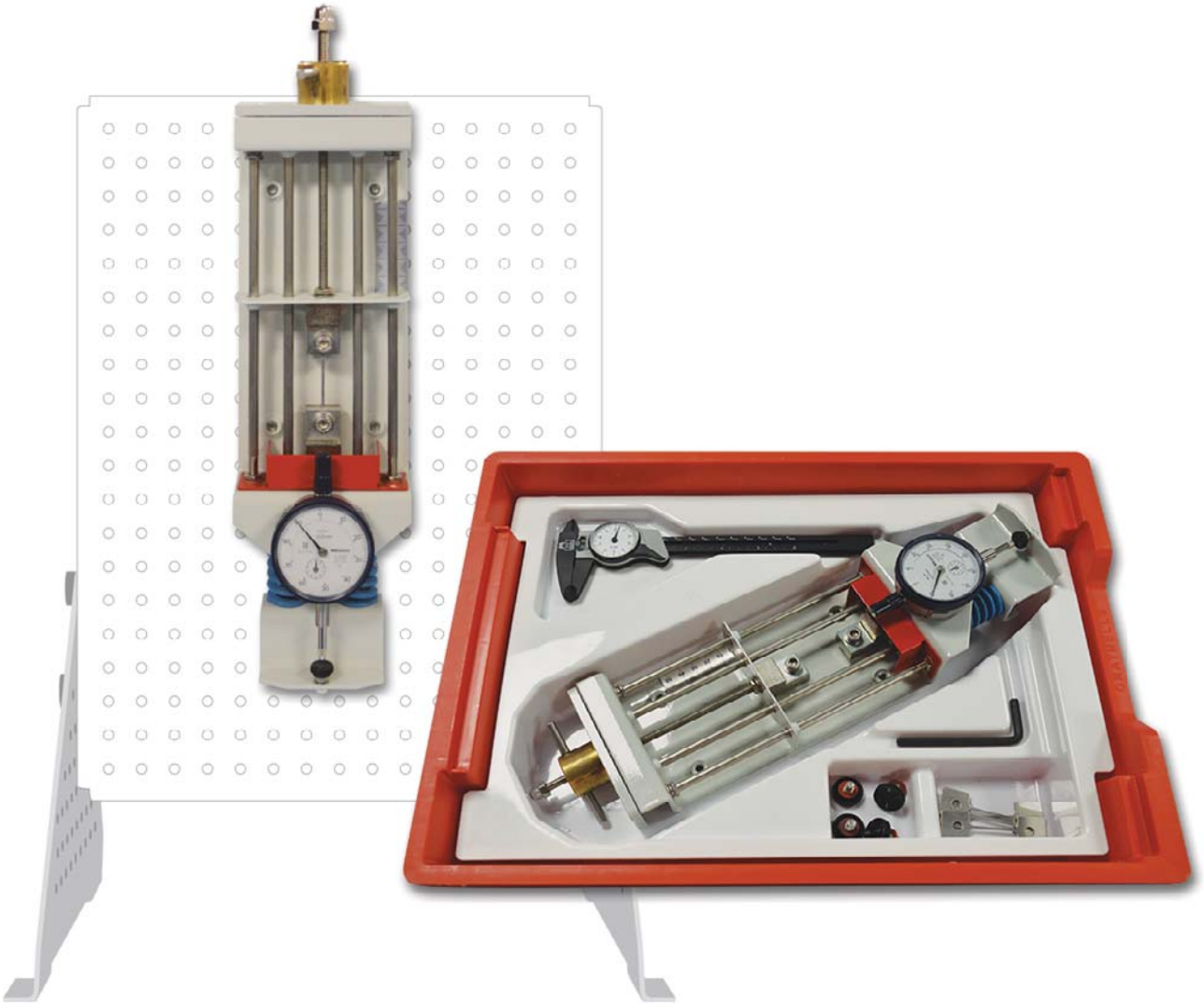
TENSILE TESTER KIT

ES6

Demonstrates the principles of tensile tests on specimens of different materials, showing material behaviour in the elastic and plastic region (Young,s modulus).



KEY FEATURES

- One of a series of 18 kits for experiments in fundamental engineering science topics
- For use on any engineering course from foundation to postgraduate
- Flexible and modular with sensible size parts, each kit fits onto the work panel (ES1) for experiments and simple classroom demonstrations
- Supplied in a hard-wearing storage tray with moulded insert to hold parts securely and a graphical list to help check the kit contents
- Rugged and durable parts for safe 'hands-on' experiments, allowing better understanding
- Contains all parts needed for experiments in tensile testing of different materials

TECQUIPMENT

TENSILE TESTER KIT

ES6

DESCRIPTION

This versatile kit is part of a series that allows many experiments using different arrangements of their parts. Students, teachers or lecturers fit the parts of the kit to the work panel (ES1) (supplied separately) to study or show an engineering science topic.

This kit includes a cased tensile tester with specimens of different materials to show students the principles of tensile tests.

Students use the tensile tester to stretch the specimens to destruction, while measuring the extension and force. The tests introduce students to tensile test terms including:

- overall stress and strain
- yeild properties
- tensile strength
- elongation

The choice of different specimens allows comparisons of different specimen material and how it affects its tensile properties.

TecQuipment supplies a memory stick with the work panel (ES1). It includes all the worksheets, guidance notes and lecturer notes (with answers) needed for typical experiments with each kit. The selection of parts in the kits and the choice of fixing points on the work panel means that teachers or lecturers may extend the experiments to an even greater range.

NOTE: The kit is for use with the ES1 work panel (supplied separately).

STANDARD FEATURES

- Five-year warranty
- Manufactured in accordance with the latest European Union directives
- ISO9001 certified manufacturer

LEARNING OUTCOMES

- Tensile tests (to destruction) of different materials
- Finding the tensile strength of a material
- Material behaviour in the elastic and plastic region
- Creating a force and extension chart

OPERATING CONDITIONS

FOR USE IN:

Well lit classroom or laboratory

STORAGE TEMPERATURE RANGE:

–25°C to +55°C (when packed for transport)

OPERATING TEMPERATURE RANGE:

+5°C to +40°C

OPERATING RELATIVE HUMIDITY RANGE:

80% at temperatures < 31°C decreasing linearly to 50% at 40°C

ESSENTIAL SERVICES

A level bench or desktop of at least 500 mm wide x 500 mm front to back.

ESSENTIAL BASE UNIT

Work Panel (ES1)

RECOMMENDED ANCILLARIES

ADDITIONAL TENSILE TEST SPECIMENS:

- Aluminium (MTTA)
- Aluminium HE30 (MTTD)
- Steel (MTTS)
- PVC (MTTP)

SPECIFICATIONS

TecQuipment is committed to a programme of continuous improvement; hence we reserve the right to alter the design and product specification without prior notice.

STORAGE TRAY (WITH CLIP-ON LID):

450 mm x 320 mm x 85 mm

NETT WEIGHT:

3.5 kg

PACKED VOLUME AND WEIGHT:

Approximately 0.015 m^3 and 4 kg

MAXIMUM FORCE CAPACITY:

1000 N

MAIN PARTS:

- Tensile tester
- Dial caliper
- Set of specimens – 10 x steel, 10 x aluminium, 10 x aluminium HE30 and 10 x PVC
- Hexagon tool

TECQUIPMENT