



Sheet Metal Testing Machine Model 100



testing equipment for quality management

ERICHSEN

**ERICHSEN
Cupping Test**

**Simple
Manually Driven
Testing Machine**

The Product

The ERICHSEN Sheet Metal Testing Machine for manual operation provides a maximum drawing force of 30 kN and a blankholder force according to the standard, of 10 kN - Model 100.

The Application

The manually operated Testing Machine is intended for measuring the drawing qualities of ferrous and non-ferrous metal by means of the ERICHSEN CUPPING TEST in accordance with

ISO 8490
EN 14-58
EN 14-67
DIN 50 101 / 50 102
BS 3855: 1965
NF A 03-652
ASTM 643-84
JIS Z-2247
UNI 3037
UNE 7080
GOST 10 510
ICONTEC 21
SIS 112635
SABS 0138-197
IS: 1756-1961
PN-68 H-04400

on sheet and strip from 0.2 to 1.5 mm thick (400 N/mm² tensile strength) and on foil material in thicknesses down to 0.005 mm. Because it is easy to operate the machine, it is particularly suitable for use in factories only involved with a limited amount of sheet metal forming, and applications confined to thinner materials.

The Purpose

The ERICHSEN Sheet Metal Testing Machine, Model 100, provides a means to measure the drawing quality of sheet metal with very little effort.

By establishing the quality of material which is still just satisfactory for producing a particular drawn work-piece the lowest cost material suitable for the part can be established.

The standardised ERICHSEN Cupping Test is in this way useful for the Purchasing Department, as part of an order specification.

The surface grain size is shown up clearly on the tip of the bulge produced in the Cupping Test, and this can be interpreted as a numerical value with the aid of the ERICHSEN grain scale. On this basis, the grain size of the sheet metal can also be fixed at the out-set.

No special skills are required to operate the machine. Anybody can use it after instruction.

The Description

The ERICHSEN Sheet Metal Testing Machine, Model 100, is a bench mounted unit with a cast iron machine body and a cylindrical test head.

To conduct the cupping test the sheet metal specimen or foil is entered into an opening through the test head.

The screw-in blankholder is set for the sheet thickness using the scale provided.

The test head is then tightened manually against a stop on the locating sleeve. This clamps the blank with a force of 10 kN as required by the cupping test standards mentioned above.

The clutch pin is pulled outwards from the locating sleeve, the test head is turned clockwise and the cupping process commences.

The cupping test value reached is displayed on a digital counter.

The forming process and the appearance of the crack can be observed conveniently looking down onto the blankholder. In poor light, or when using the smaller test tools nos. 5 and 11, we recommend the use of a special microscope with battery operated lamp.

The Technical Data

Dimensions: Width: 340 mm
Depth: 350 mm
Height: 450 mm
Net weight, approx.: 36.0 kg

Drawing force, max.: 30 kN
Blankholder force: 10 kN (fixed)
Punch stroke, max: 18 mm
Measuring result display:

Digital
(accuracy of 0.1 mm)
Width of specimen panel, max.:90 mm
Thickness of specimen panel, max.:1.5 mm

Ordering Information	
Order No.	Product Name
0004.01.31	ERICHSEN Sheet Metal Testing Machine, Model 100, including Test Tool No. 27
Supplied with: Standard lubricant to DIN, ISO and EURONORM Operating instruction manual	

Additional Tools	
Order No.	Product Name
0006.01.32	No. 21 to DIN 50 102
0001.01.32	No. 11 to DIN 50 102
0007.01.32	No. 5 to GOST 10510
0004.01.32	No. 27 (spare)

Accessories	
Order No.	Product Name
0002.01.32	Microscope (10-fold magnification) with battery operated lamp
0005.01.31	ERICHSEN-Grain Scale to ASTM E 112-63 and Steel Test Sheet 1510-61
0005.02.31	ERICHSEN-Grain Scale for Copper/Zinc Alloys in sheet metal form
0008.01.32	Special box for storing Test Tools

Subject to technical modifications.
TB 100 E - X/95