Rel. En 2025-01

AUTOMATIC ELMENDORF - DIGITAL TEAR TESTER

ELMATIC

MESDAN LAB

ELMATIC Code 275D

Automatic Elmendorf - digital tear tester

Main features

- Automatic digital tear tester, suitable for testing specimens within a very wide tear range, like textiles, paper, leather, plastic, non-woven and other materials
- Measuring range up to 30.000 cN
- Automatic test execution
- Automatic pendulum restoring to the starting position
- Total safety protective cover with auto-locking system
- LCD display
- PC & PRINTER connection
- High accuracy and repeatability of results
- High efficiency
- Officially approved by Marks & Spencer

Automatism

Test execution

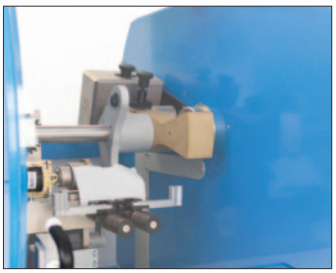
After sample insertion (1), press START to perform testing; the test sequence (from 2 to 7) will be automatically executed in total safety, according to the following steps:

1. manual insertion of sample
2. pre-cut of specimen
3. pendulum release
4. specimen tear
5. measurement of tear force
6. pendulum braking
7. pendulum raising to its starting position

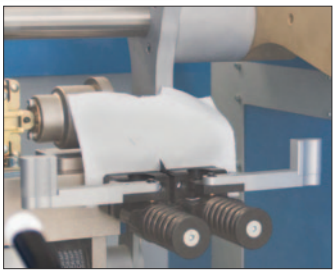
This automatism ensures high testing efficiency, high accuracy, and repeatability of results.

Pendulum restoring

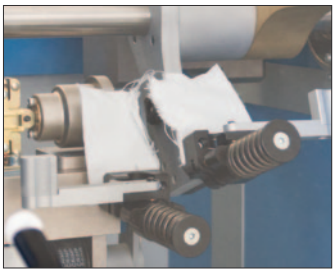
- Automatic detection of pendulum's weight
- Automatic restoring of the starting position



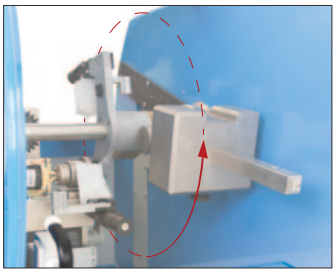
1. Manual insertion of sample



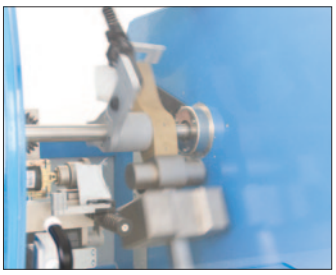
2. Specimen pre-cut



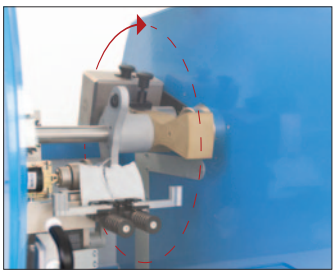
4. Specimen tear



5. Measurement of tear force



6. Pendulum braking



7. Pendulum raising to its starting position

Safety

ELMATIC is designed in accordance with CE safety regulation.

Safety cover with auto-locking system

Thanks to its safety cover, the access of the operator to the testing area is possible only if the instrument is in safe conditions; in fact, both specimen cut and pendulum swing are enabled only when the safety cover is perfectly closed; the auto-locking system allows its opening only if the instrument is not working.

Pendulum front loading

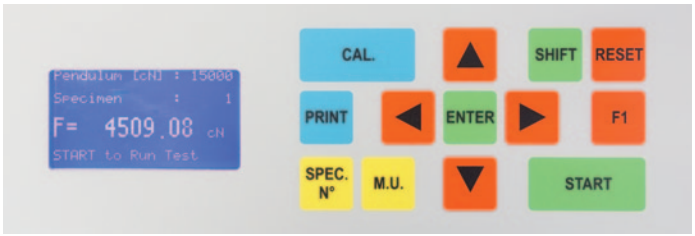
By pressing the “F1” key, pendulum automatically moves to the front loading position, so that the operator can open the cover and easily place the weights in the correct position. As soon as the cover is closed, by pressing the “START” key, the pendulum is released and then automatically raised to the starting position again. Warning message in case of incorrect pendulum positioning.

Setting and results

The instrument is designed for use even in the production area.
The user-friendly design enables intuitive selection of functions and easy setting of the test parameters, such as:

- selection of the testing standard from a pre-loaded list, or input of different test parameters and specific tolerance range;
- input of test references, such as: company name, measuring unit, selected weight, number of sample’s layers, direction (weft / warp, transversal / longitudinal).

The printout will show additional information, such as the “out-of-range” results.



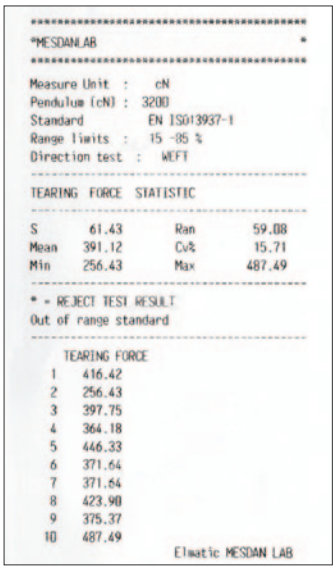
Connections

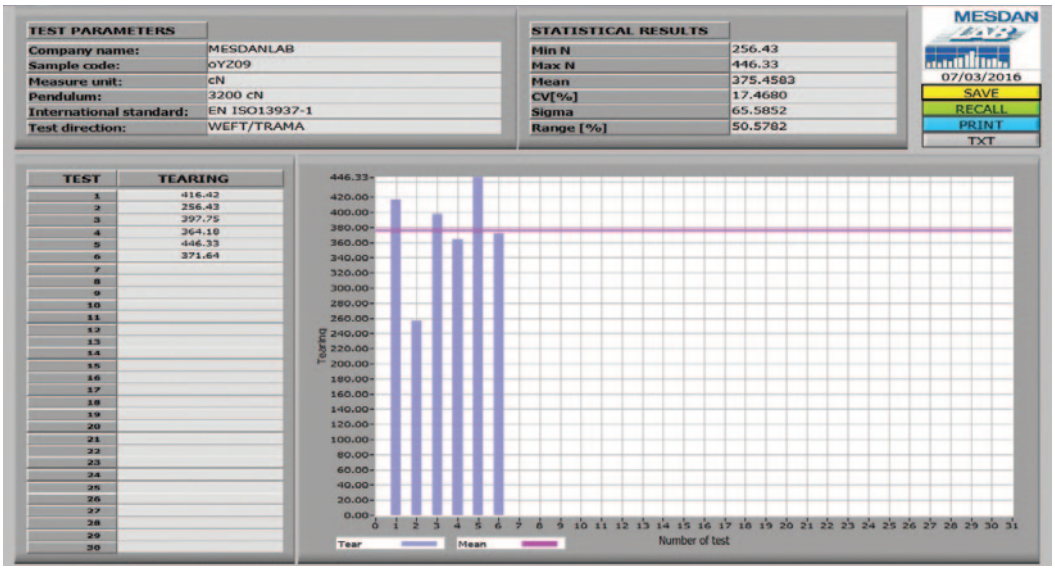
Connection to printer

To print test results and statistical data, a mini thermal printer is available as optional accessory.

Connection to PC

ELMATIC software (already included) enables the data transfer to PC for further graphic and statistical elaboration, as well as to print and save test reports.





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TECHNICAL DATA

- Measuring pendulum range: 1.600 - 3.200 - 6.400 - 15.000 - 30.000 cN
- Unit of measurement: cN - N - daN - mN - g - kg - lbs - oz
- Clamps opening: max 4,5 mm
- Cut length: 20 mm (±1)
- Tolerance range: 20-80% of each full scale, settable range or full scale
- Angular resolution: digital optical encoder with resolution 0.09 degrees
- Combinable pendulum weights: 2 weights
- Number of specimen's layers clamped together for testing (only for paper)
- Display: 128x64 LCD display
- Blade: tungsten steel
- Data port: 2 RS232 ports for PC and printer connection
- Language: Italian-English
- Statistics: force min. max. mean, CV%, St. Deviation, Range%

REFERENCE STANDARDS

Textile - according to: UNI EN ISO 13937-1, UNI EN ISO 4674-2 (coated fabrics), ASTM D1424, ASTM D751 (coated fabrics), UNI EN ISO 1974, M&S P29

Plastic - according to: UNI EN ISO 6383-2-method 360A

Paper - according to: TAPPI T414, UNI EN ISO 1974

Other reference standards - GB 3917.1, FZ/T 60006/75001, GB/T 455, JIS L1096/K7128.2

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STANDARD ACCESSORIES

Calibration kit complete with 4 check weights	Code	275D.400
Weights kit complete with 2 combinable weights in order to obtain as measuring range 1.600-3.200-6.400-15.000-30.000 cN	Code	275D.300
Specimen preparation kit complete with one template and one cork base	Code	275D.310
One spare blade	Code	275D.52
Cutting arm for 20mm cut (for UNI EN ISO 13937-1)	Code	275D.414

Elmatic CD **Software** + connecting cable + USB flash memory

OPTIONAL ACCESSORIES

Cutting arm for 15 mm cut (for M&S test)	Code	275D.416
Set of 5 spare blades	Code	275D.402
Mini thermal printer	Code	275D.136
Calibration report	Code	275D.CC1

DIMENSIONS / POWER SUPPLY

Weight: 66 kg
Dimensions: (L) 510 x (W) 700 x (H) 630 mm
Power supply: 115 up to 230 Vac, 50/60 Hz, single-phase

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