Portable Measurement Tools Learning System

990-MES1





Multimedia Curriculum and Student Reference Guide

Learning Topics:

- Basic Measurement
- Tape Measurement
- Measurement Conversion
- Precision Measurement Tools
- Dial Caliper
- Digital Caliper
- Micrometers
- Dimensional Gauging
- Indicator Measurement
- Data Collection

Amatrol's Portable Measurement Tools Learning System (990-MES1) introduces the fundamental principles of measurement including basic measurement, precision measurement, direct gauging, indirect gauging, and dimensional measurements using both the U.S. customary system as well as S.I. metric system. Understanding how to perform accurate measurements is relevant to technical careers such as quality control inspector, machinist, manufacturing engineer, operations manager, and production technician. The 990-MES1's compact size and durable case also provide for safe storage when available training space must be used to teach other topics.

The 990-MES1 allows learners to apply fundamental measurement principles using industrystandard tools like dial calipers, micrometers, and dial indicators to achieve accurate measurements that are essential to any technical career. Learners will acquire skills such as how to measure length, accurate measurement of inside and outside dimensions, measuring both in U.S. Customary and S.I. Metric units, and collecting measurement data. The 990-MES1 contains precisely-machined and numbered parts that challenge

the learner to make accurate measurements. The measurement tools and parts were carefully selected to not only teach the learner how to use the tools properly, but to also teach them the proper application for their use.



Technical Data

Complete technical specifications available upon request.

Portable Case, ABS Plastic, 20.90-in. L x 12.90-in. W x 8.40-in. D 6-in. Dial Caliper Digital Calipers w/ USB communications USB Cable for digital calipers SPC Data Management Software 0-25 MM Micrometer 3-4-in. Micrometer **Dial Indicator** Tape Measure Metric Metal Rule 6-in. Metal Rule Metal Decimal Rule, 50th scale Variable Diameter Metal Discs (3) Metal Squareness Plates (3) Metal Shafts (10) Small Hole Gauges (4) 1-2-3 Block Multimedia Curriculum (M19149) Instructor's Guide (C19149) Installation Guide (D19149) Student Reference Guide (H19149) Additional Requirements Computer, See requirements: http://www. amatrol.com/support/computer-requirements Utilities None

Gain Skills Used By Production Technicians, Machinists, and More!

The 990-MES1 uses industry-standard measurement tools used for various technical career paths including manufacturing, engineering, science, and medical technology. This learning system includes dial and digital calipers, micrometers, steel rules, dial indicator with magnetic base, a gauge block, and small hole gauges. Additional compo-



nents, such as rectangular plates, shapes of varying dimensions, and disks with machined lips are used to help learners use measuring devices to gain hands-on practice and skills.

Just to name a few specific skills that learners will develop, the 990-MES1 teaches converting between U.S. customary units and SI metric units, measuring the outside dimension of a part using a micrometer, calibrating a dial caliper, mastering a dial indicator, and collecting and displaying data using data acquisition software.

Highly-Interactive Multimedia for Measurement Skill-Building

The 990-MES1 features comprehensive measurement curriculum to teach the theoretical knowledge necessary to understand more advanced topics and applications. Within this cur-



riculum, learners will study topics such as: stating the typical accuracy of a dial caliper measurement and explain what affects it; using an outside micrometer graduated in English

> units to measure the outside dimension of a part; and describing the function of a gauge fixture. This curriculum is presented in a stunning, interactive multimedia format. Each topic's presentation includes extensive videos, 3D animations, interactive exercises, and colorful graphics that will motivate students and help them learn more effectively.

Collect Real-Time Data with Data Management Software

The 990-MES1 includes Amatrol's Data Management software. This software is a Windowsbased program that collects data in real time from digital gauges. Learners will study different ways to collect data and then apply software to improve it.

Practice Measurement Skills Anywhere, Anytime!

Learners only need a small amount of desk space and a computer to study vital measurement-related industry skills. Its compact size and durable, handheld case provide for safe storage when your limited space must bet5 used for teaching other subjects or when the system must be transported to a different location in the facility for use.





Student Reference Guide

A sample copy of the Portable Measurement Tools Student Reference Guide is included with the learning system. Sourced from the multimedia curriculum, the Student Reference Guide takes the entire series' technical content contained in the learning objectives and combines them into one perfect-bound book. If you would like to inquire about purchasing additional Student Reference Guides for your program, contact your local Amatrol Representative for more information.



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