

TM 411 STRUT BUCKLING APPARATUS



GENERAL DESCRIPTION

This bench top apparatus is used for studying buckling on struts under various end conditions.

The apparatus consists of two vertical columns where load is applied by a screw via a sliding support. Strut support for knife edge or built-in is a cylinder in a socket. Each strut has end conditions for knife-edge or built-in. Load on the strut is measured by a load cell and deflection is measured by a dial gauge. Side loading is by a weight hanger and weights. Height of loading beam is adjustable to accommodate different strut lengths.

Instruction manual is also included.

EXPERIMENT CAPABILITIES

- Determination of flexural rigidity and comparison with theoretical value.
- Determination of flexural rigidity under different end conditions.
- Determination of load VS deflection and crippling loads for strut of different lengths and cross sections.
- Effects of side load and eccentric loading.

TECHNICAL DATA

- Basic frame : 2 columns and sliding cross member with loading screw.
- Maximum strut length : 750 mm
- Load measurement : Force digital display
- Dial gauge : 0-20 mm. x 0.01 mm. graduation.
- Weight hanger
- Weights : 1 lot.
- Strut supports : 2 Knife edges
: 2 Built-in
- Struts specimens with knife edge ends:
 - Mild steel : 6 ea., different lengths.
 - Aluminium and brass : Thickness (approx.) 6 mm, Width (approx.) 20 mm, Length: 750 mm
- Software for data display and analysis by computer (separately supplied).
- Power supply : 220V, 1Ph, 50Hz. Other power supply is available on request.

OPTIONAL EQUIPMENT

- Struts of other sizes and materials are available on request.
- TM 010A Displacement digital display instead of dial gauge with magnetic holder indicator.
- TM 411-050 Computer Interface
This includes displacement sensor and computer interface unit.
- Other optional equipment, please contact manufacturer (essom@essom.com)



Net (unpacked) shipping dimensions WxLxH
Net weight

: 25 x 25 x 105 cm
: Approx. 20 kg