



### Features

Tesca Deflection of Beam Apparatus 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. Ex: deflection load ratio. The "MFV" unit consists of an aluminum and stainless steel structure to carry out an experiment with metal beams up to a length of 1 m. Three beams with different cross-sections 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 obtaining measures easily in different points of the beam. The weights will be hung from hooks, in order to apply the load to any point in the beam.

### Specifications

- Bench-top unit.
- Structure of anodized aluminum and stainless steel.
- Metallic guide with a graduated ruler for positioning the different supports.
- 2 Removable stainless steel supports.
- 1 Removable stainless steel cantilever support.

Note: Specifications are subject to change.

### Tesca Technologies Pvt. Ltd.

IT-2013, Ramchandrapura Industrial Area, Sitapura Extension,  
Near Bombay Hospital, Vidhani Circle, Jaipur-302022, Rajasthan, India,  
Tel: +91-141-2771791 / 2771792; Email: info@tesca.in, tesca.technologies@gmail.com  
Website: www.tescaglobal.com

- Dial gauge, 0-25 mm range, and 0.01 accuracy.
- It allows experimentation with beams up to 1000 mm in length for their study.
- Three test rectangular beams (made of stainless steel) with different cross-sections and 1 m. 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.
- In order to carry out some of the practices with the MFV unit, 2 sets of weights "C type" is required. (See required accessories).
- Manuals: The Trainer is supplied with the following manuals: Required Services, Assembly and Installation, Starting-up, Security, Maintenance and Practices manual.

### Accessories

- 2 sets of weights "C type" (set C).
- Each "C type" set is composed of:
  - 1 support hook.
  - 6 weights of 100 gr.
  - 2 weights of 200 gr.
  - 2 weights of 500 gr.
  - 1 weight of 1000 gr.

### Dimensions & Weight Dimensions

- 1200 x 400 x 400 mm. approx. Weight: @ 20Kg

### Experiments

1. Study the characteristics of simply-supported and cantilever beams.
2. Determination of the relationship between applied load and deflection.
3. Beam supported on its two ends with a central loading point.

4. Study the variation of length in deflection.
5. The effect the beam's length has on a centrally loaded beam supported by its two ends.
6. The effect of the cross-section of deflection of beams.
7. The effect the beam's section has on a centrally loaded beam supported on its two ends.
8. Cantilever beam with a load on one of its ends.
9. The effect the beam's length has on a cantilever with a load on one of its ends.
10. The effect of a cross-section in a cantilever with a load on one of its ends.
11. Beam supported by two points and subjected to a different momentum of uniform bending.
12. Study of bending, application of loads at different points with fixed or free ends.

#### **Scope of Delivery**

- 1 mounting frame, disassembled
- 1 set of bolts with a hexagon socket wrench
- 1 instruction manual

Note: Specifications are subject to change.

#### **Tesca Technologies Pvt. Ltd.**

IT-2013, Ramchandrapura Industrial Area, Sitapura Extension,  
Near Bombay Hospital, Vidhani Circle, Jaipur-302022, Rajasthan, India,  
Tel: +91-141-2771791 / 2771792; Email: [info@tesca.in](mailto:info@tesca.in), [tesca.technologies@gmail.com](mailto:tesca.technologies@gmail.com)  
Website: [www.tescaglobal.com](http://www.tescaglobal.com)

