INSTALLATION AND MAINTENANCE

Installation of MIC Clutches

Installation Procedure

1. The unit is shipped ready for installation, and no adjustment or assembly is required. All models are designed with a D-cut bore and a custom gear, pulley, or hub as specified by the customer.

2. The unit is usually mounted on a D-cut shaft-end. Use a snap ring or set collar on the field side and the D-cut shaft step on the gear/pulley side of the clutch to secure the unit axially on the shaft.

3. Loosely restrain the torque tab to prevent the field from rotating due to field bushing drag. Some axial and radial clearance should be allowed so that the field bushing is not pre-loaded.

4. Connect the lead wires to the power source and energize the field. If any noise or drag is noticed when the clutch is disengaged, make sure that the torque tab is not binding and that the gear/pulley input is not being subjected to excessive side-loading. Most MIC units do not have ball bearings thus are only capable of minimal side-loading.

Loss of Torque

The most common service problem is loss of torque. The following quick checks can easily be made and will usually take care of the problem:

1. Check for wear: The unit may be worn out and need replacing.

2. Check the friction surfaces for contaminants: Remove if any are present (see Contamination).

3. Check for proper power input: Use a DC voltmeter across the field terminals and verify that normal voltage is being supplied. If the power control has a potentiometer, this should be turned to full power for this test. The voltage should also be read as the potentiometer is turned down and should be approximately proportional.

4. If the voltage is zero or low, the wiring should be checked for a grounded (shorted) or open coil.

Ogura Industrial
100 Randolph Rd.
Somerset, NJ 08875

www.ogura-clutch.com
info@ogura-clutch.com
(732) 271-7361

A. Grounded coil: With the power off and one lead disconnected, measure the resistance between one field terminal and the field shell. The ohmmeter should register no change (infinite resistance) with a good unit. Repeat with other terminal. If the ohmmeter shows a reading, this means there is some grounding to the shell, and the field should be replaced.

B. Open coil: With the power off and both leads disconnected, measure the resistance between the two field terminals. The ohmmeter should give a reading very close to the following. An open coil would give no reading (infinite resistance) and must be replaced.

Table 1

Model	2.5N	5N	8N
Coil Resistance [Ω] (DC 24V – 20°C)	172	155	155

Contamination

Care should be taken so that contaminants such as oil, grease, etc. do not come in contact with the working faces of the unit. In some cases it may be necessary to provide a cover or baffle to prevent this. Oil and grease on the friction surfaces should be removed by wiping with a small amount of environmentally friendly grease solvent. However, depending on the permeability of the grease or oil, it may be impossible to remove completely, so if the unit shows signs of slippage it needs to be replaced.

Heat

If the unit appears to be running hot, first check the temperature on the outside of the field. The field temperature can be around 150°F in an ambient temperature of 72°F due to the heat generated by the coil and operation of the unit. Excessive heat may be a source of failure and can be corrected by:
- Insuring that the input voltage is correct.
- Providing ventilation of the unit.
- Reducing system inertia and/or cycle rate.