

# Elcometer 1506 Cylindrical Mandrel Bend Tester



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### Elcometer 1506 Cylindrical Mandrel Bend Tester

A very robust mechanical unit for determining the elasticity, adhesion and elongation capacity of dried paint on sheet metal.

The frame has a bending lever, with height adjustable roller and sliding vice for the sample. Thanks to its design, the instrument can be adapted to the diameter of the mandrel used.

The coated specimens, no more than 70mm (2.75") wide, and 80mm (3.15") long (for a mandrel 2mm (0.08" diameter) to 100mm (3.98") (for a mandrel of 32mm (1.25" diameter) are bent perfectly and regularly on decreasing mandrels until cracks can be observed.

Each instrument is supplied with a kit of 14 stainless steel mandrels with diameters of:

Metric Version - 2, 3, 4, 5, 6, 8, 10, 12, 13, 16, 19, 20, 25 and 32 mm

Imperial Version – 0.08, 0.12, 0.16, 0.20, 0.24, 0.31, 0.39, 0.47, 0.51, 0.63, 0.75, 0.79, 0.98, 1.25 inches

### 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.

### At a glance

- Robust and easy to use gauge.
- Integrated bending lever and sliding sample vice - for quickly changing mandrel dimensions between tests.

Can be used in accordance with:	
ASTM D 1737	BS 3900 E1
DIN 53152	DIN EN ISO NF 1519
ECCA T7	NF T 30-040

Model	Description	Part Number	
		Metric	Imperial
Elcometer 1506	Elcometer 1506 Cylindrical Mandrel Bend Tester ISO-DIN-ASTM	K0001506M001	K0US1506M001
Accessories	Elcometer 1506 Spare set of 14 Mandrels	KT001506P201	KTUS1506P201

## Related products



Elcometer 1510

The particularly robust and rigid construction of the Elcometer conical mandrel tester is used in the determination of elasticity, adhesion and elongation of paint on sheet metal. 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.



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.

### ENGLAND

Elcometer Instruments Ltd  
Edge Lane  
Manchester M43 6BU

Tel: +44 (0) 161 371 6000  
Fax: +44 (0) 161 371 6010  
e-mail: sales@elcometer.com  
www.elcometer.com

### USA

Elcometer Instruments Inc  
1893 Rochester Industrial Drive  
Rochester Hills Michigan 48309

Tel: +1 248 650 0500  
Toll free: 800 521 0635  
Fax: +1 248 650 0501  
e-mail: inc@elcometer.com  
www.elcometer.com

### CANADA

Elcometer Canada Ltd  
PO Box 622, 401 Ouelette Avenue  
Windsor, Ontario N9A 6N4

Tel: +1 248 650 0500  
Toll Free: 800 521 0635  
Fax: +1 248 650 0501  
e-mail: ca\_info@elcometer.com  
www.elcometer.com

### ASIA & THE FAR EAST

Elcometer (Asia) Pte Ltd  
896 Dunearn Rd  
Sime Darby Centre #3-09  
Singapore 589472,  
Republic of Singapore

Tel: +65 6462 2822  
Fax: +65 6462 2860  
e-mail: asia@elcometer.com  
www.elcometer.com

### BELGIUM

Elcometer SPRL  
Rue Vallée 13  
B-4681 Hermalle /s Ardenteau

Tel: +32 (0)4 379 96 10  
Fax: +32 (0)4 374 06 03  
e-mail: be\_info@elcometer.be  
www.elcometer.be

### FRANCE

Elcometer SARL  
BP 8-Bou  
60 Rue de la Petite Levée  
45430 Chécy

Tel: +33 (0)2 38 86 33 44  
Fax: +33 (0)2 38 91 37 66  
e-mail: fr\_info@elcometer.fr  
www.elcometer.fr

### GERMANY

Elcometer Instruments GmbH  
Himmlingstraße 18  
D-73434 Aalen

Tel: +49 (0) 7366 91 92 83  
Fax: +49 (0) 7366 91 92 86  
e-mail: de\_info@elcometer.de  
www.elcometer.de