

Dimensional Metrology (Hub) Training Kit

Overview

The dimensional hub training kit is designed in order to allow trainees to grasp and comprehend knowledge related to metrology field. Using this training kit, students will get familiar with different measurement devices besides being able to measure specified lengths, depths, and diameters



Specification

- This training kit offers users the basic fundamentals of measurements by enabling them to determine the depth, length, and diameter.
- The training kit consists of up to 10 test pieces (hubs) that obtain different dimensions, these pieces allow trainees to carry out different measurement experiments.
- All of the test pieces are made out of stainless-steel material for longer lifetime.
- Seven of the ten test pieces are considered rejected during experiments as they are slightly deviated than the desired ones.
- Four testing equipment are included in this training kit allowing students to determine dimensions using more than one method.
- The testing equipment include the following:
 - » Caliper
 - » Depth caliper
 - » Three-point internal micrometer
 - » Limit plug gauge
- All of the kit components are laid neatly in a storage box made out of durable plastic to provide protection to the kit contents.

- The kit is lined with foam material carved to contain each component precisely protecting them against wear and deterioration.

- The kit is compact and easy to use in laboratories. All of the kit contents are labeled for an easy access of the components.

Experiments

- Familiarization with the basic fundamentals of metrology: testing, measuring and gauging.
- Determination of lengths, depths, and diameter.
- Familiarization with typical measuring equipment.
- Familiarization with general tolerances.
- Recognition of systematic and random errors.
- Estimation of measurement deviations.
- Testing specified bore with limit plug gauge.

Technical Data

- 10 hubs with individual dimensions
 - » Material of construction: stainless-steel
- Test equipment
 - » Caliper: 0...150mm
 - Reading accuracy: 0,05mm
 - » Depth caliper: 0...150mm
 - Reading accuracy: 0,05mm
 - » Three-point internal micrometer: 40...50mm
 - Reading accuracy: 0,005mm
 - With setting ring acc. to DIN 2250 C, nominal diameter 45mm
 - » limit plug gauge
 - Nominal diameter: 30mm
 - Acc. to DIN 2245
 - Tolerance field: ISO Fit H7

Scope of Delivery

- Dimensional metrology (hubs) training kit (MMS110)
 - » 10 test pieces
- Hard copy user manual

Options

- Digital content (BI01).