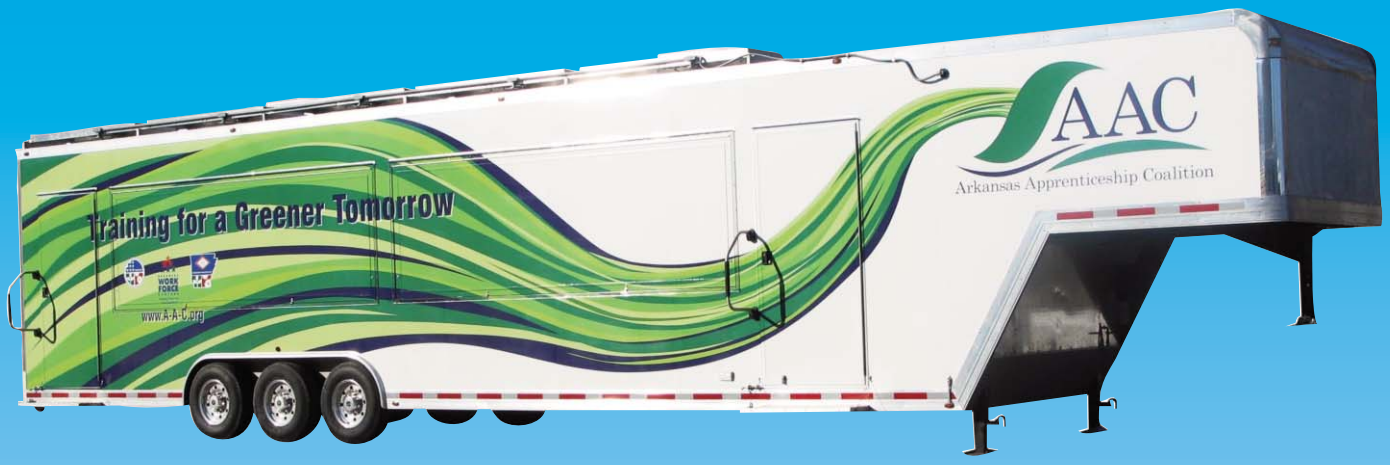
NEW MOBILE TRAINING LABS







GREEN MECHANICAL COUNCIL

Hampden® ENGINEERING CORPORATION

ISO 9001:2015

MADE IN U.S.A.

Hampden Engineering Corporation

MOBILE CLASSROOM SIZES

The Hampden Mobile Classroom provides you with a means of expanding your training capabilities. Our Mobile Classrooms are a low cost alternative to building an addition or renovating your current facility. As an added bonus, the mobile classroom can be taken virtually anywhere allowing you to bring the training to where it is needed, saving time and money. Your mobile classroom can be customized with a wide variety of Hampden's quality products tailored to meet your specific needs. Your mobile classroom will even be designed with your graphics and logos on the side. The Hampden Mobile Classroom gives you the ability to quickly reconfigure the training package to expand your capabilities for your future training needs.

Let us build a training package to meet your specific needs

Save time and money... bring the classroom to your students... wherever and whenever it is needed most!



Expand your training capabilities with a Mobile Training Facility from Hampden Engineering

Mobile Classrooms Sized to Meet Your Needs

20' Long Mobile Classroom

The **Hampden 20' Mobile Classroom** is a double axle, 20' long x 7' wide (6'-9" I.D.) trailer with 7,000 lbs. GVWR rating. Constructed from exterior grade aluminum, installed vertically with non-corrosive mechanical fasteners.

The 20' mobile classroom is set up as a training environment for 3-6 students at various stations. Trailer also includes one side mounted door that raises up to allow for open classroom environment, as well as two side access doors and one large transportation door in back for movement of equipment.

28' Long Mobile Classroom

The **Hampden 28' Mobile Classroom** is a double axle, 28' long x 8.5' wide 8' high (I.D.) trailer with 10,000 lbs. GVWR rating. Constructed from exterior grade aluminum, installed vertically with non-corrosive mechanical fasteners. The 28' mobile classroom is set up as a training environment for 6- 8 students at various stations. Trailer also includes one side mounted door that raises up to allow for open classroom environment, as well as two side access doors and one large transportation door in back for movement of equipment.

44' Long Mobile Classroom

The **Hampden 44' Mobile Classroom** is a triple axle, 44' long x 8.5' wide 8' high (I.D.) gooseneck trailer with a 18,000 lbs. GVWR rating. Constructed from .040" exterior grade aluminum, installed vertically with non-corrosive mechanical fasteners. The 44' mobile classroom is set up as a training environment for 10-12 students at various stations. Trailer also includes two side mounted doors that raise up to allow for open classroom environment, as well as two side access doors and one large transportation door in back for movement of equipment.

52' Long Mobile Classroom

The **Hampden 52' Mobile Classroom** is a triple axle, 52' long x 8.5' wide 8' high (I.D.) gooseneck trailer with a 21,000 lbs. GVWR rating. Constructed from .040" exterior grade aluminum, installed vertically with non-corrosive mechanical fasteners. The 52' mobile classroom is set up as a training environment for 12-14 students at various stations. Trailer also includes two side mounted doors that raise up to allow for open classroom environment, as well as two side access doors and one large transportation door in back for movement of equipment.

... Other sizes available upon request.

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MOBILE CLASSROOM SIZES

Hampden 20' Mobile Classrooms



20 ft. With back loading door, open side, two entry doors and generator



Sport Style mobile classroom with back loading door and one entry door

Hampden 28' Mobile Classrooms



Two entry doors, back loading door, and one side mounted awning door



Two entry doors, back loading door, and one side mounted awning door, and solar mounted roof panels

Hampden 44' Mobile Classrooms



Two entry doors, back loading door, and two side mounted awning doors, and solar mounted roof panels



Two entry doors, back loading door, and two side mounted awning doors



Two entry doors, back loading door, and two side mounted awning doors

Hampden 52' Mobile Classrooms



Two entry doors, back loading door, and two side mounted awning doors

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MOBILE CLASSROOMS



Hampden *Solar* Mobile Classroom

Description

The **Hampden 28' Solar Mobile Classroom** comes complete with heating air conditioning package and electrical power included in the system. Incorporated into the electrical system are (14) roof mounted solar panels. These panels can be used to keep the trailer battery fully charged and to operate the supplied DC dome lights. Another option is generator system to run heating/air conditioning and electrical power, recharge capability through direct plug of power source. Trailer includes a custom graphics and logos wrapping package applied to the exterior of trailer. The mobile classroom also includes one curb side awning door that raises up to allow for open classroom environment as well as two curb side access doors and one large transportation door/ramp in back for removing and moving in equipment. The mobile classroom is equiped with a water supply package and drain package that allows easy and convenient use of the training equipment.

Solar Panel Option







H-SHSP-1 Solar Heat and Solar Photovoltaic Trainer

Hampden **Model H-SHSP-1** Solar Heat and Solar Photovoltaic Trainer is a fully mobile solar heat solar photovoltaic control system trainer which lets the student technician examine the hot water and electrical layouts and operational features normally associated with a solar heating system and photovoltaic power source. The trainer demonstrates the characteristics of the solar array, water heating, water circulation, storage battery, AC and DC distribution, and AC and DC loading.



H-SST-1A Solar System Trainer

The Hampden **Model H-SST-1A** Solar System Trainer is an actual solar hot water heating system. System components include a solar collector, circulation pumps, storage tank, heat exchanger, air separator, air handler, solar heating coil, automatic air vents, thermostat, and a control panel with sensors. Gauges, thermometers, and flowmeters permit students to observe pressures, temperatures, and flow rate while the system is in operation.



H-SPT-AC-1A Solar Photovoltaic Trainer

The Hampden **Model H-SPT-AC-1A** Solar Photovoltaic Trainer is a control system trainer which lets the student technician examine the electrical layout and operational features normally associated with a photovoltaic power source. The trainer demonstrates the electrical characteristics of the solar array, storage battery, AC and DC distribution, and AC and DC loading.

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MOBILE CLASSROOMS

Hampden *Bio-Fuel* Mobile Classroom

Description

The **Hampden 28' Bio-Fuel Mobile Classroom** comes complete with heating/air conditioning package and electrical power included in the system. Incorporated into the electrical system is a generator system to run heating/air conditioning and electrical power, recharge capability through direct plug of power source. Trailer includes a custom graphics and logos wrapping package applied to the exterior of trailer. The mobile classroom also includes one curb side awning door that raises up to allow for open classroom environment as well as two curb side access doors and one large transportation door/ramp in back for removing and moving in equipment. The mobile classroom is equiped with a water supply package and drain package that allows easy and convenient use of the training equipment.



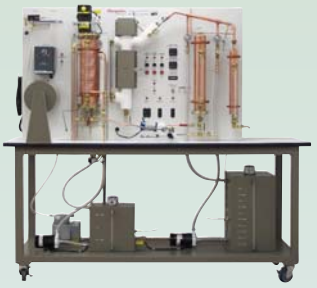
H-BIO-100 Bio-Diesel Demonstrator



H-BIO-100
Bio Diesel Demonstrator

The Hampden **Model H-BIO-100** Bio Diesel Demonstrator is ideal for educational purposes, using the same protocol and with the same quality construction as the large scale units. The rugged design, capacity and ease of use make this unit ideal for teaching and experimentation.

The **H-BIO-100** is capable of producing up to 26.5 gallons per batch with High Temperature Pressurized Process (HTP) which consistently delivers 98% or better conversion ratios. Proper use of the unit and the HTP process delivers ASTM and EN compliant Biodiesel, without the need to wash.



H-ETS-1A Ethanol Production Process System

The Hampden **Model H-ETS-1A** Ethanol Production Process System is designed to facilitate the instruction of students on the process required to produce ethanol for experimental purposes. Ethanol is a very promising fuel alternative to oil since sources are widely available and ethanol is clean-burning.

H-6150-TT Table Top Liquid-To-Liquid Extraction Demonstrator



The Hampden **Model H-6150-TT** Table Top Liquid-To-Liquid Extraction Demonstrator option has been developed to permit student study of the fundamentals of a small scale liquid-to-liquid extraction system. In addition to demonstrating the hydrodynamics of liquid-to-liquid extraction systems and interface control techniques, this unit can also be used to determine the mass transfer rates, heat transfer coefficients, extraction efficiency, and operating conditions.

Hampden *Green* Mobile Classroom

Description

The **Hampden 44' Gooseneck Green Mobile Classroom** comes complete with air conditioning and electrical power included in the system. Incorporated into the electrical system are (20) roof mounted solar panels. These panels can be used to keep the trailer battery fully charged and to operate the supplied DC dome lights. Other options are generator system to run air conditioning and electrical power, recharge capability through direct plug of power source, 120/240V, 50 Amp. The mobile classroom is to include a custom graphics and logos wrapping package applied to the sides and rear of trailer. The mobile classroom also includes two side mounted doors that raise up to allow for open classroom environment as well as two side access doors and one large transportation door in back for removing and moving in equipment. The mobile classroom is a triple axle trailer, loaded weight 18,000 lbs. The mobile trainer is equipped with a water supply package and drain package that allows easy and convenient use of the training equipment.



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MOBILE CLASSROOMS

Hampden *Green* Mobile Classroom Equipment



H-HPT-3 Heat Pump Trainer

The Hampden **Model H-HPT-3** Heat Pump Trainer simulates the split system heat pump. Split system heat pump units are designed for use with a wide variety of fossil fuel furnaces, electric furnaces, air handlers, and evaporator coil combinations.



H-RPT-1 Residential Piping Trainer

The Hampden **Model H-RPT-1** Residential Piping Trainer is designed to demonstrate a series of modern waste flushing systems. The Hampden **Model H-RPT-1** Residential Piping Trainer consists of three modern flushing system: Single Flush Flushometer, Dual Flush Flushometer, and Pressure Assist Water Closet.



H-PST-1 Plumbing Trainer

The Hampden **Model H-PST-1** Plumbing Trainer is used to demonstrate an environmentally friendly toilet flushing system. Utilizing gray water, ie. water drained from a sink, the vanity tank will fill and pump the gray water into the water storage tank of a standard toilet.



H-WPG-1B Wind Powered Generator

The Hampden **Model H-WPG-1B** Wind Powered Generator has been designed to provide the student with the basic understanding of how wind generators function as an alternate source of energy. This system consists of a wind source, an AC generator, control panel with internal battery and base assembly.

The Hampden **Model H-WPG-1B** Wind Powered Generator will supply the wind source that will operate the wind turbine. The output of the wind turbine is used to charge a 12 VDC battery mounted inside the control panel. The output of the wind turbine will change depending on the status of the battery.



H-GTL-1 Geothermal Trainer

The Hampden **Model H-GTL-1** Geothermal Trainer provides hands-on training by allowing students to conduct tests and adjustments on a modern Geothermal Heat Pump.

The **H-GTL-1** Geothermal Trainer is equipped with: Exclusive double isolation compressor mounting system; Insulated divider and separate compressor/air handler compartments; Extended range operation; Exceeds ASHRAE 90.1 efficiencies; Internally trapped condensate drain line; and Unit Performance Sentinel performance monitoring system.



H-PVIT-1
Photovoltaic Installers Trainer

The Hampden **Model H-PVIT-1** Photovoltaic Installers Trainer has been designed with the latest Industrial/Commercial components available. The trainer will provide the necessary training in completing a fully functioning, grid-tied solar electric system. This system will have the capability to be fully monitored and controlled.

The Hampden **Model H-PVIT-1** Photovoltaic Installers Trainer consists of a mobile steel frame with (4) solar panels mounted on the rear. The solar panels are mounted to a frame that allows the panels to be positioned for optimal sun exposure. The front of the frame has all the intricate components mounted for easy access.

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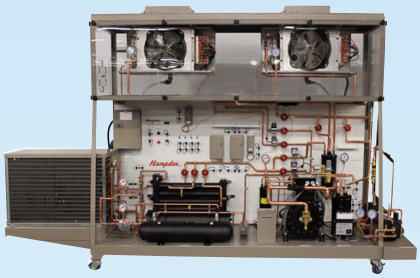
MOBILE CLASSROOMS

Hampden Air Conditioning Mobile Classroom

Description

The **Hampden 44' HVAC Mobile Classroom** comes complete with air conditioning and electrical power included in the system. Other included options are a generator system to run air conditioning and electrical power, recharge capability through direct plug of power source, 120/240V, 50 amp. It can be equipped with any of Hampden's HVAC trainers to provide your students experience with operating and troubleshooting HVAC systems. The mobile classroom is to include a custom graphics and logos wrapping package applied to the sides and rear of trailer. The mobile classroom also includes two side mounted doors that raise up to allow for open classroom environment as well as two side access doors and one large transportation door in back for removing and moving in equipment. The mobile classroom is a triple axle trailer, loaded weight 18,000 lbs. The mobile trainer is equipped with a water supply package and drain package that allows easy and convenient use of the training equipment.





H-IRT-1 Industrial Refrigeration Trainer

The Hampden **Model H-IRT-1** Industrial Refrigeration Trainer consists of industrial refrigeration components completely factory assembled and wired. It is designed to provide training with larger commercial and industrial refrigeration systems which require water-cooled condensers (tube-in-tube and shell-in-tube), electric and hot gas defrost systems, cooling towers, hot bypass capacity control systems, crankcase pressure regulators, crankcase heaters and pressure pumps.



H-RST-2
Mobile Refrigeration System Trainer

The Hampden **Model H-RST-2** was designed to provide students with an actual working model of a refrigeration system, complete in every detail. The Hampden **Model H-RST-2** Mobile Refrigeration System Trainer helps students to develop a thorough understanding of the refrigeration cycle. It can operate in five different modes, allowing testing & troubleshooting experience for various types of refrigeration systems.



H-ACT-1
Air Conditioning System Trainer

The Hampden **Model H-ACT-1** Air Conditioning System Trainer is based on R-410A refrigerant. R-410A is an efficient and environmentally friendly refrigerant. The **Model H-ACT-1** is 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.

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Hampden Process Engineering Technology Mobile Classroom

Description

The **Hampden 52' Process Engineering Technology Mobile Classroom** comes complete with air conditioning and electrical power included in the system. It can be equipped with any of Hampden's Instrumentation and Controls Trainers to provide your students with experience in setting up, tuning, operating, and troubleshooting actual instrument and control systems of the type used in the power and process industries. This Trailer is a triple axle, 52' long x 8.5' wide 8' high (I.D.) gooseneck trailer with a 21,000 lbs. load rating. Constructed from .040" exterior grade aluminum, installed vertically with non-corrosive mechanical fasteners. The 52' mobile classroom is set up as a training environment for 12-14 students at various stations. Trailer also includes two side mounted doors that raise up to allow for open classroom environment, as well as two side access doors and one large transportation door in back for movement of equipment. The mobile classroom is to include a custom graphics and logos wrapping package applied to the sides and rear of trailer. The mobile classroom also includes two side mounted doors that raise up to allow for open classroom environment as well as two side access doors and one large transportation door in back for removing and moving in equipment. The mobile trainer is equipped with a water supply package and drain package that allows easy and convenient use of the training equipment.





H-FP-223-14 Hydraulic Trainer

The Hampden **Model H-FP-223-14** Hydraulic Trainer consists of a mobile bench, hydraulic pump, and selection of hardware mounted on a vertical panel. All hydraulics hardware is of commercial quality and configured for training purposes. *(Shown with EH Option)*



H-ICS-8189 Process Control Trainer

The **Model H-ICS-8189** Process Control Trainer was developed to provide hands-on training for industrial process automation. This trainer provides measurement and/or control of flow, level and pressure utilizing microprocessor based controls.



H-ICS-8189-4
Instrumentation & Controls Trainer

The **Model H-ICS-8189-4** Instrumentation & Controls Trainer provides experience in setting up, tuning, operating, and troubleshooting actual instrument and control systems of the type used in the power and process industries. By simulating a different process loop, this unit provides instruction in the measuring and transducing of such physical variables as pressure, temperature, flow and level.

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MOBILE CLASSROOMS



Hampden Industrial Maintenance Mobile Classroom

Description

The **Hampden 44' Industrial Maintenance Mobile Classroom** comes complete with air conditioning and electrical power included in the system. Other included options are a generator system to run air conditioning and electrical power, recharge capability through direct plug of power source, 120/240V, 50 amp. It can be equipped with any of Hampden's Industrial Maintenance trainers to provide your students experience with operating and troubleshooting HVAC systems. The mobile classroom is to include a custom graphics and logos wrapping package applied to the sides and rear of trailer. The mobile classroom also includes two side mounted doors that raise up to allow for open classroom environment as well as two side access doors and one large transportation door in back for removing and moving in equipment. The mobile classroom is a triple axle trailer, loaded weight 18,000 lbs. The mobile trainer is equipped with a water supply package and drain package that allows easy and convenient use of the training equipment.





H-IMTS
Industrial Training Maintenance System

The Hampden **Model H-IMTS** Industrial Maintenance Training System provides maintenance technicians with the equipment needed to learn state-of-the-art techniques for maintaining complex drive systems through "hands-on" practice. The Industrial Maintenance Training system consists various drives and mechanisms used in industry.



H-FP-223-14 Hydraulic Trainer

The Hampden **Model H-FP-223-14** Hydraulic Trainer consists of a mobile bench, hydraulic pump, and selection of hardware mounted on a vertical panel. All hydraulics hardware is of commercial quality and configured for training purposes.



H-HMD-100-CM Mobile Test Console

To provide the facilities required to perform experiments with Hampden Series 100 Motors and Generators covered by Hampden Series 100 and 250 Student Manuals. Hampden Mobile Student Experimentation Stations,

Model HMB-100A and **Model HMD-100-CM** contain power and metering services, an ample work surface, and storage area for experimentation components. These stations may also serve as versatile power and instrument facilities for a wide range of other laboratory experiments.

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MOBILE CLASSROOM SPECIFICATIONS

Customized to meet your specific needs

Specifications

Following is a partial list of components included with all Hampden 44' long Mobile Classrooms.

Contact Hampden Engineering for a complete spec sheet or to customize to your specs

- Front corner post jacks – 3,000 lbs. capacity
- Rear crank down scissor type stabilizer jacks – 5,000 lbs. capacity
- 2-5/16 adjustable ball coupler with ½" safety chains
- Weather resistant wiring package with 12" x 2" electric brakes
- Fully undercoated chassis
- Radial tires with 8 bolt silver spoke wheels
- Recessed battery box assembly – vented
- 100 amp hour deep cycle battery
- Battery charge indicator and diode isolation
- Battery mounting bracket with cover
- 6 circuit fuse panel and 50 amp PC50 power source
- LED clearance lights
- High profile brake lights
- Fender mounted turn indicators
- LED wrap around tail lights with integrated rear side marker
- Anodized aluminum front corner caps
- Aluminum diamond tread stone guard for CVG
- 2 sidewall doors for ventilation and open environment
- D.O.T. required conspicuity tape on both sides and rear
- D.O.T. A-frame mounted 22 amp hour UI series breakaway switch
- 7.0 KW commercial gas generator - Optional
- 13.5M BTU roof mounted air conditioner
- 5,600 BTU heat strip
- Rear swing down type ramp door with aluminum diamond tread plate floor
- 12½" aluminum extruded ramp toe – 2,400 lbs. capacity
- 36" entry door on both sides with recessed interior step, 20" fold out step and folding grab handle
- Aluminum diamond tread plate floor over plywood floor
- ¼" white vinyl covered plywood ceiling
- End caps lined with aluminum cove
- 12 volt dome light with optic lens
- Necessary lights, switches, receptacles and service panel
- Drainage system for water removal - Optional
- Hampden bar-lock fastening system, provides equipment mounting hardware along wall
- Handicap accessible

NOTE: All Hampden training equipment can be provided with the Hampden bar-lock fastening system. This system provides a carefree means of transporting your equipment in the trailer.



An inside look at one of **Hampden's Mobile Classroom Trainers**

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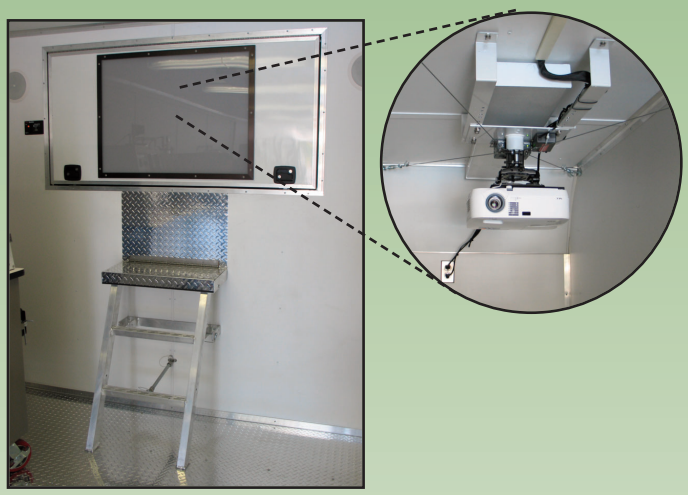
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MOBILE CLASSROOM OPTIONS

Video System Option

Video System consisting of the following:

- NEC VT440 SVGA 1100 Lumen Data Video Projector
- VMB-12 Ceiling mounting Plate
- Projector Tray with quick release clamp
- 20 Ft. VGA Video Cable
- Custom Mounting Plate with 15-pin video and F Connector
- Speakers (2)
- 26" x 38" x 1/4" Dalite DaPlex Rear Screen (mounted on storage door)
- Video Screen mounted in front of trailer and communication ports at two locations in trailer.



Roof Mounted Solar Panels Option

Roof Mounted 50 Watt solar panels (14-20) depending on trailer size with solar charge controller. Deep cycle storage batteries (2-4) depending on number of solar panels, and 1,000 watt DC to AC inverter.



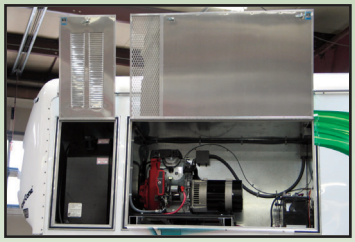
Storage Unit Option

For storage of information, manuals, accessory equipment, etc.

- A two-drawer file cabinet, mounted inside trailer's gooseneck compartment.
- An 84"H x 47"W x 22"D storage cabinet with adjustable shelves mounted inside the trailer.

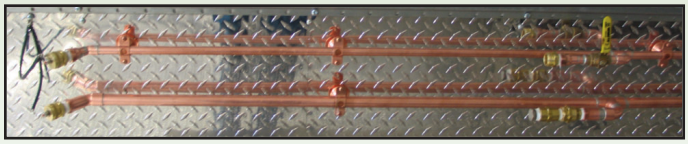
Generator Option

The Hampden Generator Option consists of one gas or diesel internally mounted generator, with fuel tank in available sizes: 5.5kw or 7kw



Water Supply and Drain Option

Consists of an installed water supply line and drain line with taps at each trainer, allowing the trainers to be filled and drained without removing the trainers from the trailer.



Workbench Option

Consists of workbenches mounted inside trailer to provide a work space for Hampden Table Top trainers.



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® ENGINEERING CORPORATION

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