

# WORKFORCE DEVELOPMENT PROGRAM



**Hampden®**  
ENGINEERING CORPORATION



# WORKFORCE DEVELOPMENT PROGRAM

## CONSTRUCTION

*Let us make your plumbing and piping a breeze*

### **The Hampden Model H-RIG-1C Rigging Systems Trainer**

is designed to teach the techniques of safely moving loads of various shapes, sizes and types. The Trainer contains a variety of lifting and moving vices to allow the student to learn the proper methods of moving loads safely.



### **The Hampden Model H-PPST-1 Piping / Pipefitters System Trainer**

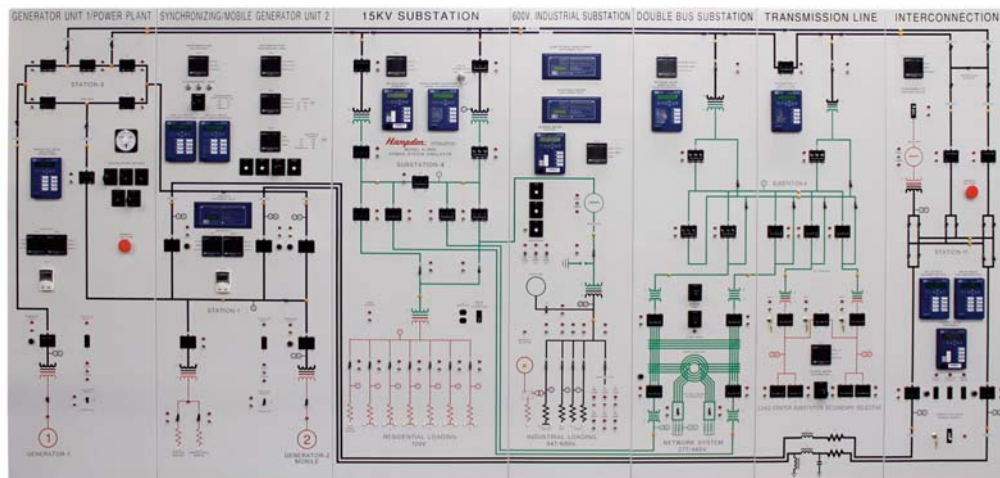
provides the student with a “hands-on” trainer for piping. The student will learn the necessary methods of connecting and running metal/iron piping, plastic piping, copper tubing, and hydraulic hose.



## ENERGY

### ***The Hampden Model H-180A Power System Simulator*** *Teaches the student to go from Generation and Interconnection through Transmission to Distribution*

**With 7 Sections depicting a complete Power System Simulator it can be configured either along a straight wall or in a corner setting**



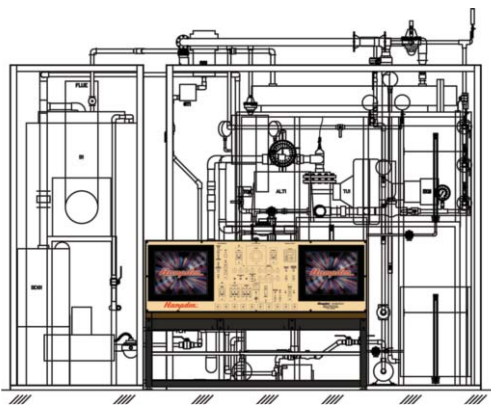
# WORKFORCE DEVELOPMENT PROGRAM

*Train your students on standard equipment  
found in both residential dwellings and commercial establishments*

## ENERGY

*Our Energy Program teaches students how power stations produces electricity  
with the*

### H-181A Steam Power Plant Trainer



#### **HAMPDEN MODEL H-181-A/G or H-181-A/O Steam Power Plant Trainer - Gas/Oil or Mix**

consists of four modular sections. The primary function of the Hampden Steam Power Plant Trainer is to demonstrate to the student how a power station uses steam to turn a turbine which is coupled to an alternator which produces electricity. The boiler converts the water to steam which is piped through the superheater and steam separator to the turbine. The returning steam from the turbine is piped to the condenser. The steam is converted to water and piped to the condensate storage tank. Water is pumped from this storage tank to the economizer and back into the boiler.

### TRY DIGITAL INSTRUCTION MODULES ▶▶▶

The Hampden **Model H-185-2A Advanced Boiler Trainer** serves to demonstrate principles of operation and troubleshooting techniques of a current model boiler system. All functions operate as on the actual equipment and present the student with realistic problem solving opportunities.



### **Hampden Transformer Learning Systems are Designed to Fit into Any Level of Study!**

**Model H-DTT-26 Transformer Lab Kit** allows students to correctly make connections to power transformers located on utility poles.

**Hampden®** ENGINEERING CORPORATION





MANUFACTURING TRAINING

Our Manufacturing Training Program offers the equipment, components and learning materials necessary to obtain a solid understanding of Basic Electrical Circuits & Principles, HVAC Design and Control, and Security / Fire / Ground-Fault Circuit Design & Troubleshooting. An Industrial Maintenance Certificate is available with this program for the “IMI”.



**Model HMD-100-CM Deluxe Mobile Console** comes with AC-DC Power Supplies, AC and DC Instrumentation, Single and Three phase Wattmeters, Lockable Storage, Cords and Instructions.

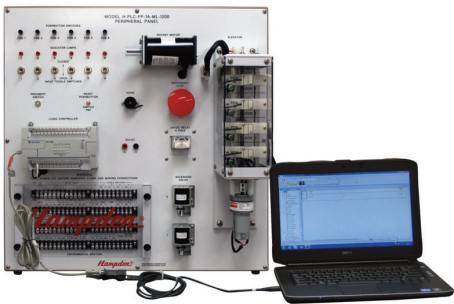
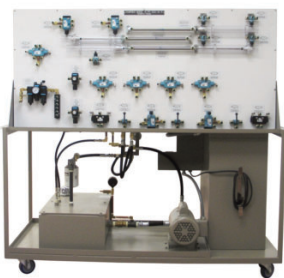
**Model GNR-H2200 Industrial Controls Training System** provides students with practical “hands-on” experience in designing, wiring, checking out, and troubleshooting “real-world” motor control systems.



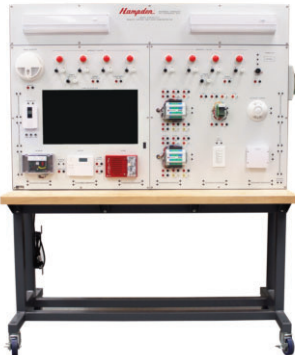
**Model H-IMTS-1 Industrial Maintenance Training System** is an excellent selection of educational training equipment designed to fully introduce students to the subjects of Mechanical Transfer Systems, Valve Operations, and Diesel Power Systems, with techniques for maintaining and designing complex drive and linkage systems, valve and actuator assemblies and more.



Complete your **Hydraulic and Pneumatic Power** curriculum. Each program has been carefully engineered to provide you with a complete applications demonstration laboratory on wheels. Components are first grade commercial quality, labeled and permanently secured in place in order to provide your students with the best “hands-on” learning environment available.



The Hampden Model **H-RCSD-3B Residential/Commercial Remote Control Switching Demonstrator** provides a complete trainer showing a state-of-the-art building wiring system control of lighting and appliances via programmed or manual remote.



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

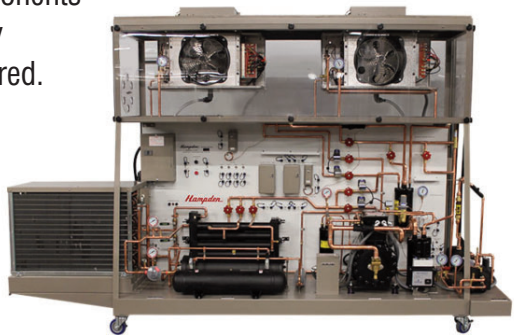
The Hampden’s Model **H-MFA-3C Fire Alarm Demonstrator** is a fully functioning fire alarm system which can be utilized to present the student with a variety of common installation and operational features. The trainer is a composite of basic equipment usually associated with residential and commercial layouts.



**H-RST-2 Mobile Refrigeration System Trainer** is designed to provide students with an actual working model of a refrigeration system, complete in every detail.



The Hampden Model **H-IRT-1 Industrial Refrigeration Trainer** consists of industrial refrigeration components completely factory assembled and wired. It is designed to provide training with larger commercial and industrial refrigeration systems.



- |                            |                             |                              |                             |                           |
|----------------------------|-----------------------------|------------------------------|-----------------------------|---------------------------|
| • Petrochemical Plants     | • Agricultural Centers      | • Gas Distribution Companies | • Aircraft Manufacturers    | • Pharmaceuticals         |
| • Aluminum Mills           | • Engine Manufacturers      | • Labor Unions               | • Semiconductor Industry    | • Automotive/Truck Plants |
| • Chemical Plants          | • Steel Plants              | • Fisheries                  | • Military Training Centers | • Pulp & Paper Industry   |
| • Bus & Rail Manufacturers | • Utilities/Gas/Oil/Nuclear | • Mines                      | • Component Manufacturers   |                           |

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## WATER / WASTEWATER

### Aerobic Digester

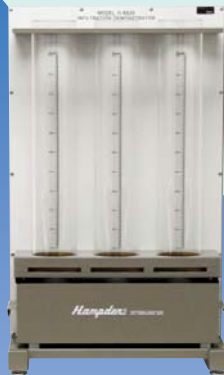
**Model H-6518** provides a comprehensive study of the continuous activated sludge process used in public health engineering facilities.



**H-6518 AEROBIC DIGESTER**

### Anaerobic Digester

**Model H-6515** is a bench-top trainer designed to demonstrate the fundamentals of the anaerobic treatment processes.



**H-6515 ANAEROBIC DIGESTER**

### Aeration Demonstrator

**Model H-6517** provides a means of understanding the biological treatment of waste waters.

### Flocculation Test Unit

**Model H-6529** is used to determine optimal chemical dosages for flocculation by helping the student determine the exact amount of alum or polymer necessary to trigger flocculation.



**H-6529 FLOCCULATION TEST UNIT**

### Permeability Fluidization Studies

**Model H-6519** is designed to investigate the measurement and characteristics of flow through a bed of particles.

### Ion Exchange Demonstrator

**Model H-6516** is a bench-mounted unit designed to emulate the industrial operation of ion-exchange resins for either continuous water softening or demineralization.

### Filterability Index Unit

**Model H-6528** has been developed to investigate filters and how they relate to water treatment or demineralization.

### Infiltration Demonstrator

**Model H-6520** is a table top unit designed to investigate the infiltration rates of different soil types and soil surface treatments.

### Solid Handling Investigation Bench

**Model H-6809** has been designed to allow students to familiarize themselves with various methods of handling solids through blending, separating, sizing, and much more.

### Mobile Bed and Flow Visualization

**Model H-6524** is a self-contained unit used to investigate flow visualization and mobile bed situations in relation to Civil Engineering structures.

### Reverse Osmosis Demonstrator

**Model H-6505** is a self-contained unit used to investigate ultra filtration techniques as they are applied to water purification and desalination, waste material treatment and more.

### Sedimentation Studies Trainer

**Model H-6527** has been developed to investigate the physical processes of sedimentation. The student will be able to evaluate and measure the particles as to height, size and settling rates for making up the sedimentation curve.

### Model Sedimentation Tank

**Model H-6521** can be used to investigate the hydraulic characteristics and settling efficiencies of a model settling basin. The student will be able to evaluate how non-uniform flows occur and their interaction with sediment settling characteristics.

### Sediment Transport Channel Demonstrator

**Model H-6523A** is a self-contained teaching apparatus used to demonstrate the development of various bedforms that arise from the flow of water in a channel.



**H-6527 SEDIMENTATION STUDY TRAINER**



# WORKFORCE DEVELOPMENT PROGRAM

## BIO-PROCESS and ETHANOL

***Bio-process and Ethanol**, the development of products by using a biological process, represents an important and rapidly expanding area of science. Many problems associated with water, air, and soil contaminants can be fixed with biotechnology. Modern biotechnology is currently being used in soils for growing better crops, in sewage treatment plants for eliminating odors and meeting regulatory requirements, and in toxic waste clean-up, as well as many other areas. Biotechnology represents a tremendous opportunity for many businesses to change the way they do business, whether they are in manufacturing, pharmaceuticals, or agriculture. Many products modified by the newer techniques of biotechnology are currently in the supermarket, drug and retail stores. Additional products, such as the clean-burning ethanol, are being developed which offer advantages to farmers, the environment and human health.*

**H-ICS-8189-4 Instrumentation and Controls Trainer** provides experience in setting up, tuning, operating, and troubleshooting actual instrument and control systems of the type used in the power and process industries. By simulating a different process loop, this unit provides instruction in the measuring and transducing of such physical variables as pressure, temperature, flow and level.



**H-ICS-8189-4pH Instrumentation, Controls and pH Controls Trainer** provides experience in setting up, tuning, operating, and troubleshooting actual instrument and control systems of the type used in the power and process industries.



**H-6252 Modular Chemical Reactor System** investigates the chemical reactor, the most commonly used and important piece of equipment in a chemical plant.



**H-6150 Liquid-to-Liquid Extraction Demonstrator** studies the fundamentals of a liquid-to-liquid extraction system. This unit can also be used to determine the mass transfer rates, heat transfer coefficients, extraction efficiency, and operating conditions at different liquid flow rates.



**H-6852 Modular Heat Exchanger System** is used to investigate the fundamental principles of heat transfer devices. The unit can be configured to operate four different types of heat exchanger modules using quick connect couplers eliminating the use of tools.



Hampden's **H-6535 Hydrostatics Bench** consists of an assortment of apparatus needed for numerous experiments into the properties of fluids and hydrostatics, including all of the plumbing, pumps and valve control to direct the fluids in the system.



**H-ETS-1A Ethanol Production Process Trainer** is designed to facilitate the instruction of students on the process required to produce ethanol for experimental purposes. Ethanol is a very promising fuel alternative to oil since sources are widely available and ethanol is clean-burning and environmentally friendly.



The **H-BIO-100 Bio Diesel Demonstrator** is built to withstand rigorous experiments. This unit is designed upon the same principals and protocols as large-scaled units. Key features include ease of use, no wash process and price/capacity ratio. Experiments entail a variety of variables such as pressure, temperature, time to temperature proportions, feedstock types, etc.



*Hampden Engineering Corporation*

# WORKFORCE DEVELOPMENT PROGRAM

**LOOK TO HAMPDEN WHEN YOU WANT THE LATEST TECHNOLOGY!**

**Take your classroom  
with you.**

**Think of the possibilities!  
Workforce at your finger-  
tips and your students.**



**STRAP DOWN  
FOR  
YOUR TRAVELS**



**CUSTOMIZE THE EQUIPMENT TO FIT YOUR NEEDS!**



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