

**21ST CENTURY TRAINING
REQUIRES
21ST CENTURY REFRIGERANTS**

NEW WORLD STANDARD AIR CONDITIONING SYSTEMS



Hampden®
ENGINEERING CORPORATION



AIR CONDITIONING SYSTEMS

Model H-ACT-1 Air Conditioning System Trainer

*** **AHEAD OF ITS TIME** ***

BASED ON R-410A REFRIGERANT (A REPLACEMENT FOR R-22)

- ◆ **EFFICIENT**
- ◆ **RELIABLE**
- ◆ **ENVIRONMENTALLY FRIENDLY**

Refrigerant approved by



U.S. Environmental Protection Agency

Designed to provide the student with a thorough understanding of the systems used in residential and commercial applications. The system components are panel mounted and provide easy access for testing and troubleshooting. When specified, the trainer can be supplied with an integral fault package comprised of ten electrical faults, mounted in a locking box on the rear of the trainer. Also available is a panel mounted meter package that permits monitoring of the system voltage, current, watts, and a digital temperature package with thermocouples to display the system temperatures at critical locations.

Features

The Hampden **Model H-ACT-1** Air Conditioning System Trainer consists of:

- ◆ Three types of liquid control devices
 - ◆ A capillary tube
 - ◆ Thermostatic expansion valve
 - ◆ Hand expansion valve
- ◆ A reversing valve is included so that the system may be run as a heat pump.
- ◆ Brazed connections, to handle the higher working pressures of R-410A
- ◆ Included are sight glasses and pressure gauges at the inlet and outlet of the evaporator and condenser
- ◆ Thermometer wells
- ◆ Temperature and pressure controls
- ◆ Receiver
- ◆ Filter dryer
- ◆ Accumulator

Power Required

Input: 220VAC - 1Ø - 3W - 60Hz

Comes tested and factory charged with R-410A refrigerant.

Furnished complete with operating instructions, experiment and teacher manuals.

H-RST-DMB Option Digital Manifold with Bluetooth

- Digital backlit display with auto-dimming
- Rugged 4-way TITAN valve block
- High and low side temperature and pressure reading
- Calculates superheat and subcooling
- Real time pressure sample rate
- Library of 126 refrigerant profiles
- Two temperature clamps and 4 hoses included
- Internal data storage and Bluetooth communication

The Yellow Jacket P51-870 Kit includes:

- P51-870 Titan Digital Manifold
- Two Temperature Clamp Probes
- Vacuum Sensor

Results can be transmitted via Bluetooth to a smartphone for additional analysis or data storage. Instrument has on-board data logging too, as well as vacuum sensor.



R-410A REFRIGERANT

BRINGING THE FUTURE INTO THE CLASSROOM



Hampden **MODEL H-ACT-1** Air Conditioning System Trainer (shown with options)

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

AIR CONDITIONING SYSTEMS

H-ACT-1 OPTIONAL ACCESSORIES

H-ACT-FP-10E Electrical Fault Package

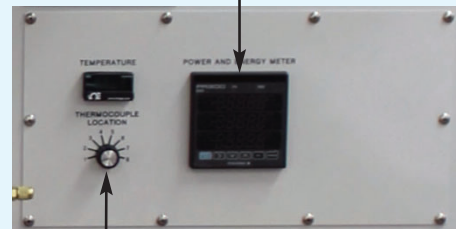
FAULT TABLE FOR OPTIONAL H-ACT-FP-10E

FAULT SWITCH	COMPONENT FAULTED	EFFECT	REMARKS
1 (NC)	Defective power cord	Trainer inoperative	No main power to trainer.
2 (NC)	Open high-low pressure switch	Compressor inoperative	No power through pressure switch to compressor.
3 (NC)	Defective evaporator motor winding	Evaporator frosting	No cooling with fan inoperative.
4 (NC)	Defective condenser motor winding	Condenser fan inoperative	Discharge pressure will rise, causing high pressure switch to open, thus causing compressor to shut off.
5 (NC)	Open reversing solenoid valve coil	Stays in refrigeration mode	Unit will not operate as heat pump.
6 (NC)	Transformer primary windings open	Compressor inoperative	Zero volts from contactor.
7 (NO)	Thermostat contacts shorted	Temperature control has no effect on compressor	Compressor runs continuously.
8 (NC)	Run capacitor open	Compressor inoperative	No power to compressor run winding; runs about 2-1/2 amps higher.
9 (NO)	Run capacitor shorted	Compressor inoperative	Compressor starts then stops on thermal overload; off on overload.
10 (NC)	Zero volts to compressor	Compressor inoperative; indoor fan operates	Zero volts from compressor contactor.

H-ACT-DMP

The instrument package consists of one Yokogawa PR300 Power Energy Meter.

This meter monitors the compressor volts, amps and wattage.



H-ACT-TC

Digital Temperature Module with Thermocouple Selector Switch

Hampden offers an instructor training program either at our factory or at your site.

Our technicians provide an indepth training program to allow the user to get a complete understanding of the equipment and its operation.



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

Hampden[®]
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