Product Name :	**Product Code :**
Portal Frame Apparatus with Data Acquisition	CHINAELABC2700004

Description :

Portal Frame Apparatus with Data Acquisition

Technical Specification :

An experimental apparatus to provide extended investigations into realistic structures including determining the points of failure of a loaded portal frame and also identifying the modes of failure.
The experiment hardware fits onto a Structures Test Frame.
Students fix a specimen portal frame (two uprights with a cross-beam at the top) to the bottom crosspiece of a test frame.
The test frame also holds horizontal and vertical screw mechanisms with electronic load cells for loading the portal frame.
Students set the portal frame load conditions by arranging the load cell screw mechanisms to provide either single or combined loads.
They then load the portal frame manually by adjusting the screw mechanisms.
The electronic load cells connect to a Digital Force Display that shows the horizontal and vertical loads as the portal frame deforms.
Two long-travel digital deflection indicators measure the portal frame deformation.
Students continue to load the portal frame until it is in the fully plastic condition, that is, it has undergone plastic collapse.
They monitor the collapse load, deformations, and note where plastic hinges formed during collapse.
Students should use the Plastic Bending of Beams experiment before progressing to Plastic Bending of Portals.
The Plastic Bending of Beams experiment provides a basic understanding of underlying principles, such as plastic deformation and form factor.
Packs containing 12 extra specimen portal frames are available separately.
The Operation Manual provides details of the equipment including sample experiment results.

The Operation Manual describes how to use the equipment and gives experiment procedures.

Key features:
Allows safe and practical experiments into plastic bending of portals
Realistic and verifiable experiment results
High-quality structures training module for students of mechanical, civil and structural engineering
Optional Structures Software package for extra, 'virtual' experiments, that simulate and confirm the results from your hardware and allow extended experiments
Optional unit with Structures Software package for automatic data acquisition and virtual experiments.

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