

Elcometer 1510 Conical Mandrel Bend Tester



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At a glance

- Rugged and rigid tester with a ground conical mandrel for greater accuracy and repeatability.
- Simple vice arrangement for quick set up.

Elcometer 1510 Conical Mandrel Bend Tester

Mechanical testing equipment for the determination of elasticity, adhesion and elongation of paint on sheet metal. The frame has a bending lever with a roller which pivots on a steel conical mandrel with a diameter from 3.2 to 38.1mm (0.12 to 1.5"). A graduation indicates the mandrel diameter in mm and inches.

This particularly robust and rigid construction provides excellent resistance to deformation and long service life. The specimen can be bent on part of or along the entire length of the mandrel, and the results (cracks) corresponding to different test diameters can be observed in a single operation.

Elasticity & Resistance Deformation

Elasticity and resistance to deformation are part of the key physical properties required in the coatings industry today. Essentially there are three different test methods which are used to determine a coating's performance under different deformation conditions.

Bend Test : A coated metal sheet is bent over a cylindrical or conical mandrel and the coating observed for cracks and discolouration.

Impact Test : A coated metal sheet is placed beneath a falling weight and the resultant damage caused by the deformation is observed. The impact test method is used to identify how the coating performs under a rapid deformation process.

Cupping Test : A coated sheet metal is subjected to a gradual deformation by a polished die. This deformation is caused by the die being pushed from beneath the coating – i.e. from the reverse side of the sheet metal. The end-point is when the coating begins to crack.

Can be used in accordance with:

ASTM D 522	BS 3900 E11
DIN 53150	DIN ISO EN 6860
ECCA T7	

Model	Description	Part Number	
		Metric	Imperial
Elcometer 1510	Elcometer 1510 Conical Mandrel Bend Tester ISO/ASTM	K0001510M001	K0US1510M002

Related products



Elcometer 1500

A simple instrument for determining the elasticity, adhesion and cracking of dry paint on flat specimens, consisting of a mandrel support which also serves as a test stand. Painted metal sheets, are manually bent around mandrels of decreasing diameter until cracks appear.



Elcometer 1506

This cylindrical mandrel bend tester consists of a robust frame which has a bending lever, with height adjustable rollers and a sliding vice for the sample. Thanks to its design, the instrument can be adapted to the diameter of the mandrel used are bent perfectly and regularly over the mandrels.



Elcometer 1620

Used for assessing the cupping ability of coatings applied to metal sheets up to 1.2mm (0.05") thick, the Elcometer cupping tester is available with either an analogue or a digital gauge, manual or electric. Models are supplied with an illuminated magnifier to accurately view the deformation's results.



Elcometer 1615

Used for evaluating the resistance of a coating to impact (elongation, cracking or peeling). A weight with hemispherical ends falls on the coated side or reverse of a sheet metal specimen fixed onto a corresponding die. The impact testers can be supplied with accessory kits to allow tests to be in accordance with ASTM D 2794 and NF T30 017.



Elcometer 1542

Simple but effective method for determining the adhesion of a large variety of coatings. The instrument is ideal for testing the adhesion of thin coatings on flat surfaces using the cross cut method, available with three different spacings 1, 2, and 3mm, corresponding to the thickness of layer to be tested.

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