

Fluid Study/Mechanical Systems

Educational Training Equipment for the 21st Century

Bulletin 696

H-6960 Laminar Flow Analysis Demonstrator

Purpose

The Hampden **Model H-6960** Laminar Flow Analysis Demonstrator allows students to do experiments of two-dimensional problems associated with laminar flow. A dye injection system allows the flow patterns to be seen more vividly and easier to videotape or photograph.

Lexan® shapes are provided to assist the student in assembling flow pattern experiments.

Description

The Hampden **Model H-6960** Laminar Flow Analysis Demonstrator consists of a table, non-corrosive working section, end tanks, inlet manifold, inlet flowmeters, sink manifold, sink flowmeters, and dye injection system.

Services Required

Water Pressure required:
14.5 PSI

Maximum Flow:
0.05 ft/min.

Specifications

Table:

1.50" sq. mechanical steel tubing welded together and finished in instrument tan texture. Cross members are provided along with mounting uprights and levelers.

Working Section:

Stainless steel construction, non-corrosive, incorporating inlet, working section and outlet tanks. A lower glass plate is bonded to the bottom of the working section.



MODEL H-6960 Laminar Flow Analysis Demonstrator
Dimensions: 45"H x 52"W x 32"D
Shipping Weight: 650 lbs.

Lower Glass:

Heavy plate glass with opal finish approximately 24" wide by 36" long with 1" grid lines. Incorporated into glass are eight feed and eight drain orifices. These are positioned along the center lines of the glass in cruciform arrangement. The center fitting has two orifices in close proximity.

Control Drain:

Consists of eight drain flowmeters with needle valves, panel mounted.

Upper Glass:

Heavy plate glass with handles and a spacer set for adjustments of distance between the upper and lower glass of 1/8".

Control Feed:

Consists of eight feed flowmeters with needle valves, panel mounted.

Inlet Tank:

Consists of one control valve with inlet diffuser and one ball valve tank drain.

Outlet Tank:

Consists of an adjustable control weir plate and one control ball valve tank drain. A drain port is incorporated in the overflow portion of the outlet tank.

Dye Injector:

This system consists of a manifold feeding 19 injectors spaced at 1" intervals, dye reservoir, stainless steel needle valve, clear tubing and one bottle of blue dye.

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

Hampden
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