

Heat Pump Trainer

Educational Training Equipment for the 21st Century

Bulletin 237-107-1D

H-RST-17 Heat Pump Trainer

Description

The Hampden **MODEL H-RST-17** Heat Pump Trainer consists of commercial components completely plumbed and wired for demonstration. The student will study the thermodynamic cycle of the typical heat pump. This system supplies either heating or cooling for a separate closed circuit air handler.

The Trainer consists of a mobile table with component panel and cold box evaporator enclosure. One operational instruction manual is provided.

Specifications

Mobile Table:

- Construction:
2" mechanical steel tubing finished in instrument tan texture.
- Top:
Woodcore plastic laminate top
- Casters:
Swivel with locks, 4 required

Component Panel:

- Frame:
14 gauge furniture stock steel finished in instrument tan texture.
- Panel:
11 gauge furniture stock steel finished in instrument white enamel.
- Cold box:
Furniture stock steel and clear polycarbonate.

Nomenclature and Graphics:

Black silk screen enamel.

Components:

- Hermetic Compressor
- Condenser, water cooled
- Evaporator, refrigerant to water
- Thermostatic Expansion Valve, 2 required

- Sight Glass
- Filter Drier
- Gauge, Refrigerant Pressure
- Gauge, Refrigerant Compound
- Gauge, Water Pressure
- Flowmeter, Refrigerant R-134a, 2 required
- Flowmeter, water
- Pressure Control, high/low
- Thermostat, heating/cooling
- Reversing Valve
- Check Valves, 4 required
- Hand Valve
- Solenoid Valves, 2 required
- Temperature Indicator, digital type T
- Selector Switch, thermocouple
- Thermocouples, type T, 8 required
- Voltmeter, AC
- Ammeter, AC
- Wattmeter, AC
- Main Circuit Breaker
- Lot of switches and pilot lights
- Lot of copper tubing and fittings
- Air Handler, water to air
- Water Circulator
- Expansion Tank
- Suction Accumulator
- Fill Valve

This system is charged with R-134a refrigerant. Overall dimensions are 70" H x 70" W x 32" D.

Option

- H-RST-DMB Digital Manifold with Bluetooth



Computer Data Logging (CDL) Add-on Package

The **MODEL H-RST-17** Heat Pump Trainer Computer Data Logging (CDL) Add-on Package consists of:

- Control Panel, surface mounted with circuit breaker, pilot light and RS-232 port
- Thermocouples, type T, 8 required
- Pressure Transducers, 4 required
- Flow Transducer, 2 required
- Power Supply – 24V DC
- Analog Input Module – 4–20mA
- Analog Input module – Thermocouples, 2 required
- Watt Transducer
- Isolated RS-232/RS-485 Converter Module
- Software Package:
Utility Software
Genie SCADA Software

NOTE: The CDL Add-on Package is factory installed. Add suffix **-CDL** when ordering (**H-RST-17-CDL**).

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

Hampden
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