

Elcometer 3045 Persoz & König Pendulum Hardness Tester



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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 \dot{s} to 4 \dot{s} , whereas the König measures from 6 \dot{s} to 3 \dot{s} .

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.

- ③ **Sturdy and robust design ensures consistent results**
- ③ **Fully automatic test – position the sample, close the door and press start**
- ③ **Batch memory stores all test data for output to a PC via the supplied ElcoMaster™ Software**
- ③ **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.**
- ③ **Adjustable feet and bubble indicator ensures test is level**
- ③ **Multilingual menu driven operation**
- ③ **Rigid perspex door provides easy access for sample positioning**
- ③ **Internal storage for the calibration tile and pendulum**

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TEST METHODS		
	Persoz Method Stainless steel pendulum, weight 500g (17.6oz), fitted with 2 balls measuring 8mm (0.3") diameter.	
	Oscillation Period:	1 second, ± 0.001
	Deflections:	12 ς to 4 ς
	Damping Time on Glass:	430 \pm 10 seconds
	König Method Stainless steel pendulum, weight 200g (7.05oz), fitted with 2 balls measuring 5mm (0.2") diameter.	
	Oscillation Period:	1.4 seconds, ± 0.02
	Deflections:	6 ς to 3 ς
	Damping Time on Glass:	250 \pm 10 seconds

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

[†] Pendulums are not supplied with the tester and should be ordered separately

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

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.