

## Elcometer 3045 Persoz & König Pendulum Hardness Tester



*Elcometer 3045 Persoz & König Pendulum Hardness Tester*

**Can be used in accordance with:**

ASTM D 4366  
BS 3900 E5  
DIN 53157  
**ISO 1522**  
NBN T22-105  
NF T30-016

Consisting of a pendulum which is free to swing on two balls resting on a coated test panel, these pendulum hardness testers are based on the principle that the amplitude of the pendulum's oscillation decreases more slowly when supported on a harder surface and reduces faster on a softer surface.

The hardness of any given coating is given by the number of oscillations within the specified limits of amplitude. The Persoz test measures the time taken for the amplitude of oscillations to decrease from 12° to 4°, whereas the König measures from 6° to 3°.

The Elcometer 3045 Pendulum Hardness Tester is equipped with a number of unique features designed specifically to maximise repeatability and reproducibility of the pendulum hardness test method.

**Hardness Testing**



Hardness can be defined as a material's resistance to permanent deformation.

In the coatings industry, hardness measurement can be used to determine the resistance of the coating to scratching from general wear and tear and also if a coating is fully cured.

The term "Hardness" is used to refer to different properties of material, specifically resistance to scratch and wear and resistance to penetration.

Depending on the requirements, there are various methods for testing hardness. Some are dedicated to characterise coatings and others are more suitable for testing bulk materials such as metals, plastics, rubber or elastomers.

- **Sturdy and robust design ensures consistent results**
- **Fully automatic test – position the sample, close the door and press start**
- **Batch memory stores all test data for output to a PC via the supplied ElcoMaster™ Software**
- **Automated calibration**
  - **The user places the supplied glass calibration tile in place of the sample, positions the appropriate pendulum on the positioning pins and closes the door. The Elcometer 3045 then performs a full calibration routine and automatically adjusts the unit to meet the specified standards.**
- **Adjustable feet and bubble indicator ensures test is level**
- **Multilingual menu driven operation**
- **Rigid perspex door provides easy access for sample positioning**
- **Internal storage for the calibration tile and pendulum**

TEST METHODS		
	<b>Persoz Method</b>	
	Stainless steel pendulum, weight 500g (17.6oz), fitted with 2 balls measuring 8mm (0.3") diameter.	
	Oscillation Period:	1 second, $\pm 0.001$
	Deflections:	12° to 4°
	<b>König Method</b>	
	Stainless steel pendulum, weight 200g (7.05oz), fitted with 2 balls measuring 5mm (0.2") diameter.	
	Oscillation Period:	1.4 seconds, $\pm 0.02$
	Deflections:	6° to 3°
	Damping Time on Glass:	250 $\pm$ 10 seconds

TECHNICAL SPECIFICATION	
<b>Dimensions</b>	500 x 330 x 760mm (19.7 x 13 x 29.9")
<b>Weight</b>	15kg (33lb)
<b>Part Number</b>	<b>K3045M001</b> Elcometer 3045 Persoz & König Pendulum Hardness Tester
<b>Packing List</b>	Elcometer 3045 Pendulum Hardness Tester <sup>†</sup> , glass calibration tile, RS232 data cable, 3 x mains leads (UK, EUR and US), ElcoMaster™ Software and operating instructions.

<sup>†</sup> Pendulums are not supplied with the tester and should be ordered separately

SPARES & ACCESSORIES	
Persoz Pendulum	<b>KT003030P001</b>
König Pendulum	<b>KT003040P001</b>
Glass Calibration Tile	<b>KT003045P009</b>
Bubble Level	<b>KT002400P001</b>
Mains Lead, EUR 220V	<b>KT009999P001</b>
Mains Lead, UK 240V	<b>KTUK9999P001</b>
Mains Lead, US 110V	<b>KTUS9999P001</b>

## Related Products



Elcometer 3092

### Elcometer 3092 Sclerometer Hardness Tester

The Elcometer 3092 tests the hardness of a coating by moving a tungsten carbide tip over the coating with predetermined force.



Elcometer 501

### Elcometer 501 Pencil Hardness Tester

The pencil hardness test, also referred to as the Wolff-Wilborn test, uses the varying hardness values of graphite pencils to evaluate a coating's hardness.

## ENGLAND

Elcometer Limited  
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 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

## 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 SA  
Rue Vallée 13  
B-4681 Hermalle /s Argenteau

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

## NETHERLANDS

Elcometer NL  
Newtonlaan 115  
3584 BH Utrecht

Tel: +31 (0)30 210 7005  
Fax: +31 (0)30 210 6666  
e-mail: nl\_info@elcometer.com  
www.elcometer.com

## FRANCE

Elcometer Sarl  
97 Route de Chécy  
45430 BOU

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  
Ulmer Strasse 68  
D-73431 Aalen

Tel: +49 (0)7361 52806 0  
Fax: +49 (0)7361 52806 77  
e-mail: de\_info@elcometer.de  
www.elcometer.de