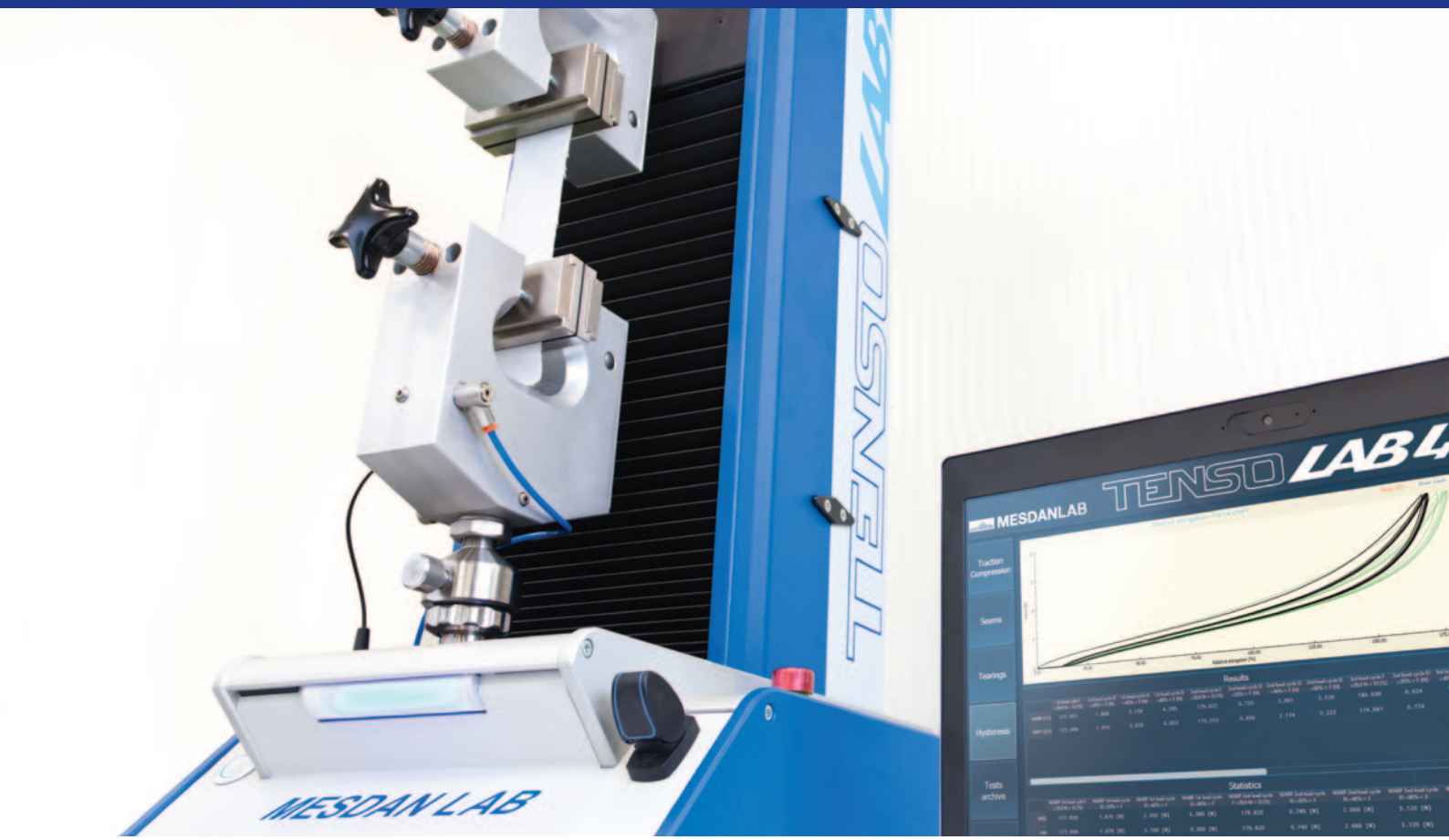
SEMI-AUTOMATIC STRENGTH TESTER

TENSO-LAB 4



Tenso-Lab 4 is the latest generation of the well-known Tenso-Lab semi-automatic tensile tester. The new model is distinguished by:

- **New hardware**: high accuracy and robustness (can be used to test fibres, single yarns, hanks/LEA, fabrics and garment accessories), direct-drive ball bearing screw, low speed operation available, extended capacity to 5000N, ...
- **New components**: newly designed clamps with improved performances, additional load cells with higher accuracy level, quick exchange of load cells and clamps/jaws.
- **New open software**: more intuitive and easy to operate, SQL database and standard Ethernet machine connection to data export, no restriction on testing routines (can be created by the enduser, no special skills needed).
- Standard compliance, conforms to major testing methods (ISO, ASTM, JIS, BS, WOOLMARK, NEXT, M&S, etc.).
- Made in Italy and designed to meet the highest testing standards.

MESDAN LAB

TENSO-LAB 4 CODE 2512E, 2512F

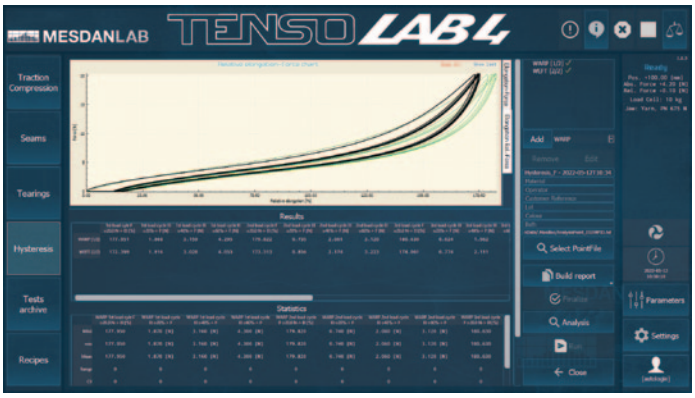
Available models:

- **Tenso-Lab 4 Plus**, code **2512E**, with integrated PC
- **Tenso-Lab 4**, code **2512F**, with external PC (optional)

Main Features:

- Built according to the CRE (Constant Rate of Extension) testing principle
- Belt free, direct-drive ball bearing screw
- Automatic pretension and automatic load cell and clamp recognition
- Top quality load cells (manufactured by HBM - Germany), accuracy class: ± 0,02%
- Integrated sensor into the motor ensuring accurate clamp positioning (less than 0,02 mm)
- Possibility to perform tests at extremely low speed
- Automatic reset of force values when load cell/clamps are changed
- High resolution of acquired data
- High return speed (1800 mm/min)
- Quick load cell exchange (only 10 sec. compared to 2 min. of previous models)
- Advanced alarm system to prevent accidents; safety clamp movement
- Modern Software, flexible and easy to use, including a series of pre-set standard testing routines. New testing routines can be created by the enduser; no special skills are needed.
- Hysteresis

Mesdan tensile strength tester series is officially approved by Marks & Spencer



Load cell capacity	Load cell accuracy	Resolution	Code
10 N	0,2 cN	0.0001 cN	2512E.579
20 N	0,4 cN	0.0002 cN	2512E.580
100 N	2 cN	0.001 cN	2512E.581
500 N	10 cN	0.005 cN	2512E.583
1000 N	20 cN	0.01 cN	2512E.584
5000 N	100 cN	0.05 cN	2512E.585

TECHNICAL CHARACTERISTICS

Single column tensile strength tester, CRE testing principle	
Load Capacity	5000 N
Speed range	0.001 to 1800 mm/min
Crosshead travel	900 mm
Position resolution	0.0001 mm
Force measure accuracy	± 0.03%
Force maximum resolution (load cell of 10 N)	0.0001 cN
Force minimum resolution (load cell of 5000 N)	0.05 cN
Operating temperature	from 0°C to +50°C
Frame stiffness	5000 N/mm
Operating humidity	+10 to +90% non-condensing
Machine Configuration	Table top, base cabinet available

Speed accuracy:	± 0.01% under stable conditions
Crosshead guidance	double linear slide with four skates integrated within the column
Available load cells (Value referred to the effective capacity)	10 N, 20 N, 100 N, 500 N, 1000 N, 5000 N
HBM 6 wire load cell system with high sensitivity (2mV/V)	accuracy class ± 0,02% (5000 division)
Max speed at full load	1000 mm/min
Max returning speed	1800 mm/min

Protection against force overload

Full machine management via dedicated controller

User-friendly interface for Windows OS

Available software languages	Italian, English, Spanish, Chinese

Calibration and verification of the force measuring system according to ISO 7500-1. Meets 0,5 accuracy class of ISO 7500-1.

OPTIONAL ACCESSORIES

Wide range of interchangeable load cells (see above table)

Vast range of interchangeable pneumatic and mechanical clamps (for hanks / LEA, fabrics) and jaws* for fabrics (rubber or metal flat), for seam slippage/Grab (various dimensions), Contact Line for stretch/recovery, for single fibre (pneumatic clamps and pretensioning clips), for fibre bundle ("Pressley" clamps, with holder and torque vice), etc.

Foot switch (necessary for fabric pneumatic clamps)	Code	2512E.618
Silent compressor	Code	3390
ISO 9001 Calibration Report available on demand	Code	2510.CC1

ISO 17025 Calibration Certificate (Accredia - ILAC) available on demand

**Jaws must be always added; not included in the fabric clamps assembly*

Photographs and descriptions of the present leaflet have to be considered as purely indicative and not binding

OPTIONAL ACCESSORIES

PC (for 2512F)	Code	237.92
Monitor	Code	250.300
Keyboard & mouse	Code	250.350
Printer	Code	250.4
UPS	Code	2341.900

DIMENSIONS / POWER SUPPLY

Weight: 82 kg
Dimensions: (L) 370 x (W) 480 x (H) 1415 mm
Power supply: 115-240 Vac, 50/60 Hz, single-phase, 0,7 kW

MESDAN

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DNV ISO 9001 · ISO 14001