



The objective of this equipment consists on the study of the deformation in the plane, of frame type structures under the action of solicitations. The equipment is supplied with a gantry in U and another with a "gable" roof.

The equipment has a characteristic system of embedding and sliding articulated support.

The recorded deformation is extracted from the system by 2 comparator clocks that are placed at any point on the frame. These deformations are the response of the system to the different loads applied.

The loading of the structure is achieved through 2 load systems with weights, whose maximum load is 12 kg, having weights of different masses, from 0.5 to 2.5 kg.

LEARNING OBJECTIVES

- Study of the deformation of frames in the U form and two waters.
- Support study:
 - Embedment
 - Sliding articulated support
- Comparison between calculated and measured displacements.
- Application of the superposition principle.

TECHNICAL DATA

Frames

- Material: Stainless steel AISI 304 Pulido
- Profile: 20x8 mm
- Resistance to creep: 310 MPa (45 KSI)
- Maximum resistance: 620 MPa (90 KSI)
- Elasticity module: 200 GPa (29000 KSI)
- Density: 7,8 g/cm³ (0,28 lb/in³)

Weights

- Material: Tin bronze
- Density: 8,77 g/cm³
- Minimum mass accuracy: $\pm 2\%$
- Units and mass:
 - 3x 2,5 kg
 - 3x 1 kg
 - 2x 0,5 kg
- 2x Stainless steel hooks for weights placement.

Displacement measurement system

- 2 displacement measurement systems with dial gauge.
- Reading range: 0 a 25 mm
- Appreciation: 0,01mm

Forwarding cable sheaves

- 2 forwarding cable sheaves with plates of different sizes.

Cables

- Material: Stainless steel
- Longitudes:
 - 1x 200 mm
 - 1x 500 mm
 - 1x 1 m

Weights placement flanges

- 2 weight placement flanges.
- Material: Stainless steel.

Embedment

- 2x embedments with anti-rotation system.
- Fixing by knurled nut screws (tools are not necessary).

Sliding support

- Sliding support with aluminum profile and bearings (minimum friction).
- Fixing by knurled nut screws (tools are not necessary).

REQUIREMENTS

- Se requiere el pórtico ST 01.1 para poder trabajar con este equipo.