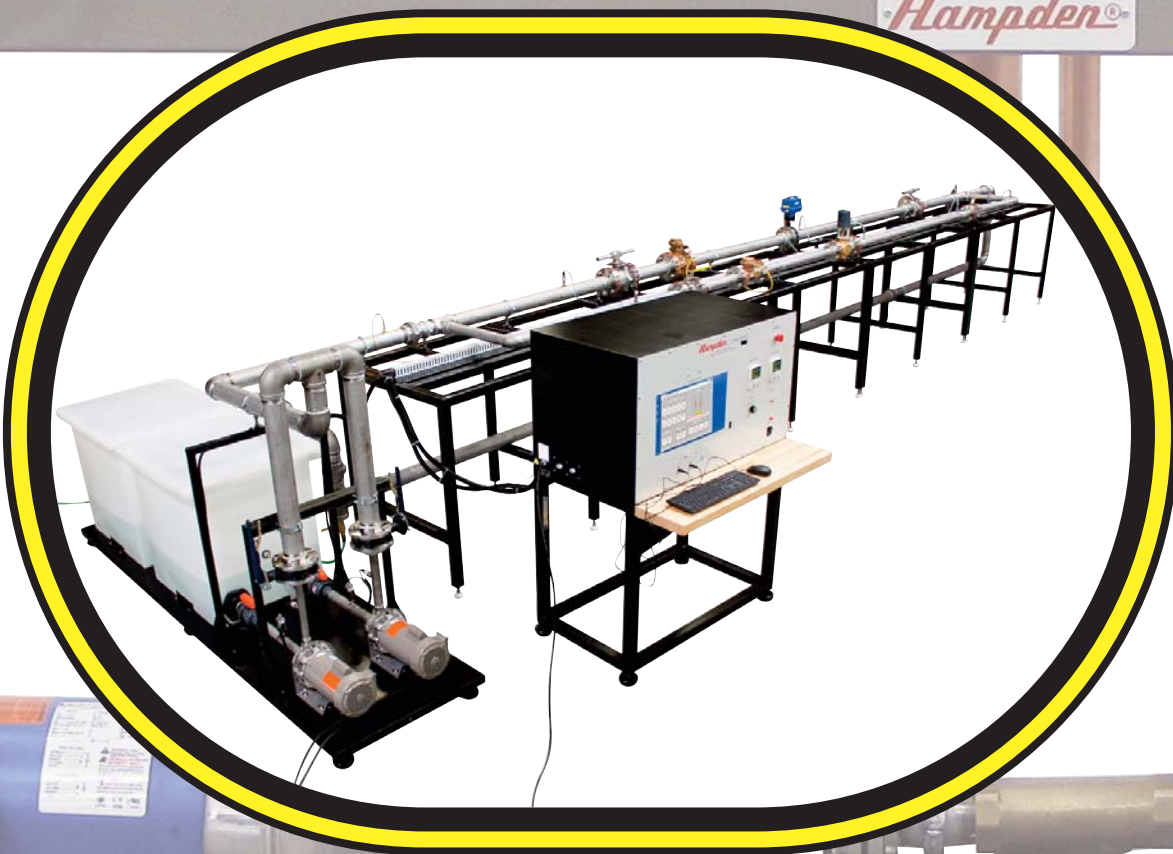


PIPEFITTERS



Hampden®
ENGINEERING CORPORATION



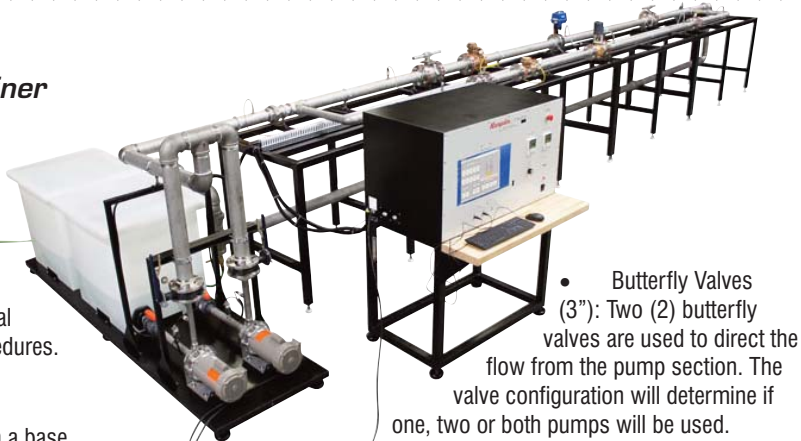
PIPEFITTERS

H-PVST-200 Full Scale Industrial Pump and Valve Trainer

The Hampden **MODEL H-PVST-200** Full Scale Industrial Pump and Valve System Trainer is a custom designed unit built to meet the plant specific training needs of the industrial facility. The trainer includes the basic facilities necessary to pump water (or other fluids) in a loop together with the plant specific pump(s), valves and control configurations. Furthermore, all major components are flanged fitted which allows easy removal from the unit. This will enable the trainee to learn service procedures.

Components

- Centrifugal Pump: Two (2) centrifugal pumps mounted on a base with two reservoir tanks. Each pump is attached to a 1.5 HP motor. Pump 1 has a 3.25" impeller and Pump 2 has a 4.0625" impeller.
- Motorized Globe Valve (2"): One (1) globe valve is fitted with a motorized actuator that is controlled from the control panel.
- Motorized Butterfly Valve (3"):
- One (1) butterfly valve is fitted with a motorized actuator that is controlled from the control panel.
- Ball valve (3"):
- Two (2) Stainless Steel ball valves are used to direct flow through the 3" section of pipe.
- Ball valve (2"):
- Two (2) Stainless Steel ball valves are used to direct flow through the 2" section of pipe.



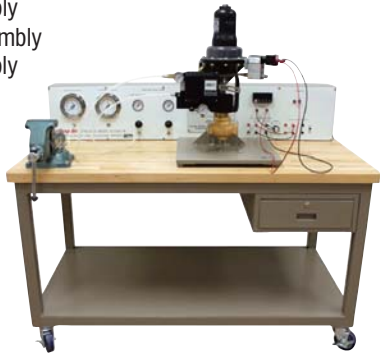
- Butterfly Valves (3"):
- Two (2) butterfly valves are used to direct the flow from the pump section. The valve configuration will determine if one, two or both pumps will be used.
- Flow meter:
- Two (2) vortex shedding flow meters are used. One with a range of 20-200 GPM is used in the 2" line. The other with a range of 30-300 is used in the 3" line.
- Pressure Transmitters:
- Twelve (12) pressure transmitters are located throughout the trainer that feed back to the control panel.
- Reservoir tanks:
- Two (2) reservoir tanks are mounted on the pump section with 3" coupling linking the two together.
- Control Panel:
- One (1) control panel is used to read the pressure and temperature measurements along with controlling the pump speeds with the VFDs. The motorized valve controls are also located on the panel.
- Flanged connections:
- Pair of flanged connections are used on the components for ease of removal.

H-CVAT-1A Control Valve and Actuator Trainer

The Hampden **Model H-CVAT-1A** Control Valve and Actuator Trainer provides students with hands-on training for valves, positioners, and actuators found in industry today. Students learn the operation and servicing of globe, ball, and butterfly valves, and both pneumatic and electro-pneumatic positioners and actuators. This trainer is complete with all of the necessary pneumatic and electronic power supplies, connectors, gauges, and regulators necessary to perform experiments utilizing the various valve assemblies.

The **Model H-CVAT-1A** consists of the following equipment:

- Globe Valve Assembly
- Butterfly Valve Assembly
- V-Ball Valve Assembly
- Pressure Regulator



H-181-100B Steam Boiler Trainer

The Hampden **Model H-181-100B** Steam Boiler Trainer efficiently provides hot water for process heat and building heat typically used throughout industry. This trainer teaches technicians the skills they need to select, operate, install, maintain and repair basic steam systems.

The **Model H-181-100B** is a "real-world" system producing heated process water. It includes the major steam and hot water system components commonly encountered. The trainer also includes extensive pressure, temperature and flow instrumentation which enables students to learn operational skills and troubleshooting. The piping is designed so that components can be removed and replaced. The **Model H-181-100B** consists of the following:

- Industrial Boiler
- Blowdown Tank/Aftercooler
- Pressure Regulator Valves
- Temperature Regulator Valves
- Feedwater Tank and Pump
- Pressure Gauges
- Temperature Gauges
- Heat Exchangers
- Electrical Fault Package with six instructor inserted faults
- Student and Teacher's Manuals



H-MVOT-2A Motorized Valve Operator Trainer

The Hampden **H-MVOT-2A** Motorized Valve Operator Trainer provides students with "hands- on" training for wiring, adjusting and troubleshooting a four-train motorized valve operator.

The **Series H-MVOT** Motorized Valve Operator Trainer consists of the following components:

- Component panel
- Motorized valve operator
- Manual
- Mobile bench
- Cord set

Mounted on the rear of the Component Panel is one 3-pole main circuit breaker with "Power On" pilot light, one control transformer with fused secondary, and one 3-phase reversing starter with overloads. Mounted on one end of the panel is one "Power On" pilot light, two indicator pilot lights, one selector switch, and six pushbuttons.

Mounted on the front side of the panel is one "Power On" pilot light. The front panel is steel with silkscreened schematics and all component connection points brought out to Hampden HR-1S socket receptacles.



H-MVOT-2A-FT Shown

H-BFPD-1 Backflow Prevention Demonstrator

The Hampden **MODELH-BFPD-1** Back Flow Prevention Demonstrator provides the instructor with the ability to demonstrate multiple methods of back flow prevention of liquids.

Eight circuits are laid out on this double sided mobile demonstrator. The bench is constructed from furniture grade steel, finished in instrument tan texture enamel. Four casters are mounted to the bench, two with locks, two without. The panel is mounted to the top of the bench and is constructed from 11 gauge furniture grade steel, finished in gloss white enamel. Four circuits are laid out on each side of the panel with the components labeled with KEM black silkscreen enamel.

The components mounted to the panel are:

- Double Check Valve BFP – 1
- Double Check Valve Assembly BFP – 2
- Standard Duty BFP – 1
- Heavy Duty BFP – 1
- Reduced Pressure BFP – 2
- Pressure Vacuum Breaker – 4
- Ball Valves
- Gate Valves
- Lot of 3/4" Copper Tubing
- Lot of 3/4" Fittings

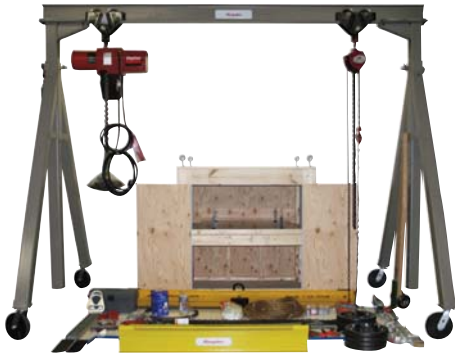
H-RIG-1C Rigging Systems Trainer

The Hampden Model **H-RIG-1C** Rigging Systems Trainer is designed to teach the techniques of safely moving loads of various shapes, sizes and types.

The Hampden Rigging System contains a variety of lifting and moving devices to allow the student to learn the proper methods of moving loads safely.

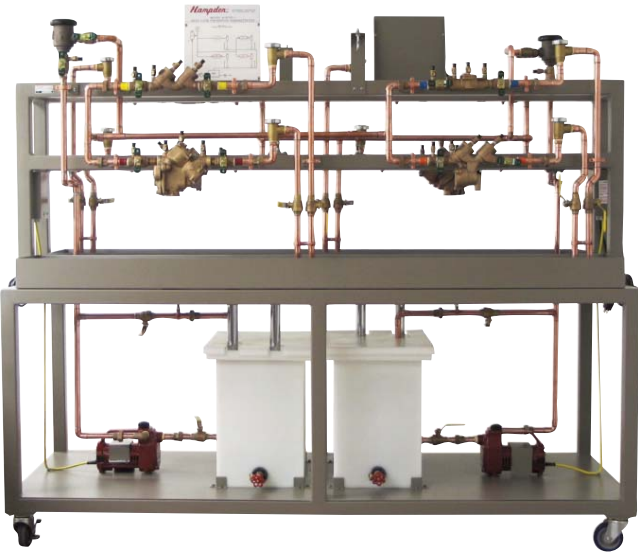
The basic Rigging System contains a variety of lifting and moving devices that consists of:

- Gantry Crane Unit
- Electric Hoist
- Chain Hoist
- Block and Tackle



The components mounted on the bench are:

- Water Storage Tank
- Water Pump
- Return Drain



PIPEFITTERS

H-PPST-1 Piping/Pipefitters System Trainer



The Hampden **Model H-PPST-1** Piping/ Pipefitters System Trainer provides the student with a hands on trainer for piping. The student will learn the necessary methods of connecting and running metal/iron piping, plastic piping, copper tubing, and hydraulic hose. Each material has its own particular methods used in plumbing.

The Hampden **Model H-PPST-1** Piping/ Pipefitters System Trainer consists of a frame that students use to mount and run pipes, valves, and other components. Once the piping is complete, the system will be tested by allowing water to be pumped through it. The student will learn how to make the necessary connections, depending on the type of material that the pipe is made from.

Unit includes the following parts: Mobile Frame, Pump, Tank, Piping, Valves, Tool Box, Flow Meter, and Protection.

H-PVST-1 Pump and Valve System Trainer



The Hampden **Model H-PVST-1** Pump and Valve System Trainer is a custom designed unit built to meet the plant specific training needs of the industrial facility. The trainer includes the basic facilities necessary to pump water (or other fluids) in a loop, together with the plant specific pump(s), valves and control configurations. Furthermore, all major components are flange fitted which allows easy removal from the unit. This will enable the trainee to learn the proper service procedures.

The unit is permanently mounted on a steel panel and base and the front of the panel is silkscreened with a schematic of the pumping system. This unit is 60"H x 70"W x 30"D and comes with an instruction manual.



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