

## H-6980 Series/Parallel Pump Test Demonstrator

### Purpose

Hampden's **Model H-6980** Series/Parallel Pump Test Demonstrator provides hands-on experience with the centrifugal pump in both series and parallel configurations.

### Description

The **Model H-6980** is a bench-mounted pumping system permitting students to explore pumping mechanics and its effects.

The unit 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.

Students will be able to perform the following experiments:

- Single Pump Operation (Pump #1)
- Single Pump Operation (Pump #2)
- Parallel Pump Operation
- Series 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)



**MODEL H-6980** Series/Parallel Pump Test Demonstrator shown with **H-6980-11** Turbine Pump option and **H-6980-13** Flexible Impeller Pump option  
Dimensions: 75"H x 75"W x 32"D  
Shipping Weight: 1500 lbs.

### Specifications

#### Instruments:

##### Gauges:

- Delivery side of pumps
- Suction side of pumps

##### Tachometer:

- Dual photo pickup on motors.
- Digital indicator on panel

##### Manometer

- Hampden **Model H-6927-10** Digital Differential Pressure Manometer is battery operated, uses a backlit 3-1/2 digit display with automatic shut-off and low battery indicator

#### DC Motor Speed Drive:

Controls the DC dynamometer

#### Pumps: Centrifugal (2)

#### DC Dynamometer:

DC motor - 1/2HP trunion mounted with torque scale and counter balance weight.

#### Protection:

1-pole main ground fault circuit breaker w/ associated pilot light.

#### Holding Tank:

Two section with total capacity of 130 gallons. "V"-Notch Weir between tanks.

#### Couplers: Woods type, quick disconnect

#### Valves:

- Ball Type
- Throttling

#### Unions:

- Orifice section
- Centrifugal pumps

#### Nomenclature:

Silkscreen, Black Kem Enamel

#### Accessories:

- Vernier hook-gauge
- Operating Instruction Manual
- Experiment Manual
- Teacher's Manual

#### Base:

Mechanical steel tubing, with heavy duty levelers, finished in instrument tan texture.

#### Panel:

11 gauge furniture stock steel finished in instrument white enamel.

### Services Required

120V AC-1 $\phi$ -60Hz

### Computer Data Logging

This feature adds digital gauges and remote pump speed controls into the system. One interface package consisting of National Instruments I/O modules and LabVIEW® templates are provided for interfacing into a PC computer through the USB port.

Computer and National Instrument LabVIEW® Software are included.

Specify **MODEL H-6980-CDL**

### Options



**H-6980-13**  
Flexible Impeller Pump



**H-6980-11**  
Turbine Pump



**H-6980-12**  
Gear Pump



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

**Hampden**  
ENGINEERING CORPORATION