Computer Aided Desktop Trainers

Hampden® ENGINEERING CORPORATION

ISO 9001:2015

MADE IN U.S.A.

Clothes Dryer

MODEL H-DGCD-CSI Gas or **H-DECD-CSI** Electric Clothes Dryer Simulator demonstrates the principles of operation and troubleshooting used on top-of-the-line dryers.

Additional Features:

- Dampness Control Disconnect
- Timer
- Separate Meters for Voltage, Watts, Current, Resistance Readings

Clothes Washer

MODEL H-DCWS-CSI Clothes Washer Simulator serves to demonstrate the principles of operation and troubleshooting of a current model, electrically powered automatic operation clothes washer.

Additional Features:

- Cycling Motor Disconnects
- Active Circuit Breaker
- Separate Meters for Voltage, Current, Watts, Resistance Readings
- Complete Action Thermostat
- Ohmmeter/Line Voltage Interlock
- Complete Voltage/Resistance Test Points

Gas Heating System

MODEL H-DGHS-CSI Gas Heating System demonstrates a complete and dynamic aid for adjustment, analysis and troubleshooting of gas fired hot water heating systems. Normal operation and 21 different malfunctions may be simulated.

Additional Features:

- Draft Meter
- Spark Indicator (flame sensor)
- Hot Surface Ignitor
- Combustion Blower
- Air Proving Switch
- Two Zones (circulators)
- Boiler Temperature/Pressure
- Test Meter CO_2, O_2, CO Stack Temperature
- Gas Valve

Air Conditioning

MODEL H-DACS-CSI Air Conditioner Simulator serves to demonstrate the principles of operation and troubleshooting of a current model, electrically powered air conditioner.

Additional Features:

- Suction and Discharge Pressure Gauges
- CHARGE (refrigerant) Control
- Two Large Identified Air Flow Checks
- Motor Disconnects
- Active Circuit Breaker
- Complete Action Thermostat
- Separate Meters for Voltage, Watts, Resistance Readings

Oil Heating System

MODEL H-DOHS-CSI Oil Heating System demonstrates the principles of operation and adjustment, analysis and troubleshooting of oil fired hot water heating systems.

Additional Features:

- Draft Meter, Overfire/Stack/Chimney
- Oil Tank Level Indicators
- Spark Indicator
- Burner Air Flow Control
- Adjustable Draft Regulator
- Boiler Temperature/ Pressure
- Smoke Test Meter
- Two Zone Circulation Pumps
- Flue CO_2 Meter
- Burner Suction/Discharge Meters

Refrigeration & Freezer

MODEL H-DRFS-CSI Refrigeration/Freezer Simulator demonstrates the principles of operation & troubleshooting techniques applied to a top-of-the-line residential refrigerator-freezer.

Additional Features:

- Suction and Discharge Pressure Gauges
- Refrigerator/Freezer Thermometers
- Adjustable Temperature Control
- Charge (Refrigerant)
- Control Condenser/ Evaporator Air
- Flow Indicators
- Six Customer Control Switches
- Separate Meters for Voltage, Watts, Resistance Readings

Absorption Chiller/Heater

MODEL H-DACH-CSI Absorption Chiller/Heater Simulator demonstrates the principles of operation, controls, safety and interlocking controls, and troubleshooting using aqueous lithium bromide as the absorbent.

Additional Features:

- Low Temperature Cut-out
- High Pressure Relief
- Chilled Water Flow Switch
- Cooling Water Flow Switch
- Monitoring of Burner and Generator
- Temperature and Pressure Monitoring:
  - First-stage Generator
  - Second-stage Generator
  - Evaporator and Condenser
  - High and Lo Temperature Heat Exchanger
  - Absorber
- Microprocessor Based Control Panel

Heat Pump

MODEL H-DHPS-CSI Heat Pump Simulator demonstrates the principles of operation and troubleshooting techniques used on a modern large capacity heat pump.

Additional Features:

- Gas Suction & Discharge Pressures
- Two-step Indoor Thermostat
- Outdoor Building Thermostat
- Dynamic Temperature Variation/Adjustable Outdoor Temperature
- Ohmmeter/Line Voltage Interlock
- Outdoor Coil Thermostat
- Supply Air Temperature Monitor
- Light Identified Motor/Relay Action
- Active Inside Temperature Indicator
- Refrigerant (CHARGE) Control
- Two Different Motor Types
- High Pressure Cut-out Switch
- Four Student Activated Visual Checks

Wastewater Treatment

MODEL H-DWTS-CSI Wastewater Treatment Simulator. The operator monitors and controls every aspect of the treatment process including: inlet pump control, grit removal, primary sludge removal, biological filtering, chlorine mixer, sludge management

Additional Features:

- Incoming Flow
- Influent pH
- Bar Rack Screening
- Primary Sludge Removal
- Initial Dissolved Oxygen
- Mid Dissolved Oxygen
- Final Dissolved Oxygen
- Flocculation Basin
- Return Activation Sludge (RAS)
- Waste Activated Sludge (WAS)
- BOD and TSS Levels
- Disinfection (Cl) Injector
- Residual Chlorine Removal
- Effluent pH

Oil Heating Electric System

MODEL H-DOHE-CSI Oil Heating Electric Simulator provides a complete and dynamic aid for electrical analysis and troubleshooting of oil fired hot water heating systems.

Additional Features:

- Cad Cell Tester
- Complete Primary Control Circuit
- Spark Indicator
- Main Circuit Breaker
- Dynamic Temperature Variation
- Ohmmeter/Voltage Meter
- Schematic and Pictorial Test Points
- Malfunction Indication
- Flame Indicator
- Boiler Low Temperature Limit Switch
- Two Zone Circulation
- Electrode Isolation
- Adjustable Zone Thermostats & Thermometers
- Adjustable Ambient Temperature Gauge
- Boiler Temperature Gauge
- Hot Water Temperature Gauge
- Running and Calling Indicators

COMPUTER AIDED DESKTOP

Standard Features

- Schematic and Pictorial Test Points
- Specification Chart
- Improper Equipment Use Warning
- Component Isolate Switch
- Malfunction Indication
- Windows Digital Control System

Real-Time Performance

Hampden's line of Computer Assisted Panel Instruction Modules have been designed to provide realistic System Operation & Troubleshooting functions to virtually ***Any Classroom***!

Each module's front panel is silkscreened with a complete schematic & pictorial layout of all system operations and combined with actual test-point pushbuttons, LEDs and meters.

Each module's front panel displays a complete schematic and pictorial view of the system.l

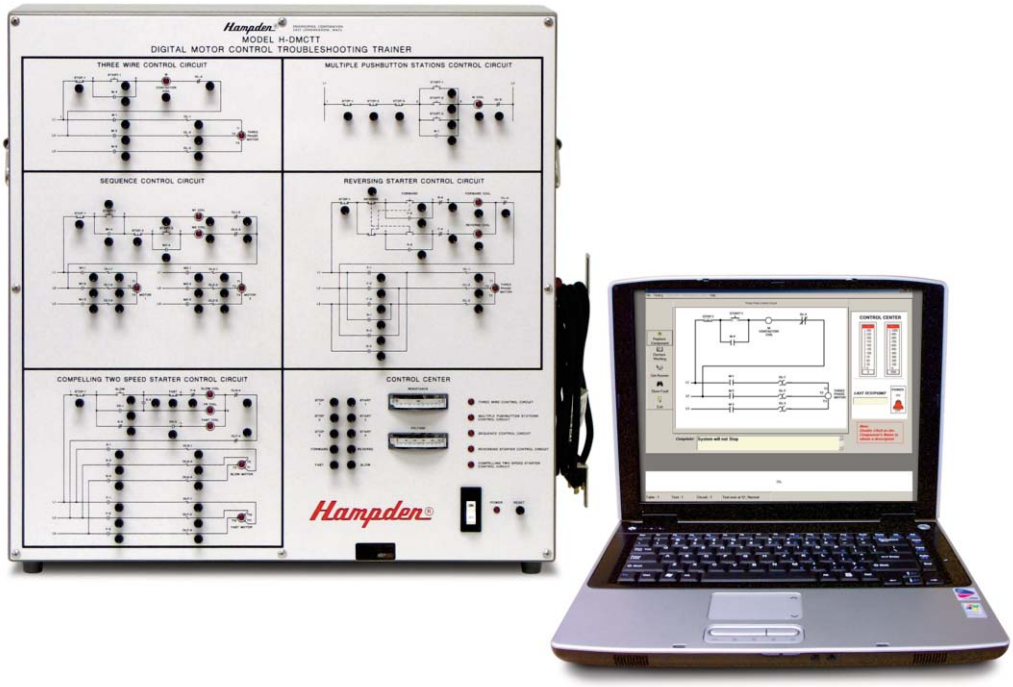
Shown, MODEL H-DACH-CSI with MODEL H-LTCS Laptop (included)

Realistic Problem Solving in the Classroom

All Instruction Modules have the capability of inserting system specific Mechanical & Electrical malfunctions—singly or in multiples. This gives students the added experience of resolving realistic problem situations which would otherwise be very difficult for an instructor to create in a classroom.

Hampden

Standard Products…Designed to Meet Your Growing Needs!



Motor Control & Troubleshooting

MODEL H-DMCTT shown with optional MODEL H-LTCS laptop computer

Model H-DMCTT Motor Control Troubleshooting Trainer provides interactive motor control troubleshooting trining via computer to a student operator wanting exposure to connection and operation, without bulky hardware and electrical hookups.

Additional Features

- Three-Wire Control Circuit
- Multiple Station Control Circuit
- Sequence Control Circuit
- Reverse Starter Control Circuit
- Competing Control Circuit
- AC Voltmeter
- Ohmmeter
- Panel Power Supply
- Eight Pushbuttons for Motor Control Functions
- LEDs Represent Motor Coils and Motors

OPTIONS FOR ALL TRAINERS

MODEL H-CSI-CS Pentium™ Desktop Computer System
MODEL H-CAI-PO Printer to provide the instructor with a color hard copy of the students' progress.

Hampden is committed to providing industry-leading technology.

For the latest from Hampden, visit our home page at http://www.hampden.com or e-mail us at sales@hampden.com

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