TEXTILE DURABILITY TESTING

Martindale

Abrasion & Pilling Testers

Evaluate resistance to wear, pilling and surface change.
4, 6 or 9 stations with clear, station-by-station test monitoring.



PW-K017-9 shown

4 STATIONS

PW-K017-4

4.3-inch HMI

Compact daily testing

6 STATIONS

PW-K017-6

7-inch HMI

Flexible sample capacity

9 STATIONS

PW-K017-9

7-inch HMI

Higher sample throughput

Precision at Every Stage. Confidence in Every Test.

METHOD & APPLICATIONS

Measure wear. Assess appearance.

For fabric development, material comparison and routine quality control of apparel, upholstery and technical textiles.

WEAR RESISTANCE

Report rubs to breakdown, mass loss or appearance change using the selected ISO 12947 method.

PILLING BEHAVIOUR

Compare surface change with assessment photographs; report pilling grade from 1 to 5.

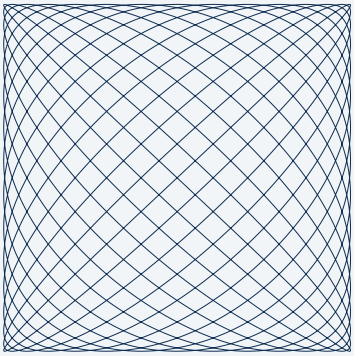
REPEATABLE SETUP

Match the motion, loading, specimen mounting and test materials to the chosen standard.

The Martindale principle

The guide plate moves the loaded specimen over the test surface along a multi-directional Lissajous path. Abrasion and pilling use different travel settings, holders and loading arrangements.

One complete Martindale path comprises 16 rubs. The rub count and the complete movement cycle are different quantities; report results in the units required by the method.



Martindale Lissajous path (schematic)

Key textile method settings

ABRASION	PILLING	ABRASION LOAD	TEST SPEED
60.5 mm	**24 mm**	**9 / 12 kPa**	**47.5 rpm**
Nominal travel	Nominal travel	By test method	Nominal method speed

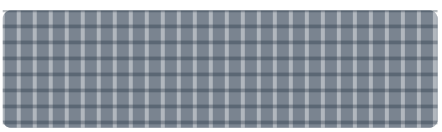
WOVEN APPAREL



KNITTED FABRICS



UPHOLSTERY



01 PREPARE	02 TEST	03 ASSESS
Condition and mount	Set method and cycles	Record the test result

MODELS & TEST METHODS

Choose your station capacity.



PW-K017-4

4 stations / 4.3-inch HMI



PW-K017-6

6 stations / 7-inch HMI



PW-K017-9

9 stations / 7-inch HMI

Specification	PW-K017-4	PW-K017-6	PW-K017-9
Test stations	4	6	9
Touchscreen PLC/HMI	4.3-inch	7-inch	7-inch
Station monitoring	4 counters	6 counters	9 counters
Test modes	Abrasion and pilling with the appropriate kits		
Rubbing movement	Multi-directional Martindale / Lissajous		
Test setup	Preset rub count and visible test status		
Operator controls	Start / hold; reset and jog on 6 / 9 station HMI		
Specimen handling	Removable holders and accessible clamping rings		

Test standards & reported results

ISO 12947-1	Martindale apparatus
ISO 12947-2, ISO 12947-3, ISO 12947-4	Breakdown / mass loss / appearance change
ISO 12945-2	Pilling, fuzzing and matting
ASTM D4966 / ASTM D4970	Martindale abrasion / pilling resistance

Condition textiles according to ISO 139. Select the applicable standard edition, test kit, loading and assessment procedure before testing.

OPERATION & TEST KITS

Built around the daily workflow.

Prepare specimens, set the test and monitor each station from one central control panel.



Clear control. Practical access.

- **Follow every specimen**

  Separate station counters keep the test progress visible alongside the preset rub count.

- **Handle samples efficiently**

  Open test positions and removable loading parts provide access for mounting and inspection.

Configure the instrument for your methods

ABRASION STATION KIT

Specimen holders, 9 / 12 kPa loading sets and specimen mounting tools for textile abrasion.

PILLING STATION KIT

Pilling holders, retaining rings and loading components for ISO 12945-2 assessment.

PREPARATION & ASSESSMENT

38 mm and 140 mm cutters, mounting tools and photographic references for woven and knitted fabrics.

TEST MATERIALS & REPLACEMENTS

Wool abradant, method-specific felt and backing foam. Keep replacement materials consistent with the test specification.

Select abrasion and pilling kits separately. Specify the standards, station count and required consumables; the quotation defines the exact delivery scope.

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