

## SHEAR FORCES AND BENDING MOMENT STUDY UNIT



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### Experimental capabilities

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- **Determination of the shear force in a beam**
- **Determination of the bending moment**

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### PRINCIPLE OF OPERATION

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The SFT 022 bench is a bench designed for the study of shear forces and bending moments in a beam subjected to the simple bending.

This machine allows to study  $T_y$  and  $M_{fz}$  in sections of variable position relative to the supports and to the point of application of loads.

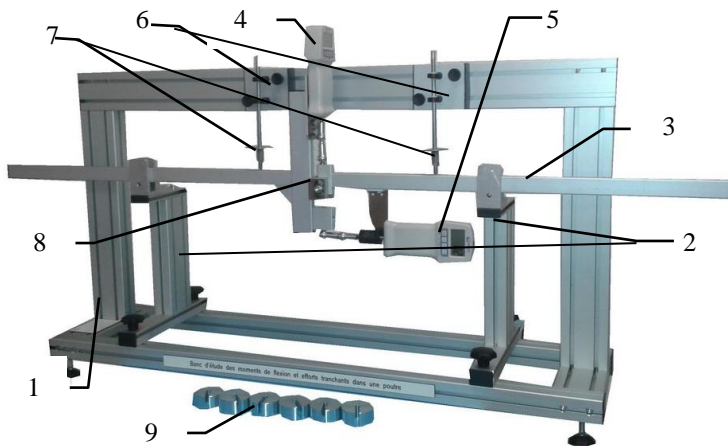
The robust design of this equipment makes it perfectly suited for use in schools.

Its anodized aluminum structure on wheels makes it extremely robust as well as great flexibility of integration into your premises.

The manufacturing of this equipment meets the European machine directive.

## Illustrations

## Technical details



Example of loading:

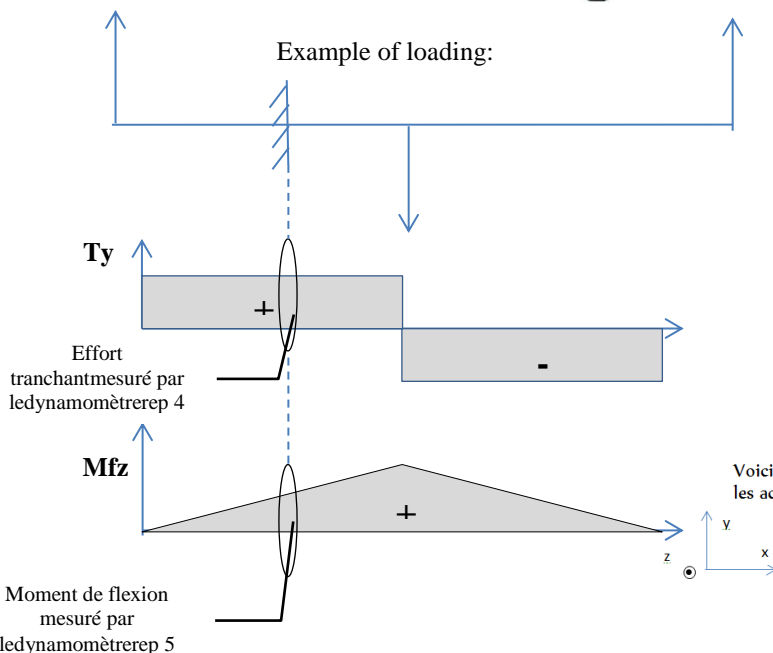
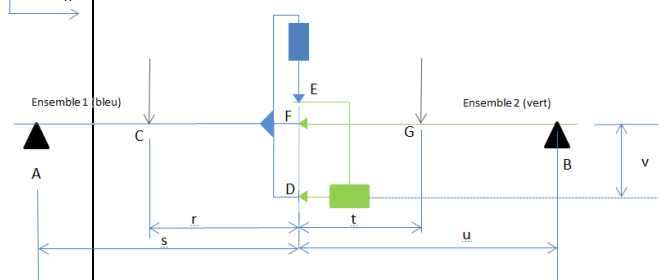


Diagram of shear forces and bending moments

1. Structure of the bench made of anodized aluminum profiles with 4 feet dampers & a graduated ruler for positioning of the various moving elements
2. Adjustable supports in distance - point linking with the beam
3. Beam - Divided into 2 parts, the link (central articulation) between the two half-beams represent the section to study for the shear forces and bending moments
4. Dynamometer allowing to measure the shear force
5. Dynamometer allowing to measure the bending moment
6. Weight support guide - adjustable position throughout the beam
7. Weight support - allows to receive maximum 3 weights. The load is applied on the beam in a timely manner
8. Articulation between the 2 half-beams. This articulation allows to make independent measurements of shear force and bending moment
9. 6 Weights of 5N

Voici le schéma cinématique de l'ensemble poutre / supports/ dynamomètre et de tous les accessoires d'articulation de la poutre



## Services required

- Dimensions: (LxWxH mm): 1600 x 300 x 900
- weight (Kg): 25

Note : if the equipment installation is operated by our staff, all supplies and exhaust connections required must stand at less than 2m from the machine

## Documentation

- User's manual
- Technical documentation of the components
- Certificate of conformity CE