

# Elcometer 1615 Variable Impact Tester



Elcometer 1615  
Variable Impact  
Tester

This simple to use gauge is ideal for evaluating the resistance of a coating to impact (elongation, cracking or peeling).

There are two test methods: either a weight with a hemispherical punch attached falls on a coated metal sheet or a weight falls on to a hemispherical punch which is resting on the coated metal sheet.

The Elcometer 1615 Impact Tester comes as one universal assembly with the option of six different kits providing the functionality for various testing methods.

The test specimen is fixed into position by the quick release clamp. The weight is lifted to the pre-determined height and can be set by the adjustable collar device. The weight is then released and the resulting deformation observed.

The base unit is common to all tests. Simply select the appropriate kit to meet your requirements.

- **Graduated tube with engraved markings:**  
The tube has clearly engraved, graduated markings in both kg-cm and lb-inch to ensure accuracy.
- **Stop collar with adjustable settings:**  
Ten settings between 2mm and 15mm (0.08 and 0.60") to change the depth of impact when working in accordance with ISO Standards.
- **Integrated bubble level:**  
Ensuring that the tester is perpendicular for accurate results.
- **Easy fix sample clamp:**  
The test sample can be secured or released by a simple twist of the clamp handle.
- **Comprehensive range of test kits:**  
Six different test kits are available containing all the items required to test in accordance with specified Standards.

## 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 metal sheet 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. The end-point is when the coating begins to crack.

<b>Guide Tube:</b>	Scale Length: 0mm to 1000mm (0" to 39") Total length: 1390mm (54")
<b>Dimensions</b>	1460 x 200 x 165mm (57.5 x 8.0 x 6.5")
<b>Weight</b>	10.6kg (23.4lb)
<b>Packing List</b>	Elcometer 1615 Impact Tester with passivated base, integrated bubble leveller, graduated tube, collar release mechanism and operating instructions <i>Kits are not supplied as standard. Please select the required kit from the table overleaf.</i>
<b>Part Number</b>	<b>K0001615M201</b> Elcometer 1615 Impact Tester Universal Base Unit and Tube

## Elcometer 1615 Kits

In order to test a sample in accordance with a specified standard, a number of kits have been created to provide a single Impact Tester which, by using the appropriate kit, allows the user to work in accordance with a wide range of National and International Standards.

ELCOMETER 1615 KITS		
Kit	Description	Part Number
	<p><b>Kit A:</b> Comprising of:                      Falling 1kg (2.2lb) weight with 20mm (0.78") punch – outside diameter 25mm (0.98"), stop collar, 27mm (1.06") die with fixing screw, sample clamp with two fixing screws, 3mm (0.12") and 4mm (0.15") hexagonal wrench.                      Can be used in accordance with:                      ISO 6272:1993, BS 3900-E13</p>	KT001615KITA
	<p><b>Kit B:</b> Comprising of:                      Static indenter with 15.9mm (0.6") punch, falling 1kg (2.2lb) weight, 12.7mm (0.5") punch, 16.3mm (0.64") die with fixing screw and 3mm (0.12") hexagonal wrench.                      Can be used in accordance with:                      ISO 6272 Part 2:2002</p>	KT001615KITB
	<p><b>Kit C:</b> Comprising of:                      Static indenter with 15.9mm (0.6") punch, falling 2lb (208g) weight, 16.3mm (0.64") die with fixing screw and 3mm (0.12") hexagonal wrench.                      Can be used in accordance with:                      ASTM D2794 Method 2, BS 6496:1984, EN 12206-1</p>	KT001615KITC
	<p><b>Kit D:</b> Comprising of:                      Falling 1kg (2.2lb) weight with 20mm (0.78") punch – outside diameter 24.6mm (0.97") - and stop key, 27mm (1.06") die with fixing screw, stop collar, sample clamp with fixing screws, 3mm (0.12") and 4mm (0.15") hexagonal wrench.                      Can be used in accordance with:                      ISO 6272 Part 1:2002, BS EN ISO 6272-1:2004</p>	KT001615KITD
	<p><b>Kit E:</b> Comprising of:                      Falling 400g (0.9lb) weight with 23mm (0.9") punch, 22mm (0.87") die with fixing screw and 3mm (0.12") hexagonal wrench.                      Can be used in accordance with:                      NFT 30-017:1989</p>	KT001615KITE
	<p><b>Kit F:</b> Comprising of:                      Falling 1kg (2.2lb) weight with 20mm (0.78") punch – outside diameter 25mm (0.98"), stop collar, 27mm (1.06") die with fixing screw, sample clamp with two fixing screws, static indenter with 15.9mm (0.6") punch, falling 1kg (2.2lb) weight, 12.7mm (0.5") punch, 16.3mm (0.6") die with fixing screw, 3mm (0.12") and 4mm (0.15") hexagonal wrench.                      Can be used in accordance with:                      ISO 6272:1993, ISO 6272-2:2002</p>	KT001615KITF

## Spares / Accessories for Kits

Kit	Part Number	Description
Kit A	KT001615N226 <sup>†</sup>	20mm (0.7") Diameter Punch Head, Outside Diameter 25mm (0.98")
	KT001615N214	27mm (1.06") Die complete with 3mm (0.12") Hexagonal Wrench & Fixing Screw
	KT001615N209	Sample Clamp Mechanism
	KT001615N208	Stop Ring Collar
	KT001615N221	1kg (2.2lb) Falling Weight, Outside Diameter 25mm (0.98")
Kit B	KT001615N215 <sup>†</sup>	12.7mm (0.5") Diameter Punch Head
	KT001615N205 <sup>†</sup>	15.9mm (0.6") Diameter Punch Head
	KT001615N212	16.3mm (0.6") Die complete with 3mm (0.12") Hexagonal Wrench & Fixing Screw
Kit C	KT001615N205 <sup>†</sup>	15.9mm (0.6") Diameter Punch Head
	KT001615N212	16.3mm (0.6") Die complete with 3mm (0.12") Hexagonal Wrench & Fixing Screw
Kit D	KT001615N206 <sup>†</sup>	20mm (0.7") Diameter Punch Head, Outside Diameter 24.6mm (0.97")
	KT001615N214	27mm (1.06") Die complete with 3mm (0.12") Hexagonal Wrench & Fixing Screw
	KT001615N209	Sample Clamp Mechanism
	KT001615N208	Stop Ring Collar
	KT001615N201	1kg (2.2lb) Falling Weight, Outside Diameter 24.6mm (0.97")
Kit E	KT001615N207 <sup>†</sup>	23mm (0.9") Diameter Punch Head
	KT001615N213	22mm (0.87") Die complete with 3mm (0.12") Hexagonal Wrench & Fixing Screw
Kit F	KT001615N226 <sup>†</sup>	20mm (0.7") Diameter Punch Head, Outside Diameter 25mm (0.98")
	KT001615N205 <sup>†</sup>	15.9mm (0.6") Diameter Punch Head
	KT001615N215 <sup>†</sup>	12.7mm (0.5") Diameter Punch Head
	KT001615N214	27mm (1.06") Die complete with 3mm (0.12") Hexagonal Wrench & Fixing Screw
	KT001615N212	16.3mm (0.6") Die complete with 3mm (0.12") Hexagonal Wrench & Fixing Screw
	KT001615N209	Sample Clamp Mechanism
	KT001615N208	Stop Ring Collar
	KT001615N221	1kg (2.2lb) Falling Weight, Outside Diameter 25mm (0.98")

<sup>†</sup> Punches are universal and can be used either fitted to a falling weight or as a punch resting on the sample.

## Related products



Elcometer 1620

### Elcometer 1620 Cupping Tester:

Robust and user-friendly instrument used for assessing the cupping ability of coatings applied to metal sheets up to 1.2mm (0.05") thick.



Elcometer 1510

### Elcometer 1510 Conical Mandrel Bend Tester:

Mechanical tester used to determine the effects of bending on the elasticity, adhesion and elongation properties of cured coatings on sheet metal.



Elcometer 1506

### Elcometer 1506 Cylindrical Mandrel Bend Tester:

Mechanical tester used to determine the effects of bending on the elasticity, adhesion and elongation properties of cured coatings on sheet metal – similar to the Elcometer 1510.



Elcometer 1500

### Elcometer 1500 Cylindrical Mandrels on a Stand:

A simple instrument for determining the elasticity, adhesion and cracking of dry paint on flat specimens.

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