

Control Valve Trainers

Educational Training Equipment for the 21st Century

Bulletin 135-1E

H-CVAT-1

Control Valve and Actuator Trainer

Purpose

The Hampden **Model H-CVAT-1** 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.

Experimental Possibilities

- Installation, maintenance, programming & operation
- Valves, positioners, actuators & pressure regulators
- Reverse actuator action
- Positioner usage and bypass
- Calibration of positioners (zero & span)
- Characterization of valve flow response (valve plugs)

Description

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

Globe Valve Assembly:

Globe valve, pneumatic actuator, electro-pneumatic positioner w/gauge, electronic position transmitter, power supply, air regulator

Butterfly Valve Assembly:

4" Butterfly valve with a fishtail disk, pneumatic diaphragm actuator, pneumatic positioner with gauges, bypass and air regulator, current to pressure regulator

V-Ball Valve Assembly:

1-1/2" V-Ball valve, pneumatic piston actuator, pneumatic positioner with gauges, air regulator

Pressure Regulator:

2" Pressure regulator with 3/4" NPT

Panel Loader

2-Gauge loading regulator with three-way changeover valve

In addition to the above equipment, this bench also provides the following ancillary equipment and instrumentation:

- Air Compressor, 1/4 HP
- Power Supply, 24V DC
- Digital Process Meter
- Pressure Gauges
- Pressure Regulators
- Machinist Vise

- Valve Stands
- Circuit Breakers (3)
- Neon Pilot Light - red (5)
- On/Off Switches (2)
- Pneumatic Quick Connect Lines
- HR-1S Socket Receptacles
- Patch Cords
- Main Air Supply Filter

All equipment is mounted on or stored in the mobile bench (the air compressor and accessories are stored inside the lockable storage compartment). Overall dimensions of the unit are 73"H x 70"W x 30"D.

Option: H-CVAT-1SS

Stainless Steel Control Valve and Actuator Trainer



H-PVST-1 Pump and Valve System Trainer

Purpose

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 control panel and frame and the top of the frame has a mylar overlay showing schematic of the pumping system. This unit is 60"H x 70"W x 30"D and comes with an instruction manual.

Description

The Hampden **Model H-PVST-1** consists of the following components:

- Centrifugal Pump, 3/4HP
- Globe Valve (2") w/ Electric Actuator
- Ball Valve (2") with Pneumatic Actuator
- Butterfly Valve (2")
- Gate Valves (1-1/4" and 2")
- Safety Valve (1" NPT)
- Y-Strainer (1-1/4")
- Pressure Gauge (2)
- Flowmeter
- Differential Pressure Switch
- Flanged Connections
- Polyethylene Tank



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