

# Heat Pump Trainer

Educational Training Equipment for the 21st Century

Bulletin 237-107F

## H-RST-12 Heat Pump Trainer

### Purpose

The Hampden **Model H-RST-12** Heat Pump Trainer provides the student with an introduction to the principle components of heat pump systems.

For practical electrical troubleshooting, the instructor has the ability to insert eighteen commonly found electrical faults such as: defective capacitor, motor, and timer. The instructor may also insert three mechanical faults such as two defective thermal expansion valves (faulted filter and faulted rods) and defective filter-drier.

### Specifications

**Compressor:** Hermetic, 1/3HP

**Condenser:** Water cooled with flowmeter, pressure regulator, pressure gauge, two ball valves and two hose fittings.

**Evaporator:** Forced Air cooled

**Environmental Chamber:** Steel with clear Lexan removable or hinged panels and emergency heater

**Thermostats:** Digital programmable and digital non-programmable heat pump

**Metering Devices:** Capillary tube, 2 required

**Devices:** Thermostatic Expansion Valve, 2 required

**Accessories:**

- Sight glass with moisture indicator
- Check valves, 4 required
- Filter drier - dual
- Liquid receiver with isolation valves
- Dual pressure controller
- Reversing valve, 4-way Electric Suction Accumulator
- Pressure Gauge
- Compound Gauge
- Defrost Timer
- Fan Limit Control
- Valves, 7 required

**Control Panel:**

- Main circuit breaker
- Defrost timer switch
- Low voltage transformer with fuse
- Thermostat selector switch
- Temperature meter Digital Type-T
- Thermocouple, Type-T, 10-required
- Thermocouple Selector Switch
- Light, Power On
- Wattmeter, Analog

**Cabinet:** 16-gauge furniture stock steel finished in instrument tan enamel. Doors are hinged with handle and lock. Storage space is approx. 26"H x 47"W x 30"D

**Panel:** 14-gauge enclosure finished in instrument tan enamel with a 12-gauge panel finished in instrument white enamel.

**Carrier:** Mobile with locking storage and control panel

**Cabinet Top:** Medite wood core covered with antique white plastic laminate with black plastic trim

**Casters:** Four 3" swivel casters, two with locks

**Power Cord:** 8-foot 3/c power cord with plug and cord holder

**Courseware:**

- Correlated student manual
- Correlated instructor's manual with fault guide, pre and post tests

**Input:** 120V AC, single-phase, 60Hz (available for operation on any voltage or frequency)

**Refrigerant:** R-134a



**MODEL H-RST-12**  
(Shown with H-RST-DMB Option)  
**Dimensions:** 75"H x 48"W x 30"D  
**Shipping Weight:** 850 lbs.

**Accessories:**

- Thermometer, wet bulb
- Psychrometer, hand
- Condensate graduate

### Options

- Computer Data Logging is available, specify **Model H-RST-12-CDL** (must be specified at time of original order)
- **H-RST-DMB** Digital Manifold with Bluetooth

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

**Hampden**  
ENGINEERING CORPORATION

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