



Linear Rubber Shear Apparatus (SMT-MM-13)

This apparatus is designed to study the shear strain in a rubber block due to the shear stress applied on it. When a force acts parallel to the surface of any object, it produces shear strain in it. The unit consists of a frame that is attached to wall. A rubber block is affixed to its surface. The rubber block has a metallic strip fastened to its surface. To produce shear strain in the rubber block, load is applied to metallic strip via a hanger. The unit has dial gauge attached to the upper end of the rubber block to measure the amount of deformation.

TECHNICAL SPECIFICATIONS

Specifications:

- Measures the shear deflection of a rubber block 150x75x25mm and allows Bulk Modulus and Poisson's Ratio to be determined.
- Deflection measured by a dial gauge.
- An Instruction manual for student and lecturer provided.
- Set of weights.

Technical Data:

- Rubber Block:
 - Back Rubber
 - Size= 150mm*75mm*25mm
- Dial Gauge:
 - For indicating shearing displacement
 - Range 25mm
 - Precision: 0.01mm
- Weights:
 - 1x 10N (hanger).
 - 2x 5N, 2x 10N
- LxWxH: 350x150x200mm
Weight: approx. 30kg

Experimental Data:

- Examination of Shear Stress and Shear Strain in a Rubber Slab.
- Demonstrate relationship between shear load and shear deformation.
- Determination of the Modulus of Rigidity for the Rubber.
- Determination of the variation of deflection with load applied.

