

Air Conditioning Training Systems

Educational Training Equipment for the 21st Century

Bulletin 233-1K

H-ACD-2A Recirculating Air Conditioning Demonstrator

Purpose

The Hampden **Model H-ACD-2A** Recirculating Air Conditioning Demonstrator is designed to demonstrate the principles of air conditioning. Students can investigate the theoretical performance of the R-410a refrigeration system (other refrigerants available) along with the various treatments utilized in the air flow distribution cycle including: heating, cooling, humidification, de-humidification, recirculation, and mixing.

The Hampden **H-ACD-2A** Recirculating Air Conditioning Demonstrator consists of eight basic segments:

- | | |
|---------------|---------------|
| 1. Blower | 5. Preheater |
| 2. Manometers | 6. Humidifier |
| 3. Damper | 7. Evaporator |
| 4. Mixers | 8. Reheater |

All controls are centrally located with analog or digital display for monitoring.

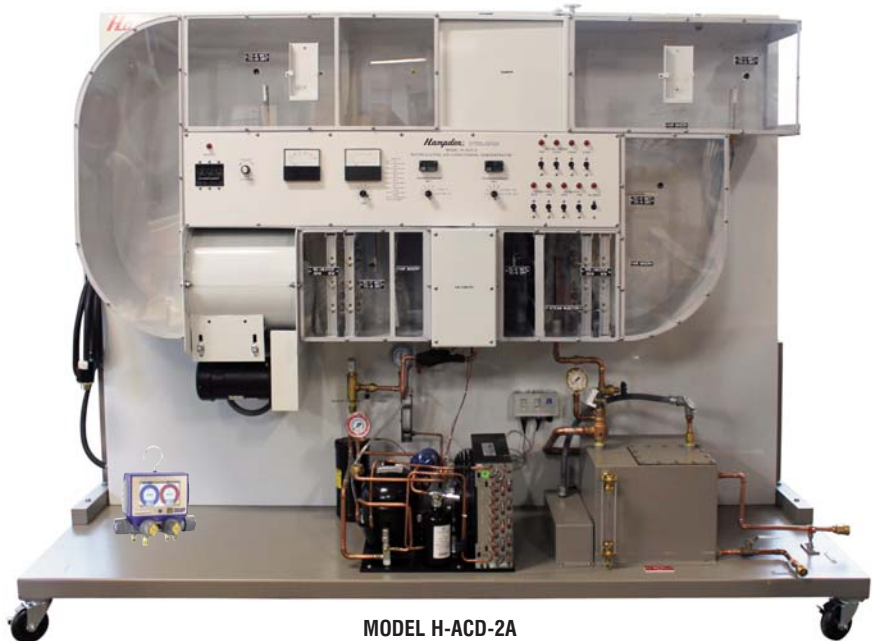
Services Required

- 208V AC, 3Ø, 4W, 60Hz
- Water Supply

This unit comes complete with operating instructions, experiment, and teacher's manuals.

Experiments

- Air Flow Measurement
- Wet Bulb Temperature Measurement
- Air Density and Velocity Flow Rate Calculations
- Humidity and Dew Point
- The Refrigeration Cycle
- Effect of Humidity on Refrigeration
- Refrigeration Controls
- Air Conditioning Process
- Removing Sensible and Latent Heat



MODEL H-ACD-2A
(Shown with H-RST-DMB Option)
Dimensions: 70"H x 88"W x 31"D
Shipping Weight: 1450 lbs

Options

- ◆ The Hampden **Model H-ACD-2A-CDL** Recirculating Air Conditioning Demonstrator with Computer Data Logging package includes the following:
 - Thermocouples (13), Type "T"
 - Air Velocity Transmitter with a 4–20mA output
 - Pressure Transmitters (2) with 4–20mA output
 - Differential Low Pressure Transmitters (2) with 4–20mA output
 - Wattmeters (2) with 4–20mA output
- Interface Modules and Windows® Software
- ◆ The Hampden **Model H-ACD-CDL-L** National Instruments Modules with LabView Software
- ◆ The Hampden **Model H-ACD-FP-16E** Electrical Fault Package
- ◆ The Hampden **Model H-RST-DMB** Digital Manifold with Bluetooth

Options must be specified at time of original order

All Hampden units are available for operation at any voltage or frequency

Hampden
ENGINEERING CORPORATION

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