



DOUBLE SHEAR EXPERIMENT

SM1000J

An experiment for determining the shear strength of specimens using a double shear test. It fits in the Universal Testing Machine (SM1000) and consists of a specimen holder and shear strap.



KEY FEATURES

- Fits in the tensile test area of TecQuipment's Universal Testing Machine (SM1000) for double shear tests of cylindrical specimens.
- Includes copper specimens



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DESCRIPTION

Shear testing determines the shear strength, τ , of cylindrical materials. This is based upon DIN50141 standard which is valid for materials with a maximum tensile strength of $1300 \text{ N}\cdot\text{mm}^{-2}$.

The Double Shear Experiment (SM1000j) fits in the area below the loading platform of TecQuipment's Universal Testing Machine (SM1000).

In a single shear test (one when a specimen is sheared on one cross section), the specimen can bend before it shears, this has to be accounted for to obtain good results. With a double shear test, the specimen is sheared at two locations, bending is eliminated resulting in a much simpler test.

The specimen holder fits to the lower ball joint and the shear strap holder to the upper ball joint. The copper specimen is passed through the specimen holder and the shear strap. The two sections are joined by fitting the dowel through the shear strap holder and shear strap. The pump is used to increase the ram force until the specimen shears.

STANDARD FEATURES

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

LEARNING OUTCOMES

- Determining the shear stress of the specimen materials.

ESSENTIAL BASE UNIT

- Universal Testing Machine (SM1000)

RECOMMENDED ANCILLARIES

- Extra hardness specimens (C101) – see separate datasheet

OPERATING CONDITIONS

OPERATING ENVIRONMENT:

Laboratory environment

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

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.

APPROXIMATE NETT WEIGHT:

2.1 kg

APPROXIMATE PACKED VOLUME:

0.02 m³

PENETRATOR:

Hardened steel 10 mm diameter

DOUBLE SHEAR TEST SPECIMENS INCLUDED (5):

- C101 copper (DS1010)