H-6535
Hydrostatics Bench

Purpose

The Hampden **Model H-6535** Hydrostatics Bench consists of an assortment of apparatus needed for experiments into the properties of fluids and hydrostatics.

Description

This unit consists of a mobile bench with the following components:

- Viscosimeters (3)
- Manometers (2)
- Sink
- Dead weight tester
- Hand water pumps (2)
- Lot of glassware
- Storage tank (2)
- Fittings
- Pressure gauge, Bourdon Tube
- Tubing
- Valves (14)
- Precision balance
- Barometer
- Weight set
- Constant Level Tubes
- Stop clock
- Air pump

The **Model H-6535** consists of Constant Level Tubes that demonstrate Pascal's Law of fluid upthrust included with a comprehensive investigation into hydrostatic pressure. Also included is a balance scale to determine the specific gravity of solids by immersion in water demonstrating the relationship to Archimedes Principle of fluid displacement. The unit has the capability of measuring the specific gravity of liquids by use of a hydrometer as well as by an inverted U-tube apparatus. The hydrostatic bench has the capability of a comprehensive investigation into measurement of fluid viscosity using falling ball viscosimeters and the measurement of fluid surface tension by the Capillary-Rise method.

MODEL H-6535 Hydrostatics Bench
Dimensions: 56"H x 72"W x 24"D
Shipping Weight: 750 lbs

The unit also consists of pressure measuring devices with comprehensive experiments which include a Digital Barometer to accurately measure atmospheric pressure, and investigation into the calibration of a Bourdon Tube Pressure Gauge using a Dead Weight calibration technique. Also included are two manometers to measure pressure, one digital and the other filled with water, that demonstrate the difference in range and sensitivity between the two types of manometers.

The unit consists of all the devices and accessories that are required to perform the listed experiments, including all of the plumbing, pumps and valve control to direct the fluids in the system. Also included is a built in safety feature that directs fluid into flasks in the case of over-pressurizing the manometers.

Typical Experiments

- Verification of Archimedes Law
- Dynamics of a floating body
- Operation of a Bourdon pressure gauge
- Measurement of viscosity
- Function and use of a hydrometer
- Capillarity
- Operation of a Barometer
- Manometry - principles and application
- Density and specific gravity
- Hydrostatic pressure on a plane surface
- Dead weight calibration of pressure gauges
- Demonstration of fluid upthrust (Pascal's Law)

Additional experiments that can be performed in conjunction with the **Model H-6540** Water Hydraulics System include:

- Determine center of pressure position
- Effect of flow upon static head
- Determination of metacentric height
- Study potential, pressure & elastic energy
- Measure fluid levels by vernier point gauge

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

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P.O. Box 563, East Longmeadow, MA 01028 • Tel 413-525-3981 • Fax 413-525-4741 • E-mail sales@hampden.com **800-253-2133**