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## Customized Test System for Appliance Motors

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### APPLICATION

This Custom Motor Test System is designed to test face mount motors used in appliances.

### COMPONENTS

- Custom Dynamometer Table with Safety Enclosure
- Safety Interlock
- Heavy-Duty Equipment Rack
- HD-810 Hysteresis Dynamometer and Blower: modified for high speed testing
- DSP6001 High-Speed Programmable Dynamometer Controller
- TM 208 In-Line Torque Transducer
- M-TEST 4.0 Motor Testing Software
- Custom Motor Fixture
- Coupling
- High-Speed, Digital Power Analyzer
- Motor-Driven Variable Transformer (15 A) and Controller
- PC, Monitor, Keyboard

### SAFETY FEATURES

#### Safety Enclosure

A customized safety enclosure surrounds the dynamometer, torque transducer, coupling and the motor under test. The enclosure slides along the table for easy access to the equipment mentioned above and locks in place for testing.

The enclosure's side panels are composed of two 0.032 inch stainless steel skins bonded to a Dyneema® core to provide the ultimate safety guard. The front of the enclosure is a high impact resistant polycarbonate door which allows for visibility of the motor and dynamometer during a test. The steel rear door is vented to prevent negative pressure. Both the front and rear panel doors lock in place for safe testing.



#### Safety Interlocking

For an extra safety precaution, electrical interlocking switches are built into the system. The two exterior and two interior safety locks must be secured in order for a test to initiate. Accordingly, a test will abort if any of the locks become unfastened at any point during a test.

#### Emergency Stop Button

Allows the user to shut down all power to the system if a problem situation should arise.

### CUSTOM MOTOR FIXTURE

This CMTS includes a custom-designed motor fixture to accommodate face mount motors. This fixture is compatible with all Magtrol Model HD-800 Series Dynamometers. To test other types of motors, the fixture can be retrofitted with supplementary adapter plates.



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