

# MARTINDALE ABRASION & PILLING TESTER 9 STATION MODEL

**\*\* code 2568 \*\***

For the control of abrasion and pilling on all kind of woven and knitted fabrics, as well as leather, non-woven, etc.

To perform analysis of fabric mass loss due to wear.

Modular & flexible: could be supplied with 4 positions and further upgraded to 6, 8 or 9 positions.

The instrument is extremely silent and vibration free thanks a sharp project and an extreme care in assembling the Noise and Vibration free movement.

Provides an extremely precise Lissajous figure



## **Conform to the following standards:**

### **Abrasion:**

EN ISO 12947-1, EN ISO 12947-2, EN ISO 12947-3, EN ISO 12947-4, IS 12673, ASTM D4966, IWS TM112, SN 198529, etc.

### **Pilling:**

EN ISO 12945-2, ASTM D4970, IWS TM196, SN 198525.

## **Officially approved by Marks & Spencer for the following test method:**

- Marks & Spencer P17 Pilling method P1.
- Marks & Spencer P18C Enhanced Pilling.
- Marks & Spencer P19 Martindale Abrasion Resistance of Apparel Fabrics.
- Marks & Spencer P19A Martindale Abrasion Resistance of Handbags and Belt Fabrics.
- Marks & Spencer P19B Martindale Abrasion Resistance of Upholstery.
- Marks & Spencer P19C Martindale Abrasion Resistance for Shirting.

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## Test procedure

For ISO & EMPA pilling tests, special kit of 90 mm diameter is used. The reference pilling photographs are EMPA 991 for woven fabrics and EMPA 992 for knitted fabrics.

According to the International standards, the fabric samples, being in contact with a disc of the same fabric (for pilling analysis following some specific norms) or of an abradent fabric, undergo preset rubbing cycles at a given pressure, making the well-known Lissajous figure.

The wearing test ends when the operator notices the breakage of the first two yarns of the fabric structure. The pilling test ends with the analysis of the pilling effect on the sample surface after a preset number of turns. The evaluation of the results is made by comparison with the reference standard photographs.

## Technical features

- Touch screen keyboard for a simple and intuitive use of the instrument.
- Independent digital counting of each testing head and total rotation counter.
- Easy access to the tested specimens (no need to lift or remove the moving plate) and quick replacement of the abradent surface.
- Emergency key and safety device to stop the motor and power supply in case of problems.
- Sound signal at test ending.
- Kit of 9 sample holders and pressing weights of 9 kPa or 12 kPa.
- Supplied with wrench for fixing the sample holder on the front panel of the Instrument and fixing the sample on the holder itself.
- All consumables (abrasive cloth, felt, polyurethane foam) are top quality provided with traceable certificate.
- Power supply: 220V- 50Hz /110V-60Hz
- Consumption: 100VA
- Dimensions: 85 X 66 X 34 cm.
- Instrument net weight:100 kg.

## Accessories

When ordering the Martindale, the following accessories are supplied with the instrument:

Code	Description	Included
314 12	Set of standard abrading fabric (160 cm x 100 cm) for abrasion.	X
314 10	Standard backing foam, polyurethane sheets (4 pieces, 150 cm x 50 cm) for abrasion and pilling.	X
314 8	Standard backing felt, diameter 140 mm (20 pcs.) for abrasion and pilling.	X
	Kit of 9 standard sample holders (38 mm diameter) complete with pressing weights of 9 kPa and 12 kPa.	X
	Auxiliary accessory for fitting the abradent fabric.	X

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**Optional accessories** necessary for pilling test according to ISO 12945, SN 19852. Not included. To be requested in case of order:

Six 90 mm top sample holders and six 260 g weights according to ISO 12945, SN 198525 and SN 198529. code 2561B300

Standard felt, diameter 90 mm (20 pieces) for pilling tests according to ISO 12945, SN 198525 and SN 198529. code 314 20

### Other optional accessories

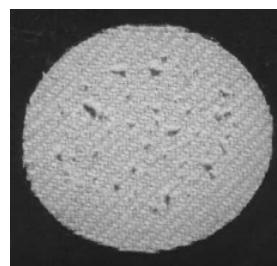
- Set of standard photographs SM50 for pilling tests on orthogonal fabrics (3x4cm pc.). Code 314 14

- Set of standard photographs SM54 for pilling tests on knitted fabrics (3x4cm pc). Code 314 16

- Set of standard photographs EMPA 991 for pilling tests on orthogonal fabrics (3x4cm pc). Code 314 18

- Set of standard photographs EMPA 992 for pilling tests on knitted fabrics (3x4cm pc). Code 314 24

- For ABRASION tests according to BS 5690 and M&S standards:  
Set of 24 standard backing non-woven felt discs 140mm diameter, Code 314 26



- For ABRASION tests according to EN ISO 388 (protective clothing):  
set of abrasive paper Code 2560 326  
bi-adhesive tape Code 2560 328

- Pointed steel pivot for Lissajous figure. Code 2560 222.



- Sample cutter, 38 mm diameter, to prepare samples for abrasion and pilling tests. Code 2560 322.

- Sample cutter, 140 mm diameter, to prepare samples for pilling tests, and standard fabric for abrasion tests. Code 2560 320



- Sample cutter, 90 mm diameter, to prepare samples for pilling tests, and standard fabric for abrasion tests. Code 2560 324

- Calibration certificate. Code 2560 CC1.

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