

# Industrial Maintenance Overview

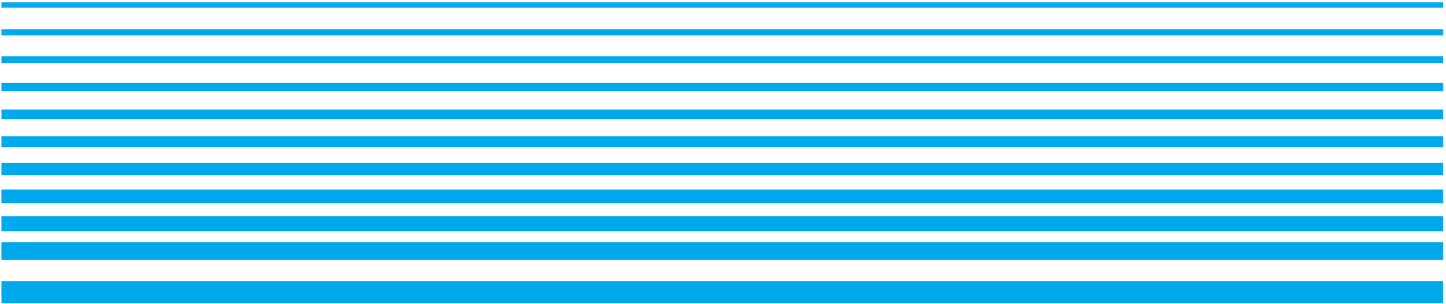
<i>ELECTRICAL</i>	<i>CONTROL SYSTEMS</i>	<i>PLC/ENERGY MANAGEMENT</i>	<i>AC, REFRIGERATION &amp; BOILERS</i>	<i>FLUID POWER</i>	<i>MECHANICAL SYSTEMS</i>	<i>PROCESS CONTROL</i>
<b>Basic Electricity</b> Basic Electricity Kit Electrical Circuits Kit Relay Kit Intermediate Electricity Digital Multimeter <b>Electrical Circuits</b> Security Systems Ground Fault Devices Fire Alarm System Clock Systems Emergency Lighting <b>Motor Control</b> Circuits Trainer Remote Switching Wire Control Software <b>Rotating Electrical Machines &amp; Transformers</b> Motors & Machines Console Fractional Motor Setup 3-Phase Add-on Dissectible Motor Digital Photo Tachometer AC/DC Power Supplies Dissectible Transformer 3-Phase Transformer	<b>Electro-Mechanical Controls</b> AC Motor Control DC Motor Control <b>Control Electronics</b> Stepper Motor Trainer DC Servo Motor Trainer Mag-Amp Control SCR Controls Trainer Adjustable Frequency Speed Controller <b>Drives</b> Variable Frequency Drive 4-Quadrant DC Speed Controller AC Vector Drive	<b>PLC Systems</b> PLC Controller <b>Energy Management</b> Multi-zone Building Energy Management (Honeywell)	<b>Refrigeration</b> Basic Refrigeration Commercial Refrigeration Air Conditioning Mobile Refrigeration Cooling Tower <b>Refrigeration Control</b> Compressor Simulator Solid State Controls Air Conditioning Controls AC & Refrigeration Test Bench Intermediate Electricity Refrigeration Cycle VHS <b>Boiler Systems</b> Forced Air & Hydronics Heating Demo Boiler System Trainer Gas Controls Trainer Electronic Ignition	<b>Hydraulic Systems</b> Hydraulics Trainer Electro Hydraulics Hydraulic Faults Trainer Hydraulics Video Instruction Program <b>Pneumatic Systems</b> Pneumatics Option Pneumatic Faults Trainer Pneumatics Video Instruction Program <b>Valves</b> Valve and Actuator Trainer Limiterque Valve Operator Trainer Mobile Pump & Valve System Alignment Trainer Rigging Trainer <b>Diesel Systems</b> Digital Diesel Engine Simulator Diesel Video Instruction	<b>Drive Gears</b> Industrial Maintenance Training System Ind. Maint. Video Mechanical Transfer System <b>Plant</b> Industrial Process Plant Trainer <b>Control</b> Mobile Process Control System <b>Calibration</b> Instrumentation & Calibration Console Instrument & Control Interface Package	



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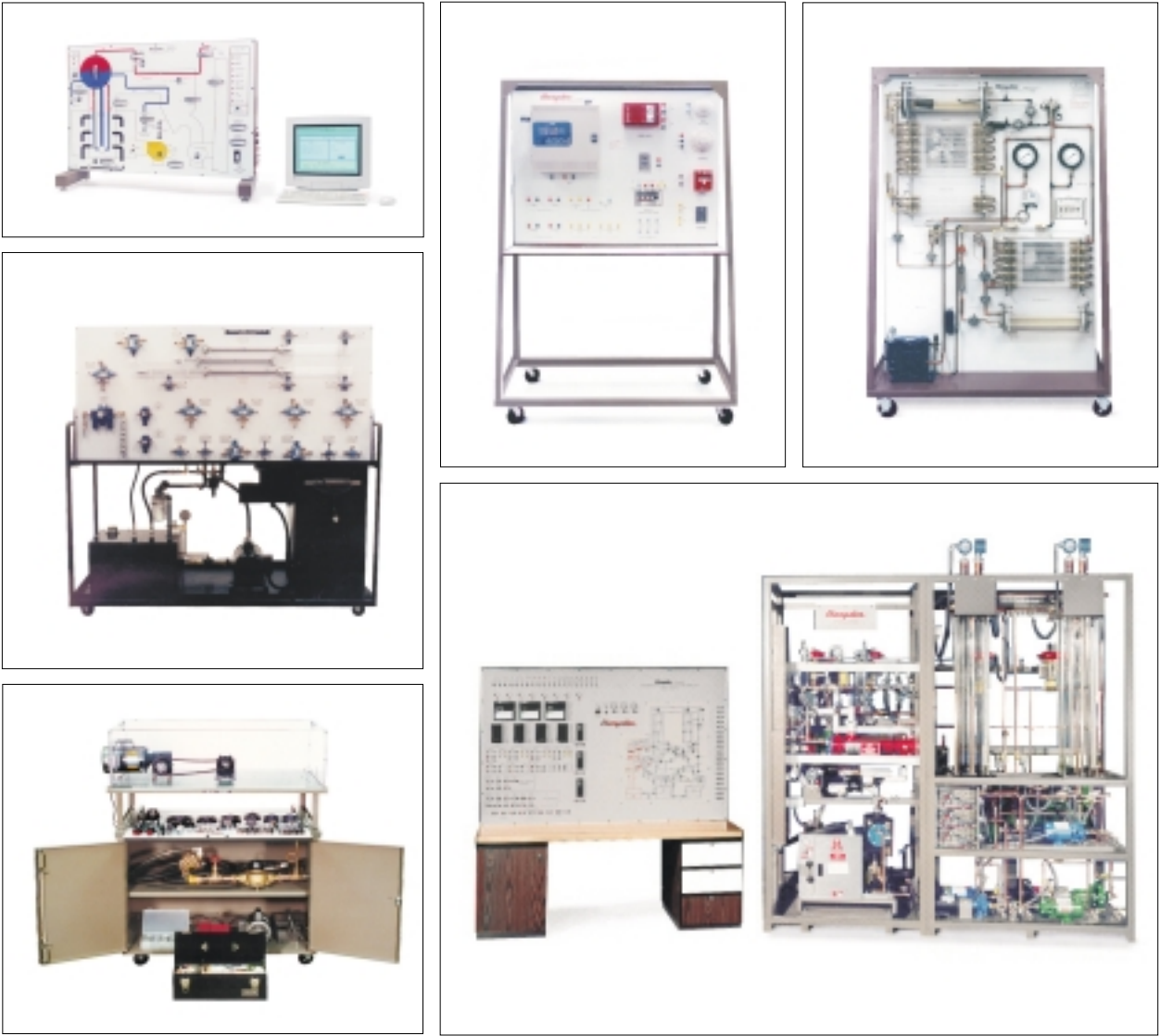
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# INDUSTRIAL MAINTENANCE PROGRAM

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Grade Components and Equipment.



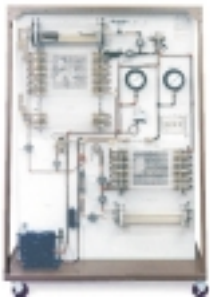
INTERNATIONAL MAINTENANCE INSTITUTE  
CERTIFICATE PROGRAM

The International Maintenance Institute's mission is to provide industry with certified maintenance professionals through a qualified program of education, training, and testing.

Complete coverage of **Basic through Advanced** industrial systems—utilizing **Actual Commercial Components**. All equipment may be equipped with sensors and signal conditioners for automatic data acquisition, logging, processing and control.

The world-wide success of Hampden's air conditioning, refrigeration and boiler products are a result of the extraordinary collaboration between Hampden engineers and the technical education community. Simply put, we are your very best source for any type of standard or custom product required to complete or expand upon your curriculum.

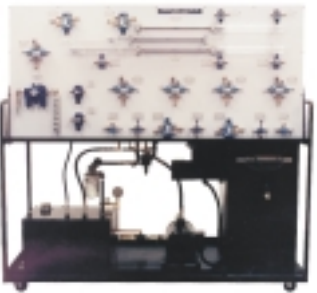
## AC, Refrigeration & Boilers



- ▶ Refrigeration Systems
- ▶ Refrigeration Controls
- ▶ Boiler Systems

H-RST-2 Refrigeration System Trainer (shown)

## Fluid Power



- ▶ Hydraulic Systems
- ▶ Pneumatic Systems

H-FP-223-14P (shown)

## Mechanical Systems



- ▶ Drive Gears
- ▶ Valves
- ▶ Diesel Systems

H-IMTS Industrial Mechanical Transfer System Trainer (shown)

## Process Control



- ▶ Process Plant
- ▶ Industry Standard Controller
- ▶ Calibration

H-8189-4 Mobile Instrumentation & Controls Trainer (shown)

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## Electrical

- ▶ Basic Electricity
- ▶ Electrical Circuits
- ▶ Rotating Electrical Machines & Transformers



HMD-100 Series 100 Machines (shown)

Our Industrial Maintenance 'Electrical' program offers the equipment, components and learning materials necessary to obtain a solid understanding of **Basic Electrical Circuits & Principles, HVAC Design & Control, and Security/Fire/Ground-Fault Circuit Design & Troubleshooting**.

As an essential introductory course, we also offer **Hampden's Rotating Electrical Machines & Transformers package**—which provides an in-depth study of industry standard motor/generator systems with the advantage of hands-on design and troubleshooting

Complete your **Hydraulic & Pneumatic Power** curriculum. Each program has been carefully engineered to provide you with a complete applications/demonstration laboratory on wheels.

Components are of **first grade commercial quality**, labeled and permanently secured in place in order to provide your students with the best hands-on learning environment available.

Optional courseware packages (available in VHS and CD-ROM formats) are highly recommended and cover basic to advanced design and troubleshooting.

An excellent selection of educational training equipment designed to fully introduce students to the subjects of **Mechanical Transfer Systems, Valve Operations, and Diesel Power Systems**.

Students learn state-of-the-art techniques for maintaining and designing complex drive & linkage systems, valve and actuator assemblies, as well as operating and evaluating a fully functional industrial diesel engine simulator.

Hampden engineers have assembled this group of process control training products as a result of their universal success and popularity among educators.

Our Industrial Process Trainers **provide all of the operating characteristics of full-sized industrial plants** without the dangers inherent in an actual process plant environment. All trainers are fully equipped with all necessary hand valves, check valves, steam traps, drain connections and piping. **Computer Data Logging** is highly recommended as an option for all products.

## Control Systems

- ▶ Electro-Mechanical Controls
- ▶ Control Electronics
- ▶ Drives



H-REM-ACMC Mobile AC & DC Motor Control Trainer (shown)

A comprehensive offering of powerful learning tools designed to expand your students' knowledge of **Complex AC & DC Motor Control Circuitry**.

These selected components provide students with the equipment needed to assemble, test, and troubleshoot 'real-world' motor/ generator configurations with concentration on **Advanced Microprocessor Based Control Systems**.

These units are designed to extend and accelerate a student's knowledge. Clearly identified controls, components and connections.

## PLC/Energy Management

- ▶ PLC Controller
- ▶ Multi-zone Building Energy Management



H-PLC Controller w/ Peripheral Panel PLC-PP-500 (shown)

Our Programmable Logic Control systems are designed to provide a comprehensive education in the basic functions and advantages of **Modern Logic Control Devices**.

Emphasis on Interconnection Wiring, General Programming Information Ladder Diagram Programming, Counters & Timers, Motor Control, Self-Diagnostics, and Power Failure Protection.

These state-of-the-art products include built-in troubleshooting and diagnostic capabilities and are exceptional tools for introductory through advanced studies.