

**Product Name :**  
Solids Handling Study Bench**Product Code :**  
ALABS-A104-288**Description :****Solids Handling Study Bench**

- Exercises split between three separate units allowing only relevant equipment to be purchased or simultaneous use by more than one group of students at a time
- Hele-Shaw cell employed to give clear and accurate measurement of angle of repose and to demonstrate the behaviour of mixtures of different grains
- Ball mill and V blender operate inside a protective enclosure to minimise risk to the operator from rotating components or dust
- Ball mill and V blender can be quickly disconnected from the drive arrangement and easily removed from the protective enclosure to aid filling, emptying and cleaning
- Hele-Shaw cell, ball mill and V blender all constructed using clear acrylic where practicable to aid viewing

**Specification:***Solids Handling*

- Protective enclosure with transparent lid allowing safe operation of a Ball mill or V blender
- Variable speed Ball mill using porcelain balls as the grinding medium. Clear acrylic sides allow visualisation of the process
- Variable speed V blender constructed from clear acrylic for visualisation of the process with dust-tight access cover

#### ***Powder Handling***

- Freestanding PVC backboard to support the various pieces of apparatus
- Hele-Shaw cell constructed from clear acrylic to measure angle of repose and demonstrate the behaviour of mixtures of granular materials
- Pyrex glass cylindrical hopper with conical base fitted with four interchangeable orifices
- Lid for cylindrical hopper creating a cyclone inside the hopper for pneumatic transport demonstrations
- Air pressure regulator and Venturi ejector for pneumatic transport demonstrations
- Glass beaker supplied for determining bulk density / particle density / porosity (voidage)

#### **Description:**

##### ***Solid Handling***

The equipment consists of interchangeable Ball Mill and V Blender assemblies that are operated inside a protective enclosure. The enclosure, constructed from solid PVC, incorporates an electric motor with quick release coupling and manually adjustable speed control. A single-piece transparent hinged cover over the top and front of the enclosure allows access to the mill or blender and allows the user to safely observe the operation of the equipment. A safety interlock prevents the motor from operating when the cover is raised.

##### ***Ball Mill***

The ball mill is a type of grinder that is used to reduce the size of solid materials using porcelain balls as the grinding medium. The ball mill can also be used to mix different powdered / granular materials. The mill supplied consists of a PVC cylindrical drum that rotates in the horizontal plane. The two ends of the drum are constructed from clear acrylic to aid viewing of the milling operation.

##### ***Vee Blender***

The V blender is the most gentle and

cost effective way to blend powdered materials together. The blender supplied consists of a shallow V shaped vessel that is constructed from clear acrylic to aid viewing of the blending / mixing operation.



## Equipments Exporters

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