

Next Generation Martindale Tester II™ (A PARAMOUNT-NITRA EQUIPMENT)

INTRODUCTION

Next Generation Martindale Tester II™ provides a means of determination of the abrasion as well as pilling resistance of all knitted, woven, non-woven and coated fabrics.

EQUIPMENT

Paramount Next Generation Martindale Tester II™ is a latest equipment with six stations to accommodate up to 6 samples together. It is designed to subject specimens under a controlled amount of rubbing at comparatively low pressures and in continuously changing directions to ensure that all surface fibers on the specimens are flexed in order to access the resistance of fabrics to abrasion. Under this test, the circular specimen of fabric are rubbed against a standard Abradant, under a known pressure and the resistance to abrasion is determined by the number of rubs to break a yarn or by the loss in the mass of the specimens.

Each sample is mounted separately in the specially designed Specimen Holders. The specimens lighter than 500 g/m² are backed with standard Polyurethane foam. The Abradant material (Standard Felt & Abradant Fabric), against which the specimen is rubbed, is clamped tightly over the abrading Platform to prevent possible metal-to-metal contact.

The Path traced by the test specimen over the Abradant is known as Lissajous figure. It changes from a circle to gradually narrowing ellipses, until it becomes a straight line, from which progressively widening ellipses develop, in a diagonally opposite direction, before the pattern is repeated. This continuously changing movement insures that the surface fibers of the specimens are flexed in every direction. The equipment is also suitable for performing Pilling test, for which only stroke of top moving plate has to reduce from 60.5mm to 24mm. The test takes about 40 minutes, the degree of pilling is assessed against standard photographs.

SALIENT FEATURES

- Specially designed equipment to determine abrasion & pilling resistance to any type of fabrics.
- Ergonomically design with modern aesthetics.
- Latest model with six stations for testing six samples together.
- Specially designed feather touch control panel for individual station display.
- Emergency stop switch to stop testing, in urgent, without hindering setting.
- Three types of load 3Kpa, 9Kpa, 12Kpa are provided to test samples BS, ISO & ASTM standards.
- All controls & components strictly adhere to C E specifications for safety.
- Supplied with all accessories including two sample cutters ϕ 140mm & 38mm with spare blades & cutting materials to make sample conveniently & one stainless steel pen to draw lissajous figure.
- Supplied with inspection & calibration certificates.

detectMASTER™ (Handy) is supplied complete with below accessories.

Main unit	: 01 No.
Top Moving Plate	: 01 No.
Sample Cutter (Ø140mm)	: 01 No.
Sample Cutter (Ø38mm)	: 01 No.
Abrading Platform Clamping Rings	: 06 Nos.
Abrading Platform Clamping Nuts	: 24 Nos.
Numbered Specimen Holders	: 06 Nos.
Weights (12 kPa) (for Upholstery)	: 06 Nos.
Weights (9 kPa) (for Apparel Testing)	: 06 Nos.
Loading Pins	: 06 Nos.
S. Steel Balls	: 03 Nos.



Pen to Make Lissajous Figure Abrasion & Pilling	: 01 Nos.
Uncreasing Load (Big)	: 01 No.
Uncreasing Load (Small)	: 01 No.
Handle (For Uncreasing Load-Big & Small)	: 01 Nos.
Standard Abrading Felt (ϕ 140 mm Cuttings)	: 06 No.
Standard Polyurethane Foam (ϕ 38mm Cuttings)	: 06 Nos.
Standard Abradant Fabrics (ϕ 140mm Cuttings)	: 06 Nos.
Wooden Accessories Box-1 & 2 (All Accessories Packed in it)	: 02 Nos.
Cutting Pads for Round Cutter	: 04 Nos.
Allen Key -4 mm (To be used to change abrasion to pilling)	: 01 No.
Detailed User's Manual	: 01 No.
Calibration Certificate (Traceable to NPL)	: 01 No.
Inspection and Conformance Certificate	: 01 No.

TECHNICAL DETAILS

LAB ENVIRONMENT

Temperature	: 20°C + 2°C
Humidity	: 65% + 5% Rh.

SCOPE	ABRASION	PILLING
	Flat Woven, Knitted and certain non-woven fabrics	Woven and Knitted fabrics (Staple Spun Yarns)
No. of specimens	Up to 6	Up to 6
	ABRASION	PILLING
Working pressure on test specimen	9 kPa (apparel) 12kPa (upholstery)	3 kPa (ASTM D 4970) 9 kPa (BS 5690) 12 kPa (BS 5690)
Rotational speed of outer pegs	47.5 ± 2.5 r/min.	47.5 ± 2.5 r/min.
Total Stroke of outer and inner pegs	60.5 ± 0.5 mm	24.0 ± 0.5 mm
Circumferential parallelism of sample holders to abrading tables	+ 0.05 mm	+ 0.05 mm

Power Supply	: 230 V AC, Single Phase
Power Consumption	: 150 Watt
Frequency	: 50 Hz.



Overall Dimensions of the Instrument	: 863 (L) x 673 (W) x 317 (H) mm 34 ½” (L) x 26 ½” (W) x 12.5” (H) Inch.
Net Weight of the Instrument	: 75 Kg. (165 lbs)
Overall Dimensions of Accessories Box I & II	: 482 (L) x 330 (W) x 203 (H) mm (Each Unit) 19” (W) x 13” (D) x 8” (H) Inch
Net Weight of the Accessories Box I	: 16.35 Kg. (36 lbs)
Net Weight of the Accessories Box II	: 9.35 Kg. (20.5 lbs)

RELATED STANDARDS

Instrument meets the specification of Bs 3424/5690, ISO 5470, ASTM 4966/4970-99, DIN 53863/53865, BSEN 388/530, IS 12673, and JIS L 1096 Standards.



AATCC
CORPORATE MEMBER



Patron Member



Member Bureau of Indian Standards