

## Toggle Joint Apparatus (EDC-MM-124)

### EXPERIMENTAL DATA:

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



### DESCRIPTION:

Toggle mechanisms are used to obtain large force amplification in such applications as sheet metal punching and forming machines.

This bench top apparatus can be used to investigate forces exerted 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 free to move sideways on ball bearing wheels. The moving links are held by a horizontal spring balance, which measures the horizontal reaction directly. The angle of the toggle can be varied. There are many ways in which the forces can be determined theoretically.

### TECHNICAL SPECIFICATIONS:

- Link length: 280 mm
- Digital weight scale with 0.01kg resolution
- 2 Sets of Weights
- Toggle Angle: 30 to 45 degrees

### RELATED LAWS:

- Toggle Joints
- Velocity Diagrams
- Forces
- Horizontal Reactions
- Mechanism
- Mechanical Advantage

### SCOPE OF DELIVERY:

- 1 x EDC-MM-124
- 2 x Weight Sets
- 2 x Load Hangers
- 1 x Digital Weight Balance
- 1 x Instructional Manual

### WEIGHT AND DIMENSIONS:

- L x W x H (mm): 520 x 120 x 230
- Weight (approx.): 8 kg

