# TM 310
## Thread testing

## Learning objectives/experiments

- determine the friction coefficient of a steel threaded spindle in conjunction with
  - a cast iron nut
  - a bronze nut
  - a plastic nut
- determine the relevant thread efficiency

## Specification

[1] investigation of the thread efficiency with different thread-material pairings
[2] nuts made of cast iron, bronze and plastic
[3] spindles with trapezoidal thread, varying pitch
[4] generate torque using pulley with spring balance and cable
[5] load via graduated loads

## Technical data

Spindle thread
- TR30x6 and TR30x12P6

Rotary plate
- diameter: 140mm

Spring balance
- 0...5N
- graduation: 0,05N

Weight
- 1x 10N
- 1x 20N

LxWxH: 300x300x300mm
Weight: approx. 15kg

## Scope of delivery

1 experimental unit
1 set of instructional material

## Description

- **determine the thread efficiency with different thread-material pairings**

The main elements of this experimental unit are a perpendicular pair of thread spindle and nut. A moment is exerted on the spindle by means of a pulley, using a spring balance and cable. Additional weights on the rotary plate influence the axial load of the thread.

Two spindles with trapezoidal threads of different pitch are included. The experimental unit contains three long nuts made of various materials with single pitch and a cast iron nut with double pitch.

The measured values can be used to determine and compare the threads efficiencies.

# TM 310
## Thread testing

Optional accessories

| | | |
|---|---|---|
| 020.30009 | WP 300.09 | Laboratory trolley |