

H-6985 Waterhammer Trainer

Purpose

The Hampden **Model H-6985** Waterhammer Trainer provides a hands-on introduction to the destructive forces existing in pumping installations where the rate of flow changes abruptly for various reasons. Theory and mechanics of computing waterhammer in pump discharge lines have advanced rapidly, the practical aspects of this subject are still confusing to engineering students.

Description

The **Model H-6985** consists of a mobile bench with control panel, pump, water tank, and pipe line.

This unit allows the student to demonstrate the following experiments:

- Agitation in Pipes
- Pressure Wave Oscillations
- Study of Waterhammer
- Determination of the Speed of Sound in Water
- Characteristics of the Variation of the Pressure of Waterhammer
- Characteristics of Constant Pressure

Specifications

Mobile Base:

- 14 gauge furniture stock steel with 11 gauge base assembly. Finished in instrument tan texture with four swivel casters, two with brakes.

Bench Top:

- 1" wood core covered in white plastic laminate

Control Panel:

- Case is 14 gauge furniture stock steel finished in instrument tan texture.
- Panel is 11 gauge furniture stock steel finished in instrument white enamel.

Nomenclature:

- Brown white-core engraving phenolic secured to the panel with self-tapping stainless steel screws.

Instruments:

- Dual pressure gauge, 0-150 psig and 0-10 Bar
- Rotometer
- Pressure transducer with 4-20mA analog output, accurate 0.25% and 24V DC excitation power supply

Valves:

- Globe valve (1)
- Throttling valve (1)
- Ball valve (2)
- Solenoid valve (1)

Tank:

- 15 gallon heavy-duty polyethylene with drain.

Pump:

- Self-priming magnetic drive with by-pass circuit

Switches:

- Solenoid switch with pilot light
- Motor starter with overload coil (1)

Computer Interface:

- Two Hampden HR-1S socket receptacles for pressure transducer output
- Two Hampden HR-1S socket receptacles for external control solenoid valve

Pipe Line:

244 ft. (75 meters) 1/2" I.D. copper tubing

Protection:

Main ground fault interrupter circuit breaker

Manuals:

- Operating Instructions
- Experiment Manual

Service Required

120V AC 1 ϕ 60Hz

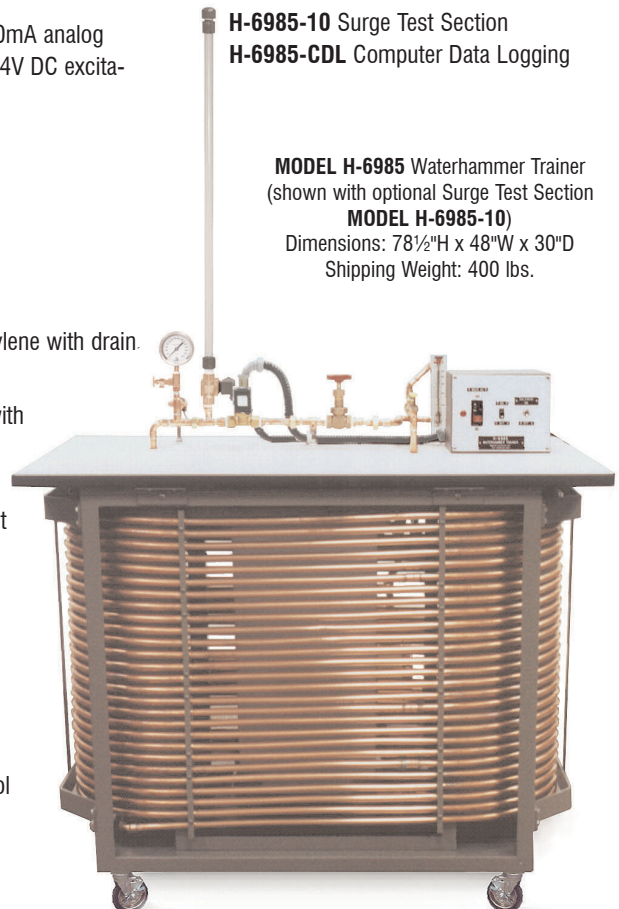
Options

H-6985-10 Surge Test Section

H-6985-CDL Computer Data Logging

MODEL H-6985 Waterhammer Trainer
(shown with optional Surge Test Section
MODEL H-6985-10)

Dimensions: 78½"H x 48"W x 30"D
Shipping Weight: 400 lbs.



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

Hampden
ENGINEERING CORPORATION