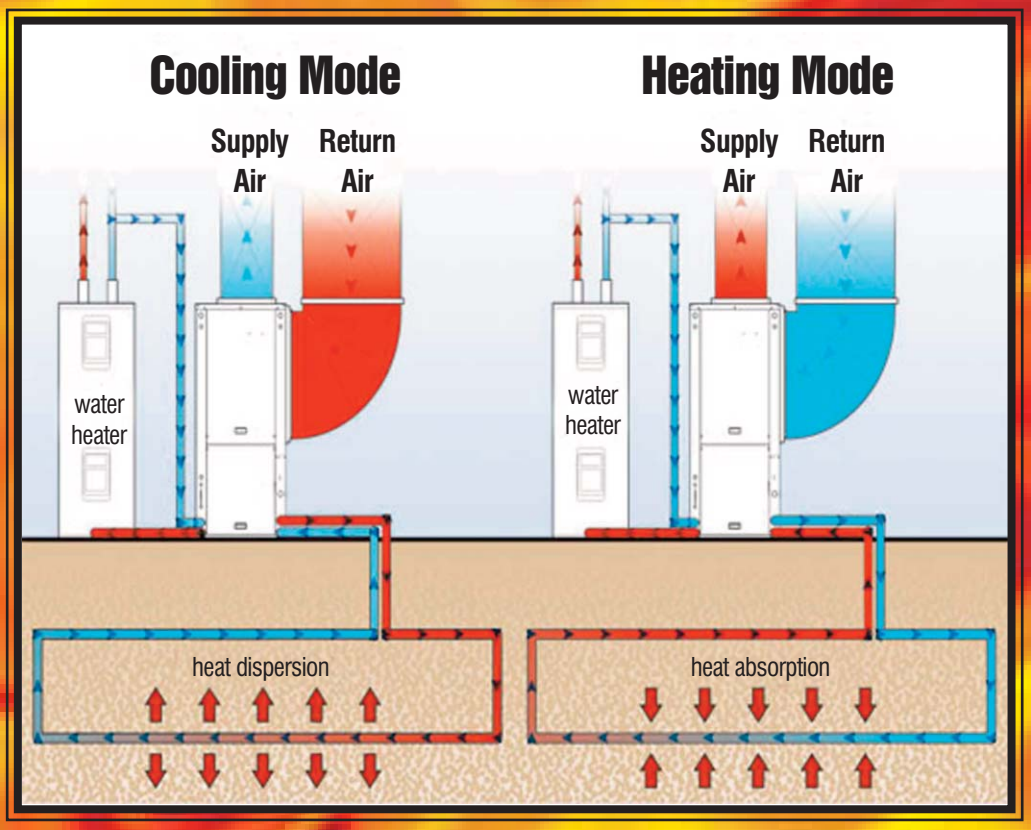
MECHANICAL ENGINEERING

— HEAT TRANSFER —
— THERMODYNAMICS —
— REFRIGERATION —
— AIR CONDITIONING —



ISO 9001:2015

Hampden® ENGINEERING CORPORATION

MADE IN U.S.A.

HEAT TRANSFER—THERMODYNAMICS—REFRIGERATION—AIR CONDITIONING

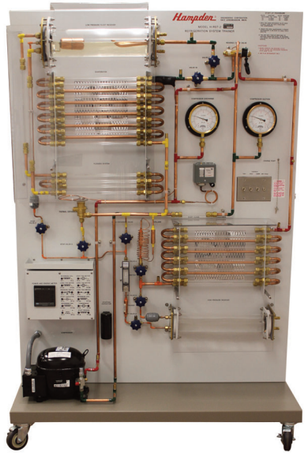
Thermodynamics is the study of ways for converting one form of energy into another—
With Heat Pumps, heat flows from regions of high temperature to regions of lower temperature. By running a heat engine backwards, we can reverse this cycle. These devices are called Heat Pumps. A Heat Pump uses work from a low temperature reservoir and expels heat to a high temperature reservoir. Heat Pumps move heat rather than convert it from a fuel.

SEER Seasonal Energy Efficiency Ratio

Hampden Engineering Corporation uses the same techniques that the large manufacturers use to make sure that our heating and air conditioning units are manufactured to make the most of the way they will be used.
Many things affect the way that heating or air conditioning units are used. The environment, the air flow, field adjustments, charge on the unit along with size. We at Hampden research and then test all of our units to make sure that they will teach the student or business the important steps to follow in training for these situations.
We make sure that the right Thermal Expansion Valves are used. Systems with these valves have more sophistcated flow control technology.
Are you getting the right refrigerant charge?
This is a critical factor that can be sometimes overlooked.
These are just some of the factors involved in the manufacture of all of our products.

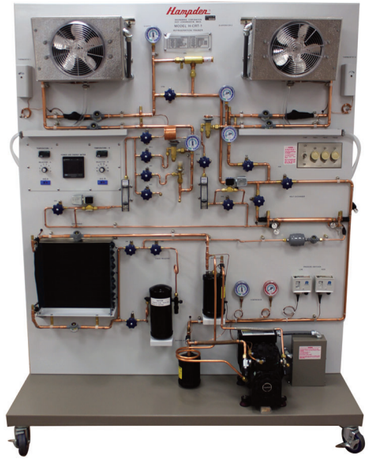
↑ H-ACT-1-CDL-L
Air Conditioning System Trainer w/CDL-L

familiarizes students with the design concepts and the methods of operation of residential and light commercial air conditioning systems. The trainer is a completely functional mechanical air conditioning system.



H-RST-2-CDL-L
Mobile Refrigeration System Trainer w/CDL-L

can operate in five different modes, allowing testing & troubleshooting experience for various types of refrigeration systems. →



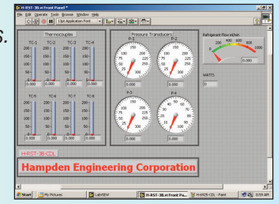
← H-CRT-1-CDL-L Commercial Refrigeration Trainer w/CDL-L

contains two evaporators, which may be operated singly or in parallel. Three types of liquid control devices are included: (1) capillary tube, (2) thermostatic expansion valve, and (3) automatic expansion valve. Sight glasses at the inlet and outlet of the evaporators and condenser allow students to monitor the changes in refrigerant state. The unit also includes pressure gauges, thermometer wells, temperature and pressure controls, heat exchanger, flowmeters, receiver, oil separator, and accumulator. Factory charged with R-134a HFC refrigerant .

Hampden Engineering Corporation

LabVIEW™
COMPATIBLE GRAPHICAL PROGRAMMING SOFTWARE
Computer Data Logging Solutions for Any Type of Equipment!

Hampden is the leading worldwide manufacturer of educational training equipment to industry, schools and universities.
We have the knowledge and experience it takes to design and build the best CDL based experiment equipment available today.
We continue to develop and introduce new products in response to technological advances.
Hampden offers the planning and implementation of complete data acquisition solutions for the training of engineering students.
Our engineers and technicians use only the best components and materials available and make sure that a complete approach is mapped out for all our CDL products.
We include templates for LabVIEW™ control software with most CDL packages.
In short, the right combination of hardware, software and courseware is your assurance that your new Hampden built equipment will provide maximum performance right from the start. Shown at the right is a typical screen.



H-ACD-1A-CDL-L Air Conditioning Demonstrator w/CDL-L

has been designed to teach the principles of thermodynamics as related to the field of air conditioning and refrigeration. Areas covered include air flow, inlet heating and humidification, air cooling, and air reheating.

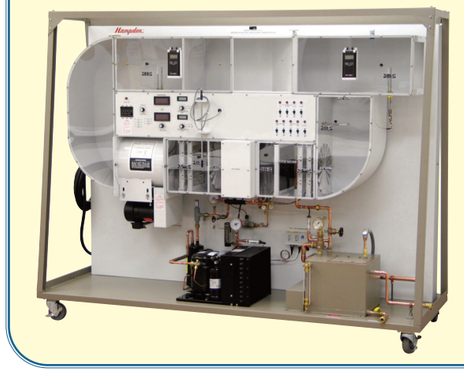
The MODEL H-ACD-1A-CDL-L Air Conditioning Demonstrator with Computer Data Logging package includes the following:

- 1 - Air Velocity Transmitter
- 2 - Pressure Transmitters
- 12 - Type “T” Thermocouples
- National Instruments Interface Modules
- LabVIEW Templates

The H-ACD-1A-FP Electrical Fault Package Option is also available.

H-ACD-2A-CDL-L Recirculating Air Conditioning Demonstrator w/CDL-L

is designed to demonstrate the principles of air conditioning. Students can investigate the theorectical performance of the R-134a refrigeration system along with the various treatments utilized in the air flow distribution cycle including: *heating, cooling, humidification, de-humidification, recirculation, and mixing*.



H-ACD-2A-CDL-L Recirculating Air Conditioning Demonstrator with Computer Data Logging package includes the following:

- Thermocouples (13), Type “T”
- Air Velocity Transmitter
- Pressure Transmitters (2)
- Differential Low Pressure Transmitters (2)
- Wattmeters (2)
- Elapsed Time Meters (9)
- National Instruments Interface Modules
- LabVIEW Templates

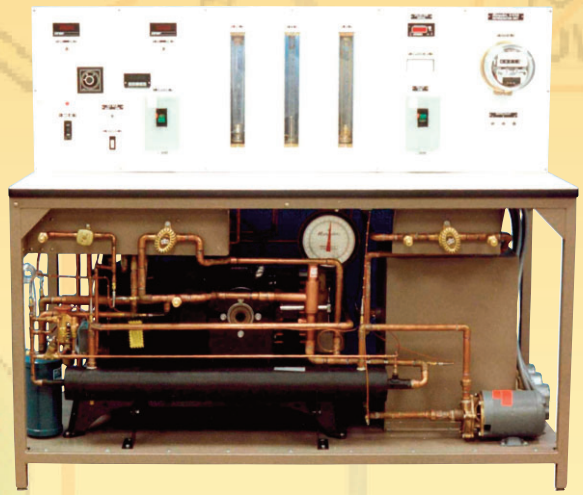
The H-ACD-2A-FP Electrical Fault Package Option is also available.

Standard Products ... Designed to Meet Your Growing Needs!

MECHANICAL ENGINEERING REFRIGERATION

Model H-6715 Refrigeration Cycle Demonstrator
provides the student with an introduction to the Second Law of Thermodynamics, which states that heat will not pass from a cold region to a hot region without an "external agency."

Model H-6720 Refrigeration Unit
has been developed to illustrate the characteristics of a large scale refrigeration system. The student will be able to investigate the theoretical performance of the refrigeration cycle and compare it with the performance of the actual cycle. Additionally, the unit serves as a source of chilled water for use in heat transfer experiments.



Model H-6710 Refrigeration Demonstrator
has been designed to illustrate the fundamental aspects of the refrigeration cycle. This unit allows the student to measure the temperature and pressure at critical points throughout the cycle to better comprehend the processes that occur in the refrigeration cycle.

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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