

Elcometer 1720 Abrasion, Scrubbing and Washability Tester



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At a glance

- Two and four station models available.
- Rapid specimen fastening system.
- Sturdy design.
- Adjustable stroke speed and length
- Variable and Fixed speed modes..
- Supplied with up to two of four test tools of your choice.

Elcometer 1720 Abrasion, Scrubbing and Washability Tester

This robust, reliable and extremely flexible machine has been designed for testing the washability, brushability and abrasion resistance of a wide range of materials, including; paint, lacquers, inks, coatings, leather, wood, plastics, printed material, fabrics, etc.

The Elcometer 1720 is available in two versions:

- 2 working stations model - undertakes two tests at the same time.
- 4 working stations model (as showed in picture) - allows the operator to test up to 4 samples, or 4 different tests at the same time, dramatically increasing your productivity.

A kit is also available - allowing you to upgrade your 2 working station model to a 4 working station model.

Simple to use and adaptable, the Elcometer 1720 has a large amount of functionality built in, including:

- *Double Counter* - Double function and independent displays makes it easy to repeat and follow test sequences
 - pre-selection count function – set the number of cycles desired per sequence and leave the machine to automatically stop
 - total count function – indicates the total number of cycles after one or several sequences

Washability, Brushability and Abrasion Testers

Improved mechanical resistance is part of today's quality requirements. One important criteria for assessing this feature is abrasion resistance. Depending on the nature and purpose of the product, various testing methods are available.

There are testing methods are related to the "abrasion by friction" concept. Others are based on the projection of abrasive particles on to the test specimen. These techniques provide valuable information about materials and processes.

To meet industry's growing needs for research and control, Elcometer develops, manufactures and supplies a range of instruments designed for wear resistance tests. Standardised or conventional, these tests are widely used for numerous applications.

Can be used in accordance with:	
ASTM D 4213-96	ASTM F 1319
ASTM D 4213-92	ASTM D 4828
ASTM D 3450	ASTM D 2486
D4488-95 (Reapproved 2001)	DIN 53778;ISO 11998
ISO 105X12	EN 60730
Renault/PSA D45 1010	

- **Variable Speeds** – with two interchangeable operating modes, the machine’s performance can be optimised according to the type of tests:
 - fixed speed mode – 37 cycles per minute (ASTM, DIN, ISO & EN test methods)
 - variable speed mode – the operator can select a speed from 15 to 65 cycles per minute. (1 cycle = 1 motion back and forth of the carriage)
- **Carriage** – the carriage is designed with multiple functionality:
 - adjustable stroke length – user defined stroke length from 30 to 290mm (1.2 to 11.4”)
 - test tool locator – the brushes or abrasive pads are located in the chambers and are guided neutrally without superfluous devices or mechanisms, making it easy to install or remove alternative test tools
- **Individual Dosers** – using this device the flow of test liquids can be regulated for each test location, independently.
- **Rapid Specimen Fastening System** – aluminium frames are held in place by quick release clamps. Each frame is fitted with a gasket which both enclose and divide the test specimen – allowing effective and comparative tests to be carried out simultaneously.
- **Chassis** – made from thick anodised aluminium, the Elcometer 1720 is both self supporting and robust, allowing the user to have complete confidence in the durability of the machine, no matter how long the test period.

The Elcometer 1720 is equipped with either 2 or 4 working stations, each path separated by a water tight gasket frame. This design enables up to 2 or 4 simultaneous comparative tests to be carried out. Dimensions are adapted so that 2 strokes of different products can be positioned onto a same specimen, e.g. PVC Leneta test panel. As a result a substantial economy of consumables can be achieved. For this purpose, the optional Elcometer 3508/1 2 Reservoir Film Applicator facilitates the sample preparation.

Equipment Included in the Elcometer 1720	Quantity Supplied	
	2 station model	4 station model
Peristaltic pump of test solution	1	1
Individual flow doser	2	4
Brush, sponge or abrasive pad with holder.	1 from a choice of tool numbers 1 – 6	2 from a choice of tool numbers 1 – 6
Stainless steel solution reservoir	1	1
Aluminium Frame with gasket and fastening – dividing the panel into 2 stations	1	2
Quick Release Clamps	2	4
Shim 250µm (9.8mils) thick, 12.7mm (0.5”) wide	1	2
Pre-selection counter for automatic stop	1	1

The Elcometer 1720 can undertake tests according to a wide range of different standards or test methods, by simply changing the abrasive tools.

Tool 1: DIN 53778 (replaced by EN ISO DIN 11998 in Dec 2001)

Wild boar hair brush and stainless steel brush holder, standardised mass: 250g (8.8oz)

Tool 2: ASTM D2486

Nylon bristle brush and stainless steel brush holder, standardised mass: 454g (16oz)

Tool 3: ASTM D4213-92 / D4828

Sponge and stainless steel brush holder, standardised mass: 500g (17.6oz)

Tool 4: ASTM D3450

Sponge and stainless steel brush holder, standardised mass: 750g (26.5oz)

Tool 5: ASTM D4213-96

Sponge and stainless steel brush holder, adapted mass: 232g (8.2oz) and sponge (with 2 integrated abrasive pads – one on each side)

Tool 6: EN ISO DIN 11998

Aluminium holder, standardised mass: 135g (4.8oz), and abrasive pad

Tool 7: Polyvalent Holder

Stainless Steel holder, fitted with a fastening screw to fix abrasive textile or paper, and other similar materials as well. mass: 454g (16oz)

Tool 8: Renault D45 1010, ISO 105X12, ASTM F1319

Also known as the “Crockmeter”, specially designed for testing colour fastness of fabrics. Assembly including adapter, removable stainless steel cylindrical rod (200g / 7.0oz), test felt or textile fixing ring and a set of additional weights: 3 x 100g (3.5oz); 1 x 500g (16.6oz)

Tool 9: GME 60269

Tool for testing the resistance to abrasion of automotive components – similar to the “Crockmeter” but holding a felt disc of 10mm (0.4”) diameter and 10mm (0.4”) thick, working under a mass of 400g (14.1oz)

Tool 10: EN 60730 (resistance to markings)

Assembly for testing the quality of markings or similar coatings. A felt rubs the test surface over a length of 30mm (1.2”), under standardised time, speed and load conditions. The assembly is screwed into the carriage. Comes complete with a height adjustable arm fastening the felt disc, a rod for holding the weights, and a combination of weights allowing the test load to be varied between 150 - 1700g (5.3 - 60oz) in 50g (1.8oz) steps.

Model	Description	Part Number		
		UK 240V	EUR 220V	US 110V
Elcometer 1720/3	Abrasion / Scrub & Washability Tester - 2 station	K0001720M003		K0US1720M003
Elcometer 1720/4	Abrasion / Scrub & Washability Tester - 4 station	K0001720M004		K0US1720M004
Accessories	Washability Upgrade Kit of 2 stations (1720/3 model only)	KT001720N001		
	Tool No 1: DIN 53778 – Wild Boar Brush & Holder	KT001720P003		
	Tool No 2: ASTM D2486 - Nylon Brush, Holder & Mass	KT001720P030		
	Tool No 3: ASTM D4213-92/4828 – Sponge, Holder & Mass	KT001720P005		
	Tool No 4: ASTM D3450 – Sponge, Holder & Mass	KT001720P073		
	Tool No 5: ASTM D4213-96 – Sponge/Abrasive, Holder &	KT001720P029		
	Tool No 6: ISO 11998 – 5 x Abrasive Pad & Holder	KT001720P036		
	Tool No 7: Polyvalent Holder with fastening screw	KT001720P207		
	Tool No 8: “Crockmeter” Renault D45 1010, ISO 105X12,	KT001720P074		
	Tool No 9: GME 60269 – Abrasion for automotive components	KT001720P075		
	Tool No 10: EN 60730 Resistance to Markings Accessories kit	KT001720N003		
	Wild Boar Brush - DIN 53778	KT001720P004		
	5 x Sponges - ASTM D4213-92	KT001720P006		
	10 x Abrasive Pad - ISO 11998	KT001720P037		
	Felt disks for EN60730 std device 2pcs	KT001720P062		
	Abrasive sheet 25m roll – for KT001720P007	KT001720P008		
	4 x Abrasive sheet - Grit 120 to rectify ASTM Brush	KT001720P051		
	Nylon Brush - ASTM D2486	KT001720P009		
	Scrub medium SC2 abrasive type	KT001720N002		
	Self adhesive gasket for frame - 10m length	KT001720P013		
	Glass plate 1pc - Face matt	KT001720P014		
	Check Weight - 50g, 1.8oz	KT001720P016		
	Check Weight - 100g, 3.5oz	KT001720P017		
	Check Weight - 200g, 7oz	KT001720P018		
	Check Weight - 227g, ½ lb	KT001720P031		
	Check Weight - 500g, 17.6oz	KT001720P019		
Packing List	Elcometer 1720 Abrasion, Scrubbing and Washability Tester - 2 lane or 4 lane model, Test tools, 1 off or 2 off, Metal strip - 250µm (10 mil) thick for ASTM standard, Liquid dosing bottle, Liquid delivery pipe, Liquid drain pipe, Hexagonal wrench for adjustment of stroke length & Operating instructions			

Related products



Elcometer 1730

The car wash simulator by Elcometer is used to characterise the resistance of coatings against the action of automatic car washes. Meeting the exacting specifications of Peugeot-Citroën, the Elcometer 1730 is the ideal product for determining the resistance of automotive coatings to the abrasion caused by either the brush fibres or dirty water.



Elcometer Taber 5700

This linear abraser uses a free floating head to follow the contours of the sample under test - making it an ideal choice for abrasion testing of any curved surface.



Elcometer 4695/68 & 4695/69

In a typical scrub test (using the Elcometer 1720), the coating is applied to the leneta scrub test panel at a specified film thickness and, once dry, is subjected to the scrub test.



Elcometer 3508

This simple to use applicator has 4 pre-set film thicknesses, one on each edge. The Elcometer 3508 is supplied with two reservoirs making it ideal for use with the Elcometer 1720 Washability Tester, the Elcometer 3560 has a single reservoir.

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