



Key Features

- The Beam Deflection Unit has been designed to enable the students to observe and study the following phenomena in simply supported beams and cantilever beams:
 - Relation between the deflections and the applied loads
 - Effect of the length and the cross section on the beam behavior
- The unit consists of an aluminum and stainless-steel structure to carry out experiment with metal beams up to a length of 1m. Three beams with different cross section are supplied
- The structure makes it easy to study cantilevers holding the beam by one end, or beams simply supported on two points. The unit gives us the possibility of modifying the position of the supporting and holding points
- It has a graduated ruler fixed on the structure that allows to obtain measures easily in different points of the beam
- The weights will be hung from hooks, in order to apply the load on any point in the beam

Technical Specifications:

- Bench-top unit
- Anodized aluminum frame and panels made of painted steel
- Main metallic elements made of stainless steel
- The unit mainly consists of:
 - Metallic guide with a graduated ruler for positioning the different supports
 - Two removable stainless-steel supports
 - Removable stainless-steel cantilever support
 - Dial gauge: Range: 0–25mm, Accuracy: 0.01mm
- It allows experimentation with beams up to 1000mm length for their study
- Three test rectangular beams with different cross sections and 1m of length are supplied
- The unit allows test as: Cantilever beam, Beam fixed at one end and simply supported at the other end, simply supported beam
- Adjustable legs for balancing the unit
- Should supplied with following required elements:
 - 2 Sets of Steel Hook and Mass Set 3 Kg

Note: Specifications are subject to change, Photos shown above are Indicative, Actual Product can Vary.



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- Manuals: This unit should be supplied with the following manuals: Services, Assembly and Installation, Starting-up, Safety, Maintenance & Practices Manuals

List of Experiments:

- Study of the characteristics of simply-supported and cantilever beams
- Determination of the relationship between applied load and deflection
- Beam supported on its two ends with a central loading point
- Study of the variation of length in deflection
- The effect the beam's length has on a centrally loaded beam supported by its two ends
- The effect of the cross-section of deflection of beams
- The effect the beam's section has on a centrally loaded beam supported on its two ends
- Cantilever beam with a load on one of its ends
- The effect the beam's length has on a cantilever with a load on one of its ends
- The effect of a cross-section in a cantilever with a load on one of its ends
- Beam supported by two points and subjected to a different momentum of uniform bending
- Study of bending, application of loads at different points with fixed or free ends

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