BICO DRILLING TOOLS
AN SBO COMPANY

M.A.S.T.E.R.
MOTOR ASSIST SYSTEM TO ENHANCE ROP

7.00" x 6.75" MASTER (S3) 7/8 5.0 B5



PHYSICAL DATA

Motor: BICOMASTER Bearing Pack: B5

A - Bit to Middle of Stabilizer Blade	24.1 in (613 mm)	***Common Top Connection**	4-1/2 IF or XH
B - Overall Motor Length	33.3 ft (10.2 m)	***Common Bottom Connection**	4-1/2 IF or XH
C - Max OD of Motor at Stabilizer	7.25 in (184.2 mm)	**Estimated Weight**	3,000 lbs (1,361 kg)

**Additional connections are available. Contact BICO sales for inquiries*

MOTOR LOADS

	Continuous Operation	Ultimate Loading
WOB	81,000 lbs (36,740 kg)	93,150 lbs (42,250 kg)
Backreaming	56,000 lbs (25,400 kg)	64,400 lbs (29,210 kg)
Bit Overpull*	197,000 lbs (89,360 kg)	740,000 lbs (335,660 kg)
Body Overpull*	526,000 lbs (238,590 kg)	1,070,000 lbs (485,340 kg)

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

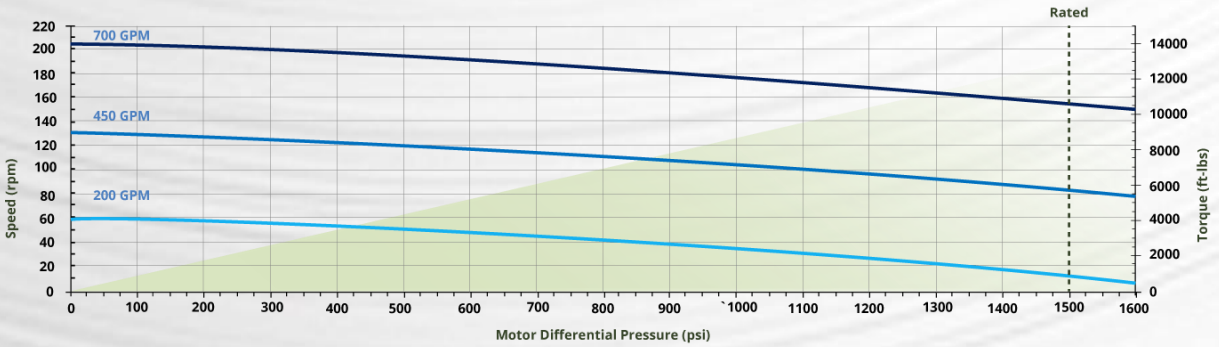
POWER SECTION SPECIFICATIONS

Lobes: 7/8 **Stages:** 5.0

Flow Range Min	200 gpm (757 lpm)	**Max Recommended Pressure**	1,500 psi (103.4 bar)
Flow Range Max	700 gpm (2,649 lpm)	**Torque Slope**	9.20 ft-lbs/psi (181.00 Nm/bar)
Speed Ratio	0.29 rev/gal (0.077 rev/l)	**Torque @ Max Recommended Pressure**	13,800 ft-lbs (18,710 Nm)
No Load Bit Speed	58 - 203 rpm	**Power @ Max Recommended Pressure**	364 hp (272 kW)
No Load Pressure Drop	500 psi (34.50 bar)	****Stall Torque**	20,700 ft-lbs (28,065 Nm)
BICO Elastomers are rated up to 400°F+ (204°C+)			

***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*

PERFORMANCE CURVE



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.*

www.bicodrilling.com

©2025 BICO Drilling Tools, Inc. All rights reserved. v1.1