) SERIES 3	optional	4-1/2 XH (NC46)	4R
7 in (178 mm) MUD LUBE		4-1/2 IF (NC50)	4R
7 in (178 mm) MUD LUBE	optional	4-1/2 XH (NC46)	4R
8 in (203 mm) SERIES 1		6-5/8 REG	5F-6R
8 in (203 mm) SERIES 2		6-5/8 REG	5F-6R
8 in (203 mm) MUD LUBE		6-5/8 REG	5F-6R
9-5/8 in (244 mm) SERIES 1		6-5/8 REG	5F-6R
9-5/8 in (244 mm) SERIES 1	optional	7-5/8 REG	5F-6R
9-5/8 in (244 mm) MUD LUBE		6-5/8 REG	5F-6R
9-5/8 in (244 mm) MUD LUBE	optional	7-5/8 REG	5F-6R
11-1/4 in (286 mm) SERIES 1		6-5/8 REG	5F-6R
11-1/4 in (286 mm) SERIES 1	optional	7-5/8 REG	5F-6R
11-1/4 in (286 mm) MUD LUBE		6-5/8 REG	5F-6R
11-1/4 in (286 mm) MUDE LUBE	optional	7-5/8 REG	5F-6R

# ADJUSTABLE SETTING INSTRUCTIONS



**NOTE: DO NOT USE ROTARY TABLE**

Degree Setting Increments
0.39
0.78
1.15
1.50
1.83
2.12
2.38
2.60
2.77
2.90
2.97
3.00

Instructions	
1	Break connection as shown.
2	<b>Chain tong 3-4 turns. DO NOT USE Rotary Table.</b>
3	Retract the Kick Ring.
4	Chain tong the Kick Ring. <b>NOTE:</b> Number on Kick Ring should line up with the same number on the Kick Housing to achieve desired angle. (Eg. <b>1.83</b> lines up with <b>1.83</b> )
5	Slide Kick Ring back to engage Kick Housing. Chain tong snug.
6	Torque to proper setting.

4 (Eg. **1.83** lines up with **1.83**)



	FT-LB	Nm
<b>2-3/8" S1</b>	1,600	2,170
<b>2-7/8" S1</b>	2,500	3,390
<b>3-1/8" S1</b>	2,500	3,390
<b>3-3/4" S1</b>	3,500	4,800
<b>4-3/4" ML</b>	10,000	13,600
<b>5" S2</b>	12,000	16,250
<b>5-1/4" ML</b>	12,500	16,900
<b>5-1/2" S1</b>	13,000	17,600
<b>6-1/2" S1/S2/S3</b>	25,000	33,900
<b>6-3/4" S1/S3/ML</b>	25,000	33,900
<b>7" S3/ML</b>	32,000	43,390
<b>8" S1/S2/ML</b>	40,000	54,000
<b>9-5/8" S1/ML</b>	60,000	81,300
<b>11-1/4" S1/ML</b>	75,000	101,690

# CONVERSION TABLES

FRACTION	DECIMAL	MM	FRACTION	DECIMAL	MM	FRACTION	DECIMAL	MM	FRACTION	DECIMAL	MM
1/64	0.0156	0.396	17/64	0.2656	6.746	33/64	0.5156	13.096	49/64	0.7656	19.446
1/32	0.0313	0.795	9/32	0.2813	7.145	17/32	0.5313	13.495	25/32	0.7813	19.845
3/64	0.0469	1.191	19/64	0.2969	7.541	35/64	0.5469	13.891	51/64	0.7969	20.241
1/16	0.0625	1.588	5/16	0.3125	7.938	9/16	0.5625	14.288	13/16	0.8125	20.638
5/64	0.0781	1.984	21/64	0.3281	8.334	37/64	0.5781	14.684	53/64	0.8281	21.034
3/32	0.0938	2.383	11/32	0.3438	8.733	19/32	0.5938	15.083	27/32	0.8438	21.433
7/64	0.1094	2.779	23/64	0.3594	9.129	39/64	0.6094	15.479	55/64	0.8594	21.829
1/8	0.1250	3.175	3/8	0.3750	9.525	5/8	0.6250	15.875	7/8	0.8750	22.225
9/64	0.1406	3.571	25/64	0.3906	9.921	41/64	0.6406	16.271	57/64	0.8906	22.621
5/32	0.1563	3.970	13/32	0.4063	10.320	21/32	0.6563	16.670	29/32	0.9063	23.020
11/64	0.1719	4.366	27/64	0.4219	10.716	43/64	0.6719	17.066	59/64	0.9219	23.416
3/16	0.1875	4.763	7/16	0.4375	11.113	11/16	0.6875	17.463	15/16	0.9375	23.813
13/64	0.2031	5.159	29/64	0.4531	11.509	45/64	0.7031	17.859	61/64	0.9531	24.209
7/32	0.2188	5.558	15/32	0.4688	11.908	23/32	0.7188	18.258	31/32	0.9688	24.608
15/64	0.2344	5.954	31/64	0.4844	12.304	47/64	0.7344	18.654	63/64	0.9844	25.004
1/4	0.2500	6.350	1/2	0.5000	12.700	3/4	0.7500	19.050	1	1.0000	25.400

TYPE	IMPERIAL	IS EQUAL TO	IMPERIAL	METRIC	
			LENGTH	1 [in]	.125 [ft]
AREA	1 [in <sup>2</sup> ]	--	645 [mm <sup>2</sup> ]	--	
VOLUME	1 [gal]	.0238 [bbl]	3.78 [l]	.00378 [m <sup>3</sup> ]	
WEIGHT	1 [lbm]	--	.454 [kg]	--	
FORCE	1 [lbf]	--	4.45 [N]	.445 [DaN]	
TORQUE	1 [ft-lb]	--	1.36 [N-m]	--	
FLOW	1 [gpm]	.0238 [bbl/min]	3.78 [lpm]	.00378 [m <sup>3</sup> /min]	
SPEED	1 [rev/gal]	--	.265 [rev/l]	--	
PRESSURE	1 [psi]	--	6.895 [kPa]	--	
VISCOSITY	1 [sec/qt]	--	1.06 [s/L]	--	
PLASTIC VISCOSITY	1 [lb/100 ft <sup>2</sup> ]	--	.00479 [mPa.s]	479 [cP]	
DENSITY	1 [ppg]	--	120 [kg/m <sup>3</sup> ]	--	
POWER	1 [HP]	--	.746 [kW]	--	

TEMPERATURE	[C]	[F]
		-40
	-20	-4
	0	32
	20	68
	40	104
	60	140
	80	176
	100	212
	120	248
	140	284
	160	320
	180	356
	200	392
	220	428
	240	464
	260	500





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