



Whitworth Quick Return mechanism Apparatus (SMT-TM-03)

The Whitworth mechanism is also known as the quick-return mechanism. It represents a revolving crank slider and produces non-uniform stroke movement with slow forward movement and fast backward movement. The SMT-TM-03 unit generates non-uniform stroke movement by means of a Whitworth mechanism. The experimental unit comprises the drive disk 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 millimeter-precise steel ruler is attached to the cylinder to measure the stroke. The elements are mounted on a base plate.

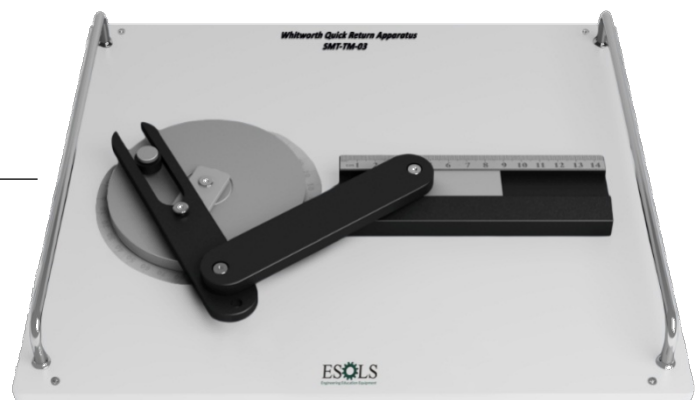
TECHNICAL SPECIFICATIONS

Specifications:

- Generation and investigation of non-uniform stroke movements.
- Adjustment of the crank radius at three positions of the connecting rod on the crank disk.
- Adjustment of the angle by turning the crank disk.
- Measuring the stroke on the cylinder.
- Investigation of revolving crank slider.

Technical Data:

- Drive disk:
 - Anodised aluminium. Ball-bearing mounted.
- Crank radius:
 - 50mm.
- Slider radius:
 - 55mm.
- Driving rod:
 - Anodised aluminium. Length: 145mm.
- Cylinder/driving rod/frame:
 - Stroke 0...100mm.



Technical Data:

- Investigation of a revolving crank slider
- Influence of crank length and input angle on the output stroke
- recording the transmission function of a revolving crank slider