Whitworth Quick Return Mechanism Apparatus (EDC-TM-108)

EXPERIMENTAL DATA:

- Demonstration of a revolving crank slider
- Influence of variation in crank length and input angle on the output stroke
- Observing the transmission function of a revolving crank slider

DESCRIPTION:

The Whitworth and quick-return mechanism represent a non-uniform movement of revolving crank slider. It produced a slow forward movement while a fast return movement. This mechanism is used in tools, packaging and transport machinery.
The unit generates non-uniform stroke movement by means of a Whitworth mechanism. The experimental unit comprises of the drive disk along-with crank and coupling, the driving rod and the cylinder. The angle is adjusted using the crank disk, and an angle scale is integrated into the base plate. A ruler is attached to the cylinder to measure the stroke. The elements are mounted on a sturdy wall-mounted base plate. Two handles make it easy to carry and stack the unit.

TECHNICAL SPECIFICATIONS:

- Aluminum Disc with ball bearing mount
- Crank Radius: 46mm
- Slider Radius: 55mm
- Driving Rod: 145mm
- Angular protractor scale with 360º range and 1º resolution

WEIGHT AND DIMENSIONS:

- L x W x H (mm): 400 x 280 x 150
- Weight (approx): 5 kg

SCOPE OF DELIVERY:

- 1 x EDC-TM-108 Assembly
- Instruction manual

RELATED LAWS:

- Mechanisms
- Cams
- Followers
- Constant Speed
- Velocity Diagram
- Acceleration Diagram
- Linear displacement against rotation
- Simple Harmonic Motion