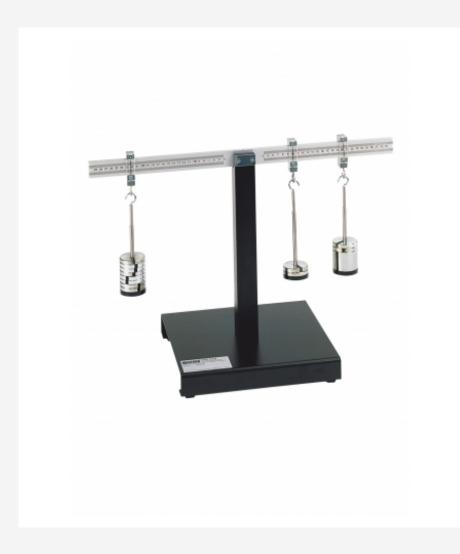


# **EM 049**

# Equilibrium of moments on a two-arm lever



## Description

 fundamentals of the equilibrium of moments and application of the law of levers

EM 049 is used to investigate the fundamentals of the equilibrium of moments based on the example of a two-arm lever. Moments occurring on the lever are to be brought to equilibrium.

A centrally mounted beam represents a two-arm lever. Movable riders are placed on the lever and weights are applied. Equilibrium is attained by moving the weights. Distances from the pivot point – the lever arms – can be read from an integrated scale. The calculation of the lever arms is verified in the experiment.

A vertical column carries the lever. A sturdy base plate ensures that the unit stands securely.

### Learning objectives/experiments

- fundamentals of the equilibrium of moments: applied forces, generated moments and equilibrium
- action of forces dependent on the lever arm

## Specification

- [1] investigation of the equilibrium of moments on a two-arm lever
- [2] ball bearing-mounted beam with integrated scale as two-arm lever
- [3] sturdy metal frame
- [4] storage system to house the components

## Technical data

#### Beam

- LxWxH: 600x30x10mm, centrally ball bearing mounted
- lever length: 2x 300mm

#### Weights

- 3x 1N (hanger)
- 6x 5N
- 12x 1N

LxWxH: 600x300x410mm Weight: approx. 10kg

LxWxH: 200x70x40mm (storage sys-

em)

LxWxH: 95x68x35mm (storage system)

### Scope of delivery

- 1 experimental unit
- 1 set of weights
- 1 set of instructional material



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Optional accessories

020.30009 WP 300.09 Laboratory trolley