

H-6645 Series/Parallel Pump Trainer

(Left to Right): **Model H-6645** Series/Parallel Pump Trainer shown with **Model H-6648** Control Interface Module option and **Model H-LTCS** Laptop Computer option



Purpose

The Hampden **Model H-6645** Series/Parallel Pump Trainer is 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 various configurations to be implemented.

Description

Three differential pressure transmitters are included to allow measurement of the head pressure of the pumps and the flow rate. The data is collected via the **Model H-6648** Control Interface Module option. Two of the transmitters are capable of measuring pressures in the range of 0–30 PSI (0–830" H₂O) and one with a range of 0–15 PSI (0–138.5" H₂O). The differential pressure transmitter connections are made with quick connect fittings at several points around the trainer.

A T-type thermocouple is mounted in the reservoir to provide accurate water temperature information. This measurement is also accessed through the **H-6648** Control Interface Module option.

The pumps are equipped with an optical pickup that allows tachometer measurements to be made. The tachometer measurements are made by connecting the optical pickup plugs to the **H-6648** module. The power for the pumps is provided by the **H-6648** Control Interface Module option, this allows the **H-6648** circuit breakers to protect the pumps from inadvertent damage. The **H-6648** is also GFI protected against ground faults, which in turn protects the **H-6645** from ground faults as well. The plugs on the **H-6645** were specifically designed to match the receptacles on the **H-6648** for this reason.

Specifications

Base:

- 14-gauge furniture stock steel finished in instrument tan texture.

Pumps:

- Centrifugal rated 16 gpm @ 30 Ft. head, 8 Ft. cord and plug

Valves:

- Ball, 5-required
- Needle, 1-required

Tank:

- Nalgene, 10-gallon with cover

Sensors:

- Flow - Orifice Plate
- Temperature - Type T thermocouple with 8 Ft. wire and plug
- Photo Tachometer Cell, 2-required with 8 Ft. wire and plug

Transmitters:

- Differential/Pressure Transmitter for flow with 4-20mA output with 8 Ft. cord and 5-pin plug
- Pressure Transmitter with 4-20mA output, 2-required with 8 Ft. cord and 5-pin plug

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

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