

H-6809 Solid Handling Investigation Bench

Purpose

The Hampden **Model H-6809** Solid Handling Investigation Bench has been designed to allow students to familiarize themselves with various methods of handling solids through blending, separating, sizing, discharge rates, angle of repose, grinding, and material transport.

Model H-6809 Solid Handling Investigation Bench consists of the following:

- A scale to compare and learn the weights of various materials
- 0-42 rpm variable speed V cone blender
- Angle of repose compass and cylinder which allows students to measure the angle at which materials tend to fall, based on their density
- Clear glass cyclone and clear hopper connected through clear tubing enabling observation of material transport and cyclonic action
- Compressor connected to an ejector providing compressed air
- Ball mill controlled by a 0-42 rpm variable speed motor to enable observation of grinding process
- Variable speed sieve shaker complete with six (6) 8" test sieves ranging in mesh size from 0.25mm to 2mm. The sieving action can be stopped manually or automatically after a selected time, or run in time intervals until manually stopped
- Operating Instruction Manual

Specifications

Frame:

1" square mechanical steel tubing finished in instrument tan texture.

Enclosure:

16 gauge furniture stock steel finished in gloss white enamel.

Panel:

12 gauge furniture stock steel finished in gloss white enamel.



MODEL H-6809 Solid Handling Investigation Bench

Nomenclature:

3-ply brown/white core engraving phenolic leg-end plates secured to the panel with stainless steel self-tapping screws or black KEM silkscreen enamel.

Feet:

Adjustable levelers.

Electronic Scale:

Digital Readout, 6.0Kg x 0.001.

Collection Tray:

12-3/4" x 6-7/8" x 2-1/2" 304 stainless steel with track.

Sieve Shaker:

Adjustable-speed with six 8" pans, one cover and six brass sieves ranging from 0.25 to 2mm.

Hopper:

Clear cylinder with a 2.5 liter capacity, 14 different diameter orifice plates and slide valve.

V Cone Blender:

Consists of two clear cylinders connected together at 90° angle with access cover, ball bearing set shaft right angle drive and variable speed electric motor. The capacity of the blender is 1.2 liters. Speed range is 0-42 rpm.

Ball Mill:

Perform grindability and rank test. Unit is a one tier mill with speed range of 0 to 42 rpm. A cylindrical vessel is provided charged with burundum grinding media.

Horizontal Cylinder:

Clear cylinder with access cover and protractor for determining density and angle of repose.

Material Transport:

Clear cyclone, ejector, clear tubing, compressor, and fittings.

Services Required

Electrical:

- 120VAC-1 ϕ - 60Hz
- 220-240VAC-1 ϕ -50Hz

Consumables:

- Rock Salt
- Sand
- Sugar

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

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