

H-6984 Rotodynamic Pump Test Trainer

Purpose

The Hampden **Model H-6984** Rotodynamic Pump Test Trainer provides a hands-on introduction to the centrifugal and axial flow pumps.

Description

The Hampden **Model H-6984** Rotodynamic Pump Test Trainer consists of a mobile bench with dynamometer, fixed axial flow pump and a demountable centrifugal pump. Each pump is coupled to the dynamometer with an easy release coupling. Students will be able to explore first hand pumping mechanics and their effects.

Services Required

208V AC-3 ϕ -60Hz

Specifications

Base:

- Mechanical steel tubing, 2" square with heavy duty casters. Finished in instrument tan texture.

Panel:

- 11 gauge furniture stock steel finished in instrument white enamel.

Enclosure

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

Instruments:

Gauges:

Delivery circuit and discharge circuit, (2 req'd).

Torque Meter:

Digital indicator coupled to the dynamometer load cell.

Variable Frequency Drive Module:

Motor speed, voltage and current readout.

Dynamometer:

- Trunnion mounted 2HP squirrel cage induction motor - double shaft with load cell arm

Motor Speed Drive:

- Variable frequency module

Tanks:

- Sump tank constructed of polypropylene, 85 gal. (323 liters)
- Volumetric measurement tank constructed of stainless steel calibrated for 10 and 60 liters with gravity discharge to sump tank.

Pumps:

- Centrifugal
- Axial flow

Protection:

- 1-pole ground fault interrupter circuit breaker.
- 1-pole instrument circuit breaker.

Nomenclature:

- Brown white core engraving stock secured to the panel with stainless steel self-tapping screws or KEM black silkscreen.

Accessories:

- Vernier hook-gauge
- Weir, V-notch
- Operating Instructions
- Stop Watch

Experiments

- Determination of Flow - Volumetric and weir
- Efficiency
- Flow Rate Plots at Various Constant Speeds
- Brake Power Input Measurement
- Variation of Pump Capacity with Speed
- Pump Speed Analysis
- Cavitation

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

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