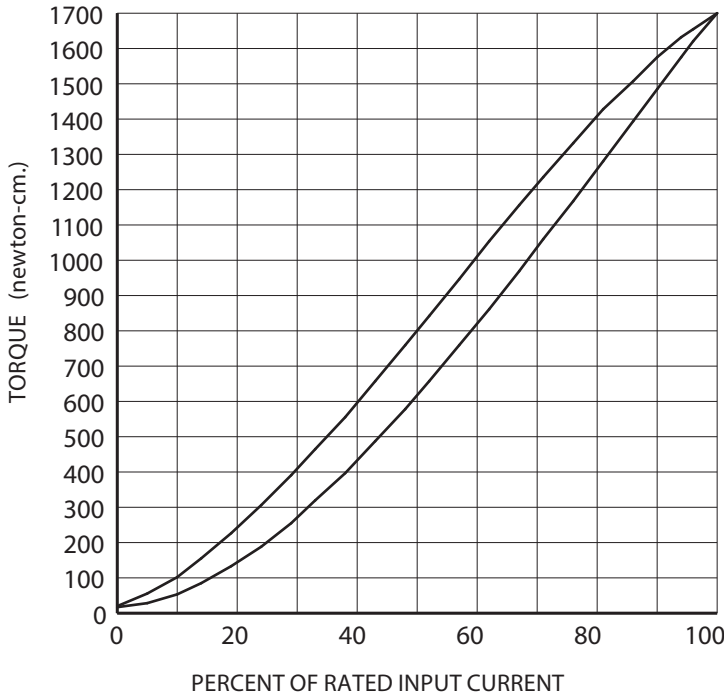


magnetic particle BRAKE B150

34 to 1700 N-cm.

DATA SHEET



CHARACTERISTICS - With no electrical excitation, the shaft freely rotates. With electrical excitation, the shaft becomes coupled to the housing. Torque is proportional to input current (see torque graph), and independent of RPM. While the load torque is less than the output torque, the shaft won't rotate. When the load torque is increased, the brake will slip smoothly at the torque level set by the coil input current.

Torque range	34 to 1700	Newton-cm.
Maximum RPM	1300	RPM
Maximum heat dissipation	80	watts
Maximum case temperature	75	degrees C
Maximum overhung load	54	kg.
Shaft inertia	1.7×10^{-4}	kg-m ²
Response (unforced)	130	mSec.
Response (forced)	65	mSec.
Weight55	kg.

← Use the lower curve when approaching a current value from 0 amps. Use the upper curve when approaching a current value from 100% rated current.

	6 V	12 V	24 V	90 V
COIL RESISTANCE (Ohms)	3.4	13.5	55	600
100% INPUT CURRENT (Amps)	1.7	0.85	0.42	0.14

← Rated D.C. coil voltages available: 6 VDC (yellow leads), 12 VDC (green leads), 24 VDC (red leads), 90 VDC (blue leads).

BRAKE PERFORMANCE

TORQUE: At the rated voltage, the brake will draw 100% of the rated input current. Output torque will be 1700 Newton-cm.

POWER SUPPLY: A "constant-current" D.C. power supply is recommended for the best accuracy in open-loop control systems. This type of power supply will maintain a fixed (but adjustable) output current, regardless of the temperature of the brake, so output torque is constant (but adjustable).

HEAT DISSIPATION: The brake can dissipate 80 slip (thermal) watts continuously. For continuous slip, calculate the heat input by the formula :

$$\text{HEAT (watts)} = \text{RPM} \times \text{TORQUE (N-cm.)} / 960$$

Using the above formula: At rated torque, the maximum continuous slip RPM is 45. The brake can dissipate higher amounts of heat for short periods of time, but the average must not exceed 80 watts. The case temperature must never exceed 75 degrees C.

INSTALLATION INFORMATION

Do not drop, or strike with a hammer. Keep away from fine metal filings and fine metal chips. Shield from liquids.

Do not attempt to remove the brake shaft or retaining rings.

All pulleys, sprockets, couplings, thru-shafts (hollow shaft models), etc. must mount as slide fits. Use a puller to remove stuck components. Never pry or hammer to install or remove components.

Solid Shaft Models: Center your set-screw on the flat of the brake shaft.

Hollow Shaft Models: Never tighten the 1/4" set screws of the clamp ring without the thru-shaft installed. Tighten set screws to 8 Newton-meters, using a 1/8" (0.125 inch) hex key wrench.

Always use a flexible coupling when connecting the shaft of a rigidly mounted brake to the shaft of another rigidly mounted device. Precisely align both shafts.

Always electrically ground the brake.



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