

HOME PRESSURIZATION AND DISTRIBUTION TRAINER



Hampden®
ENGINEERING CORPORATION



AIR DISTRIBUTION from *Hampden*[®]

EXTEND CLASSROOM KNOWLEDGE INTO A REAL-WORLD, HANDS-ON ENVIRONMENT WITH HAMPDEN TRAINING EQUIPMENT

Purpose

The Hampden **Model H-HEAT-2** Air Distribution System Trainer is designed to acquaint the student with the fundamentals of air movement found in a typical residential dwelling. The trainer aids the student in acquiring a better understanding of static pressures, back drafting, air leakage and thermal boundaries. The trainer shows the student how air moves under various conditions created in a residential dwelling.

Description

Operating from any 120 volt outlet, this trainer is suitable for classroom demonstration and/or individualized instruction. An instructor manual is supplied to explain trainer operation.

With the included smoke generator the students will be able to see the path of the air flow throughout the house. The house is fitted with (5) pressure taps located in critical areas to enable the students to take pressure readings and calculate air loss.

Specifications

The **H-HEAT-2** is constructed of 3/8" thick clear Lexan, allowing for 100% visual accessibility of every room inside the trainer. With this unique feature the student will be able to see the smoke flow throughout the house into any air gap. The trainer is divided into 11 rooms, with one main LED lighting strip illuminating the entire trainer. The trainer has 3 floors, floor #1 includes a garage, utility room, kitchen, dining room and living room. Floor #2 includes a bathroom, two bedrooms, office and bonus room. Floor #3 is the attic.

The trainer includes a simulated HVAC system that consists of 100% clear duct work, a blower fan, return register and 7 supply registers. Smoke can be injected into the clear ducts allowing the student to see the actual flow of air coming out of the duct, flowing throughout the house and out any air gap or exhaust point.

The utility room includes an exhaust fan to simulate a dryer exhaust and also includes a simulated gas water heater that exhausts through the side of the house. The kitchen includes a simulated range hood exhaust. The living room includes a simulated fire place with a flue that exits through the roof. The bathroom includes a simulated exhaust fan.

Incorporated into the trainer is a high volume pressurization fan that will allow the student to fully pressurize the house and take pressure readings via the included parts. Air gaps can be inserted during the pressurization process to show the effect a poorly weatherized house has on efficiency.

The house includes 4 hinged panels that allow access to the inside of the house. This allows the student to open and close the interior doors to show the effect on air flow and circulation.

The roof/attic includes ridge vents and soffit vents to show the flow of air through the roof.

The trainer is mounted on a steel base which includes: switches for the lights and fans, a smoke generator and a circuit breaker protected power supply. All the interior components run on 12VDC for safety. The smoke can be exhausted in 3 locations, at the water heater, in the garage, in the living room, and into the HVAC duct.

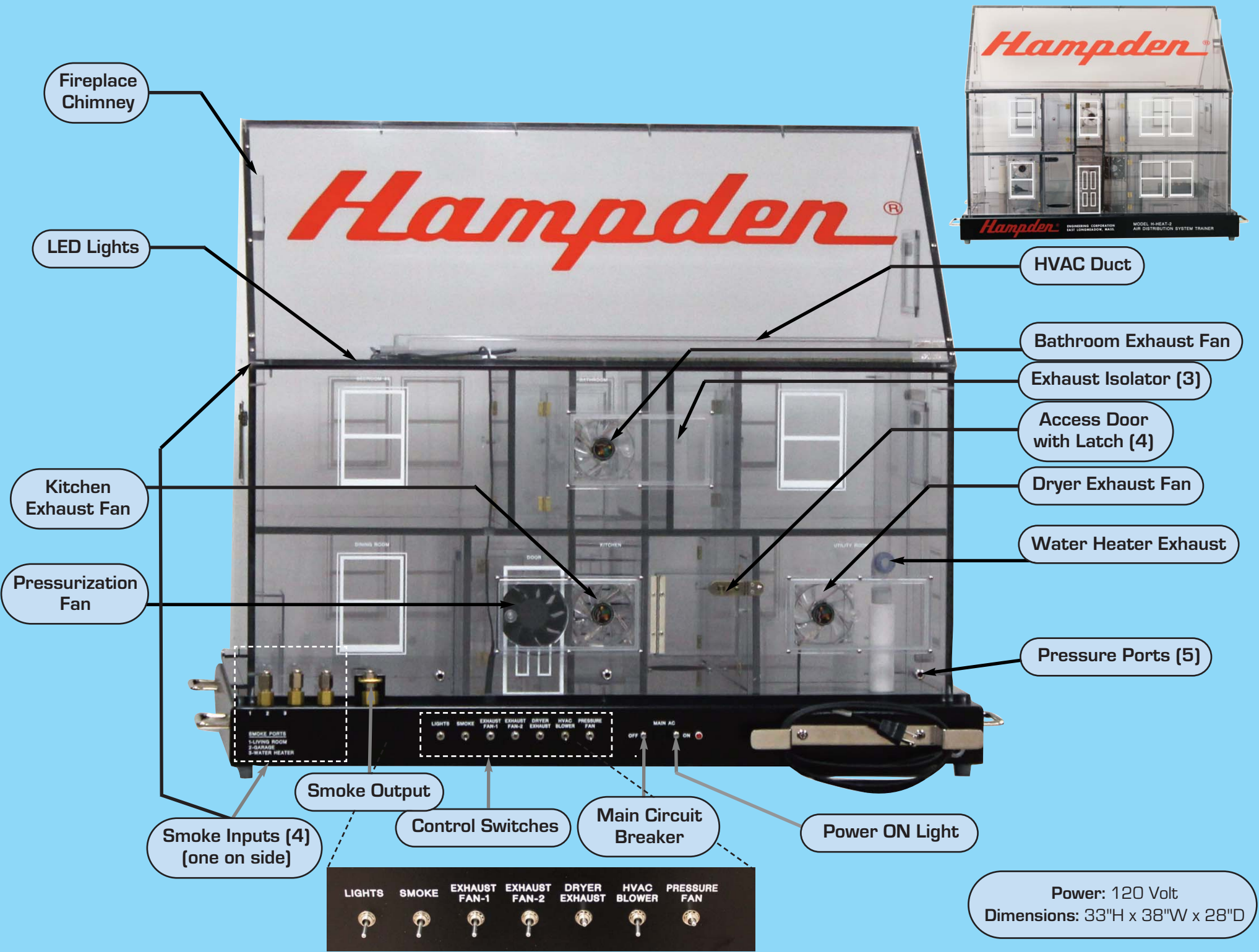
A Digital Manometer is also included.

Learning Objectives

- Pressure Diagnostics
- Duct Leakage Testing
- Back Drafting
- Thermal Boundaries

Option

- **H-HEAT-2-MT** Mobile Table



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

1. Orientation

- Energy Audit Overview
- The Energy Auditor
- Diagnostic Equipment
- Green Awareness / Terminology (Certification)

2. Safety

- Safety
- OSHA 10 Certification

3. General Competencies

- Show pressurization of a particular zone within the house
- Pressurize different rooms of the house
- Demonstrate depressurization
- Demonstrate where air moves through voids within the structure by means of smoke
- Show the pressure reading in Pascal via a pressure meter



Model H-HEAT-2

Air Distribution System Trainer on Cart Option
Shown with Option H-HEAT-2-MT Mobile Table

Model H-AP-2 Air Distribution System Trainer



The Hampden **Model H-AP-2** Air Distribution System Trainer is designed to acquaint the student with the fundamentals of air movement found in typical forced air heating and air conditioning systems. The trainer aids the student in acquiring a better understanding of static pressures, velocity pressures, and air volumes. The trainer shows the student how air moves under various conditions created in the distribution system.



Hampden is committed to providing industry-leading technology.

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