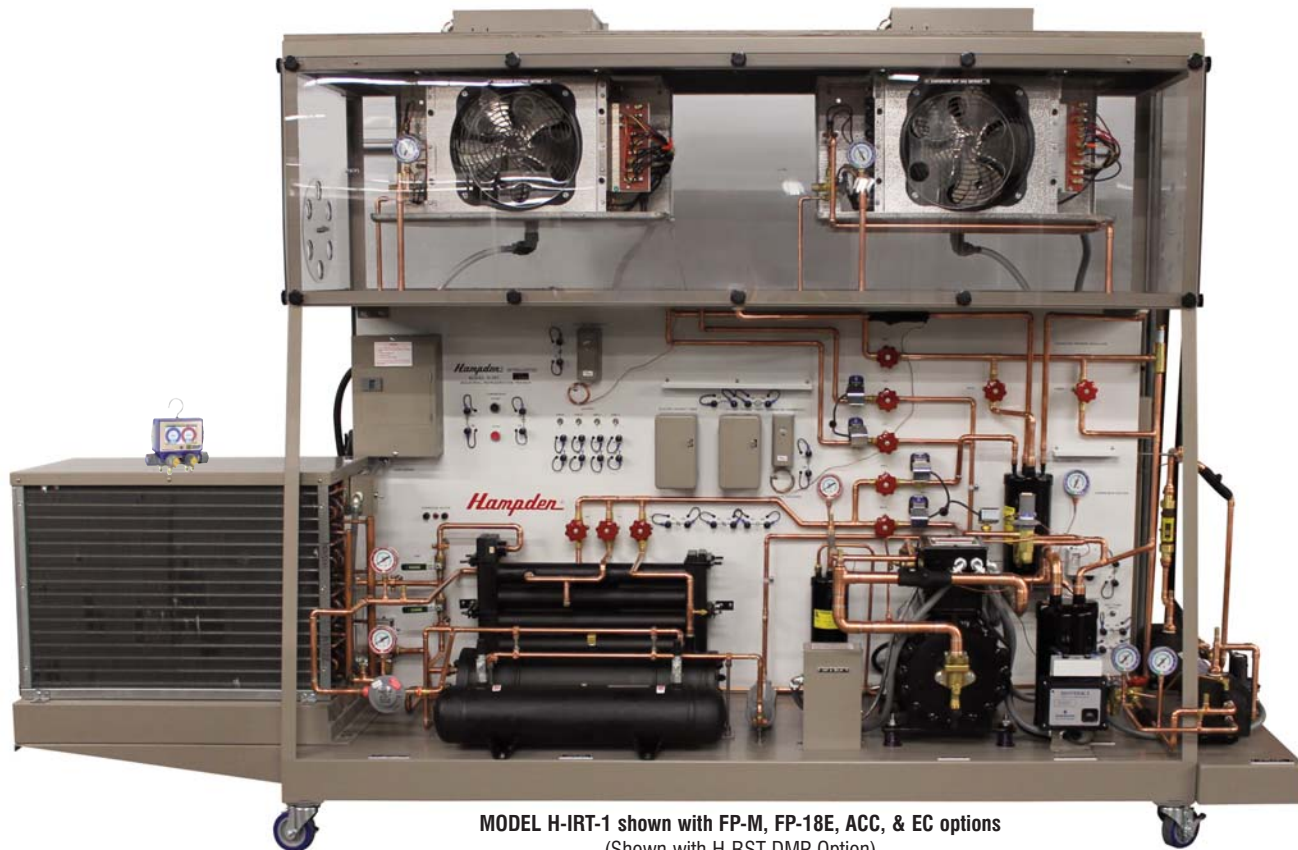


Industrial Refrigeration Trainer

Educational Training Equipment for the 21st Century

Bulletin 231L

H-IRT-1 Industrial Refrigeration Trainer



MODEL H-IRT-1 shown with FP-M, FP-18E, ACC, & EC options

(Shown with H-RST-DMP Option)

Dimensions: 76"H x 88"W x 31"D

Shipping Weight (without options): 1500 lbs

Four clear plastic panels enclose the upper portion containing the evaporators.

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 which require water-cooled condensers (tube-in-tube and shell-in-tube), electric and hot gas defrost systems, cooling towers, hot bypass capacity control systems, crankcase pressure regulators, crankcase heaters and pressure pumps.

Options

H-IRT-FP-M Mechanical Fault Package

H-IRT-FP-18E Electrical Fault Package

H-IRT-ACC Third Condenser to expand training capabilities (Air Cooled)

H-IRT-EC Evaporator Chiller, shell and tube type water chiller

H-IRT-1-CDL Industrial Refrigeration Trainer with Computer Data Logging package

H-ACTK-CT Water Cooling Tower

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

032822

Industrial Refrigeration Trainer

Educational Training Equipment for the 21st Century

Bulletin 231-1K

H-IRT-1 Industrial Refrigeration Trainer

Description

The Hampden **Model H-IRT-1** Industrial Refrigeration Trainer consists of the following:

- 3 HP semi-hermetic compressor
- Refrigerant R-134A (other refrigerants available)
- Crankcase heater with automatic control system
- Oil circulating pump
- Two evaporators (forced-air type) with solenoids, timers, etc.
- Two water-cooled condensers (tube-in-tube and shell-in-tube)
- Gas bypass systems
- Crankcase pressure regulator with gauges
- Operating instructions, student experiment manual and teacher manual
- Text: *Modern Refrigeration and Air Conditioning* with study guide and lab manual

Lessons

The following lessons are included in the Hampden **Model H-IRT-1** Teacher's Manual:

- Properties of Matter
- Temperature and Heat Energy
- Refrigerants

The Hampden **H-ACTK-CT** Cooling Tower provides a hands-on introduction to the principal components of cooling towers. The unit provides the student with the ability to assemble and troubleshoot the systems.

Enclosure:	Steel with an Epoxy finish-mobile
Fan:	1/4 HP
Pump and Motor:	1/2 HP with thermal protection
Controls:	Thermostat Hi-Pressure switch Disconnect switch Float valve
Hardware:	Galvanized pipe and fittings Wire Conduit or liquid type cable Connectors Fill connector Hoses
Courseware:	Correlated operations manual
Input:	208/220V AC, single phase (Supplied by the H-IRT-1)

- The Refrigeration Cycle
- Pressure-Enthalpy Charts
- Heat Transfer
- Refrigerant Oils
- Leak Detection
- Removing Refrigerant From a System
- Charging a Refrigeration System
- Liquid Control Devices-Thermostatic Expansion Valve
- Pressure Controls

Services Required

- 240/120V AC 1Ø 60Hz 35A with ground
- A source of flowing water
- A drain to sewer

Experiments

- Evaporator No. 1 with Tube-in-Tube Condenser No.1
- Evaporator No. 1 with Shell-in-Tube Condenser No.2
- Evaporator No. 2 with Tube-in-Tube Condenser No.1
- Evaporator No. 2 with Shell-in-Tube Condenser No.2
- Electric Defrost
- Hot Gas Defrost



Front view



Side angle view



Back view

MODEL H-ACTK-CT Water Cooling Tower
Dimensions: 60.5"H x 29.25"W x 48.125"D
Shipping Weight 610 lbs

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

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