

9.63" BRUTE (S3) 7/8 4.8 G2 CS 120-BTB

PHYSICAL DATA

Motor: BICOBRUTE Transmission: Clawshaft Bearing Pack: G2

A - Bit to Middle of Stabilizer Blade	57.2 in (1,423 mm)	*Common Top Connection	6-5/8 or 7-5/8 REG
B - Bit to Bend	120.1 in (3,050 mm)	*Common Bottom Connection	6-5/8 or 7-5/8 REG
C - Overall Motor Length	37.2 ft (11.3 m)	Recommended Bit Sizes	12" + (304 mm +)
D - Max OD of Motor at Stabilizer Upset	10.87 in (276.1 mm)	Estimated Weight	7,100 lbs (3,220 kg)
E - Radius at Kickpad	5.00 in (127.0 mm)		

*Additional connections are available. Contact BICO sales for inquiries

MOTOR LOADS

	Continuous Operation	Ultimate Loading
WOB	127,000 lbs (57,605 kg)	146,050 lbs (66,250 kg)
Backreaming	58,000 lbs (26,310 kg)	66,700 lbs (30,255 kg)
Bit Overpull*	288,000 lbs (130,600 kg)	1,506,000 lbs (683,000 kg)
Body Overpull*	1,062,000 lbs (481,720 kg)	2,295,000 lbs (1,040,990 kg)

*While not operating - Continuous Loads (Lay motor down if exceeded) - Ultimate Loads (Motor parts may be left in hole if load approached)

PREDICTED BUILD RATES

Degrees / 100 ft (30 m)

Bend Angle	Slick Motor Hole Size (in)			Partial Stabilized 1/4" UG Hole Size (in)			Full Stabilized 1/8" UG Hole Size (in)		
	12-1/4	14-3/4	17-1/2	12-1/4	14-3/4	17-1/2	12-1/4	14-3/4	17-1/2
1.00	3.2	0.7	—	4.5	5.3	6.3	3.7	4.5	5.4
1.15	3.9	1.4	—	5.1	5.9	6.8	4.5	5.1	6.0
1.50	5.5	3.0	—	6.9	7.2	8.2	6.4	6.4	7.3
1.75	6.6	4.1	1.4	8.3	8.2	9.1	7.7	7.4	8.3
1.83	7.0	4.5	1.8	8.7	8.5	9.5	8.1	7.7	8.6
2.00	7.8	5.3	2.5	9.6	9.2	10.1	9.0	8.3	9.3
2.12	8.3	5.8	3.1	10.3	9.6	10.6	9.7	8.8	9.7
2.25	8.9	6.4	3.7	11.0	10.1	11.1	10.4	9.5	10.2
2.38	9.5	7.0	4.3	11.6	10.8	11.6	11.1	10.2	10.7
2.50	10.1	7.6	4.8	12.3	11.4	12.0	11.7	10.9	11.2
2.90	11.9	9.4	6.7	14.4	13.6	13.6	13.8	13.0	12.7
3.00	12.4	9.9	7.1	15.0	14.1	14.0	14.4	13.5	13.1

— No rotation is recommended in the hole curvature over the maximum calculated BUR. This condensed Build Rate table is the result of a theoretical geometry analysis of the motor and is presented as guideline for job design and planning. Due to the extensive variability in drilling BHA design, formation characteristics and other external factors, BICO cannot guarantee the values stated in the Build Rate table. If different hole size calculation is required, contact BICO's Representative. Fixed Bend Housing bend angles are subject to availability.

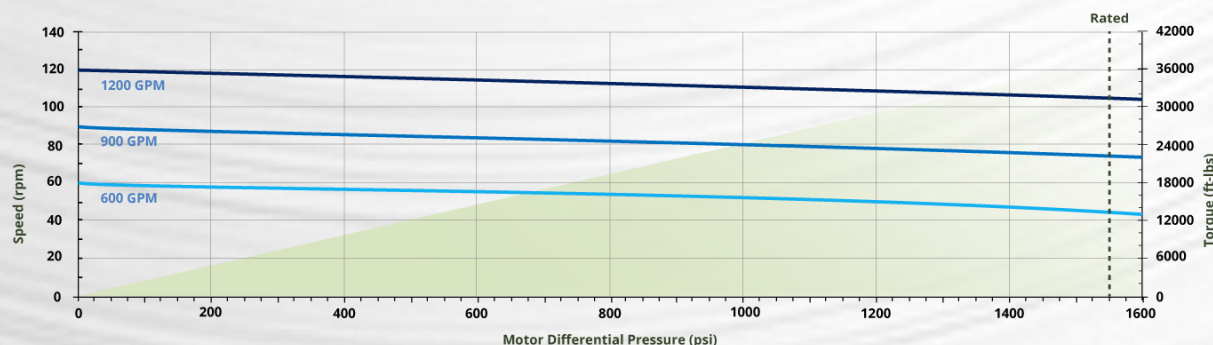
POWER SECTION SPECIFICATIONS

Lobes: 7/8 Stages: 4.8

Flow Range Min	600 gpm (2,271 lpm)	Max Recommended Pressure	1,550 psi (124.1 bar)
Flow Range Max	1,200 gpm (4,542 lpm)	Torque Slope	26.22 ft-lbs/psi (515.94 Nm/bar)
Speed Ratio	0.10 rev/gal (0.026 rev/l)	Torque @ Max Recommended Pressure	40,641 ft-lbs (55,101 Nm)
No Load Bit Speed	60 - 120 rpm	Power @ Max Recommended Pressure	905 hp (600 kW)
No Load Pressure Drop	500 psi (34.50 bar)	**Stall Torque	60,962 ft-lbs (82,652 Nm)

BICO Elastomers are rated up to 400°F+ (204°C+)

PERFORMANCE CURVE



**Stall Torque: Stall torque is assumed to be at 1.5X the torque at maximum recommended pressure, it might reach up to 3X the torque at maximum recommended pressure
Disclaimer: The Performance Curve and Performance Data published by BICO Drilling Tools are based on recorded dynamometer data at surface temperature (72 °F) on a standard fit configuration between rotor and stator, with clean water, and are presented as a reference to the potential power of the power section and or motor. Downhole conditions such as highly elevated bottom hole temperatures and different drilling/intervention fluids shall require adjusted loose fits that may produce reduced power during surface (dynamometer) testing and will achieve the expected torque and speed values when reaching planned conditions.