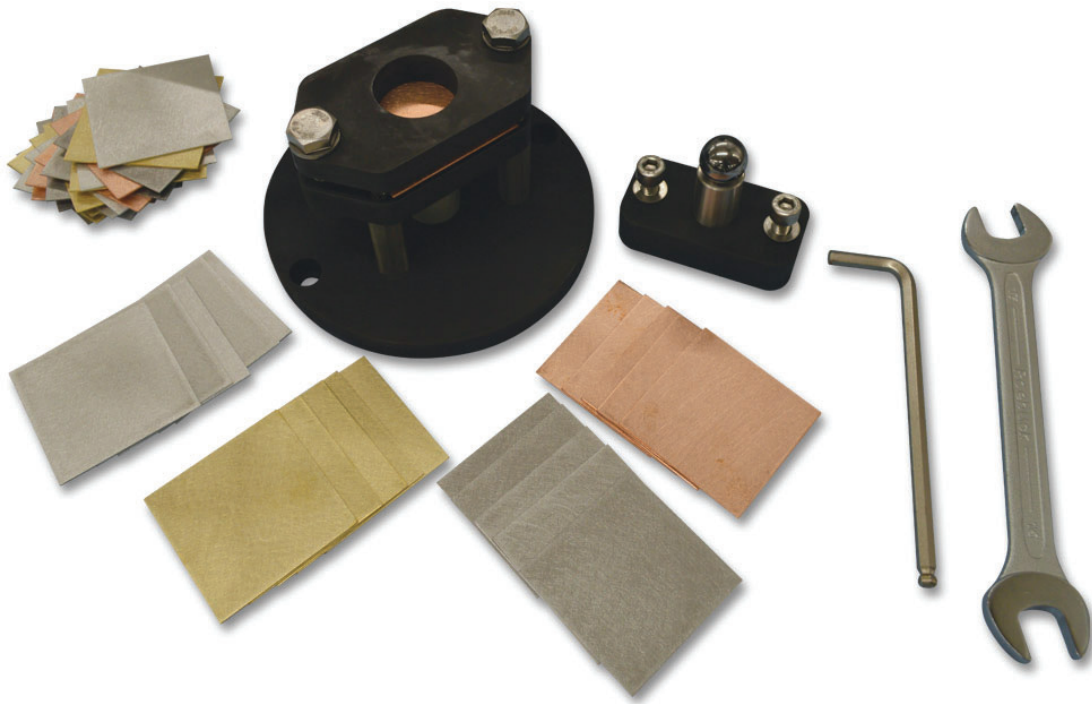




≡ CUPPING EXPERIMENT

SM1000H

An experiment for testing cold formed sheet metals by cupping, for understanding properties in moulding manufacturing processes. It fits in the Universal Testing Machine (SM1000) and consists of a sphere that is pressed into the specimen held between two plates until the specimen ruptures.



KEY FEATURES

- Fits in the compressive test area of TecEquipment's Universal Testing Machine (SM1000) for cupping tests of sheet materials.
- Includes a mirror for easy viewing of the material rupturing
- Includes specimens of different basic engineering materials
- Works with TecEquipment's Universal Testing Machine (SM1000)

≡ CUPPING EXPERIMENT

SM1000H

DESCRIPTION

The Cupping Experiment (SM1000h) fits in the area above the loading platform of TecQuipment's Universal Testing Machine (SM1000).

The penetrator is made of hardened steel, the cupping specimen is clamped between the clamping plate and the die plate. An angled mirror is placed below the die plate to enable easy viewing of the specimen rupturing.

The penetrator sphere is first lubricated then using the Universal Testing Machine it is pressed into the cupping specimen causing a cupped shape indentation to form. As more pressure is applied, the cup forms until it ruptures as seen in the angled mirror.

STANDARD FEATURES

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

LEARNING OUTCOMES

- An understanding of the limits of various sheet materials.
- An understanding of the Erichsen Number, IE (the depth of penetration achieved when a specimen first ruptures).
- An understanding of the difference between isotropic and anisotropic ruptures

ESSENTIAL BASE UNIT

- Universal Testing Machine (SM1000)

RECOMMENDED ANCILLARIES

- Extra specimens (HE30, C101 HH, CZ108 HH and CR4) – 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:

3.9 kg (4.9 kg with 40 specimens)

APPROXIMATE PACKED VOLUME:

0.02 m³

PENETRATOR:

Hardened steel 20 mm diameter

HARDNESS TEST SPECIMENS INCLUDED (10 OF EACH):

- HE30 aluminium (ER1010)
- C101 HH copper (ER1020)
- CZ108 HH brass (ER1030)
- CR4 mild steel (ER1040)