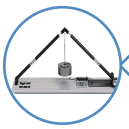

Toggle Joint Apparatus (SMT-MM-23)

This apparatus is designed to evaluate forces within a toggle mechanism. Load is applied to the two pairs of links by a hanger suspended from their connecting pivot. One end of the links is pivoted to a base, and the other end is able to move sideways on low friction ball bearing wheels. The moving links are restrained by a horizontal spring balance, which measures the horizontal reaction directly. The angle of the toggle can be varied. Adjustment is provided for returning the geometry of the loaded toggle to its original unloaded state before taking measurements.

TECHNICAL SPECIFICATIONS

Specification:

- Determines the horizontal reaction due to loading a toggle joint mechanism; assesses the effect of the toggle angle.
- Loading applied at the apex pivot by a weight hanger.
- Variable toggle angles available, and facility to re-adjust to original state.

Technical Data:

- The apparatus consists of two pair of links mounted on a base with one end of the links fixed, a central pivoted joint, and the other end restrained by a spring balance to read the resulting horizontal force.
- An instruction manual for student and lecturer provided.
- Set of weights.
- 1m ruler supplied.

Experiments:

- To determine the experimental horizontal reaction due to loading.
- To compare with theoretical predictions, such as the velocity diagram technique.
- To assess the effect of the toggle angle.

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