

# Gas Burner Trainers

Educational Training Equipment for the 21st Century

Bulletin 229-2

## Purpose

The Hampden **Model H-GHT-3** Mobile Gas Burner Demonstrator provides hands-on experience for students to conduct tests and adjustments on modern forced air gas furnaces.

## Description

The unit consists of:

- Mobile bench
- Gas burner
- Gas manifold
- Forced air heat exchanger
- Draft diverter
- Direct spark ignition
- Thermostat
- Gas solenoid valve
- Instruction Manual and Text Book

The heat exchanger is protected with an expanded metal protector.

- \* Natural gas supply and connection to the gas solenoid are not included, customer is responsible for meeting all local and state code requirements prior to hook-up.
- \*\* Liquid Propane available on request.

**Model H-GHT-3** Mobile Gas Burner Demonstrator ►  
Dimensions: 60½"H x 48"W x 25"D  
Shipping Weight: 600 lbs.

## H-GHT-3 Mobile Gas Burner Demonstrator



## H-GHT-1B Gas Heat Trainer

### Purpose

The Hampden **MODEL H-GHT-1B** Gas Heat Trainer provides practical experience in the operation, testing, and troubleshooting of gas-fired furnaces, and furnace control system.

### Description

The Hampden Gas Heat Trainer is a standard commercial furnace that operates on natural gas. If desired, however, it may be supplied for propane gas operation.

The unit plugs into a standard 1 $\phi$  AC receptacle. For a thorough understanding of its operation, thirty points in the electrical circuit are brought out to pin jacks on the front of the Trainer. This provides the student with easy access to measurement and test points.

### Operation

With the Hampden Gas Heat Trainer, the student can gain an understanding of four aspects of gas furnace operation.



**Model H-GHT-1B**  
Dimensions: 15-3/8"H x 30-1/8"W x 48-1/8"D  
Shipping Weight: 282 lbs

1. Learn to identify, by appearance and function, the mechanical and electrical components of a gas-fired furnace.
2. Develop an appreciation for the safety precautions necessary when connecting, operating, and servicing furnaces.
3. Observe the correct operating sequence, analyze the reasons for each step, and learn how the control and protective devices operate.
4. Acquire practical troubleshooting experience. On the side panel, there are fifteen toggle switches which can be used to insert faults in the electrical circuit. After the instructor has programmed in the desired faults, it is up to the student to discover the source of the problem.

## H-GHT-1T Gas Heat Trainer Test Kit

The **Model H-GHT-1T** Hampden Gas Heat Trainer Test Kit contains the equipment necessary to make tests and perform experiments with Hampden's line of **H-GHT Series** Gas Heat Trainers.

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

# Gas Heat Trainer

Educational Training Equipment for the 21st Century

Bulletin 229-3

## Purpose

Hampden's **Model H-GHT-4** Gas Fired Warm Air Heating Trainer provides hands-on training by allowing students to conduct tests and adjustments on a modern forced air gas modulating furnace.

## Specifications

The **H-GHT-4** Gas Fired Warm Air Heating Trainer consists of the following:

- Mobile Bench
- Gas Burner
- Gas Manifold
- Forced Air Heat Exchanger
- Lo/Hi Gas Valves
- 92,000 BTU Gas Fired Furnace
- Two-stage 24V Heating Thermostat
- Hot Surface Ignitor
- Electronic Blower Speed Control
- Instruction Manual and Text Book

The following components shall be mounted on mobile bench:

- Forced Air Gas Furnace
- Main Disconnect Switch
- 24V Two-Stage Heating Thermostat
- Power Cord

The **H-GHT-4** incorporates 38 **HR-1S** socket receptacles inserted in the furnace circuit for testing purposes.

Input Power: 120V AC-1 $\phi$ -60Hz

## Description

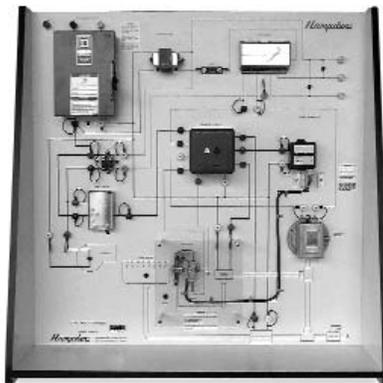
The **H-GHT-4** Gas Fired Warm Air Heating Trainer is equipped with a two-stage heating and modulating fan control. This Trainer is fired by either natural gas or liquefied petroleum.

1. **Sealed Combustion:** Designed to bring in air from outside to support combustion, helping to prevent drafts so that furnace will perform safely.
2. **Pressure Switch:** If airflow inside the heat exchanger is interrupted, the pressure switch signals the furnace to shut down.
3. **Stainless Steel Secondary Heat Exchanger:** Provides added efficiency by extracting residual heat from the air after it passes through the primary heat exchanger.
4. **Induced Draft Motor Blower:** Creates the flow for the gases through the heat exchanger. For added safety it runs before and after each heating cycle.
5. **New Ignitor Technology** with 30 second temperature ramp-up to increase ignitor life by 25%.
6. **Multi-Speed Blower** designed for a wide range of heating capacities.
7. **Variable Speed Blower** maximizes system efficiencies. Using whisper-quiet variable speed motor technology, the blower improves air quality by mixing air from floor to ceiling to create more uniform temperatures.

## H-GHT-4 Gas Fired Warm Air Heating Trainer



**Model H-GHT-4** Gas Fired Warm Air Heating Trainer  
Dimensions: 79-3/8"H x 62"W x 28"D  
Shipping Weight: 600 lbs.



**Model H-GHT-2** Gas Heat Trainer  
Dimensions: 39½"H x 39"W x 20½"D  
Shipping Wt.: 125 lbs.

## H-GHT-2 Gas Heat Trainer

The Hampden **Model H-GHT-2** Gas Heat Trainer contains the actual control components of a commercial gas heat installation. No gas is required. Although operation of the blower motor, along with the pilot and main burner are simulated, the spark ignitor is real and fully functional. Up to 15 faults may be inserted from rear panel.

This unit is also available to mount on a mobile A-frame.  
Specify Hampden **Model H-GHT-2-MCI-1000**

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

**Hampden**  
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