

STUDY UNIT OF GANTRIES DEFORMATIONS



Experimental capabilities

- **Simple isostatic gantry solicitation**
- **Simple hyperstatic gantry solicitation**
- **Simple hyperstatic reinforced gantry solicitation**
- **Solicitation of simple triangular structure.**
- **Solicitation of complete triangular structure.**

Operating principle

This bench allows to study the deformation of gantries and to assess the impact of the links that the hyperstatism as well as the role of the different components of the structure.

Simple or reinforced gantries

Simple or complete Fermes

Distributed loads and point loads.

The robust design of this device makes it suitable for use in schools.

The equipment is set up on an Anodized aluminium frame on casters wheels. This gives it great strength and a flexibility of integration into your premises.

The manufacture of this equipment complies with the European standard for machinery manufacturing.

Technical details

Basic structure:

- 1 anodized aluminum bearer chassis
- 1 table desk with 2 sides
 - o 1 side for the study of gantries - see description below
 - o 1 side for the study of farms (triangular structures) - see description below

Work desks

- Gantries study desk
 - o 1 isostatic gantry structure
 - o 1 gantry hyperstatic structure
 - o 2 removable diagonal braces
 - o 2 removable reinforcing gussets
- Desk for the study of farms (= triangular structures)
 - o 1 single farm-type structure
 - o 1 set of beams allowing to pass in full farm

Loads :

- 4 modules "point load"
- 8 weights
- 2 modules "distributed load" (flexible element / its geometry adapts to the deformation of the structure)

Measure

- o A set of deformation measurements consists of:
 - 6 guide rails
 - 6 ball skids prestressed for longitudinal guidance of the comparators along the beams
 - 6 mechanical comparators with direct reading

Services required

- Dimensions: (LxWxH mm): 1000 x 500 x 1800
- weight (Kg): 50

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