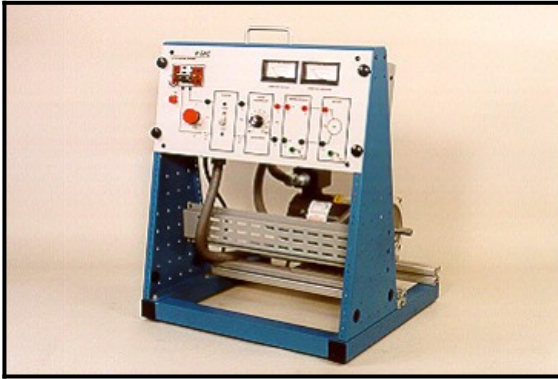


## 417 Permanent Magnet, DC Motor Trainer



### Product Dimensions

(L x W x H)  
 Approx. 19in. x 19in. x 25in. (480 x 480 x 640 mm)  
 50lbs. (23kg)

### Shipping Dimensions

Approx. 85lbs. (39kg)

### FEATURES AND SPECIFICATIONS

- Welded aluminum baseplate.
- Provision for bench-top mounting.
- Motors mounted on T-slotted rails which accommodate 184T and 56 frame motors (56 frame standard).
- Master circuit breaker with lock-out / tag-out capability.
- Silkscreened panel face with identification of line and motor lead numbers.
- Color-coded banana-jack patch cord receptacles.
- Voltmeter and ammeter.
- Permanent internal grounding of all elements.
- Enclosure cover safety interlock switch.
- Four instructor fault insertion switches (on rear of control enclosure).
- Large emergency stop switch.
- Keyed instructor power switch (on rear of control enclosure).
- Large pilot light.
- Packaging for shipment via motor freight.

### SERVICE REQUIREMENTS

110 VAC - 240 VAC, 3-phase, based on individual product.

### COURSE CONTENT

The courseware, useful in both an instructor-led or self-

### GENERAL DESCRIPTION

This series of motor trainers represents a cross section of common industrial motors. Each motor module includes a welded aluminum mounting baseplate, aluminum control box support structure, and a steel control enclosure. All motor wiring is accomplished through banana jack receptacles on the control enclosure's front panel face. Each unit comes equipped with an appropriate voltmeter and ammeter. Four instructor fault insertion switches are provided on each motor module. An optional motor loading module attaches to each motor unit using a flexible coupling provided with the loading module.

### OPTIONS

[#560-000 - Electrical Trades Training Manual \(IPT\)](#)

[#560-001 - Electrical Trades Handbook \(IPT\)](#)

[#562-000 - Electric Motor Repair](#)

[#040-747 - Video series, 2-part, titled, "AC Motor Control & Troubleshooting" \(Industrial Text & Video\).](#)

[#040-749 - Videos, two-part series titled "DC Motor Control & Troubleshooting" \(Industrial Text & Video\)](#)

[#410-001 - Portable digital multimeter.](#)

[#410-001E - Portable Multimeter, Economy](#)

[#410-002 - Non-Contact Tachometer.](#)

[#410-100 - Prony Brake Assembly.](#)

[#410-500 - Use/Exercise Guide \(additional\)](#)

### RELATED ITEMS

[#273-940 - DC, Permanent Magnet Motor \(PMDC\) Cutaway](#)

[#410 - Split-Phase, Capacitor Start, AC Motor Trainer](#)

[#411 - Permanent Split Capacitor Start, \(PSC\) AC Motor Trainer](#)

[#412 - Three-Phase, Squirrel Cage Rotor, AC Motor Trainer](#)

[#415 - Shunt Wound, DC Motor Trainer](#)

[#416 - Compound, Cumulatively Wound, DC Motor Trainer](#)

[#419 - Motor Loading Device](#)

[#426 - DC Permanent Magnet Motor Control Trainer](#)

### STANDARD ACCESSORIES

\* Patch cords. \* Use/Exercise Guide. \* Instructor and student wiring diagrams. \* Related textbook (with purchase of four or more devices).

directed format, includes a textbook on motors and motor control, and twenty-one illustrated, hands-on exercises.

Exercises include:

- \* Introduction to motor control terminology and construction.
- \* Interpreting motor nameplate data. \* Wiring the split-phase, capacitor-start AC motor. \* Wiring the permanent split capacitor-start AC motor. \* Wiring the three-phase, wye/star configured squirrel cage rotor AC motor. \* Wiring the three-phase, delta configured squirrel cage rotor AC motor. \* Introduction to troubleshooting. \* Troubleshooting the split-phase, capacitor-start AC motor. \* Troubleshooting the permanent split, capacitor-start AC motor. \* Troubleshooting the three-phase, wye/star configured squirrel cage rotor AC motor. \* Troubleshooting the three-phase, delta configured squirrel cage rotor AC motor. \* Wiring the shunt-wound DC motor. \* Wiring the Series-wound DC motor \* Wiring the compound, cumulatively-wound DC motor. \* Wiring the permanent magnet DC motor. \* Troubleshooting the shuntwound DC motor. \* Troubleshooting the serieswound DC motor. \* Troubleshooting the compound, cumulatively-wound DC motor. \* Troubleshooting the permanent magnet DC motor.

This device has been designed for professionals for use under controlled circumstances for training only. DAC assumes no liability for injury resulting from the use or misuse of this product.

Motor-driven rotating machines have inherent risks of injury. This device should be operated only in the company of professional training mentors or experienced industrial maintenance personnel.