

TM 450 UNSYMMETRICAL CANTILEVER APPARATUS

GENERAL DESCRIPTION

The equipment is for determination of shear center for various sections.

The cantilever under test is mounted horizontally at one end. The mounted end can be rotated to indicate its position relative to a fixed angular scale. Load is applied through a weight hanger and weights at the free end. The free end is attached to a circular disc where vertical and horizontal displacements may be measured by two dial gauges. The pin where weight hanger is hung can be moved laterally on the circular disc across and outside the section of the cantilever.

Instruction manual is also included.



EXPERIMENT CAPABILITIES

- Vertical and horizontal displacements vs angular positions for an applied load.
- Maximum and minimum vertical displacements when horizontal displacement is zero.
- Relationship between $\frac{\Delta V}{W}$ and $\frac{\Delta H}{W}$
- Determination of shear center.
- Determination of area moment of inertia around neutral axis.

TECHNICAL DATA

- Cantilever section made from aluminum 500 mm long
 - Angle section : 1 ea.
 - Channel section : 1 ea.
 - Rectangular section : 1 ea.
- Load hanger : 1 N
- Weights : 1 lot.
- ST131 Dial indicators : 2 required (separately supplied), 0-20 mm range x 0.01 mm graduation.
- Software for data display and analysis by computer (separately supplied).

OPTIONAL EQUIPMENT

- A cantilever of aluminum tube approx. 15 mm diameter for combined bending and torsion test using eccentric load
- Other optional equipment, please contact manufacturer (essom@essom.com)

Note: TM 450 = ST316 + ST305

Net (unpacked) shipping dimensions WxLxH : 30 x 75 x 45 cm
Net weight : Approx. 25 kg