

TESTING INSTRUMENTS FOR
A MEASURABLE DIFFERENCE...

IDM
instruments

GELBO FLEX LINT TESTER WITH PARTICLE COUNTER

MODEL: IDM-G0005-M1



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INTRODUCTION

The Gelbo Flex Lint Tester is used to measure the number of loose fibres (lint) shed from non-woven materials in a 30 second time period of flexing. It is important that non-woven textile materials must have a low tendency to lint.

The IDM Gelbo Flex Lint Tester is a fast and accurate instrument for determining the linting of non-woven materials. This test can also be applied to other materials like tissues. The sample is subjected to repetitive twisting and compression cycles, air is withdrawn from the testing chamber and particles in the air stream are counted and classified with the laser particle counter.

It consists of two 82.8mm diameter mandrels, one fixed and the other attached to a twisting arm to perform a flexing action. The moveable mandrel twists and compresses the sample at 60 cycles/min with 180° rotation over 120 mm of stroke.

Flexing Chamber measuring 300 x 300 x 300 mm which has removable panels for easy cleaning with built in Isokinetic intake probe (air collector), and HEPA filter to reduce the incoming dust & lint.

Particle Counter counts and sorts the particles in real time with relevance to sizing from 0.3 to 25.0µm or 0.5 to 25.0µm (see optional items for other models). The counter will simultaneously monitor up to 6 environmental sensors such as temperature, humidity, air velocity or differential pressure. These are recorded whilst measuring particles. It has a flow rate of 1CFM (28.3 LPM) and is able to store up to 3,000 data sets including particle and environmental data, plus location time etc. It also prints reports on a built-in thermal printer.

The instrument comes along with a particle counter with an option to choose from:

- 3100+ Measuring Channels: 0.3, 0.5, 1.0, 5.0, 10.0, 25.0µm
- 5100+ Measuring Channels: 0.5, 1.0, 3.0, 5.0, 10.0, 25.0µm

(See options for other models)

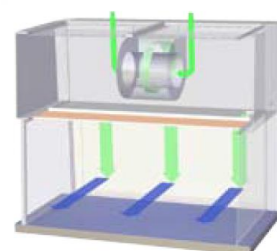
Laminar Flow Cabinet - optional

It is highly recommended to use a Laminar Flow Cabinet especially when testing areas that do not have clean environment.

- The laminar flow clean benches provide ISO Class 3 air cleanliness within the work zone as per ISO 14644.1, significantly cleaner than the usual Class 5 classification.
- Stable & self-compensating flow
- ULPA filters (per IEST-RP-CC-001.3) tested to a typical efficiency of >99.999% for 0.1 to 0.3 micron particles

Airflow diagram

- Air is forced evenly across the ULPA/H14 filter(s); the result is a stream of clean laminar air within the workzone inside the cabinet; this dilutes and flushes all airborne contaminants from the interior.
- Filtering won't let particles greater than 0.3 µm pass through.

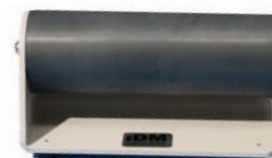


FEATURES

- **Dry-state lint testing**
- **1 x Particle Counter**
- **2 x Sample Mounting Fixture**
- **1 x Sample Roller**
- **1 x Stainless Steel cutting template: 285 mm x 220 mm**
- **1 x Isokinetic Probe (Air Collector)**
- **Sensor Monitor**
- **Data Storage**
- **Reporting Software**



Cutting Template



Sample Roller

SOFTWARE & REPORTING

The Gelbo Flex Lint Tester uses the LMS Express 7 allows which allows users to manually download data directly from Lighthouse instruments. Manual data can be downloaded from the Particle Counters via COM ports and Network Ports.

Data tables allows users to view data points in detail. They can be printed and exported to Microsoft Excel file (*.xls) or Comma Separated Values file (*.csv).

- Manual data download from Lighthouse Portable Particle Counters via COM ports and Network Ports
- Exports data tables and reports to excel (*.xls) or (*.csv).
- Exports graphs to (*.bmp), (*.jpeg) and more
- Easy unit conversion
- Localized dates and numbers
- Includes database with archiving feature

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Test Result Table Sample

APPLICATIONS

- Nonwoven Materials
- Woven Fabrics
- Textiles
- Surgical Clothing
- PPE suits & Face Masks

STANDARDS

- ISO 9073-10
- Inda IST 160.1
- DIN EN 13795-2
- YY/T 0506.4

SPECIFICATIONS

Gelbo Flex Lint tester (Main Unit)

Mandrels	2 x 82.8mm dia
Cycles/Min	60
Rotation	180°
Stroke	120 mm
Flexing Chamber	300 mm x 300 mm x 300 mm
Power	220/240 VAC @ 50 HZ or 110 VAC @ 60 HZ (please specify when ordering)

Particle Counter

Measuring Channels (standard)	3100+ Measuring Channels: 0.3, 0.5, 1.0, 5.0, 10.0, 25.0µm OR 5100+ Measuring Channels: 0.5, 1.0, 3.0, 5.0, 10.0, 25.0µm
Storage	Up to 3,000 data sets
Flow Rate	1CFM (28.3LPM)
Power	220/240 VAC @ 50 HZ or 110 VAC @ 60 HZ (please specify when ordering)

OPTIONAL ITEMS

- **IDM-G0005-OP1** - 3100+ (C8) Measuring Channels: 0.3, 0.5, 0.7, 1.0, 3.0, 5.0, 10.0, 25.0µm
- **IDM-G0005-OP2** - 5100+ (C8) Measuring Channels: 0.5, 1.0, 2.0, 3.0, 5.0, 7.0, 10.0, 25.0µm
- **IDM-G0005-OP3** - Measuring Channels: 5, 10, 20, 30, 50, 100µm
- **IDM-G0005-OP4** - Laminar Flow cabinet (Horizontal/ Glass) (LHG-5AG-F8(9) – refer below
- **IDM-G0005-OP5** - Laminar Flow Cabinet (Horizontal/ Stainless Steel) (LHG-5AS-F8(9) – refer below
- **Contact Us for **Custom Options**

Guide to choosing Laminar Flow Cabinets:

1	2	3	4	5	6	7	8
Product Line	Flow	Side Wall	Width	Internal height	Control	Window	Electrical
Laminar Flow (L)	Horizontal (H)	Glass (G)	5 Feet (5)	2 feet (A)	Setinel Gold (G)	Fixed (F)	230 VAC, 50/60 Hz (8)
	Vertical (V)	Stainless Steel (S)	6 Feet (6)	2.5 feet (B)			115 VAC, 50/60 Hz (9)
			8 feet (8)	3 feet			



DIMENSIONS

Gelbo Flex Tester (Main unit)

Instrument:

- H: 350 mm
- W: 972 mm
- D: 352 mm
- Weight: 44 kg

Packaged:

- H: 580 mm
- W: 580 mm
- D: 830 mm
- Weight: 83 kg

Particle Counter

Instrument:

- H: 258 mm
- W: 203 mm
- D: 253 mm
- Weight: 6 kg

Packaged:

- H: 400 mm
- W: 400 mm
- D: 400 mm
- Weight: 8.5 kg

WORKING ENVIRONMENT

- Temperature: -10°C to 40°C
- Humidity: 25% to 85%

WARRANTY AND CALIBRATION SERVICES

- **1 year Warranty**
- Our **Preventive Maintenance and Calibration (PM&C) program** has been designed to make the maintenance and calibration of your valuable testing equipment more cost effective by preventing breakdowns and downtime by regular calibration, service and replacement of defective parts. Talk to us about this today.

RELATED ITEMS

1. Use the Single column UTM which is highly configurable to perform tension and compression testing up to 150kg (1.5t).¹



IDM-U0001-M1

2. Use the Thickness Gauge for High Loft Products has been designed to measure the thickness of high loft nonwoven material, by means of a digital readout.



IDM-T0022-M1