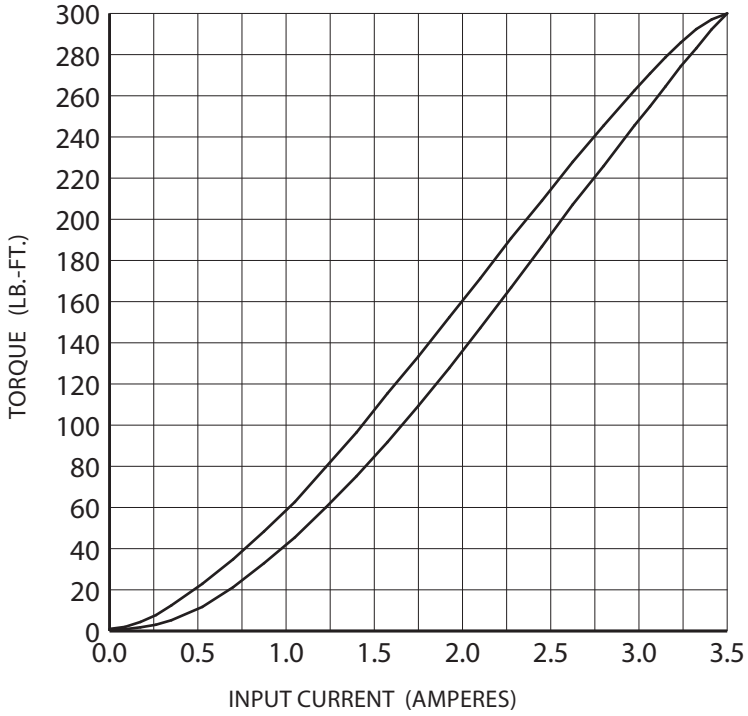
magnetic particle CLUTCH POC-400F 4 to 300 lb.-ft.

DATA SHEET



At Clutch Temperature :	68°F	160°F
COIL RESISTANCE (Ohms)	6.9	8.3
INPUT D.C. VOLTAGE, @3.5 Amps 24		29

Do not exceed 3.5 amperes or 300 lb.-feet torque.

CHARACTERISTICS - With no electrical excitation, the input shaft & output shaft freely rotate. With electrical excitation, the input shaft becomes coupled to the output shaft. Torque is proportional to input current (see torque graph), and independent of slip RPM. While the load torque is less than the output torque, the clutch drives without slip. When the load torque is increased, the clutch will slip smoothly at the torque level set by the coil input current.

Torque range	4 to 300	lb.-ft.
Maximum RPM	1800	RPM
Heat dissipation, @ 100 RPM	550	watts
Heat dissipation, @ 1000 RPM	1200	watts
Heat dissipation, w/ piped air . .	1900	watts
Piped air pressure	21	psi
Piped air volume	14	$ft.^3$/minute
Maximum case temperature	160	degrees F
Maximum overhung load	325	lbs.
Output shaft inertia	1.3	lb.-in.-sec ^{2}
Input shaft inertia	2.2	lb.-in.-sec ^{2}
Weight	259	lbs.

TORQUE CURVE - Use the lower torque curve when an input current value is approached from 0 amperes. Use the upper torque curve when the input current value is approached from the 100% input current.

Mount horizontally only.

CLUTCH PERFORMANCE

TORQUE: At 24 volts, the clutch will draw 100% of the rated input current, at 68°F. Output torque will be 300 lb.-ft.

POWER SUPPLY: A "constant-current" D.C. power supply is recommended for the best accuracy in open-loop control systems.

HEAT DISSIPATION: Fins on the internal rotor move air which increases cooling with increasing input RPM. A fan or compressed air flowing into cooling port increases cooling. For continuous slip, calculate the heat input by the formula :

HEAT (watts) = SLIP RPM x TORQUE (lb.-ft.) x 0 .14

Using the above formula: At rated torque, the maximum continuous slip RPM (input RPM - output RPM) is 13, (45 with compressed air). The clutch can dissipate higher amounts of heat for short periods of time, but the average must not exceed ratings. The case temperature must never exceed 160°F.

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 clutch shaft or retaining rings.

All pulleys, sprockets, couplings, etc. must mount as slide fits. Use a puller to remove stuck components. Never pry or hammer to install or remove components.

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

Always electrically ground the clutch.

COMPRESSED AIR COOLING For additional cooling, connect low pressure (21 psi max.) compressed air to the 3/8-19 BSPT tapped hole. (British Standard Tapered Pipe Thread). An adaptor fitting to 3/8" hose is included. Use clean, filtered, oil free, moisture free air.

Placid Industries
www.placidindustries.com
1580 Lake St., Elmira, NY 14901, USA
Phone 518 523-2422 Fax 518 523-2746