

**Martindale Abrasion and Pilling Testing Machine Advanced, 9 Station,
MSYIG16SWISS**



Martindale Abrasion and Pilling Tester

Model: MSYIG16SWISS

Introduction

The **MSYIG16SWISS Martindale Abrasion & Pilling Tester** is designed for testing the wear-resistance and grinding properties of woven fabrics, wool-blend fabrics, leather, knitted goods, and non-woven fabrics under controlled pressure. It is used to assess the durability of materials by simulating abrasive wear.

Application Scope

This tester is suitable for evaluating the wear-resistance and pilling of a variety of materials such as:

- Woven fabrics
- Wool-blend fabrics
- Leather

- Knitted fabrics
- Non-woven fabrics

Standards

The machine meets the requirements of various international standards, including:

- ISO 5470, IWS TM112/196
- DIN 53863/53865
- BS 3424/5690
- BS EN 388/530
- JIS L 1096
- ASTM D 4966/4970
- ISO 17079-2, ISO 12947
- ISO 17704, ISO 20344
- ISO 17076-2, ISO 12945-2
- SATRA TM31

Key Features

1. **Durable Construction:** Load pieces and key components made from high-quality stainless steel for long-lasting durability.
2. **Advanced Motor:** Equipped with a converter motor for smooth operation.
3. **Imported Belt:** Uses high-quality imported belts for precise operation.
4. **Microcontroller:** Powered by a USA ARM microcontroller for reliable performance.
5. **Touch Screen:** Features a 7-inch color touch screen for ease of use.
6. **Independent Station Control:** Allows for separate control of each testing station.
7. **Quiet Operation:** The machine operates quietly during testing.
8. **Repeatable Trajectory:** Features two Lissajous trajectories for high repeatability.
9. **Data Restoration:** Data can be restored after power failure.
10. **Aluminum Abrasion Table:** The abrasion table is constructed from lightweight aluminum for better performance.

Technical Parameters

- **Work-Station Numbers:** 9
- **Draw Trajectory:** Two Lissajous and Linear
- **Counter Display:** 0–999,999 (automatic stop when preset count is reached)
- **Speed:** 47.5 ± 2.5 rpm
- **Abrasion Table Diameter:** ≈ 120 mm
- **Abrasion Test:**
 - **Specimen Holder Weight:** $198 \text{ g} \pm 2 \text{ g}$
 - **Loading Weight:** $395 \text{ g} \pm 7 \text{ g}$ (Equivalent to 9 kPa)
 - **Alternate Loading Weight:** $595 \text{ g} \pm 7 \text{ g}$ (Equivalent to 12 kPa)
- **Pilling Test:**
 - **Specimen Holder Weight:** $155 \text{ g} \pm 1 \text{ g}$
 - **Loading Piece Weight:** $260 \text{ g} \pm 1 \text{ g}$
- **Weight of Load Hammer:** 2.5 ± 0.5 kg
- **Dimensions:** 850 mm × 630 mm × 430 mm
- **Weight:** 92 kg
- **Power Supply:** AC 110/220V $\pm 10\%$, 50/60 Hz

Standard Configuration

No.	Item	Quantity	Remark
1	Abrasion Tester	1	Main Body
2	Pin Shaft	9	
3	Hammer	1	
4	Lissajous Trace Pen	1	
5	Weights	18	
6	Specimen Clamps	18	$\varnothing 90$ mm each (9 pcs)
7	Abrasion Table	9	
8	Specimen Fix Ring	9	
9	Rubber Rings	18	For $\varnothing 90$ mm specimen
10	Load Disc	9	
11	Accessories Case	2	Aluminum-Alloy Case

Optional Purchase Items

1. **SDC Felt Disc (140mm Non-Woven):** 1 Pack (24 pcs)
2. **SDC Felt Disc (140mm Woven):** 1 Pack (24 pcs)
3. **SDC Felt Disc (90mm Non-Woven):** 1 Pack (24 pcs)

4. **SM25 Wool Aradant Abraden:** 1 Pack (160 cm wide, length 5)
5. **Polyurethane Foam Sheet:** 1 Pack (25 cm x 20 cm, 25 pcs)
6. **Sample Cutter:** 1 Set (?38 mm, ?140 mm)
7. **EMPA 991 Photographs (SWISSATEST):** 1 Set (12 pcs)
8. **EMPA 990 Photographs (SWISSATEST):** 1 Set (24 pcs)