

MECHANICAL SYSTEMS



Hamptden[®]
ENGINEERING CORPORATION



MECHANICAL SYSTEMS

HANDS-ON TRAINING

Model H-6645

A tabletop unit for the operation and investigation of series and parallel pump operation. The trainer consists of two centrifugal pumps that are fed by a common water reservoir and a PVC plumbing arrangement, along with five valves that allow

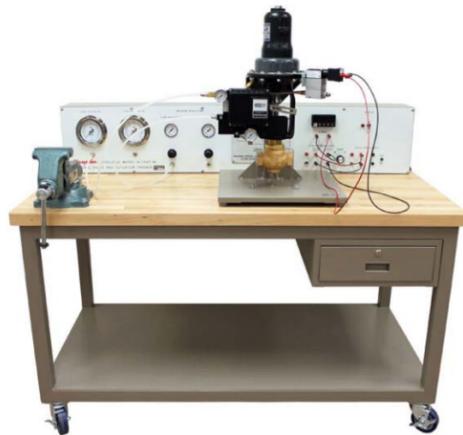


Model H-6981 Centrifugal Pump Test Demonstrator

Provides a hands-on introduction to the centrifugal pump allowing exploration of pumping mechanics and their effects. Mounted on the base is a two-section holding tank with a total capacity of 44 gallons (167 liters) of water. Also mounted on the base is a Centrifugal Pump with gauges (mounted on panel) to indicate its suction (input) pressure (vacuum) and its discharge (output) pressure. The demonstrator provides two methods of determining flow rate which can be manually adjusted with a Throttle Control Valve.



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.

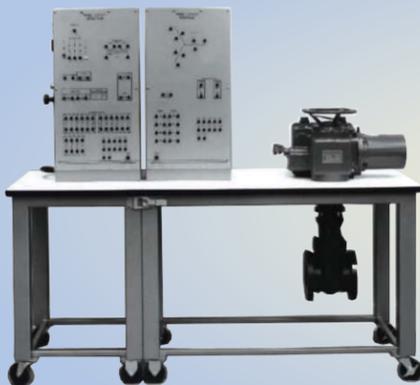
THE HAMPDEN SERIES H-MVOT Motorized Valve Operator Trainer

Provides students with "hands-on" training for wiring, adjusting and troubleshooting a two-train (MODEL H-MVOT-1A) or a four-train (MODEL H-MVOT-2A) motorized valve operator of the type made by Limitorque Corporation.

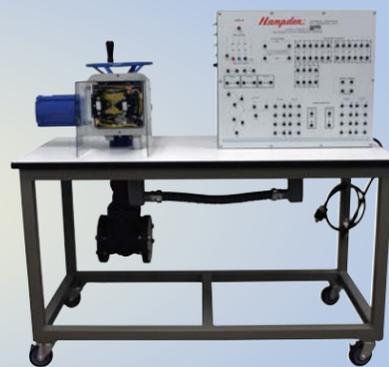
THE SERIES H-MVOT Motorized Valve Operator Trainer consists of the following components:

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

Mounted on the rear of the Component Panel is a 3-pole main circuit breaker with "Power On" pilot light, one control transformer with fused secondary, and one 3-phase reversing starter with overloads.



Model H-MVOT-1A
Two-Train
Motorized Valve Operator



Model H-MVOT-2A-FT
Four-Train
Motorized Valve Operator

CUTAWAYS



H-1500-BVC-B
Ball Valve
Cutaway w/ Base

H-1500-GVC-B
Globe Valve
Cutaway w/ Base

H-1500-PVC-B
Plug Valve
Cutaway w/ Base

H-1500-RVC-B
Safety Relief Valve
Cutaway w/ Base

H-1500-UVC-B
Butterfly/Diaphragm
Valve Cutaway w/ Base

Hampden Cutaways allow for convenient classroom training for the operation, construction, and maintenance of common industrial components.

Through carefully planned sectioning and color-coding, the complete internal configuration of each component is exposed and showcased. Seal features and hardware locations have been retained.

- ▶ Model H-1500-PVC Plug Valve Cutaway
- ▶ Model H-1500-GVC Globe Valve Cutaway
- ▶ Model H-1500-UVC Butterfly/Diaphragm Valve Cutaway
- ▶ Model H-MVOT-CA Motorized Valve Operator Cutaway
- ▶ Model H-PMP-CA ANSI Pump Cutaway
- ▶ Model H-1500-RVC Safety Relief Valve Cutaway
- ▶ Model H-1500-BVC Ball Valve Cutaway
- ▶ Model H-RTCW-1 Recovery Tank Cutaway
- ▶ Model H-PDP-CA Positive Displacement Pump Cutaway

EXPLORE PUMPING MECHANICS AND ITS EFFECTS



Hampden's Model H-6980 Series/Parallel Pump Test Demonstrator provides two methods of determining flow rate which can be manually adjusted using a throttle valve.

★ One method utilizes an orifice plate and manometer.

★ The other utilizes a vernier hook gauge, a "V"-notch weir, and equations.

PERFORM THE FOLLOWING EXPERIMENTS:

- Single Pump Operation (Pump #1)
- Parallel Pump Operation
- Flexible Impeller Pump Operation (H-6980-13 Option)
- Turbine Pump Operation (H-6980-11 Option)
- Gear Pump Operation (H-6980-12 Option)
- Single Pump Operation (Pump #2)
- Series Parallel Pump Operation



H-6980 11
Turbine Pump Option



H-6980 12
Gear Pump Option



H-6980 13
Flexible Impeller Pump Option

OTHER PUMP UNITS ALSO AVAILABLE

- H-6644 Centrifugal Pump Trainer
- H-6646 Gear Pump Trainer
- H-6647 Plunger Pump Trainer
- H-6654 Piston Pump Trainer
- H-6982 Multi-Pump Test Bench
- H-6983 Piston Pump Test Demonstrator
- H-6984 Rotodynamic Pump Test Trainer
- H-6986 Universal Pump Test Trainer
- H-PVST-1 Pump and Valve System Trainer

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

MECHANICAL SYSTEMS

The Hampden **Model H-PPST-1** Piping/ Pipefitters System Trainer provides the student with the necessary methods of connecting and running metal / iron piping, plastic piping, copper tubing, and hydraulic hose. The 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.



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 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 Hampden **Model H-IMTS-1** 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 of various drives and mechanisms used in industry, including:

- Gear Drives
- V-Belt Drives
- Chain Drives
- Shafts and Keys
- Bearings
- Roller Chains
- Couplings
- Clutches
- Conveyors
- Pumps
- Electric Motors
- Brakes
- Lubrication Techniques
- Right-Angle Drives & Speed Reducers
- Test Equipment



Optional equipment is available:

- H-IMTS-DT DVD Training Package
- H-IMTS-CP Courseware Package
- H-IMTS-CDL Computer Data Logging Package
- H-IMTS-EBM Electric Brake & Clutch Module
- H-IMTS-STP Special Tools Package (*Metric Only*)
- H-IMTS-TEP Test Equipment Package

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

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