

# Transformer Wiring Training System



Model: 408-000

DAC Worldwide's Transformer Wiring Training System (408-000) is a realistic training device that replicates the conditions and circumstances that an electrical worker encounters when making common power transformer connections in the field and industry. This self-contained, tabletop training system provides a safe, inexpensive, yet realistic alternative to paper-based learning without the danger of full-voltage field experience.

The training system includes two complete sets of three-phase transformers so that paralleling can be explored, as well as other industrial components. The device, coupled with a comprehensive student manual, creates a complete, self-paced learning system that reflects realistic industrial and commercial applications.

Useful within industrial training programs or in an educational setting, the Transformer Wiring Training System will help make this fundamental part of electrical maintenance training more memorable and effective.

## **Practice Hands-On Electrical Instrumentation Skills for Various Applications**

A wide variety of activities can be performed using the Transformer Wiring Training System, all at reduced voltages for safety – for example, a 208VAC, three-phase source is stepped down, creating a 41VAC, three-phase system. The steel frame provides durability to stand up to frequent use, and to aide learners in becoming better prepared for the tasks they will encounter on the job. Learners will get first-hand experience using banana jacks, plugs,

ground/primary connections, and secondary connections using both three-phase and single-phase applications.

This electrical training system utilizes a 16-gauge, formed-steel support structure, which allows for attachment to base assembly or associated mounting bench products. It includes a circuit breaker for lock-out/tag-out, a pilot light, an emergency stop switch, and an internal electrical interlock, which de-energizes power when opening electrical enclosure.

Through the use of both single-phase and three-phase activities within this training system, learners will benefit from eight (8) instructor fault switches in the rear of device, which simulates failure conditions and allow real-time assessment and troubleshooting for students.

### **Hands-On Exercises and Learning Activities Lead to Realistic Results**

DAC Worldwide's Transformer Wiring Training System also features exercises and learning activities that focus more on results and less on secondary academic background information. This comprehensive training system offers content in electrical principles, with individual learning activities provided in a self-paced or instructor-led format.

Using the course content, learners will study topics like analyzing transformer single-phase/three-phase voltages, identifying transformer turns ratio (TTR), demonstrating how connections can produce incorrect motor rotation, and more. Students will also get training on hands-on skills, like performing transformer connections, interconnecting multiple transformers in Wye or Delta configurations, simulating a burned-out transformer in a three-phase bank, and much more.

### **Student Training Manual Available to Enhance Learning**

A copy of this course's Student Training Manual is available with the training system. The Student Training Manual takes the technical content contained in the learning objectives, and combines it into one perfectly-bound book. If you would like to inquire about purchasing additional Student Training Manuals for your program, please contact your local DAC Worldwide Representative for more information.

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## **FEATURES & SPECIFICATIONS**

- Welded aluminum base assembly using 1.5" square, 1/8" wall tubing
- 16-Gauge formed-steel support structure, allowing for attachment to base assembly or associated mounting bench products
- 16-Gauge, formed-steel electrical enclosure
- Powder-coated surfaces throughout
- Powder-coated and silk-screened 1/8" aluminum front panel face, 19" x 18.5"
- Keyed instructor power switch
- Circuit breaker with provision for lock-out/tag-out
- Pilot light and emergency stop switch

- Internal electrical interlock, de-energizing power when opening electrical enclosure
- Color-coded banana-jack receptacles for all transformers and associated components
- Permanent internal grounding (not dependent on student wiring)
- Eight (8) instructor fault switches (rear of device)
- Allows for both single-phase and three-phase activities
- Banana jack connections used throughout
- Low-voltage operation using step-down transformers
- Internally-fused
- Packaging for shipment via motor freight

## **PRODUCT DIMENSIONS**

- **Product Dimensions**  
(W x H x D)  
19in. x 19in. x 15in. (480 x 480 x 381 mm)  
45 lbs. (23 kg)
- **Shipping Dimensions**  
70 lbs. (28 kg)

## **UTILITIES**

- 208V/60Hz/3Ph power

## **ACCESSORIES**

- Patch cords
- Panel-mounted voltmeter and phase rotation meter
- Use/Exercise Guide

## **OPTIONS**

- #945 - Bench Top Panel Rack (Recommended)
- #560-000 - Electrical Trades Training Manual (IPT)
- #560-001 - Electrical Trades Handbook (IPT)
- #902 - Electromechanical Workstation

**COURSE CONTENT** The courseware, useful in both an instructor-led or self-directed format, includes illustrated,

hands-on exercises, including:

- Perform single-phase transformer connections
- Analyze transformer single phase voltages
- Identify three-phase connections
- Interconnect multiple transformers in Wye or Delta configurations
- Analyze three-phase voltage readings
- Identify “transformer turns ratio” (TTR)
- Demonstrate how three-phase transformer connections can produce incorrect motor rotation
- Demonstrate how to parallel single-phase and three-phase transformers
- Simulate a burned-out transformer in a three-phase bank

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