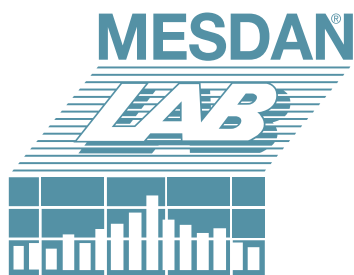


QUALITY CONTROL TESTING EQUIPMENT FOR TEXTILE



Mesdan

CERTIFICATION DNV
QUALITY MANAGEMENT
ISO 9001:2008
ENVIRONMENTAL MANAGEMENT
ISO 14001:2004



Mesdan-Lab is a division of Mesdan S.p.A, renowned designer of yarn joining solutions.

Mesdan entered the textile laboratory business in the early nineties to meet the growing demand in the market for quality control and assurance with the acquisition of OMAC SNC, a company located in Biella (Northern Italy) specialised in the production of testing equipment. Since then MESDAN have designed a complete range of equipment for the analysis of textile materials (fibres, yarns, traditional and technical fabrics), nonwoven, leather, etc. in compliance with International Standards.

Mesdan-Lab instruments stand out for their industrial design and sound quality that guarantee accurate performances in the long run. The Mesdan-Lab line is produced with particular attention to the environment, in conformity with the safety standards integrating operator-friendly solutions.

In 2004 Mesdan obtained from Det Norske Veritas (DNV) the certification of Its Quality and Environmental Management system in conformity to UNI EN ISO 9001:2000 and UNI EN ISO 14001:1996 with validity for design, manufacture and calibration of textile laboratory instruments.

Since then Mesdan have successfully undergone through the periodical audits of the Certifying Body and complete re-assessment of certification of their Quality Systems.

Legend

This catalogue is composed of 5 thematic sections illustrating the MESDAN-LAB testing equipment range according to the material to be tested. More detailed information are available in dedicated brochures which can be downloaded from our website or obtained from our sales department.

Pictures and information about the instruments are merely indicative. Mesdan reserves the right for modifications at any time.

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Pressley

231A



An equipment to determine the resistance of cotton fibres. It is fitted with clamps with 0" and 1/8" distance. The use of Pressley requires a torsion balance with capacity up to 5 mg and resolution 0.01 mg (**code 259D**).

Accessories: calibration cottons (**code 199.22**).

Built in accordance with:
ISO 3060, ASTM D1445, BS 5116, ASTM D2524

Weight: 3.2 kg
Dimensions: (L)330x(W)100x(H)125 mm.

Stelolab

231B



An instrument to check the holding strength and elongation at breakage of fibre tufts.

Suitable for cotton, wool and synthetic fibres. Holding strength reading on a graduated scale from 0 to 7 Kpa (step 0.1 Kpa), elongation reading on a graduated scale from 0% to 50%. Supplied complete with a pair of 0" clamps and a 1/8" spacer, fibre pretension tweezer, clamps holder, tweezers holder and relating tweezers.

For the use of STELOLAB a torsion balance with a capacity of 5 mg and an accuracy of 0.01 mg is required (**Code 259D**).

Accessories: calibration cottons (**code 199.22**).

Built in accordance with:
cotton version: ASTM D 1445, ISO 3060, BS 5116
wool version: ASTM D 2524, IWTO 32, 82

Weight: 10 kg
Dimensions: (L)310 x (W)160 x (H)390 mm



Torsion balance

259

For the weighing of small quantities of fibres or tufts.

Available with the following capacities:

From 0 to 5 mg, accuracy 0.01 mg	Code 259D
From 0 to 50 mg, accuracy 0.10 mg	Code 259G
From 0 to 100 mg, accuracy 0.20 mg	Code 259H
From 0 to 250 mg, accuracy 0.50 mg	Code 259L
From 0 to 500 mg, accuracy 1 mg	Code 259A
From 0 to 1000 mg, accuracy 2 mg	Code 259F

Weight: 2,5 kg
Dimensions: (L)320x(W)240x(H)410 mm.

Fiber Tensolab

331A

Single fibre electronic strength tester suitable for natural and synthetic fibres.

Complete with load cell of 500g, accuracy class 0,5.

Traction speed range from 0 to 1000 mm/min.

150 mm stroke.

A "Kit Cotton Fibre Bundle", special clamps 0" and 1/8" for testing cotton fibres, Pressley method, load cell 20 N are available on demand.

RS232 port and software are included (PC is optional).

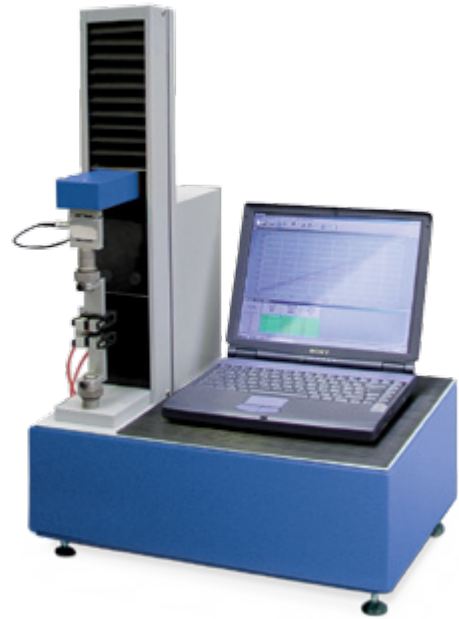
Built in accordance with:

ISO 5079, BS 3411

Power supply: 220V, 50/60 Hz

Weight: 18 Kg

Dimensions: (L) 650 x (W) 440 x (H) 400 mm



Double comb sorter

230A

For the production of staple diagrams for short spun fibres up to 100 mm (4") length.

Determination of fibre length or staple diagram is a decisive factor in determining the spinning quality of raw material and for the setting of spinning machinery.

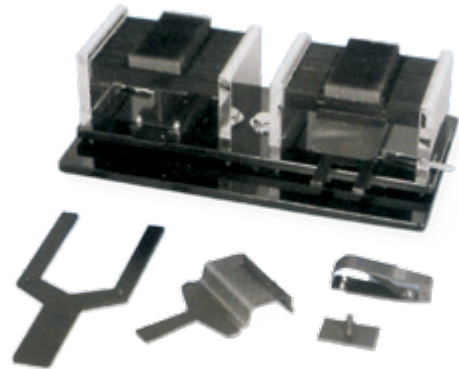
For long staple fibres, up to 250 mm (10") length: **code 230B.**

Built in accordance with:

ISO 920, ASTM D 1440/1575, IWTO 1-66

Weight: 4.5 kg

Dimensions: (L)250x(W)150x(H)140 mm.



Micronaire

199B

An instrument to determine the fineness of cotton fibres on 8 g samples. Reading scale from 2.5 to 7 micronaire index.

Supplied complete with an electric micro-pump to produce suctioned air. Equipped with mechanical calibration device.

Accessories: calibration cottons (see page 4).

Air-Flow

272B

An instrument to determine the fineness of woollen fibres on 12.5g samples. Reading scale from 18 to 42 microns. Supplied complete with an electric micro-pump to produce suctioned air. Both the Micronaire and the Air Flow require the use of a precision scale with an accuracy of 0.01 g (**code 165.708**).

Built in accordance with:

Micronaire: ASTM D 1448, ISO 2403, BS 3181

Air-Flow: ASTM D 1282, ISO 1136, IWTO 1-90 28-89

Weight: 12 kg

Dimensions: (L)310 x (W)300 x (H)330 mm.



Calibration cottons

Suitable for the calibration of cotton examination instruments, in accordance with USDA standards.

For calibration of fiber fineness:

American Upland Micronaire 5.5	Code 199.2
American Upland Micronaire 4.5	Code 199.4
American Upland Micronaire 3.5	Code 199.6
American Upland Micronaire 4	Code 199.8
American Upland Micronaire 2.6	Code 199.14
American Upland Micronaire 5.0	Code 199.18



For calibration of Micronaire, resistance, elongation and length

C39 American Upland: Micronaire 3,39, 25,1 g/tex, 7,1% elongation, 1,12 inch S.L. at 2,5%, 0,53 inch S.L. at 50%
Code 199.22

For calibration of resistance and elongation

L1 American Upland: 20.8 g/tex, 5.9% elongation **Code 199.28**

M1 American Upland: 30.8 g/tex, 6.4% elongation **Code 199.26**



Binocular Microscope 1000X 191H

Binocular model, suitable for fibre analysis.

The combination of eyepieces and lenses enables a magnification range from 40X to 1000X .

Equipped with micrometric stage carrier for object prospecting.

Power supply: 220 V, 50/60 Hz, single-phase.

Weight: 4 kg

Dimensions: (L)120x(W)200x(H)350 mm.

Microtome

256A

Hand operated model to produce fibre samples of predetermined length for microscopic analysis.

Built in accordance with: ISO 137, UNI 5423-64

Weight: 0.4 kg

Dimensions: (L)120x(W)50x(H)10 mm



Fibre Microscope kit

250.325

Complete kit of all accessories needed for the analysis of fibres length and section. It includes:

100 glasses and 150 glass covers

one oil package

six tools case (tweezers, scissors etc..)

needles

tool for preparation of section of fibres and yarns





High performance computerised system conceived for the analysis of fibres, yarns, non-wovens, spinnerets, etc. Equipment suitable to: perform in a fast and easy way the fineness analysis of single fibres; identify the different fibres contained in a blend and analyse the composition percentage; check the purchased material and identify the type of fibre; analyse the yarn structure and detect possible defects; measure the count of circular section yarns and filaments in Dtex orden; check and measure the quality and shape of Lycra or synthetic multifilament single threads; analyse the compactness of non-woven fabrics; analysis of yarn and fibre sections; measure section surfaces and perimeters; analyse mechanical parts (i.e. needle points, spinnerets, etc); process, store and print the produced measurements and the minimum, medium and maximum values, CV% and distribution graphs.

The system is composed by:

LEICA biological Microscope: magnification range on video from 252 to 1160x, with slide movement device with micrometric regulation, polarising light, for fibres and yarns analysis , etc.

PC complete with, LCD 17" monitor and photographic quality printer.

Professional Video-Camera with 1/2" CCD, 5 Mpixel, receiving images from microscope.

"Mesdan Video Analyser" Software for the image acquisition, the production of measurements and comments on the stored images and measurements directly on the live images, the statistic analysis of the acquired measurements.

Fibre microscope kit (code 250.325) for the microscopic analysis (fibres and yarns) and instruction of use.

Reference Standards: UNI 5423, AATCC 20 , ASTM 276-00, ASTM 2130-90, IWS TM 24, ASTM 276-00A, IWTO 8-97, ASTM D629-99, UNI 1130,UNI EN 12751, ISO 137

Power supply 110V-220V, 50-60 Hz

Weight: 50 Kg

Dimensions:(L)1600 x (W)700 x (H)700 mm

Optional:

63X LENS it enables 2620X on screen magnification.

Code 250 336

C-STEP CONNECTOR WITH 0.5X LENS allows you to halve the magnification on screen and double the sample field of vision.

Code 250 338

Set of 50 slides

Code 191 50

Set of 100 slide covers

Code 191 52

Immersion oil bottle

Code 191 54

Pack of paper for printer

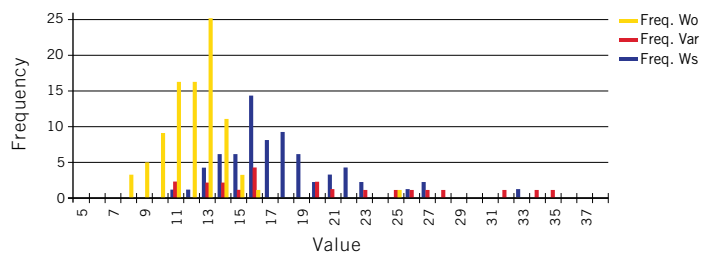
Code 250 18

Set of cartridges for printer

Code 250 322

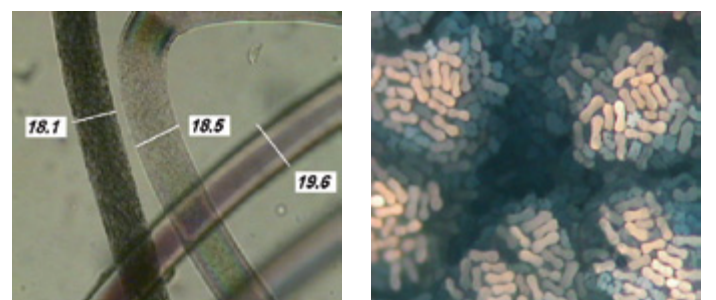
See pictures (next pages)

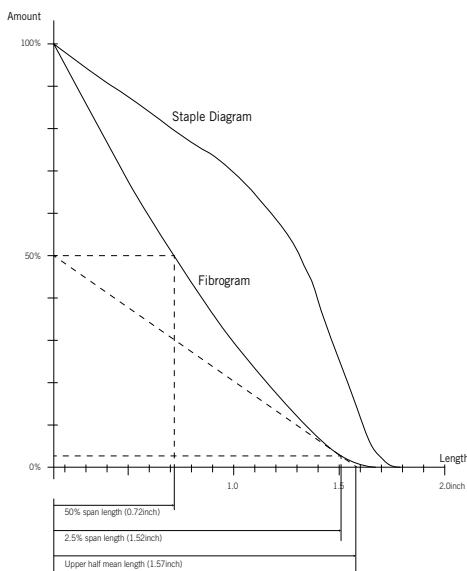
Code 250D



	N°	Mean	Mode	Min	Max	St.Dev.	CV%	Cf.(95%)	Compos.
Wo	76	18,43421	17	12	34	3,79945	34,54045	2,065363	26,09306
Varie	28	19,39286	16	11	35	7,458979	62,15816	4,220231	29,81195
Ws	96	12,14583	13	8	25	2,183699	18,19749	0,957029	44,09499

Example of micronaire analysis of a blend made of 3 different fibres





Automatically measuring the length of any type of fibre (animal, vegetal or synthetic). Specifically conceived for testing cashmere fibres or similar. Measuring range up to 80 mm.

Graphic data from each individual test

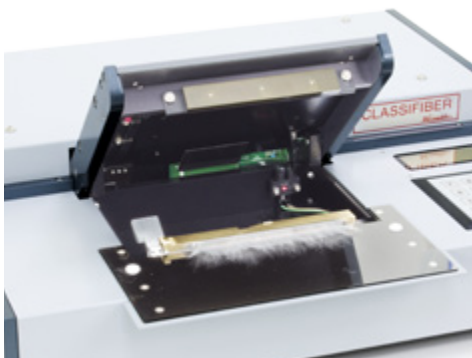
- Fibrogram
- Staple diagram
- Histogram

Statistics

- Mean
- Minimum (Min.)
- Maximum (Max.)
- Range (R)
- Standard deviation (s)
- 95 % confidence limits (Q965%)

Testing results

- Mean length (ML)
- Upper half mean length (UHR)
- Span length at 2,5% (SL 2,5%)
- Span length at 50% (SL 50%)
- Span length at 66% (SL 66%)
- Uniformity ratio (UR%)
- Uniformity index (UI%)
- Short fiber content (SFC%)



Measuring unit

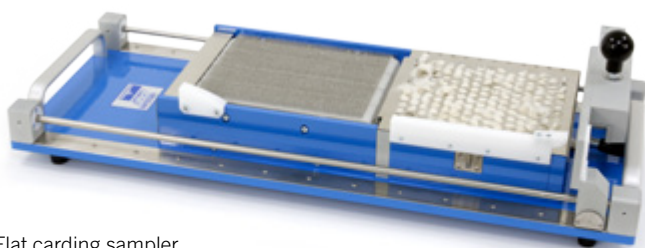
Classifiber is PC dependent. PC and dedicated software are supplied with the instrument. Complete of flat carding for sample preparation and accessories kit. Fibre length readable in mm and inches. Excellent correlation with manual testing but faster (average of 3 tests): only 20 seconds.

Built in accordance with: ASTM D1447, ISO EN 10141

Power supply: 85-265 Vac, 50/60 Hz, mono-phaser

Weight: 50kg

Dimensions: (L) 1600 x (P) 700 x (H) 700 mm



Flat carding sampler



Suitable for cotton, synthetic and blended slivers as well as raw cotton material.

By means of an optic-electrical system, NATI measures Neps and Trash in different size classes:

≥0,50mm; ≥0,70mm; ≥1mm for Neps

≥0,25mm; ≥0,50mm for Trash.

Specifically designed to be fast, reliable and easily transportable to the production floor for continuous testing and assessment of Neps and Trash at different process stages.

NATI is the only instrument presently available on the market measuring and classifying automatically Neps and Trash content in samples of large size up to 6m of sliver (30g approximately, depending on sliver count).

NATI is the only Nep tester for which no manual preparation of the sample is required thus ensuring total reliability of results (it is known that the ability of the operator can lead to 25%-50% variation in the results).

Transportable and fast in testing large size samples (it takes less than 2 minutes to test 2g of sliver), NATI makes daily control of carding department feasible, thus enabling a better quality of carding operation and a better planning of card maintenance.

User-friendly, NATI does not require any skill for operation and preliminary operation before testing.

Raw cotton testing: the used of the optional "Raw Cotton Selector" code 3282 enables you to prepare 2-2,5g samples short time and without the influence of operator's ability on results.

NATI fits an enlarged fibre waste which box specifically conceived for testing large size samples is recommended specifically for combed cotton and synthetic slivers due to the small content of Neps/g.

NATI is endowed with a brushless motor (maintenance free) granting unchanged performance even after several thousand hours of test.

Available in the version for PRINTER or PC connection (to be specified at time of order).

Optionals

Opening roller B174N for Cotton	Code 3280 168*
Opening roller S43 for Polyester	Code 3280 169*
Printer, 220V	Code 3280A 136
Raw Cotton Selector	Code 3282
Trolley Code	Code 3280 900

* one opening roller at customer's choice is already supplied with the instrument.

Power supply: 220V 50/60 Hz or 110V 60 Hz - 1 Kw

Weight: 35kg

Dimensions: (L) 400 x (W) 350 x (H) 640 mm



Top-Lab

328A

For quick and accurate counting of impurities and neps in wool, cotton and synthetic fibre tops.

Adjustable distance between rollers ranging from 42 to 260 mm.

Adjustable speed from 5 to 12 m per minute.

Predetermined drawing standard value: 6.35 (other values are available on request).

Differing impurities are counted and classified through a series of 6 electronic counters.

Optionals:

Magnifying lens, fitted with light **Code 328 2**

Printer for print-out of defects in tops **Code 3280A 136**

Power supply: 220 V, 50/60 Hz, single-phase

Weight: kg 180

Dimensions (L) 700 x (W) 800 x (H) 1400 mm



Trash Analyzer

281C

To determine the percentage content of trash, lint, non-fibre material in raw cotton samples up to 100 g. Also used to determine non-fibre content of synthetic fibres and to open and clean fibres for further testing. The analyser uses the carding principle with air separation of lint and non lint content.

Power supply: 380V, 50 Hz, three-phase

Weight: 140 kg

Dimensions: (L) 640 x (W) 950 x (H) 550 mm



Raw Cotton Selector

3282

Small laboratory carding machine to prepare a cleaned and homogenous sample of raw cotton, to be used with NATI for testing of neps content.

R.C.S. is ideal for the preparation of samples to be tested on a sticky cotton thermodetector (Honey Dew analysis). Generally speaking R.C.S. is ideal for preparation of clean fibre samples to be tested.

Power supply: 220 V - 50/60 Hz or 110V - 60Hz (external transformer is required), 30 VA

Weight: 25 kg

Dimensions: (L)600x(W)410x(H)250 mm

Electronic wrap reel for slivers and rovings

254A-254B

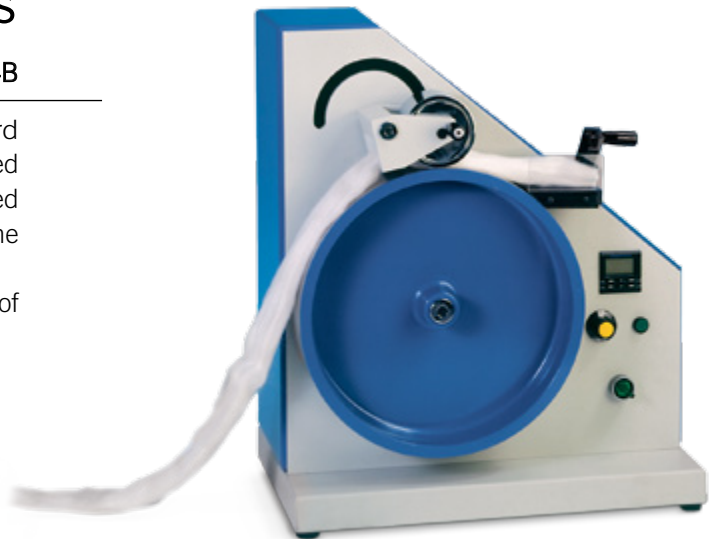
Available with a drum circumference of either 1 yard (**code 254B**) or 1 metre (**code 254A**). Adjustable drum speed from 0 to 100 m/min., with accuracy of +/- 1 cm; equipped with cutter. Designed to prevent any possible drawing of the fibre sample.

Fitted with digital counter and cutter for accurate cutting of the sliver sample.

Power supply: 220 V, 50/60 Hz, single-phase

Weight: 52 kg

Dimensions: (L) 450 x (W) 300 x (H) 500 mm.



Manual wrap reel for slivers and rovings

159A-159B

Hand-driven reel for slivers and rovings.

Available with either 1 metre (**code 159A**) or 1 yard (**Code 159B**) drum circumference.

Fitted with digital counter and cutter for accurate cutting of the sliver sample.

Weight: 20 kg

Dimensions: (L) 430 x (W) 280 x (H) 600 mm.



Oil extraction apparatus 273B

Electronic apparatus with digital reading of set temperature for quick determination of oil/grease/lubricant percent content of fibre and yarns. It takes about 15 minutes.

The use of an analytic balance with accuracy 0.0001 g is essential with this apparatus (**code 165.702**).

Accessories:

Set of 50 aluminium plates **code 273 2**

Power supply: 220 V, 50/60 Hz, single-phase

Weight: 8 kg

Dimensions: (L) 250 x (W) 150 x (H) 430 mm



Climatest

1722



Laboratory instrument for the conditioning of all textiles, such as raw fibres, yarns on spools and hanks, fabrics and garments in general, at constant temperature and humidity, according to ISO norms.

Climatest is supplied complete with two inner shelves.

Equipped with glass inner door for inspecting.

Adjustable temperature ranging from +5° C to +80° C, accuracy $\pm 0,5^\circ$ C at 37° C

Relative humidity ranging from 20% Rh to 90% Rh, accuracy $\pm 3\%$.

Digital reading of both temperature and humidity.

Automatic water supply into the reservoir.

Built in accordance with: UNI EN ISO 139, DIN12880.

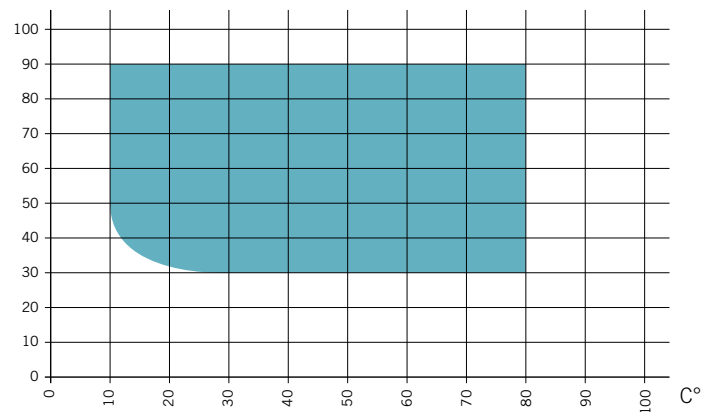
Power supply: 220 V, 50 Hz single-phase - 2100 W.

Weight: 130 kg

Inner dimensions: (L)600x(W)520x(H)800 mm.

External dimensions: (L)930 x (W)720 x (H)1460 mm.

RH%



■ Standard working range



Melting Point Apparatus 339C

To determine the melting point of fibres and synthetic yarns and classify them.

Measuring range: from +30° C to +300° C, accuracy $\pm 0.1^\circ$ C.

Complete with magnifying lens to check the melting point and 100 slides.

Built in accordance with: ASTM D789 and ASTM D2117

Power supply: 220 V, 50 Hz, single-phase - 200W.

Weight: 4.5 kg

Dimensions: (L)280x(W)185x(H)215 mm

YARNS

p 18	Automatic wrap reel	Code	161C
p 18	Electronic wrap reels		
p 18	Hand-driven wrap reels		
p 19	Fixed tensionmeter	Code	161M.334
p 19	Mobile vertical creel	Code	3102
p 19	Stationary adjustable yarn tensioner	Code	161M.330
p 20	Count analyser II	Code	1666
p 20	Count Lab	Code	165.630
p 21	Air-Texturlab	Code	320C
p 21	Pretension weights		
p 21	Thermal Shrinkage	Code	326C
p 21	Water-Texturlab	Code	320D
p 22	Auto Cop Changer	Code	299A
p 22	Twistmatic Plus	Code	2532
p 23	Electronic Twist-Lab	Code	2531C
p 23	Hand driven Twist-Lab	Code	2531D
p 24	Attrifil II	Code	233B
p 25	Autodyn II Plus	Code	2514A
p 26	Tenso-Lab 3	Code	2512A
p 27	Splice Scanner III	Code	2553
p 28	MT Evenness Tester	Code	2341
p 29	ASTM yarn standards		
p 29	Optional "KIT TWO"	Code	2520.600
p 29	Planofil	Code	2520
p 30	Coloured yarn sample winder	Code	171A
p 30	Coloured yarn sample winder - Special Type	Code	171B
p 30	Sample card winder single model	Code	171C
p 31	"Sciocco" automatic regain oven	Code	172B
p 32	Aqua-Lab	Code	2450
p 33	Hardness tester		
p 33	Humy tester	Code	185B
p 33	"Libeccio" semiautomatic regain oven	Code	245B
p 34	Mesdan Video Analyser	Code	250D
p 36	Dye Scanner	Code	2940A
p 37	Laboratory carding machine	Code	337A
p 37	MINI-SPINNING		
p 37	Stiro-Roving-Lab	Code	3371
p 38	Mini Assembly Lab	Code	3372A
p 38	Ring-Lab	Code	3108A
p 38	Wind-Lab	Code	3374
p 39	Lab Knitter	Code	294E
p 39	Twister-Lab	Code	3373

Electronic wrap reel for yarns

To prepare yarn skeins of a definite and preset length, that will then undergo testing for the determination of the related count. Equipped with electronic pre-selector for the automatic stop at the preset length. Supplied complete with a 7 position support creel (spool and small bobbin holder) Adjustable double bar yarn tensioner.

The electronic wrap reel is available with the following reels:

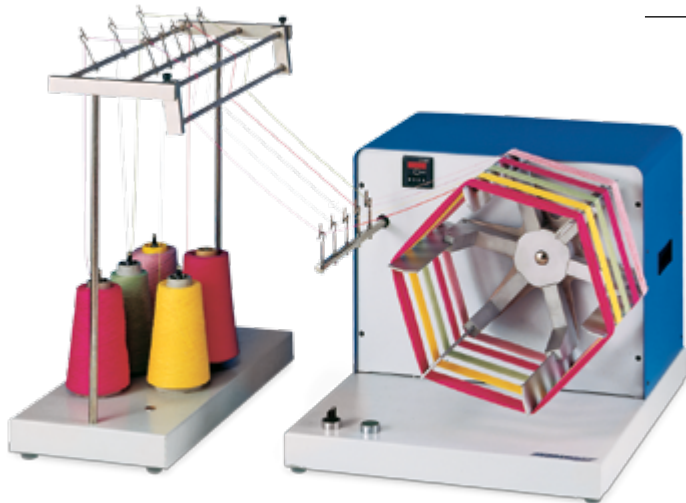
1 m reel circumference	Code 161M
1 m reel circumference – 10 positions	Code 161X
1 yd reel circumference	Code 161Y
1.5 yd reel circumference	Code 161W

Built in accordance with: UNI EN ISO 2060, ASTM D 1907, ASTM D 2260

Power supply: 220 V, 50/60 Hz, single-phase

Weight: 40 kg

Dimensions: (L)900 x (W)600 x (H)600 mm.



Automatic wrap reel

161C

Particularly suitable for dye houses where it is necessary to prepare automatically (without the operator assistance) from a single yarn bobbin large numbers of skeins (max. 7) for subsequent laboratory dyeing tests.

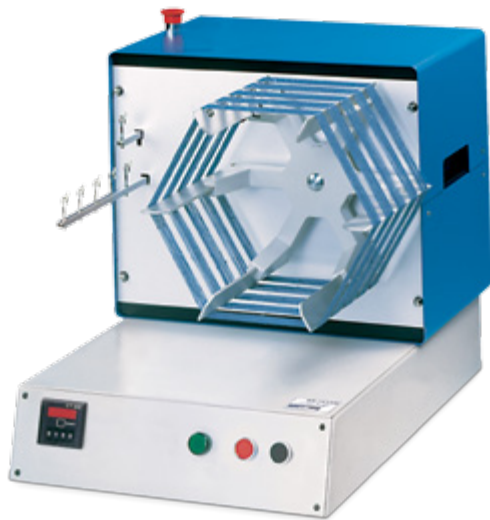
Reel circumference: 1 meter

Built in accordance with: UNI EN ISO 2060, ASTM D 1907, ASTM D 2260

Power supply: 220V, 50/60 Hz, single-phase

Weight: 50 kg

Dimensions: (L)900x(W)600x(H)600 mm



Hand-driven wrap reel

Available reel circumferences:

1 meter **Code 160M**

1 yard **Code 160Y**

Turns reading on suitable and accurate digital indicator. Supplied with support creel and double bar yarn tensioner.

Built in accordance with: UNI EN ISO 2060, ASTM D 1907, ASTM D 2260

Weight: 35 kg

Dimensions: (L)900x(W)600x(H)600 mm



Optional for Wrap reels

Stationary adjustable yarn tensioners

161M.330

In case of very coarse yarns for which a very high pretension is required (for example carpet yarns) or in case of preparation of textured synthetic fibres skeins for Crimp value testing.

This optional should be fitted on the reel feeding creel in place of the standard double bar tensioner or on the yarn guides support.



Fixed tensionmeter

161M.334

Suitable for synthetic yarns which require an accurate and continuous control of pre-set pretension during wrapping.

Available reading ranges (to be indicated when placing the order):

3-12 cN

5-20 cN

5-30 cN

10-50 cN

10-100 cN



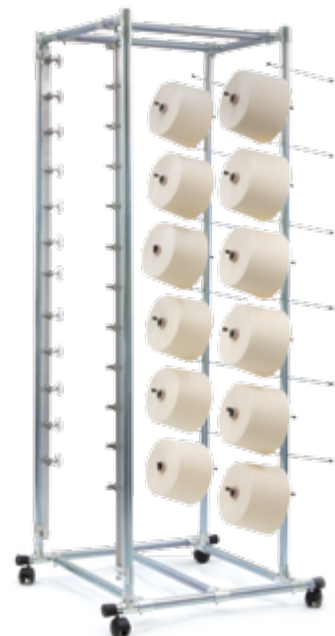
Mobile vertical creel

3102

Suitable for feeding different instruments such as wrap reel, automatic strength tester, automatic twist tester, Attrifil, evenness tester etc., where it is necessary to simultaneously use large size bobbins.

Weight: 40 kg

Dimensions: (L)600x(W)600x(H)2000 mm.



Count analyser II

1666



```

*****
**MESDANLAB **
*****
07/03/2014 15:21:09
*****
SIMPLIFY COUNT
DTEX (m) (< 100.00 )
Min N. 5: 1390.0000
Max N. 4: 1470.0000
Mean : 1406.0000
σ : 35.7771
CU [%] : 2.5446
Range [%] : 5.6899
IC:(M95%): 2.5446
Down Limit: 1334.4458
Up Limit : 1477.5542
*****
Test n. Count
1 1390.0000
2 1390.0000
3 1390.0000
4 1470.0000
5 1390.0000

```

To determine the count of slivers, rovings, yarns and fabric weight per sq.mt. Outputs: single result, minimum, maximum and average, CV%, range%, sigma, I.C.(95%), results out of tolerance. Standard measurement scales are available: Nec/m, Nec/yd, Nm, Den, Tex, dTex, Grains/YD, Gr/sq.m. Sample lengths from 1 cm (1 inch) up to 999 m (yard). Different types of electronic balances distinguishing COUNT ANALYSER models:

Sartorius balance - 820 g capacity - 0,01g accuracy - pan size \varnothing 150 mm (suitable for yarns) **Code 165.708**

Sartorius balance - 2200 g capacity - 0,01g accuracy - pan size 180X180 mm (large plate ideal for sliver, roving and yarn count testing) **Code 165.706**

Sartorius balance - 320 g capacity - 0,001g accuracy - pan size \varnothing 115 mm (ideal for synthetic filaments and fine yarns count testing) **Code 165.704**

Other models available on request.

Built in accordance with: ISO 3374, UN EN 29073, UNI 8014-2-3-4, UNI EN ISO 2060, UNI 5114, BS 2471, ISO 3801, ASTM D1907/D3776

Power supply: 110/220, 50/60 Hz, single phase

Weight: 10 kg

Dimensions: (L)700 x (W)400 x (H)200 mm.

Count Lab

165.630



COUNT LAB software (connecting cable supplied) to determine the count of sliver, roving, yarn and fabric weight per sq.mt. Standard measurement scales are available: Nec/m, Nec/yd, Nm, Den, Tex, dTex, Grains/YD, Gr/sq.m

Outputs: single result, minimum, maximum and average, CV%, range %, I.C.(95%), results out of tolerance.

Test results are exported to Excel for automatic calculation of statistics (average, minimum, maximum count, C.V.%, sigma, range %, IC%, upper and lower IC% limits).

Output report is produced for printing and saving. PC minimum features required: Windows Xp, Excel (2000 or Xp) programme, one serial and one USB port.

Optional: Sartorius electronic balance with different capacity and accuracy depending on the textile to be tested. **Count Lab can be connected to Sartorius balance only.** PC available on request.

Built in accordance with: ISO 3374, UN EN 29073, UNI 8014-2-3-4, UNI EN ISO 2060, UNI 5114, BS 2471, ISO 3801, ASTM D1907/D3776

Air-Texturlab

320C

To determine the percentage of crimp in all types of textured synthetic yarns.

Air-Texturlab requires the use of an electric wrap reel of 1 m circumference (**code 161M**), a forced ventilation oven with internal capacity 240 l (**code 251P**) – supplied complete of skein support - and a set of pretension weights (optional) according to the nominal count.

Built in accordance with: DIN 53840-1 (up to 500 dtex), DIN53840-2 (over 500 dtex)

Weight: 10 kg

Dimensions: (L)500 x (W)20 x (H)800 mm.



Water-Texturlab

320D

To determine the percentage of crimp in all types of textured synthetic yarns; particularly suitable for nylon textured yarns for stockings. Equipped with a Plexiglas cylinder to be filled with water and a skein holder millimetre bar with 1 mm accuracy. Water-Texturlab requires the use of an electric wrap reel of 1 m circumference (**Code 161M**) and a set of pretension weights (optional) to be selected according to the nominal count.

Built according to: BS 6663

Weight: 8 kg

Dimensions: (L)120 x (W)120 x (H)800 mm.

Pretension weights optional for Air and Water Texturlab 320C 320D

g	2,5	Code	320.36	g	7	Code	320.10
g	3	Code	320.2	g	8	Code	320.12
g	4	Code	320.4	g	9	Code	320.14
g	5	Code	320.6	g	10	Code	320.16
g	6	Code	320.8				

Weights with simple hook

g	25	Code	320.38	g	350	Code	320.28
g	100	Code	320.18	g	400	Code	320.30
g	150	Code	320.20	g	450	Code	320.32
g	200	Code	320.22	g	500	Code	320.34
g	250	Code	320.24	g	2500	Code	320.40
g	300	Code	320.26				



Thermal Shrinkage

326C

To determine the shrinkage (%) of synthetic yarns and cords at closely controlled temperature according to ASTM D4974 and UNI EN ISO 13844, ASTM D5591.

Reading of shrinkage on the mechanical scale.

Adjustable temperature range: from +25 °C to +250 °C.

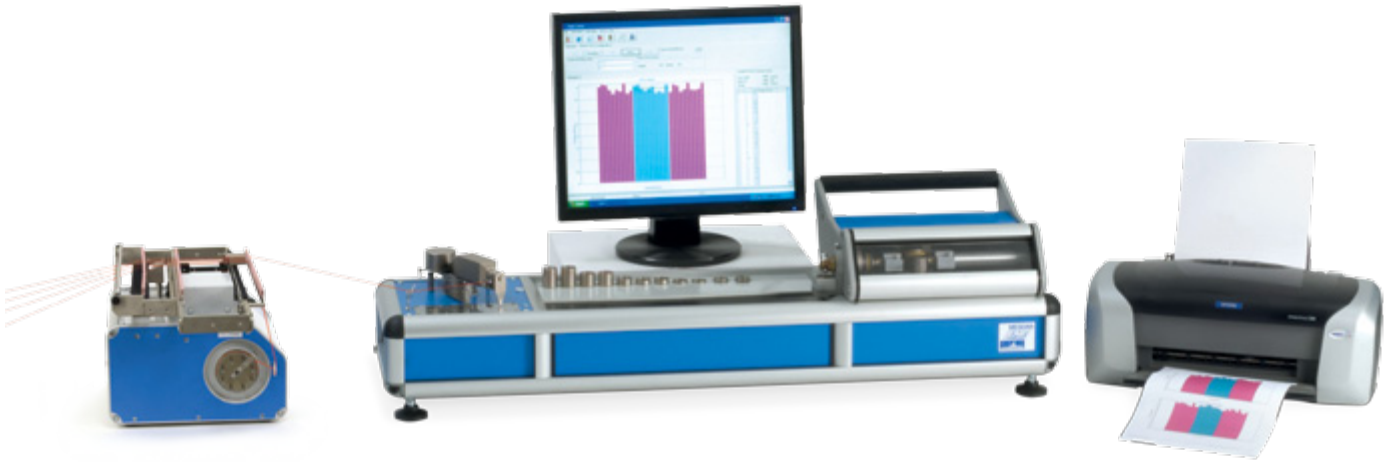
Software included. Personal computer optional.

Power supply : 220 V - 50 Hz

Weight: 30 kg

Dimensions: (L)520 x (W)550 x (H)460 mm.





Fully automatic twist tester to be connected to a personal computer for the control of the loading phase, the twist testing, the change of the yarn length of the bobbin under test, the processing of a complete series of statistical data and for the printing of the related reports.

The instrument, unique for its high quality, can automatically perform serial twist tests on a single package (max. 999 tests) or, if connected to the Auto Cop Changer device **code 299A**, it can perform multiple tests on up to 24 packages.

Suitable for all types of spun (ring and open-end) yarns and synthetic filament yarns, both "S" and "Z" twist.

Technical features:

Automatic testing either on one package or on 24 packages by means of the Automatic Cop Changer, which guarantees high accuracy and repeatability of results, also eliminating the human error.

Three preselection test methods:

Traditional method: untwisting and retwisting on single yarns.

"Schutz" method: untwisting, retwisting and double

counter-check, automatically performed on O.E. spun and combed wool yarns.

Direct method: untwisting for single yarns and multi-filament yarns.

Twist testing on certain yarn lengths at preset intervals.

Statistical results: mean value, minimum value, maximum value, C.V.%, range, standard deviation and alpha coefficient.

Twist results available either in rotations per metre (RPM) or rotations per inch.

Distance between clamps is fixed at 50 cm.

PC connection through RS232C serial output.

PC and Printer are available on request.

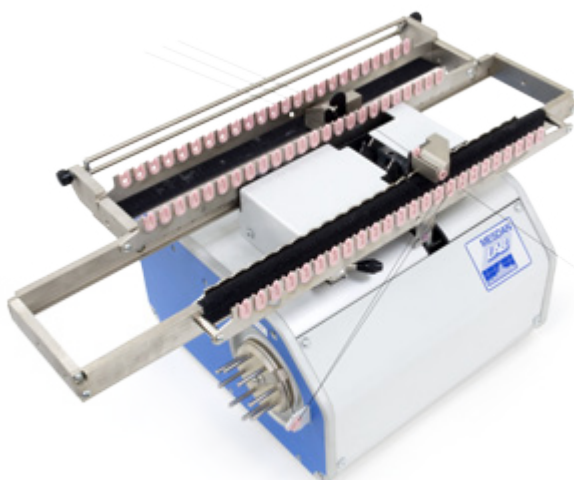
Built in accordance with: UNI EN ISO BS 2061, UNI 9277, UNI 9069, ASTM D1422-99, ASTM D1423-02

Power supply: 110/220 V - 50/60 Hz, single-phase.

Air supply: 6 bar

Weight: 25 kg

Dimensions: (L) 1.200 x (W) 380 x (H) 250 mm.



Auto Cop Changer

299A

"Auto Cop Changer" (ACC)-24 positions connectable to Twistmatic Plus, Attrifil, Autodyn and Dye Scanner for multiple tests on a lot of packages up to 24 without operator's attendance.

Very easy to use and suitable for a wide range of yarns.

Available also up to 36 positions

Code 299B

Along the ACC, a creel is required

Code 3102

Power supply: 12V, DC

Air supply: 6 bar

Weight: 17 kg

Dimensions: (L)570 x (W)250 x (H)230 mm.

Hand driven Twist-Lab

2531D



Manual twist tester for twist measurement on single and plied yarns (S/Z). Two test methods are available:

Traditional “untwist/retwist” method for single spun yarns.

Direct “untwist” method for plied yarns, threads and multi-filament yarns.

Adjustable test length (distance between clamps) from 1 to 50 cm (0.39-19.6 in). Pretension system with pulleys with 9-weight kit, up to 70 cN. Built-in digital tachometer (battery supplied) and optical sensor with led showing correct zero starting and ending position. (+/-1 turn of accuracy). Supplied Pretension system with pulleys with 9-weight kit, up to 70 cN Adjustable clamp speed, up to 2000rpm.

Endowed with two serial ports, for connection to PC (software and cable included) and to printer (optional).

Accessories included: magnifying lens, fixed calliper, pretension weights, bobbin holder, software and cable.

Optional: additional pretension weights (1N 1,5N and 2 N).

Built according to the following international standards: UNI EN BS ISO 2061, ASTM D1422-99, ASTM D1423-03, UNI 9067, UNI 9277 , UNI 9069

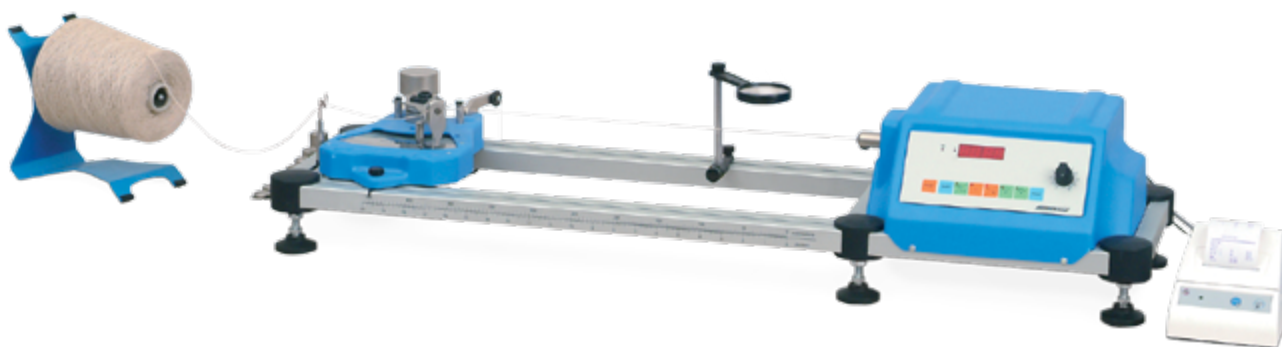
Power supply: 6 batteries 1.5V AA

Weight: 9 kg

Dimensions: (L)1200 x (W) 380 x (H) 250 mm

Electronic Twist-Lab

2531C



Electronic Twist Tester to determine twist of single, twisted (S&Z) and Open End yarns. Three methods available to be selected by the operator:

traditional “untwist/retwist” method for single yarns,

”Schutz” method (untwist, retwist and double countercheck) for OE yarns, worsted and slippery yarns.

Direct “untwist” method for plied yarns, threads and multi-filament yarns.

Adjustable test length (distance between clamps) from 1 to 50 cm (0.39-19.6 in).

Built-in digital tachometer and optical sensor with led showing correct zero starting and ending position. (+/-1 turn of accuracy). Very accurate elongation index with built-in mechanical clamp.

Pretension system with pulleys with 9-weight kit, up to 70 cN Adjustable clamp speed, up to 2000rpm.

Endowed with two serial ports, for connection to PC (software and cable included) and to printer (optional).

Accessories included: magnifying lens, fixed calliper, pretension weights, bobbin holder, software and cable.

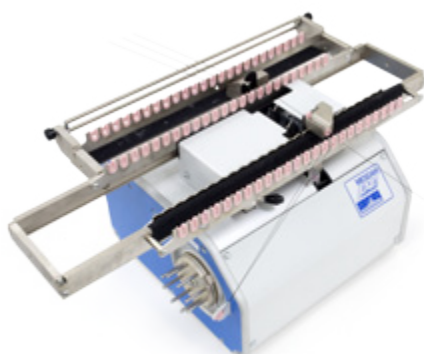
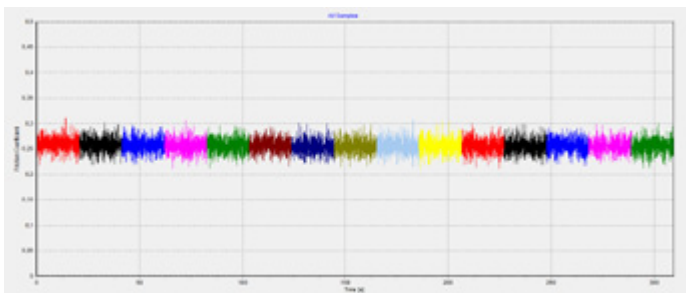
Optional: printer, additional pretension weights (1N 1,5N and 2 N).

Built in accordance with : UNI EN BS ISO 2061 UNI 9067, UNI 9277 UNI 9069 ASTM, D1422-99 ASTM D1423-02

Power supply : 220V 50Hz. On request 110V/60Hz is possible.

Weight : 9,8 kg

Dimensions :(L)1060 x (W) 300 x (H) 220 mm



Computerised instrument for automatic measurement of the friction coefficient of yarns.

Recommended for wax selection and control of waxing process (wax distribution on the yarn and wax duration).

It enables automatic execution of multiple tests on a single package of yarn without operator attendance.

Continuous control of test parameters affecting the friction coefficient such as input pretension (value and tolerance) and yarn speed which can be adjusted by the operator up to 50cN and from 50 to 300m/min.

Very accurate reading of the input and output tension by means of two electronic tensionmeter heads.

Pre-selection of the yarn length to be measured.

Pre-selection of the yarn length between two consecutive measurements in alternative to random testing.

Software (O.S. Windows) for data saving and elaboration.

Print-out listing test results, statistics, graphical representation of single test coefficient of friction and average value.

Optional:

Pc, printer

Attrifil II (**code 233B**) can be connected with the Auto Cop Changer (**code 299A**) to automatically perform tests on 24 different bobbins.

Along the ACC, a creel is required (**code 3102**).

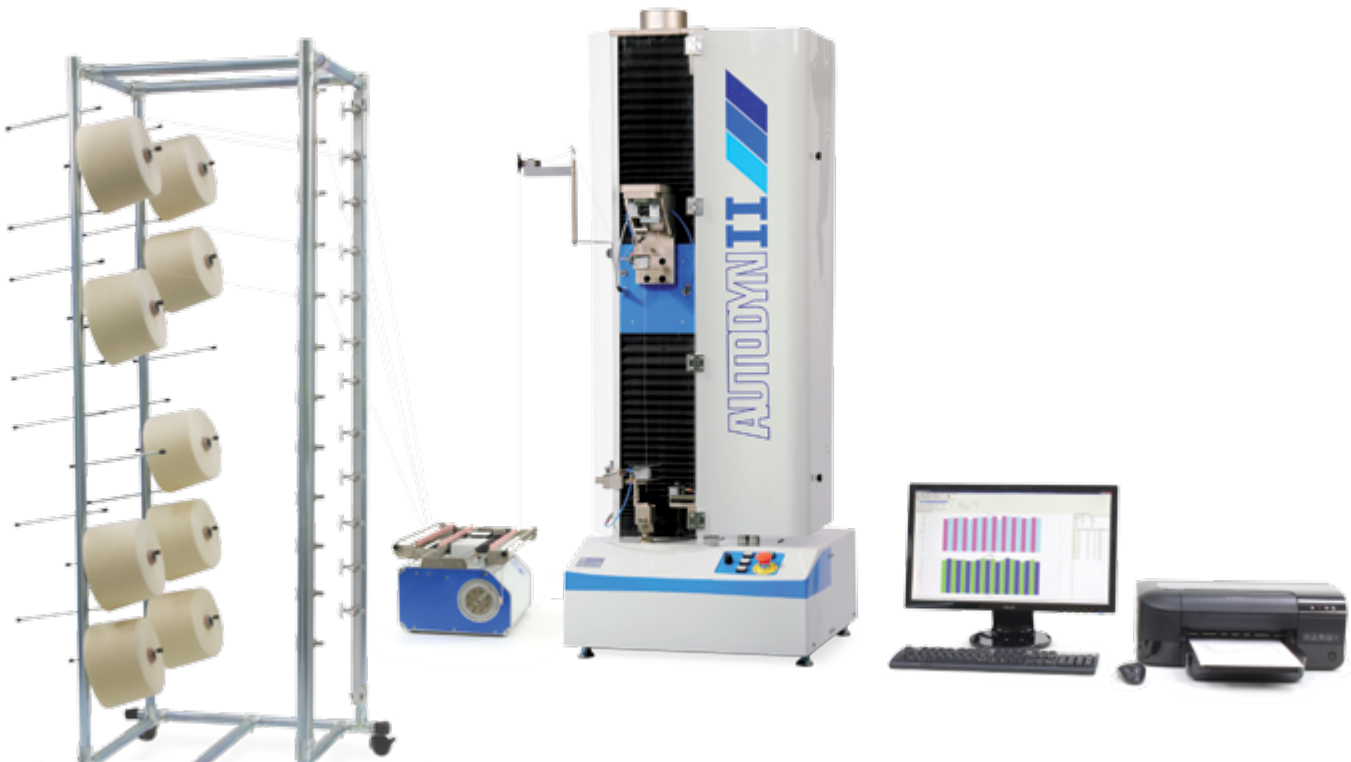
Built in accordance with: ASTM D3108

Power supply: 110/220 V, 50/60 Hz single-phase.

Air supply: 6 bar

Weight: 29 kg

Dimensions: (L)460 x (W)310 x (H)290 mm.



Modular strength tester executes **automatically** tensile tests and hysteresis cycles on yarns; it semi-automatically executes traction, compression, tearing test on fabrics, covering adhesion tests, tensile test on yarn and hanks (lea test).

The exclusive auto cop changer systems (A.C.C.) enables to test automatically up to 24 different yarns according to the parameters set in the PC by the operators.

Automatic single column strength tester, adjustable speed up to 5000 mm/min, with movement resulting from a ball bearing screw; it is controlled by a software which runs all the functioning phases.

Thanks to the specific modular software, Autodyn allows performing tests in compliance with the main international standards or according to parameters set by the operator which can be saved for future need.

Autodyn can fit different load cells easy to change with maximum capacity of 1000 N, and a huge range of pneumatic and mechanical clamps.

Modular design specifically conceived for textile industries requiring both automatic and semiautomatic testing of yarns, hanks, fabrics, covering cloths and seams.

Available also in one position automatic version **code 2514** (see "Fabrics" section for more details).

Optional: PC, printer,

interchangeable load cells of 20N

Code 2510.276

interchangeable load cells of 100N

Code 2510.993

interchangeable load cells of 1000N

Code 2510.282

Autoclamps mini for low tenacity yarns.

Code 2513.918

Autoclamps maxi for high tenacity yarns(also sewing threads).

Code 2513.920

LEA clamps for hanks (manual mode)

Code 2510.990

Scott 100 clamps for yarns and industrial small ropes(mechanical)

Code 2510.995

Mobile vertical creel

Code 3102

Others clamps for yarns and fabrics are available on request.

Built in accordance with: ISO, DIN, ASTM, BS, UNI, M&S standards

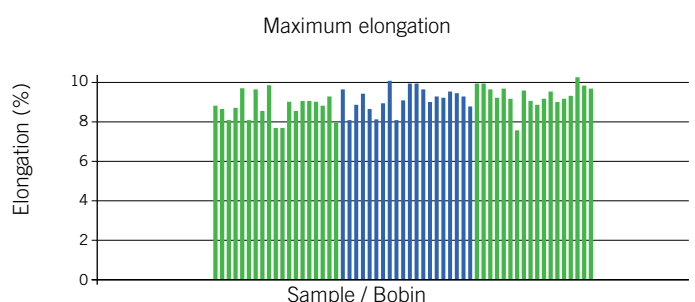
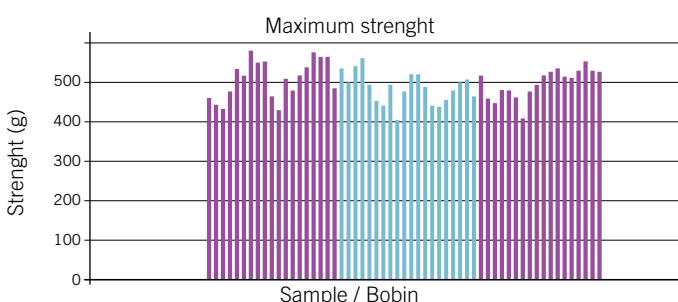
Power supply: 220V/110V 50/60 Hz - 400VA

Air supply : 6 bar

Weight: 85 Kg

Autodyn dimensions: (L) 610 x (W) 610 x (H) 1340 mm

A.C.C. dimensios: (L) 570 x (W) 250 x (H) 230 mm - 17 kg





Electronic semi-automatic single column strength tester suitable for the analysis of the tensile strength of all types of materials up to 300 Kg (3000 N).

C.R.E. tensile strength measuring system.

Zero self-resetting after every test.

Automatic settable pretension of the sample under test.

Adjustable distance between clamps ranging from 50 to 500mm.

Adjustable tensile speed ranging from 10 to 1000 mm/min. with return of the moving clamp at the maximum speed.

Tenso-Lab 3 is directly controlled by a Personal Computer (available on request) enabling an accurate control of the functioning and statistical

processing of results, in a smart Windows system.

The following basic data can be obtained: resistance, elongation, single values, average, C.V.%, RKM, hysteresis cycle tenacity.

interchangeable load cells of 20N **Code 2510.276**

interchangeable load cells of 100N **Code 2510.993**

interchangeable load cells of 1000N **Code 2510.282**

interchangeable load cells of 3000N **Code 2510.283**

Built in accordance with: ISO, DIN, ASTM, BS, UNI, M&S standards

Power supply: single-phase 110/220V, 50 Hz

Weight: kg 75

Dimensions: (L) 610 x (W) 610 x (H) 1340 mm.

Available interchangeable mechanical and pneumatic clamps for yarns:

mechanical clamps for standard yarns **Code 2510.994**

Scott 100 clamps for yarns and industrial small ropes (mechanical) **Code 2510.995**

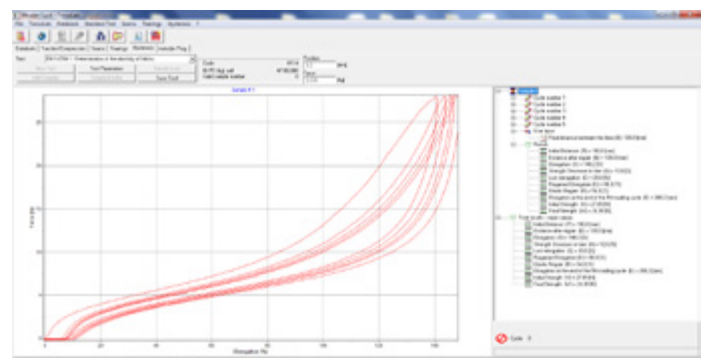
pneumatic clamps for slippery, delicate or high elasticity yarns for pneumatic clamps the foot switch is required **Code 2510.300**

Silent-Compressor, (is available on request). **Code 3390**

LEA clamps for hanks (manual mode) **Code 2510.990**

Others clamps for yarns and fabrics are available on request.

Example of Hysteresis cycle test





Portable electronic strength tester built in accordance with ISO, UNI, ASTM, DIN norms. Endowed with printer and USB port. To measure strength and elongation of yarns and splices. Specifically conceived, compact and light, for testing in the production area near the machines (winding, spinning and O.E. frames for example). Test results can be down-loaded by means of an USB memory stick for further elaboration.

Measure: force from 0 to 60 N (0-6 Kg) ; elongation from 0.5% to 45% (0-110 mm)

Electro-magnetic clamps with automatic closure are supplied with the instrument.

Clamps distance: 250 mm

Testing speed : adjustable up to 1000 mm/min

Pretension: adjustable and automatically applied

Output: force and elongation results, statistics (min., mean, max. force of elongation, CV%), tenacity

The "Splice" mode is ideal for splicers control on automatic winders, measuring force and elongation of spliced yarns (up to 64 drums), elaboration of statistics for each splicer and for all the winders; indication of out of tolerance joints for each drum/splicer.

Power supply: 110/220 V-50/60 Hz
 Weight: 11 kg
 Dimensions: (L)450 x (W)330 x (H)140 mm

Optional:

- Battery kit with built-in feeder 110V Code 2553.3244
- Battery kit with built-in feeder 220V Code 2553.3240
- Manual clamps for slippery yarns Code 2550.120G
- Movable Trolley Code 2550.150

```

*****
+ MESDANLAB
*****
18/02/2014 10:47:17
-----
Mode:Str.Tester
Test type: B
PROVA
Speed (mm/min): 500
Count unit: Tex
Count : 100.00
Ten[cN/Tex]: 2.480
RKM : 2.530
-----
STAT. ELONGATION (%)
Min 3.04 Max 3.81
Mean 3.37 Cv% 9.01
S 0.30 Ran 22.83
-----
STAT. FORCE (cN)
Min 219 Max 387
Mean 248 Cv% 14.78
S 36.66 Ran 35.48
-----
Nr. Elons. Force
01 3.23 % 226 cN
02 3.04 % 219 cN
03 3.54 % 261 cN
04 3.81 % 387 cN
05 3.23 % 228 cN
    
```





For the evenness control of slivers, rovings and yarns made of both natural and synthetic/manmade fibres. Thanks to the use of capacitive sensors, the instrument can measure, analyse, calculate and display (with related printout) the following data:

- mass variation diagram
- 160 channels spectrograph to analyse the wavelength spectrogram
- CV% and U% of mass variations
- AVE% (relative yarn count)
- I.P.I. with an indication of **thin** places, **thick** places and **neps**
- D.R.% (deviation rate %)
- C.V.% (L) referred to 4 lengths
- Diagram of mass variation both in "inert" and "1/2 inert" way

The instrument is composed of:

- measuring frame
- Personal computer with monitor and printer
- Windows OS software
- Technical features:

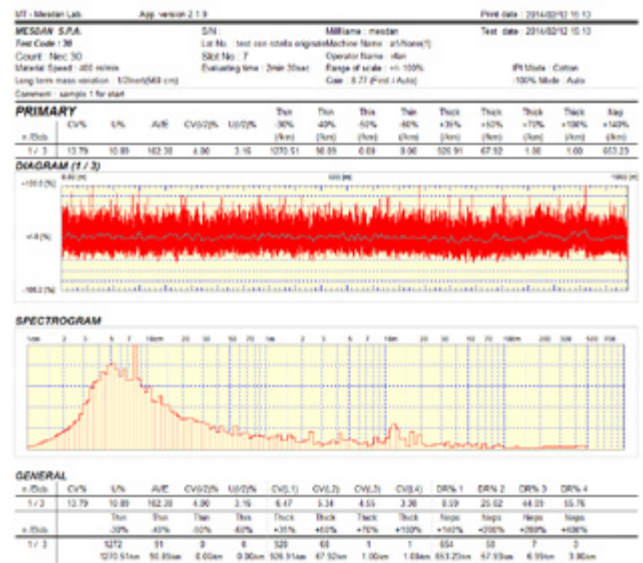
- Count range from 80g/m (sliver) to Nm 250 (yarn)
- Sample speed: from 8 to 400 m/min.
- 160 channels spectrograph
- 6 bar compressed air

- Power supply: single-phase 110/220V, 50/60Hz
- Weight: kg 80
- Dimensions: (L) 1200 x (W) 500 x (H) 600 mm.

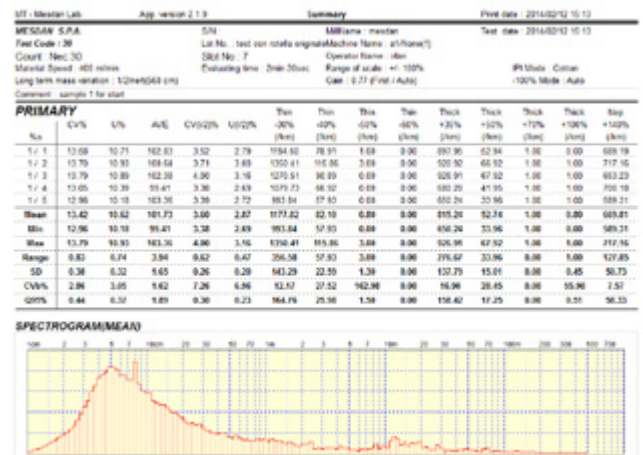
Optional:

- 24 positions Automatic Cop Changer (ACC) **Code 299A**
- H-Sensor, hairiness sensor to evaluate the yarn hairiness **Code 2342**
- Yarn creel up to 24 spindles **Code 3102**
- UPS for power stability **Code 2341 900**

Report graphic and Histogram



Statistical result and histogram



Planofil

2520

Electrical instrument to assess yarn regularity. Endowed with electronic speed adjustment.

Equipped with 2 black anodised aluminium trapezoidal tables (dimensions 255x600x155 mm).

For very coarse and bulky woollen and blended yarns, a particular model is available, PLANOFIL PLUS, equipped with a set of special pulleys for a wider separation of coils.

For regular cotton yarns, the pulley is built in accordance with ASTM D2255 standards.

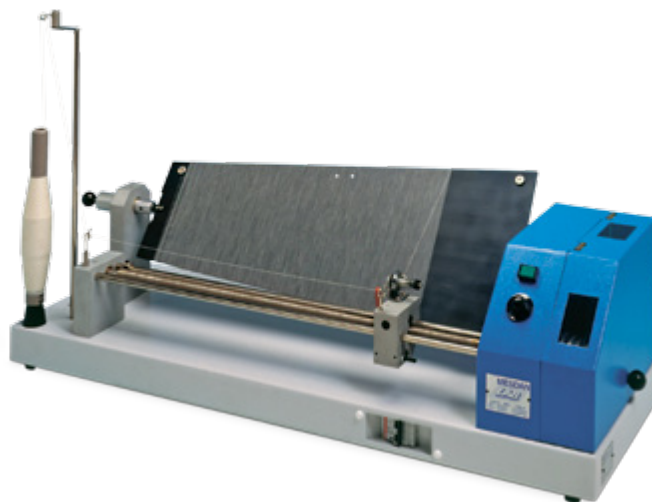
Black table **Code 2520 580**

White table **Code 2520 590**

Power supply: single-phase, 220 V, 50Hz

Weight: 24 kg

Dimensions: (L) 910 x (W) 330 x (H) 530 mm



Optional “KIT TWO”

2520.600

To wind at the same time on the same table two yarns with the same count, enabling a quicker preparation of the table (50% time saving) and a better and immediate visual comparison between the two wound yarns.

Optional:

With Kit Two it is necessary to use particular trapezoidal tables:

Black table **Code 2520.610***

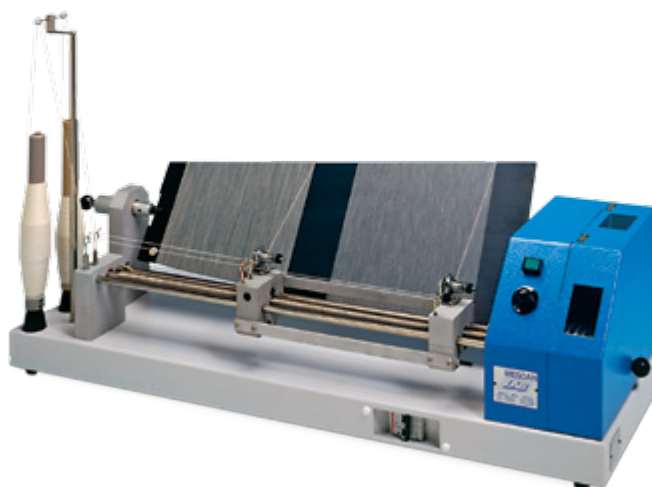
White table **Code 2520.620**

* One black table is supplied with “Kit Two”

Power supply: single-phase, 220 V, 50Hz

Weight: 24 kg

Dimensions: (L) 910 x (W) 330 x (H) 530 mm



ASTM yarn standards

Available in the following count ranges:

Ne 1-12 **Code 2520.630**

Ne 12-24 **Code 2520.631**

Ne 24-36 **Code 2520.632**

Ne 36-50 **Code 2520.633**

Ne 50-75 **Code 2520.634**

Ne 75-135 **Code 2520.635**

Built in accordance with: ASTM D2255

Dimensions: (L)635 x (W)100 x (H)380 mm.





Coloured yarn sample winder

171A

Suitable for any type of card (max. length 320 mm, width 95mm) and yarn count.

Up to 12 different yarn colours can be wound simultaneously.

Width of winding can be predetermined.

Equipped with adjustable yarn pre-tensioner.

Power supply: 220V, 50 Hz, single-phase

Weight: 40 kg

Dimensions: (L)800 x (W)500 x (H)450 mm.



Coloured yarn sample winder Special Type

171B

Special high accuracy model with micrometric winding feed. Particularly suitable for high production of coloured sample cards, especially medium-fine yarns such as sewing threads. Automatic forward and reverse winding movement and adjustable spacing and automatic stop.

Maximum winding speed: 1000 turns/min.

Up to 12 different colours can be wound simultaneously. Suitable for any card type (max. length 320 mm, max. width 95 mm).

Power supply: 220 V, 50 Hz, single-phase

Weight: 45 kg

Dimensions: (L)800 x (W)450 x (H)560 mm.



Sample card winder single model

171C

Ideal for colour gauging or sampling for spectrophotometer analysis.

Micrometric highly accurate regulation of the yarn coils with automatic forward and reverse winding movement.

The following winding widths are available: 25 mm, 30 mm, 32 mm, 40 mm, 45 mm and 57 mm (to be selected when placing the order)

Power supply: 220 V, 50 Hz, single phase

Weight: 20 kg

Dimensions: (L)360 x (W)500 x (H)500 mm.

“Scirocco” automatic regain oven

172B

Automatic moisture regain oven to measure moisture content and regain percentage in textile materials according to ISO ATSM IWS and UNI Standards.

PC operated.

Quick Sample drying (10 min. circa) by suction cycle. Adjustable drying temperature ranging up to 140°C.

Testing procedure is as follows: the cabinet automatically continues weighing until the sample attains a stable dry mass. The computer evaluates the difference between consecutive weighing and stops when the figure is lower than 0,05%.

It is possible to determine the duration of the first drying cycle as well as the duration of further 9 cycles.

The basket tare is recorded according to the basket code.

The room humidity and temperature values can be entered in order to obtain automatically the correction of the dry mass being stored for this purpose the table of correction coefficient.

Complete with electronic balance (3.200 g capacity/0,01g accuracy) and colour printer.

Printed report of test parameters and final results, such as:

sample code

basket code

date of basket gauging

weight of wet sample

weight of dry sample

dry percentage

Built in accordance with:

ISO 6741-1, 2, 4, UNI1335, UNI 9213-1, 2, 3, 4, 5, 6, ASTM D1576, ASTM D2495, IWTO 33, IWTO 34, UNI EN ISO 2060

Power supply: 380 V - 50 Hz, three-phase - 10 kW

Weight: 209 kg

Dimensions: (L)1460 x (W)640 x (H)1600 mm



Example of printout of Scirocco oven:

final results of a sample in stock to be shipped and invoiced at the official humidity regain rate.

Test identification data		Test Code	3200		
Customer Code	F1	Lot	lotto	Date	26/01/2014
Stock	part	Operator	esam	Time	11:27:00
Parcel	collo	Material	Wool (worsted)	Standard R.R.	10 [%]
		Conditioning	105 C		
Global Elaborations:		Analysit Results		Env. Cond.	
Total Mass	1000,00 kg	Humid Weight	195,54 [g]	Temperature	20 C
Commercial Mass	1056,40 kg	Dry Weight	175,06 [g]	Relative Humidity	60 [%]
# Campioni	1	Real Regain Rate	11,700 [%]		
	Modify Data...	Humidity	10,475 [%]		
Codice Stufe	SCIROCCO MESDAN	N.M. Corr. Coeff	5,640 [%]		
Sample Description					
<div style="text-align: right;"> <input type="button" value="Details..."/> <input type="button" value="Search Test..."/> <input type="button" value="Print..."/> <input type="button" value="Preview..."/> </div>					



Real Regain Rate at the Dryer
Scirocco MesdanLab

Customer Code	Test	Date	Time
F1	Test	20/02/13	14.38.31
Stock		Lot	lotto
Parcel		Operator	
Material	Wool (worsted)	Material R.R.	18%
Conditioning Temperature	105 °C		
Number of Samples	1		
Humid Weight	402,5 g		
Real Regain Rate	11,517 %		
Humidity	10,328 %		
Dry Weight	360,75 g		
Present Dry Weight	360,93 g		
Corr. Coeff. of Net Mass	5,813 %		
Net Mass	180 kg		
Commercial Mass	190,464 kg		
Testing Machine	SCIROCCO MESDAN		
Testing Conditions	20 °C	Humidity	60%
Sample Description			



Moisture content in fibres and yarns is of paramount importance in both textile trade and final product quality evaluation. Moisture variation can lead to serious quality issues such as “barre” defects, dimensional stability problems, etc.

AQUA-LAB is an innovative instrument for fast and accurate measurement of the moisture regain and moisture content in textile materials.

Its measurement speed allows HIGH VOLUME CONTROL OF MOISTURE throughout every stage of the textile chain increasing consequently the productivity & efficiency of the process as well as the final product quality.

The measurement principle of Aqua-Lab is based on an innovative low power resonance technology.

AQUA-LAB calibration algorithm associates the mass-independent microwave moisture values measured by AQUA-LAB with the moisture regain values measured by the drying oven (the only reference instrument for measuring the moisture content of textile fibers in accordance with ASTM D-2494, ASTM D-2495, ISO 6741-1,2,3,4 and many others). Aqua-Lab absolute value correlation with the regain oven (drying system) make Aqua-Lab indispensable for commercial transactions, pricing management and QC monitoring.

Specific preset calibrations are available for different textile materials that the operator can easily select in the starting menu.

The complete AQUA-LAB **code 2450** is equipped with two sensors, one for fibres (loose fibres, tops, slivers, etc) and one for yarn packages (cones, roving cops, etc). However, the system can be supplied equipped with one sensor only:

for fibres, **code 2450A**

for yarn packages, **code 2450B**

Ideal for Ginners, Top Makers, Spinning Mills, Wool Combers, Yarn Buyers, Dyeing Mills, Textile Laboratories.

Main features:

Fast, a measurement takes only a few seconds.

High repeatability and reproducibility of results

Perfect correlation with oven-drying

Suitable for any textile fibre such (for example cotton, linen, wool, cashmere, viscose, silk, acrylic, synthetics as well as blends)

No sample weighing or preliminary preparation of the sample

Non-destructive method, no waste of material

Simple test execution which can be performed by unskilled personnel.

Results are not influenced by the weight of the sample, its dimensions, its density and environmental conditions (temperature and humidity)

Very low power consumption

Maintenance free: no consumables, no wear

Ethernet available (connection to central data collection system)

Power supply: 110/220V 50/60 Hz single-phase

Main Unit: (L) 190 x (W) 110 x (H) 140 mm 2.6kg

Yarn Sensor: (L) 255 x (W) 210 x (H) 70 mm 2.5kg

Fibre Sensor: (L) 325 x (W) 370 x (H) 350 15.5 kg

AQUA-LAB recognition

At the 32nd International Bremen Cotton Conference, the **ITMF** International Committee on Cotton Testing Methods (**ICCTM**) gave full recognition to AQUA-LAB



“Libeccio” semiautomatic regain oven

245B

Semiautomatic moisture regain oven to measure moisture content and regain percentage in textile materials according to ISO ASTM IWS and UNI Standards. Quick Sample drying (10 min. circa) by suction cycle. Adjustable drying temperature ranging up to 140°C. Complete with electronic balance (3.200 g capacity/0,01g accuracy). Automatic movement of the weighing basket by means of up and down button. High precision electronic thermo-regulator.

Built in accordance with: ISO 6741-1, 2, 4, UNI1335, UNI 9213-1, 2, 3, 4, 5, 6, ASTM D1576, ASTM D2495, IWTO 33, IWTO 34, UNI EN ISO 2060

Power supply: 380 V - 50 Hz, three-phase - 8 kW

Weight: 130 kg

Dimensions: (L)980 x (W)700 x (H)1350 mm



Humy tester

185B

Digital electronic portable instrument for the instantaneous measurement of the humidity percentage contained in textiles. Reading on LCD display with 17 pre-set reading scales for the most common fibres and blends (other reading scales are available). It can be fitted with interchangeable electrodes suitable for cones, hanks, cotton bales or wool and fabrics. Measuring accuracy: +/-1%.

Optional probes (not supplied with the instruments):

probe for cotton or wool bales (2 pins - length 30 cm)	Code	185 412
probe for hanks (2 pins - length 10 cm)	Code	185 414
probe with roller for fabrics	Code	185 416
probe for bobbins and cones (8 pins - length 6 cm)	Code	185 418
calibration unit (2 pcs)	Code	185 422

Built in accordance with: DCS 194:2010

Power supply: 9V battery

Weight: 0,30 kg

Dimensions: (L) 160 x (W) 83 x (H) 300 mm



Hardness tester

For checking packages and cops hardness.
Measuring scale 0-100°C Shore A.
Equipped with pressure control device.

Available in the following models:

Mod. HP 2.5 for synthetic filaments	Code	255A
Mod. HP 5 for cotton and wool yarns	Code	255B

To check beam hardness, the following flat base models are available:

Mod. HP 2.5 F for synthetic filament	Code	255E
Mod. HP 5 F for cotton/wool yarns	Code	255D

To check beam hardness, the following flat base models are available:

Mod. HP SA, scale: 0-100°C Shore A	Code	255F
------------------------------------	-------------	-------------

Weight: 0,30 kg





High performance computerised system conceived for the analysis of fibres, yarns, fabrics, knits, non-wovens, spinnerets etc. Equipment suitable to perform in a fast and easy way the fineness analysis of single fibres, identify the different type of fibres contained in a blend and analyse the composition percentage. Ideal to check the features of purchased material, analyse yarn structure and detect possible defects. Suitable to: measure the count (dtex/ den) of yarns and round section filaments; analyse quality of Lycra filaments into the yarn; analyse the compactness of non-woven fabrics; analyse yarn and fibre sections; measure section surfaces and perimeters; analyse mechanical parts (i.e. needle points, spinnerets, etc); reduce warp and weft density of fabrics to a cm or a inch; process, store and print the produced measurements and the minimum, medium and maximum values, CV% and distribution graphs.

The system is composed by:

LEICA biological Microscope: magnification on video from 252 to 1160x with slide movement device with micrometric regulation, polarising light, for fibres and yarns analysis, etc.

LEICA Stereo-Microscope with magnification on video from 24x to 165x, illuminated base, for the analysis of fabrics, yarns and mechanical parts like traveller, needles and spinnerets.

Optical fibre illumination device (for a perfect illumination of a sample from different adjustable angles).

PC complete with LCD 17" monitor and photographic quality printer.

Professional Video-Camera with 1/2" CCD, 5 Mpixel, receiving images from microscope.

Software "Mesdan Video Analyser" for the image acquisition, the production of measurements and comments with on the stored images and measurement directly on the live images, the statistic analysis of the acquired measurements.

Fibre microscope kit (code 250.325) for the microscopic analysis (fibres, yarns and fabrics) and instruction of use.

Optional:

63X LENS (for biological microscope) it enables a 2620X on screen magnification. **Code 250 336**

C-STEP CONNECTOR WITH 0.5X LENS (for biological Microscope). The installation of this connector allows you to halve the magnification on screen and double the sample field of vision. **Code 250 338**

C-STEP CONNECTOR WITH 0.5X LENS (for Stereo-Microscopio). The installation of this connector allows you to halve the magnification on screen and double the sample field of vision. **Code 250 334**

TRINOCULAR KIT (for Stereo-Microscope) to display the sample image either on the PC monitor or in the oculars. **Code 250 340**

Set of 50 slides **Code 191 50**

Set of 100 slide covers **Code 191 52**

Immersion oil bottle **Code 191 54**

Pack of paper for printer **Code 250 18**

Set of cartridges for printer **Code 250 322**

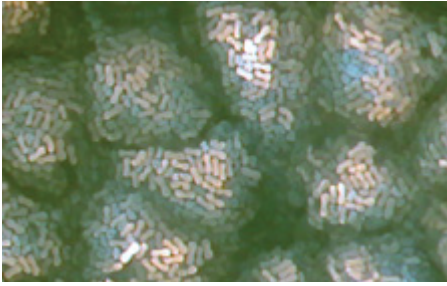
Built in accordance with: UNI 5423, AATCC 20, ASTM 276-00, ASTM 276-00A, ASTM 2130, IWTO 8, ASTM D626, UNI 1130, UNI EN 12751, ISO 137

Power supply: 110-220V, 50-60 Hz

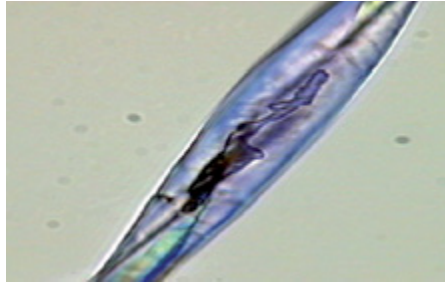
Weight: 50 kg

Dimensions : (L) 1600 x (W) 700 x (H) 700 mm

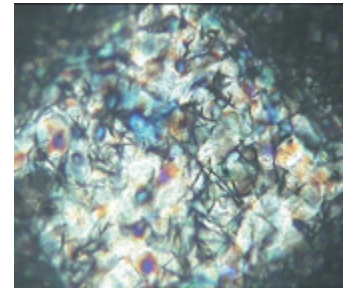
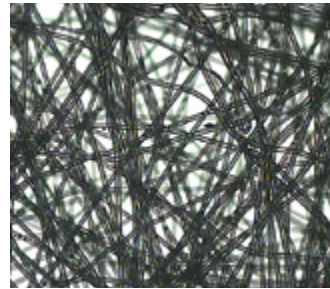
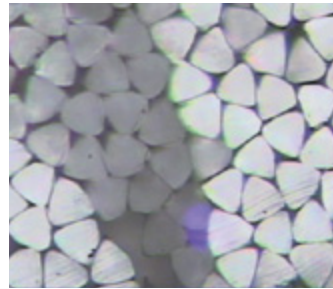
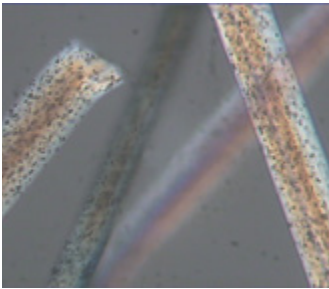
Example of Video Analyser analysis



Yarn section



Length view of cotton fibre and wool fibre

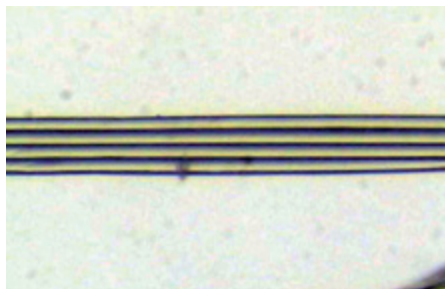


Viscose fibre (length and section view)

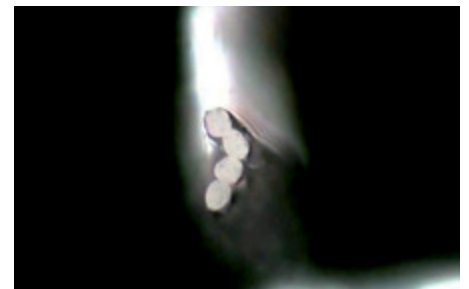
Analysis of non-woven fabric compactness



Analysis of Lycra filaments 1



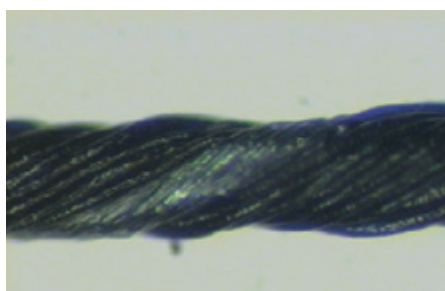
Analysis of Lycra filaments 2



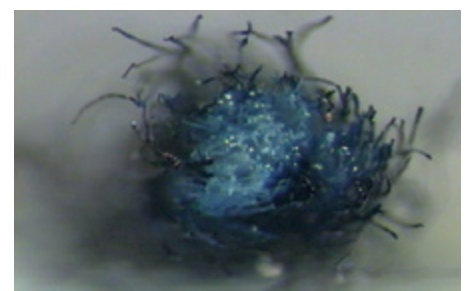
Analysis of Lycra filaments 3



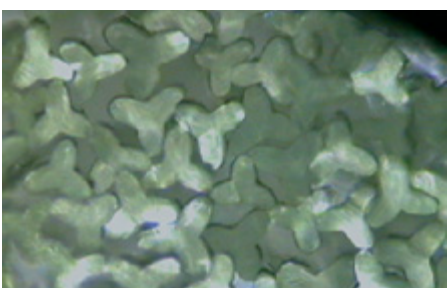
Defect analysis: presence of foreign coloured fibres in the fabric



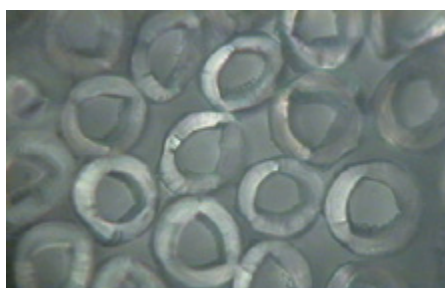
Defect analysis: presence of oil grease in a piece of yarn



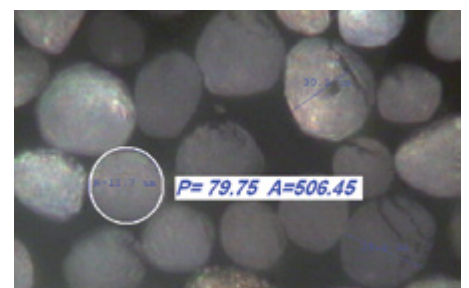
Section of indigo yarn (denim)



Section of trilobal fibre



Section of round hollow fibres



Fibre perimeter and area measurement

Dye-Scanner

2940A

Laboratory knitting machine for the automatic production of tubular knitted fabrics for checking dyeing uniformity and dye affinity, assessment between different yarn bobbins.

Suitable for synthetic, natural and artificial yarns.

Equipped with automatic cop changer (24 or 36 bobbins), electronic yarn feeder, electronic pretension device, bobbin change marking device, 36 yarns conveyor.

Main technical features:

Ergonomic panel with electronic counter-meter, speed potentiometer and led Indicators of machine functions.

Rotation speed of cylinder adjustable from 0 to 450 rpm by means of electronic potentiometer.

High productivity: 1000-1200 samples (length 2,5 cm) in about 10 hours.

Electronic counter-meter to set sample length and number of samples.

Automatic oiling device for the cylinder.

Endowed with fabric fineness adjustment mechanism.

Interchangeable Cylinder \varnothing 3, 3/4" diameter suitable for a wide range of yarns.

Electronic automatic yarn pre-tensioner (0,1cN accuracy) enabling constant and precise tension during operation.

Electronic device marking the knitted fabric when bobbin is changed.

Equipped with Automatic cop changer (A.C.C.) with builtin mechanical knotter.

Yarn feeder enabling change of cop while machine is running a test.

Two models available:

24 bobbins Auto cop changer (A.C.C.); **Code 2940B**

36 bobbins A.C.C. 36 yarns rack conveyor to the A.C.C. speeds up creel change operation. **Code 2940A**

Power supply: 380V, 50Hz three-phase 1100W

Air supply: 6 bar

Weight: 200 Kg

Dimensions: (L) 1500 x (W) 4000 x (H) 1750 mm

* Cylinder capacity should be confirmed by yarn testing as cylinder selection is affected by yarn count, composition and friction.

** cylinders with different capacity are available on request



Detail of yarn pretensioner

List of available cylinders

Code	no of needles	Needle gauge	Nominal count range *
294E 1320	320	75	Dtex 10-100
294E 1260	260	70	Dtex 30-150
294E 1240	240	48	Dtex 70-300
294E 1220	220	48	Dtex 100-400
294E 1140	140	36	Dtex 200-1000
294E 1112	112	24	Dtex 400-2000

Mini Spinning

A real spinning mills in miniature to produce a small lot of short and long staple yarn, ideal for:
textile institutes and research centres
spinning mills of blends
spinning mills of wollen yarn

Laboratory carding machine 337A

Miniature carding machine designed to produce an homogenous sample of fibres of different colour and/or nature.
It can process both short and long fibres.
Self-cleaning system to avoid dirtying of the sample.
Delivery speed: 10-15 m/min.
Safety devices: emergency stop, switch on moving panels, Plexiglas protective cover.
Average production: 4kg/hr
Working width: 500 mm (25")
Power supply: 380V, 50 Hz three phase
Weight: 570 Kg
Dimensions: (L) 860 x (W) 1460 x (H) 1730 mm



Stiro-Roving-Lab

3371

Miniature draw frame to double and draw in form of an even homogenous sliver the web coming from the Laboratory carding machine.
Suitable for short and long fibres.
Stiro-Roving-Lab is complete with a device to transform the sliver into a roving and wind it on a spool.
Adjustable draw from 2x up to 6x.
Adjustable distance between drawing rollers.
Adjustable drawing speed and pressure.
Power supply: 220V - 50 Hz
Weight: 180 Kg
Dimensions: (L) 1750 x (W) 620 x (H) 1120 mm

Detail of the device for the roving preparation.



Detail of Stiro-Roving-Lab



Ring-Lab

3108A

Mini spinning frame with 6 spindles designed for spinning trials of cotton, wollen, synthetic and blended yarns. Special model to be supplied with slivers or roving produced by Stirolab. Endowed with 5 rollers drawing the sliver up to 400X. Spinning capacity from Ne 8 up to Ne 80. Electronic setting of delivery speed, twist, draw and twist direction.

Technical details:

variable speed drive from 3500 to 25000 R.P.M.

ring diameter 45 mm; tube length 240 mm

Spindle speed: up to 18000 Rpm

Special creel for sliver supply included

Optional kit for core-yarn and compact yarn available on request. Digital control panel to show in real time : Rpm – Tpm – Break draft – Total draft – delivery speed in m/min – etc.

Power supply: 220 V - 50Hz

Weight: 335 kg

Dimensions: (L)1000 x (W)700 x (H)2100 mm.



Wind-Lab

3374

Manual winder with two heads.

Winding speed adjustable from 300 up to 1000 mt/min.

Winding traverse 6" (152 mm) and conicity 5° 57'.

Each head is equipped with yarn tensioner and mechanical waxing unit.

Automatic winder available on request, **code 3374A**.

Power supply: 230 V - 50/60 Hz

Weight: 150 kg

Dimensions: (L) 550 x (W) 1600 x (H) 1800 mm



Mini Assembly Lab

3372A

Single head assembly winder to produce cylindrical cones to be twisted.

Endowed with electronic panel to set parameters.

Winding speed from 200 up to 1200 mt/min.

Length meter and automatic stop.

Power supply: 400 V 3 phase - 50/60Hz

Weight: 100 kg

Dimensions: (L)900 x (W)900 x (H)1300mm

Twister-Lab

3373

Single head two-for-one twisting machine to produce cones of plied yarns in the laboratory.

Endowed with touch screen display to set winding parameters: spindle speed, tpm., winding angle, S/Z direction. Display of quantity of processed yarn in mt.

Spindle type 202B with adjustable speed from 5000 up to 13000 rpm.

Twisting collecting from 8 to 100 mt/min.

6" winding traverse and 4° 20' conicity.

Power supply: 220V - 50Hz

Air supply: hose ø 6 mm - 6 bar

Weight: 130 Kg

Dimensions: (L) 470 x (W) 650 x (H) 1450 mm



Lab-Knitter

294E

High precision single cylinder laboratory knitting machine for the production of tubular knitted fabric for checking dyeing uniformity and evaluate dye affinity.

Equipped with one cylinder 3,3/4" diameter, selectable number of needles and fineness (see the chart on page 27)

Endowed with fabric fineness regulation mechanism

Automatic oiling device

Ergonomic control pad complete with:

electronic yarn length meter

variable speed regulation by means of a potentiometer

Led indicators monitoring machine's functions.

Optional:

electronic tensioner Code 2940 100

foot switch Code 2940 80

Upgrading kit to transform Lab knitter in Dye Scanner (fully automatic version endowed with automatic cop changer)

Power supply: 380V- 50 Hz three-phase

Weight: 130 kg

Dimensions: (L) 850 x (W) 1050 x (H) 1750 mm

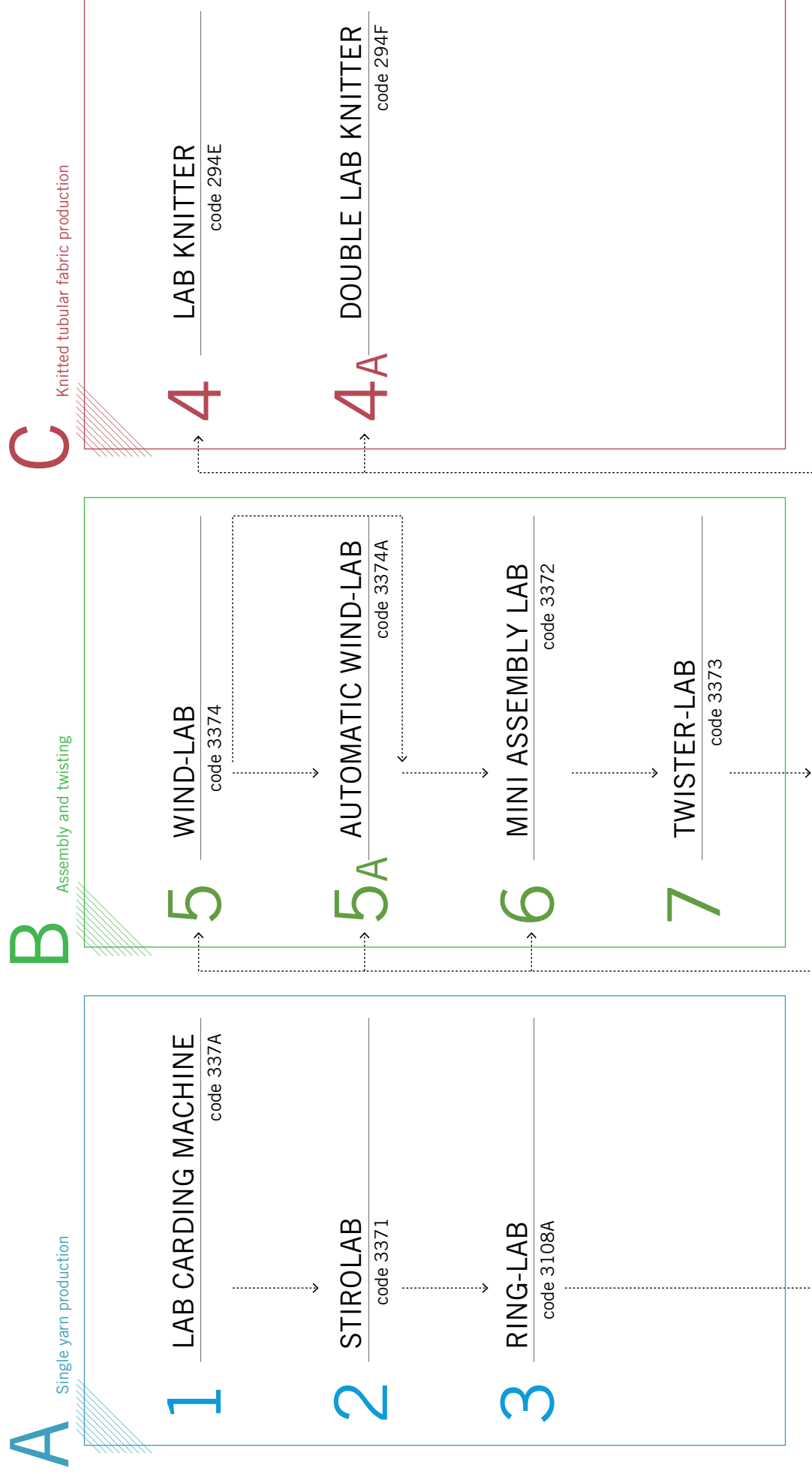
List of available cylinders

Code	n° of needles for filaments	Needle gauge	Count range for filaments	Count range for spun yarn*
294E 1320	320	75	Dtex 10-100	Ne 80-100
294E 1260	260	70	Dtex 30-150	Ne 60-80
294E 1240	240	48	Dtex 70-300	Ne 40-60
294E 1220	220	48	Dtex 100-400	Ne 20-40
294E 1140	140	36	Dtex 200-1000	Ne 12-20
294E 1112	112	24	Dtex 400-2000	Ne 8-12

* Cylinder capacity should be confirmed by yarn testing as cylinder selection is affected by yarn count, composition and friction.



Mini Spinning Layout



A Single yarn production

B Assembly and twisting

C Knitted tubular fabric production

RECOMMENDED

CONFIGURATION

BASIC - TOP

Basic (for spinning mills):

Single yarns assessment: 1+2+3+4

Plied yarns assessment: 1+2+3+6+7+4

Top (for research centres and institutes):

with automatic winder : 1+2+3+5A+6+7+4A

with manual winder: 1+2+3+5+6+7+4A

FABRICS

p 42	Tenso-Lab 3	Code	2512A
p 43	Tenso-Lab 5000	Code	2515
p 44	Autodyn II	Code	2514
p ⁴⁵ / ₄₆	Clamps for Tenso-Lab		
p 47	Crease Recovery Tester	Code	3109
p 47	Crimp Tester	Code	320A
p 47	Wrinkle Recovery Tester	Code	3110
P 48	Martindale	Code	2568
p 49	Burstmatic	Code	338E
p 50	Digital electric-hydraulic Bursting Tester	Code	338D
p 50	ICI Pilling&Snagging Tester 4 positions	Code	279G
p 50	Spray Rating Tester	Code	333A
p 51	Elmendorf	Code	275A
p 51	Pneumatic Fabric Stiffness Tester	Code	3396
p 51	Thickness-Lab	Code	1880
p 52	Air Tronic	Code	3240A
p 52	Crumpleflex	Code	3399S
p 52	Water Proof	Code	3241C
p 53	Elmatic	Code	275D
p 54	Macro-Lab	Code	250F
p 55	Circular cutter	Code	175B
p 55	Electronic balance per sq. metre	Code	165.664
p 55	Microscope for fabrics	Code	191G
p 55	Pick Counters		
p 55	Portable Microscope	Code	2604
p 56	Iso Flammability Lab	Code	3392E
p 57	45° Flammability Tester	Code	3392C
p 57	Horizontal Flammability Tester	Code	3392D
p 57	Vertical Flammability Tester	Code	3392G
P 58	Sweating Guarded Hot Plate	Code	3123
p 59	Crock-Meter	Code	2540
p 59	Electric Crock-Meter	Code	198B
p 59	Forced ventilation Oven	Code	251G
p 60	Hand driven sample cutter	Code	175E
p 60	"Hoffman" press	Code	3370A
p 60	Sample Press Lab	Code	1750A
p 61	Incubator	Code	251L
p 61	Perspirometer	Code	257A
p 61	Scorch-fastness	Code	312A
p 62	Solarbox 1500	Code	325A
p 62	Xenon-Lab	Code	325E
p 63	Dry Cleaning Machine	Code	310F
p 63	Tumble Dryer	Code	3111
p 63	Wascator	Code	310B
p 64	Autowash II	Code	311L
p 64	Front-Loading Home Tumble Dryer	Code	3111A
p 64	Top-Loading Home Laundry Washing Machine	Code	310C
p 65	Blue scale		
p 65	Grey scale		
p 65	Multifibre DW	Code	257.424
p 65	Multifibre TV	Code	257.426
p 65	Standard Adjacent Fabrics		
p 66	AATCC Crease Appearance Replicas	Code	3109.2
p 66	AATCC Smoothness Appearance Replicas	Code	310.74
p 66	ECE/IEC reference detergent		
p 66	Soap powder	Code	310.10
p 67	Static-Lab Tester	Code	291B
p 67	Vapour Permeability Tester	Code	3122
p 67	Water Vapour Test	Code	3395
p 68	Air & Water Leakage Lab	Code	2571
p 68	Glove Tester	Code	3394A
p 68	Impact Abrasion Lab	Code	2563



Electronic semi-automatic strength tester for fabrics, ribbons, strings and yarns. C.R.E. tensile strength measuring system. Zero self-resetting after every test. Automatic pretension of the sample under test. Adjustable distance between clamps ranging from 50 to 500 mm. Adjustable tensile speed ranging from 10 to 1000 mm/min. with return of the moving clamp at the maximum speed. Tenso-Lab 3 is directly controlled by a Personal Computer that enables an accurate control of its functioning and enables the operator to automatically perform, thanks to a wide number of software packages, a large number of tests according to the most recent international standards (ISO – ASTM – DIN - M. & S.). Tests are performed in an efficient and easy to use Windows environment.

The following tests can be performed according to specific norms: traction, compression, seam slippage, hysteresis cycle, adhesion and tearing. Hysteresis cycle test Seam slippage test. A wide selection of mechanical and pneumatic clamps, built in accordance with international Standards, is available (please refer to the following pages).

Pc available on request.

Different interchangeable load cells can be chosen among the following models:

maximum capacity: 2 daN (kg), accuracy: 0.1 cN (g) **Code 2510.276**

maximum capacity: 10 daN (kg), accuracy: 0.1cN (g) up to 1 daN (kg) and 1 cN from 1 daN (kg) to 10 daN (kg) **Code 2510.993**

maximum capacity: 100 daN (kg), accuracy: 1 cN (g) up to 10 daN (kg) and 10 cN from 10 daN (kg) to 100 daN (kg) **Code 2510.282**

maximum capacity: 300 daN (kg), accuracy: 10 cN (g) up to 30 daN (kg) and 100 cN from 30 daN (kg) to 300 daN (kg) **Code 2510.283**

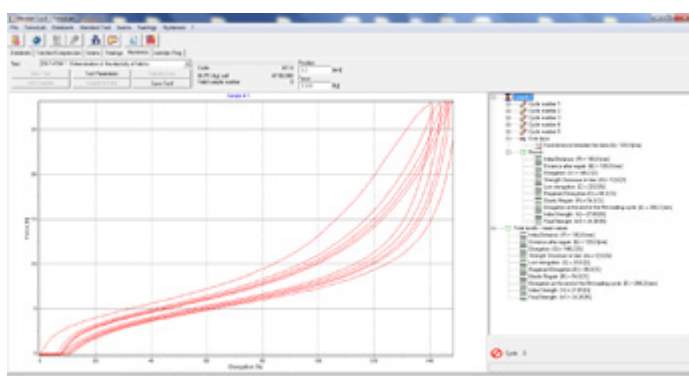
level of accuracy of load cell 0,05%

Built in accordance with: ISO, DIN, ASTM, BSi, UNI, M&S

Power supply: 220V - 50/60 Hz single-phase, 8 kW

Weight: 83 kg (Pc excluded)

Dimensions: (L)610 x (W)600 x (H)1340 mm.



Example of Hysteresis cycle test



Example of tearing test



Two-column universal electronic strength tester (CRE) developed to meet the high quality testing requirements of universities, research institutes and leading companies. With a maximum capacity of 5000 kg (50 kN), it is suitable to test also technical textiles, geo-textiles, non-woven and industrial textiles in general. Twin ball screws ensure the smooth movement of the crossbar, sliding between two reinforced guide columns that prevent any deformation of the framework. Available a version 1000kg (10 kN) **code 2516**

Working speed: from 0.5 to 500 mm/min.

Maximum travel of the crossbar: 1200 mm (without clamps)

Inner distance between the columns: 400 mm

Developed to be used with a wide range of easily interchangeable load cells and clamps, both mechanical and pneumatic.

TensoLab 5000 is PC controlled. Thanks to the different operating softwares available, it can perform traction, compression, tearing, delamination, adhesion, seam slippage tests and hysteresis cycles, according to specific international standards.

A Mechanical Extension Device is available as optional, for a further check of elongation on very rigid samples with low intrinsic elongation.

Built in accordance with ISO standards: C.R.E.

Available load cells:

maximum capacity 2 daN (kg)	Code 2510.276
maximum capacity 10 daN (kg)	Code 2510.280
maximum capacity 100 daN (kg)	Code 2510.282
maximum capacity 500 daN (kg)	Code 2510.283
maximum capacity 1000 daN (kg)	Code 2510.284
maximum capacity 5000 daN (kg)	Code 2510.288

Precision of load cells: 0,05%

Several types of clamps, both mechanical and pneumatic, are available according to the type of standards.

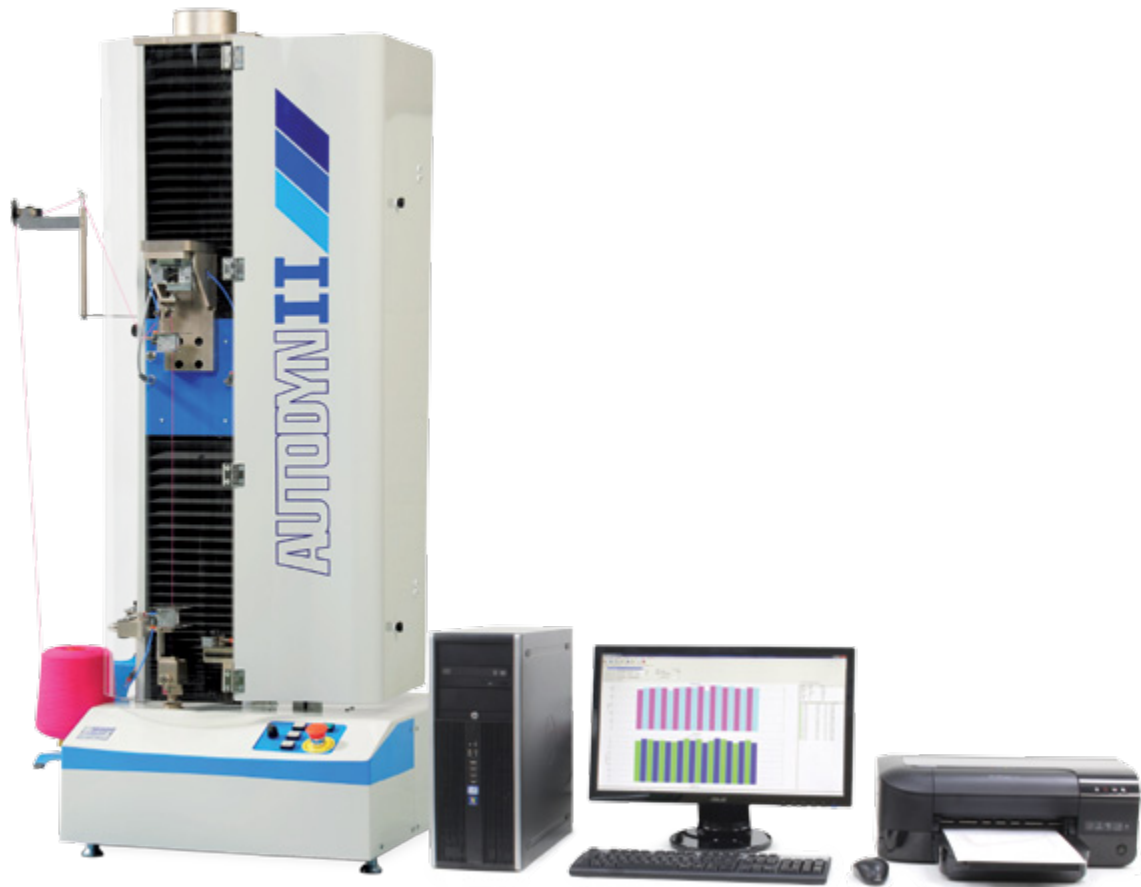
Pc available on request.

Built in accordance with: ISO, DIN, ASTM, BSi, UNI, M&S

Power supply: 220 V, 50/60 Hz, single-phase, 8 kW

Weight: 260 kg

Dimensions: (L)900 x (W)600 x (H)1900 mm.



Modular strength tester executes automatically tensile tests and hysteresis cycles on yarns; it semi-automatically executes traction, compression, tearing test on fabrics, covering adhesion tests, tensile test on yarns and hanks (lea test). Automatic single column strength tester with movement resulting from a ball bearing screw; it is controlled by a software which runs all the functioning phases. Thanks to the specific modular software, Autodyn allows performing tests in compliance with the main international standards or according to parameters set by the operator which can be saved for future need. Autodyn can fit different load cells easy to change with maximum capacity of 1000N, and a wide range of pneumatic and mechanical clamps. Working speed: from 10 to 5000 mm/min. Modular design specifically conceived for textile industries requiring both automatic and semiautomatic testing of yarns, hanks, fabrics, covering cloths and seams.

Available also in the 24 position automatic version - **code 2514A**

Optional:

- PC, printer,
- interchangeable load cells of 20, 100, 1000, 3000N
- wide range of mechanical and pneumatic grips for yarns hanks and fabrics

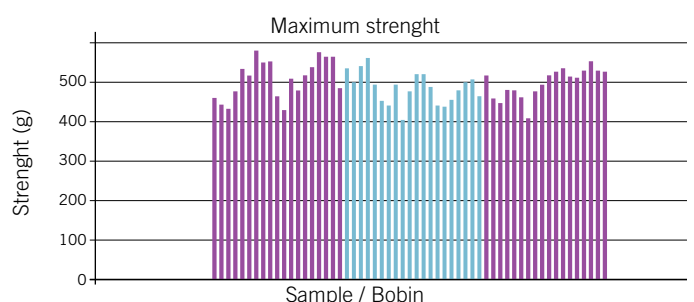
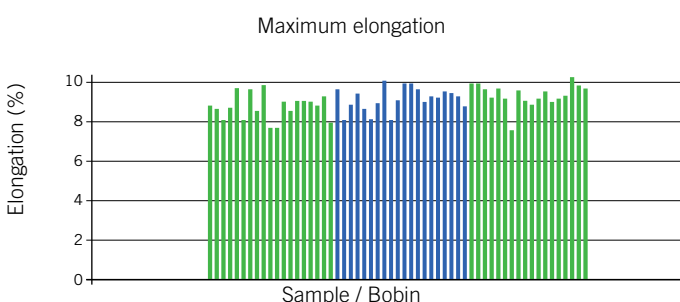
Built in accordance with: ISO, DIN, ASTM, BS, UNI, M&S standards

Power supply: 220V/110V 50/60 Hz - 400VA

Air supply : 6 bar

Weight: 85 Kg

Dimensions: (L) 610 x (W) 610 x (H) 1340 mm



Available clamps for Tenso-Lab e Autodyn

following →



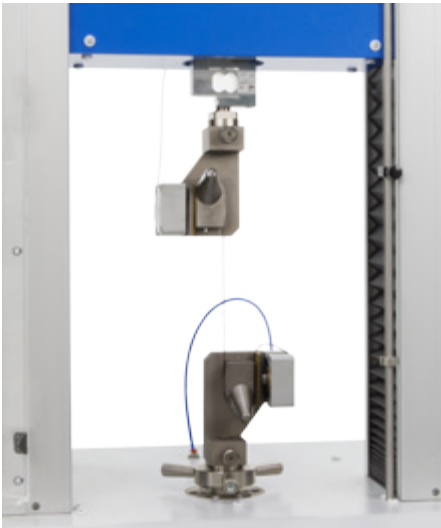
Pneumatic clamps for delicate yarns such as POY, Lycra, cotton and worsted yarns (20 N capacity).
Code 2510.978



Pneumatic clamps for standard yarns and sewing threads up to 50N maximum resistance.
Code 2510.982



Mechanical clamps for normal yarns up to 30N.
Code 2510.994



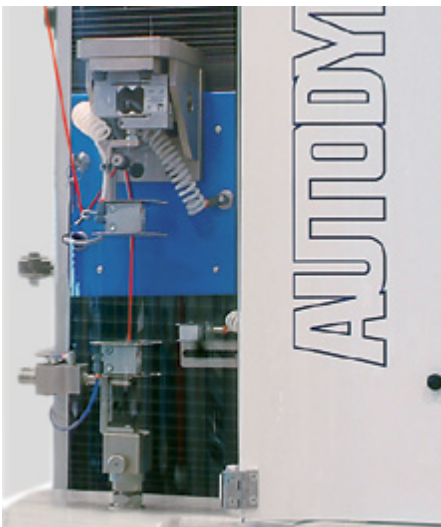
Clamps for yarns (high tenacity) with conical introducer.
Code 2510.980



Mechanical clamps for high tenacity yarns
- Scott type 100 – **Code 2510.995**
- Scott type 300 – **Code 2510.996**



LEA clamps for hanks **Code 2510.990**



Mini clamps for yarns up to 20 N (for Autodyn only)
Code 2513.918. Maxi clamps for yarns up to 50 N (for Autodyn only) **Code 2513.920**

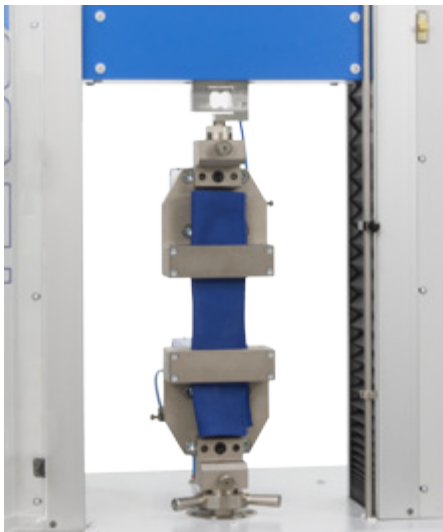


Ribbons high tenacity clamps **Code 2510.920** (for Tensolab 1000-5000 only)



Tool for nail tearing tests on fabrics. **Code 2510.922**

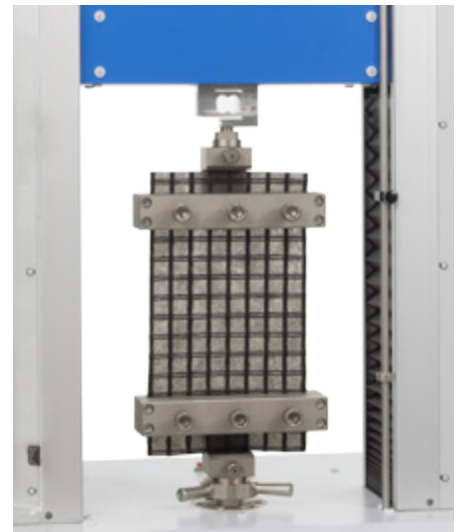
Available clamps for Tenso-Lab e Autodyn



Pneumatic maxi rubber clamps, 100mm wide **Code 2510.964** for high tenacity and heavy fabrics (for Tensolab1000-5000 only).
Pneumatic standard rubber clamps, 100mm wide **Code 2510.950** for light fabrics weight



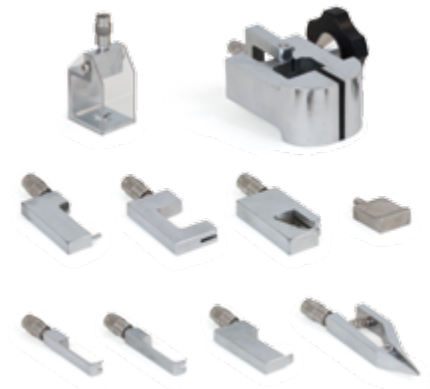
Mechanical rubber clamps, 100mm wide **code 2510.900**.



Mechanical clamps for non-woven 200 mm wide, with rubber grips **Code 2510.904**. Also available for geotextiles.



Example of interchangeable grips for body clamps 100mm
 - rubber covered grips 100mm
 - grab/rubber 25x25mm
 - grab grips 25x25mm
 - contact line grips 100mm
 - knurled grips 100mm



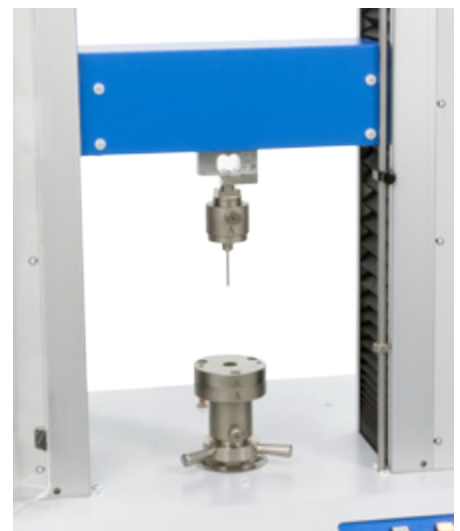
To define the garments manufacturer responsibility and duties to ensure that zips are applied appropriately to all garments. **Code 194E.28**



Tool for perforation test of non-wovens in compliance with UNI and ISO Standards (for Tensolab1000-5000 only) Type CBR. **Code 2510.690**



Tool for perforation test of non-wovens Persoz type **Code 2510.800**



En 388 perforation test. **Code 2510.681**

Crease Recovery Tester 3109

To determine recovery characteristics of fabrics undergoing a preset pressure for a determined period of time.

Built in accordance with: ISO 2313, AA TCC 66, BS EN 22313, M&S P22

Weight: 8 kg

Dimensions: (L) 250x(W)200x(H)350 mm



Wrinkle Recovery Tester 3110

To determine fabrics resistance to wrinkling.

Equipped with a standard comparative photo-kit, one 0.5 kg weight, one 1 kg weight, one 2 kg weight, and two fixing clamps with support.

Built in accordance with: AATCC 128, ISO 9867.

Weight: 9,5 kg

Dimensions: (L)150 x (W)150 x (H)330 mm



Crimp Tester 320A

To determine crimp on yarns, caused by weaving and knitting processes.

The device is used also to measure with absolute accuracy the length of a yarn section, in order to determine, after weighing, the count.

Built in accordance with: ISO 7211, EN14970, IWSTM 31-169, UNI 9276

Weight: 2 kg

Dimensions: (L)1500 x (W)80 x (H)40 mm





Instrument for the control of wear and pilling on all types of fabrics. **Model with 9 positions** with display LCD touch screen equipped with single and total rotation counter.

Supplied with 2 sets of weights of 9 and 12 kPa.

3 type test: wear, pilling, linear.

It is available on request also a **six positions model code 2568A**.

Standard Abradent Fabric (1.6x1m),	Code 314.12
Std.Backing Foam 1.5mx0.5m (pack of 4 pcs)	Code 314.10
Std.Backing Felt disc ø of 140mm (pack of 20 pcs)	Code 314.8
Std.Felt disc ø of 90 mm for Pilling test (pack of 20 pcs)	Code 314.20
Sample holder for Swiss Pilling test (EMPA)	Code 2568.300
Standard photographs SM50 for pilling test on woven fabrics (3x4 pcs)	Code 314.14
Standard photographs SM54 for pilling test on knitted fabrics (3x4 pcs)	Code 314.16
Standard photographs EMPA 991 (3x4 pcs)	Code 314.18
Standard photographs EMPA 992 (3x4 pcs)	Code 314.24
Sample cutter 38ø mm	Code 2560.322
Sample cutter 90ø mm	Code 2560.324
Sample cutter 140ø mm	Code 2560.320

Officially approved by Marks & Spencer for the following tests:

Marks & Spencer P17 Pilling method P1

Marks & Spencer P18C Enhanced Pilling

Marks & Spencer P19 Martindale Abrasion Resistance of Apparel Fabrics

Marks & Spencer P19A Martindale Abrasion Resistance of Handbags and Belt Fabrics

Marks & Spencer P19B Martindale Abrasion Resistance of Upholstery

Marks & Spencer P19C Martindale Abrasion Resistance for Shirtings



Built according to: ISO 12945-2, EN ISO DIN 12947-1/2/3/4, BS EN ISO 12947- 1, ASTM D4970/4966, IWS TM 196-112, SN 198525, JIS L1018

Power supply: 220V/50Hz, single-phase (110V-60Hz)

Weight: 100 Kg

Dimensions: (L) 900 x (W) 660 x (H) 340 mm.



Pneumatic bursting tester to determine the bursting resistance of woven and knitted fabrics, non-wovens and cardboard. The instrument measures the required pressure necessary to burst a tested specimen as well as to measure the specimen extension prior to bursting.

Such test can be carried out in two different ways:
 following a specific testing standard already present in the software
 free adjustment of testing parameters

Besides, Burstmatic can measure the hysteresis (fatigue cycling tests) as well, the specimen behavior when subject to cycling extensions and relaxations. All settings are freely programmable. Next to this, on a colour wide touch-screen one can visualize all the testing parameters, statistic results, graphics showing the dynamic behaviour of the tested fabric either during bursting or cycling tests.

All testing parameters, results and graphics can be stored into the Burstmatic database. The sample distension height is measured by means of laser technology.

Possible Tests:

Bursting tests using customised settings (freely programmable)

Cyclical tests using customised settings

Power Supply: 110-240V - 50/60 Hz monofase

Net Weight: : 65 Kg

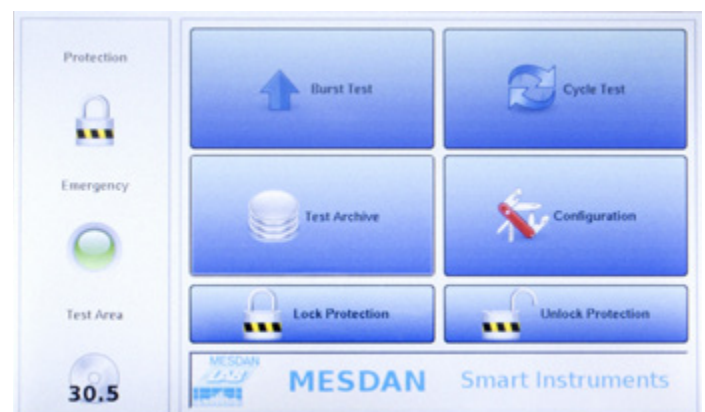
Dimensions: (L) 370 x (W) 460 x (H) 530 mm

Available test areas:

Area	Diameter	Standard
7.3 cm ²	30.5 mm	ISO 13938-2, ASTM D3786, M&S P27, WOOLMARK TM29
7.8 cm ²	31.5 mm	ASTM D3786, WOOLMARK TM29
10 cm ²	35.7 mm	ISO 13938-2
50 cm ²	79.8 mm	ISO 13938-2, M&S P27
100 cm ²	112.8 mm	ISO 13938-2

Measurement range:

Distension	mm			Pressure	bar	kPa	psi
	Min	Max	Resolution				
Min	0.1	0.004	0.01	Max pressure	10	1000	145
Max	70.0	2.756	7.00	Resolution	0.001	0.1	0.02
Resolution	0.1	0.004	0.01				





Spray Rating Tester

333A

To determine the surface wetting resistance of fabrics.
As optional, a standard photo kit is available (code 333.2)

Built in accordance with: AATCC 22, ISO 4920

Weight: 5 kg

Dimensions: (L)280x(W)280x(H)500 mm



ICI Pilling & Snagging Tester 4 positions

279G

Instrument particularly suitable for testing pilling on knitted fabrics.
Upon request, 2 position model **code 279H** can be supplied.

Optional:

special set of nails, to perform snagging test (**code 279.16**).

Model with four boxes.

Complete with revolution counter.

Speed setting: 30/60 rpm

Built in accordance with: ISO 12945-1, BS 5811, IWS TM152

Power supply: 220/110V, 50/60 Hz, single-phase

Weight: 69 kg

Dimensions: (L)980 x (W)660 x (H)800 mm



Digital electric-hydraulic Bursting Tester

338D

To determine fabrics resistance to bursting.
Pressurising device with precision volumetric pump.
Safety valve for pressure control. Control lever for test execution, emptying operation and automatic zero setting at release.
Control device run by an electric engine at variable speed, with automatic stopwatch to check test duration.
Glycol fluid. Measuring range from 0 to 50 bar (0 to 5000 kPa).
Subdivision: 0,01 bar. Supplied with: 12 membranes of pure para rubber, 12 O-rings, 1 bottle of liquid, 1 wrench for ring dismantling.
Complete with conformity certificate.

Built in accordance with: ISO 2960, ISO 13398-1 (except 6.1.3), ASTM D 3786

Power supply: 220V, 50 Hz, single-phase

Weight: 30 kg

Dimensions: (L)500 x (W)400 x (H)400 mm

Elmendorf

275A

Instrument to test tearing resistance of cloths, artificial leather, paper. Interchangeable pendulums having the following capacities can be supplied:

pendulum: 1.600 g **Code 275A.126**

pendulum: 3.200 g **Code 275A.128**

pendulum: 6.400 g **Code 275A.130**

Built in accordance with: UNI EN ISO 13937-1, ASTM D 1424, DIN 53862

Weight: kg 6 (pendulum excluded)

Dimensions: (L)380 x (W)180 x (H)380 mm.



Pneumatic Fabric Stiffness Tester

3396

For the quick and accurate measurement of fabric stiffness. A plunger of 25,4 mm (1 inch) diameter pushes the fabric through a 38mm (1,5 inch) diameter hole and the maximum force is recorded.

Selectable measurement units are: 50Kgf, 500N, 100lb.

Built in accordance with: ASTM D4032

Power supply: battery

Weight: 18 Kg

Dimensions: (L)500 x (W)500 x (H)600 mm.



Thickness-Lab

1880

Laboratory thickness tester, with digital reading, suitable for woven and knitted fabrics, non-wovens, geo-textiles and leather. Reading capacity from 0 to 10 mm, with 0,01 mm accuracy. RS232 port available.

Available models:

accomplishing EN ISO 5084 standard (textiles) 20 cm² - 0.1 and 1 kPa **Code 1880**

accomplishing EN ISO 964-1 standard (geotextiles) 25 cm² - 2 and 20 kPa **Code 1880B**

accomplishing EN ISO 53855 standard (nonwoven) 25 cm² - 0.5 kPa and 1 kPa or 10 cm² - 5 kPa **Code 1880C**

Other models for leather, rubber, paper, etc available as well. Pressure weights and additional plates for each model are available on request. A version with a measuring range from 0 to 25 mm it is also available.

Optionals: software for data acquisition and storage **code 1880.2**

Weight: 23 kg.

Dimensions: (L)250 x (W)310 x (H)300 mm.





Crumpleflex

3399S

Equipment for reproducing the wear of coated technical fabrics and to check their water resistance waste due to the crease during the final use.

A tubular sample of fabric is twisted at 87°, elongated and compressed at the same time.

At the end of the wearing test, the damaged coated fabric must be tested by Water Proof **code 3241C**

Built in accordance with: ISO 8096, BS 3424

Weight: 60 Kg.

Dimensions: (L) 1040 x (W)520 x (H) 250 mm

Water Proof

3241C

Instrument for the analysis of the water permeability of textile materials. It enables to determine the hydrostatic pressure needed for water passage through samples. It also measures the resistance of the samples to water passage at a constant hydrostatic pressure. The tested sample has a surface of 100 cm² and it is fixed with a special air tight system.

Adjustable pressure: 0-9999 mm/H₂O.

“Plus” model **code 3241D** with adjustable pressure up to 20.000 mm/H₂O is also available.

Supplied complete with “touch screen” for the setting and reading of the analysis results.

Software and cable is available on request.

Built according to: EN ISO 20811, DIN 53886, AFNOR G- 07057, ISO 811, BS 2823, BS EN 3424 part 26, AATCC 127, UNI 5123, ISO 1420-A

Power supply: single phase 220V, 50 Hz.

Weight: 50 Kg.

Dimensions: (L) 540 x (W) 540 x (H) 1700 mm

Air Tronic

3240A

Instrument to measure directly the air permeability (considered as the speed of the air flow passing vertically through a sample in specific set conditions) of woven and knitted fabrics, industrial and technical textiles, non-wovens , artificial leather, felts and paper.

Air permeability is measured in mm/s. Other available measuring units: m/s and lt/min. The standard model fits head sample holder of 2, 5, 10, 20, 50 cm²

Built in accordance with the following standards: UNI EN ISO 9237, DIN 53887, ASTM D737, AFNOR G07-111

Power supply : 220V-50Hz

Weight : 30 kg

Dimensions: (L) 430 x (W)500 x (H) 620 mm

code	Depressure 10Pa=1mm		Air flow	Mass meter	Test Area standard	Test Area optional
	Pa	mm H ₂ O	l/h (min-max)	l/h (min-max)	cm ²	cm ²
3240A	0-900	90	50-5800	10-100	2-5-10-20-50	100
3240B	0-2500	200	50-5800	10-100	2-5-10-20-50	38-100
3240C	0-2500	200	650-100.000	0-900	5-20-25-50	38-100





The only ELMENDORF on the market able to automatically perform the following operations:

- sample cut
- release of the laceration pendulum
- reading of the laceration value
- blocking of the pendulum
- reset of the pendulum into the starting position

Suitable for all kinds of apparel, technical and protective fabrics, as well as for paper, cardboard, natural and artificial leather. Model with a high laceration capacity, ranging from 1600 to 30.000 g. Pendulum complete with additional check weights, supplied as standard with the instrument.

Instrument equipped with alphanumeric keyboard and digital reader for the measurement of the laceration values that can be printed or transferred to a PC through a RS 232 serial port. Instrument fully protected and complying with the strictest EC safety norms.

Built according to the following international standards: ISO 1974, EN 21974, ISO 13937, ISO EN 4674- 2, ASTM D 751, ASTM D 1424, ASTM D 5734, AFNOR G07- 149.

Power supply: single-phase 220 V, 50 Hz

Net weight: 66 kg

Dimensions: (L)700 x (W) 400 x (H) 500 mm





High performance computerised system conceived for the analysis of fabrics and, non-wovens, etc.

Ideal to analyse yarn structures, detect defects, reduce warp and weft density of fabrics to a cm or a inch; analyse mechanical parts.

It enables to elaborate, store and print the produced measurements, relating statistics (min., mean, max. values, CV%) and distribution graphs.

The system is composed by:

Stereo-Microscope with video magnification from 24x to 165x, illuminated base, for the analysis of fabrics, yarns and mechanical parts like traveller, needles and spinnerets.

Optical fibre illumination device (for a perfect illumination of a sample from different adjustable angles).

PC complete with LCD 17" monitor and photographic quality printer.

Professional Video-Camera with 1/2" CCD, 5 Mpixel, receiving images from microscope.

Software "Mesdan Video Analyser" for the image acquisition, the acquisition of images on which measurements and comments can be produced, the measurement directly on the "live" images, the statistic analysis of the acquired measurements.

Fibre microscope kit for the microscopic analysis and instruction of use.

Optional:

C-STEP CONNECTOR WITH 0.5X LENS

The installation of this connector allows you to halve the magnification on screen and double the sample field of vision

Code 250 334

TRINOCULAR KIT

To display the sample image either on the PC monitor or in the oculars

Code 250 340

Power supply: 110-220V, 50-60 H

Weight: 50 Kg

Dimensions: (L) 1600 x (W) 700 x (H) 700 mm



Portable Microscope 2604

Pocket size microscope with 40X magnification and grazing light.

Pick Counters

Brass made pick counter 10x10 mm and 12X Code 2601

Brass made pick counter 25x25 mm and 7X Code 2605

Microscope for fabrics 191G

Stereoscopic microscope with trinocular head frame, particularly indicated for the fabric and yarn analysis.

Standard magnification from 7X to 45X.

Incident and transmitted illumination.

Optional:

Pair of oculars 20X and additional lens 2X Code 191.66
permit to have a maximum of 180 enlargements Code 191.70

Additional lens 0.5X permits to halve the standard magnification Code 191.64

Adaptor for Reflex type camera(T2 pring not supplied) Code 191.68

Power supply: 220V 50/60 Hz single phase

Weight: 7 Kg

Dimensions: (L) 200 x (W) 250 x (H) 400 mm

Circular Sample Cutter 175B

Cutting area 100 sq/cm.

Cutting depth 5 mm. Model with 4 blades.

Equipped with one cork support plate and four spare blades.

Built in accordance with: ISO 3374, BS 24 71, ISO 3801, UNI 5114, UNI 8014-2, ASTM D 3776

Weight: 2 kg

Dimensions: (L) 170 x (W) 170 x (H) 150 mm

Electronic balance per m² 165.664

Digital reading electronic balance particularly suitable to check the weight/square metre of fabrics and paper, by means of pre-cut round cloth samples with a surface of 100 cm².

The reading capacity of the balance, by using 100 cm² round cloth samples, allows measuring a maximum weight of the fabric up to 30000 g/m², with an accuracy of 1 g/m²

Weighing capacity 300 g and accuracy 0,01 g.

Pan size 120 mm ø.

Power supply: single-phase 220 V, 50 Hz

Weight: 1,9 kg

Dimensions: (L) 200 x (W) 60 x (H) 220 mm





Instrument to determine the flammability resistance of textiles and the flame propagation rate onto **Vertically** oriented textile materials.

Suitable to test:

protective fabrics

technical fabrics in general

apparel and furnishing fabrics

The instrument can be also used with toys and both natural and artificial leather.

Iso Flammability Lab is fully **automatic** since it is equipped with a PLC that controls and records the movement of the burner, the distance of the same from the samples, the flame propagation time from one set distance to the other.

The PLC has a RS 232 serial port for connection with a Personal Computer, for the printing of test results.

Optional:

Computer - Software - Printer

Radiator **code 3392E 40** to analyse the flammability resistance of textile materials exposed to the heat of a radiator (as required by the EN 13772).

Built according to the following international standards:
 EN ISO 15025 (part A), EN ISO 15025 (part B), EN ISO 6940 (part A), EN ISO 6940 (part B), EN ISO 6941 (part A), EN ISO 6941 (part B), EN 13772, EN 1101, EN 1102, EN 1103

Power supply: 110-220 V, 50-60 Hz

Net weight: 50 kg

Dimensions: (L)650 x (W) 750 x (H) 1200 mm

45° Flammability Tester 3392C

Laboratory instrument to determine the flammability resistance of fabrics to a flame applied with an angle of 45°.

Automatic model with timer in seconds that automatically stops at the desired time.

Made of stainless steel.

Transparent panel made of flame-resistant glass.

Built according to the following international standards: CFR 1610, ASTM D1230, NFPA 702, CA TB 117, BIFMA.

Power supply: single phase 110V, 60 Hz or 220V, 50 Hz

Net weight: 20 kg

Dimensions: L(400) x (W) 350 x (H) 500 mm



Horizontal Flammability Tester 3392D

Automatic instrument to determine the flammability resistance of all kinds of materials used both in the automotive and aircraft industries.

Equipped with a timer in seconds to control the ignition time.

Built according to the following international standards: ASTM D 5132, ISO 3795, FMVSS 302, FAA, BOEING, AIRBUS, SAE J 369, CMVSS 302, JISD 1201.

Power supply: single phase 110V, 60 Hz or 220V, 50 Hz

Net weight: 12 kg

Dimensions: L(450) x (W) 200 x (H) 450 mm



Vertical Flammability Tester 3392G

Automatic instrument to determine the flammability resistance to a vertical flame of apparel fabrics, protective fabrics, curtains and children's sleepwear.

Equipped with a timer in seconds to control the ignition time.

Built according to the following international standards: 16CFR part 1615-1616, ASTM D 6413, FTM 5903, FAA, BOEING, AIRBUS, CPAI 84.

Power supply: single phase 110V, 60 Hz or 220V, 50 Hz

Net weight: 38 kg

Dimensions: (L) 330 x (W) 340 x (H) 850 mm





Highly accurate instrument to determine the physiological “comfort” of fabrics.

Testing is performed by means of a transparent hot plate, called “skin model”, that simulates the process of heat and humidity transfer occurring in proximity of the human skin.

It provides the following data:

Thermic resistance (RCT) with scale from 0.002 to 2.0 m² K/W

Resistance to steam (RET) with scale from 5 to 1000 m² Pa/W

Index of permeability to steam (IMT)

Permeability to steam (Wd)

Max flux 1100W/m²

The instrument is supplied complete with:

Hot plate for fabric specimens up to 8”x8”

Electronic interface with heating and conditioning sensors

Heating device of the “skin model” plate

Air control device

Sensors for the measuring of air speed, temperature and relative humidity.

Personal computer complete with operating software

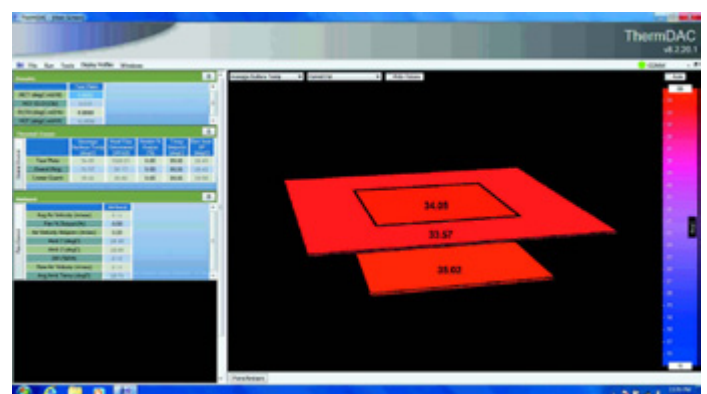
To carry out testing the use of Climatest **code 1722S** is necessary.

Built in accordance with the following international Standards: ISO EN 11092, UNI EN 31092, ASTM D 1518, ASTM F 1868, NFPA 1971.

Power supply: 220V, 50-60 Hz

Net weight: 250 kg

Dimensions: (L) 650 X (W) 520 X (H) 1500 MM.



Crock-Meter

2540

Instrument to determine colour fastness to rubbing, fitted with a digital reading counter. The instrument is supplied complete with a rubbing dowel with 1,6 cm diameter, a dowel with 1,9x2,54 cm dimensions, no. 2 interchangeable weights 9 N and 22 N and one set of crocking clothes.

Optional:

no. 500 pieces of cotton crocking cloth **Code 198.422**

Grey scale **Code 267A**

Built in accordance with: ISO UNI EN 105X12, AA TCC 8/165, M&S C8, BS 1006

Weight: 8 kg

Dimensions: (L) 670 x (W) 220 x (H) 210 mm



Electric Crock-Meter

198B

Electric model to determine colour fastness to rubbing, fitted with a digital counter. The Crock Meter is supplied complete with a rubbing dowel with 1,6 cm diameter, a dowel with 1,9x2,54 cm dimensions, no. 2 interchangeable weights 9 N and 22 N and one set of crocking clothes.

Optional:

no. 500 pieces of cotton crocking cloth **Code 198.422**

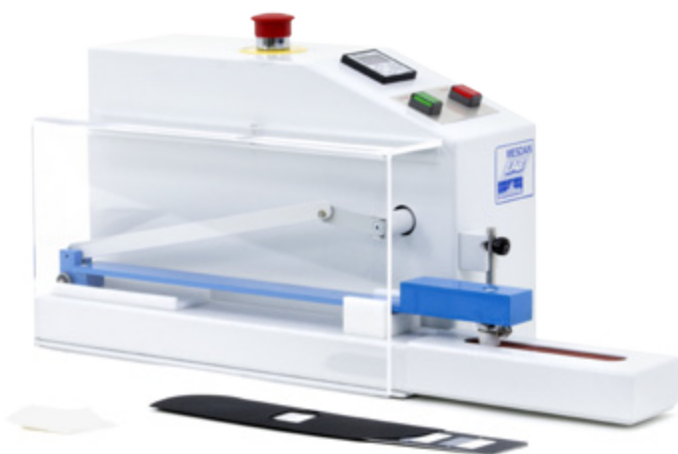
Grey scale **Code 267A**

Built in accordance with: ISO UNI EN 105, AA TCC 8/165, M&S C8, BS 1006.

Power supply: 220/110V, 50/60 Hz, single-phase.

Weight: 20 kg

Dimensions: (L) 800 x 250 (W) x 260 (H) mm



Forced Ventilation Conditioning Oven

251G

High-tech oven suitable for crimp checking in yarns and for checking the dimensional stability of fabrics in hot air.

Suitable for the hot cleaning of mechanical spinnerets, for drying and heating any type of textiles.

Supplied complete with temperature digital regulator and two grid-type shelves made of stainless steel.

Forced ventilation of the heating air with vent.

Operating temperature range from room temperature to +280°C.

Accuracy +/- 1° C.

Available models:

Inside dimensions (L)408 x (W)372 x (H)422mm,
60 litres . Weight: 40 Kg **Code 251G**

Inside dimensions (L)498 x (W)477 x (H)512mm,
120 litres. Weight: 50Kg. **Code 251H**

Inside dimensions (L)593 x (W)522 x (H)797mm,
250 litres. Weight: 90Kg. **Code 251P**

Power supply: 220V, 50 Hz, single phase





Hand driven sample cutter 175E

Hand-driven model with zigzag blade to prepare fabric samples. Blade width 31 cm and step 4 mm between two consecutive teeth.

Blade for straight cut available as optional.

Weight: 50 kg

Dimensions: 420 (L) x 760 (W) x 430 (H) mm



Sample Press Lab 1750A

1750A

Hydraulic punch cutting machine with high cutting capacity. Ideal to cut textile, leather, rubber and soft plastic specimens, to be used for different types of testing (such as strength, weight per square metre, flexion, bursting tests, etc.).

Cutting capacity: 16.000 kg

Maximum cutting surface: 400x800 mm

Maximum cutting stroke: 80 mm

Cutting device can be activated by means of a safety button.

Built in accordance with ASTM, ISO, DIN, AFNOR and UNI standards only.

Power supply: 380V three-phase - 50 Hz

Weight: 870Kg

Dimensions: (L) 980 x (W) 900 x (H) 1410 mm.

Optional Punching knives

Circular, rectangular and square, with straight and jagged blade – different dimensions on demand.

Punch setting: 30mm

Cutting stroke: about 5mm



“Hoffman” Press 3370A

3370A

Ironing machine to check fabrics dimensional stability during ironing tests.

Automatic execution of the pressing cycle, sample steaming and suction cycle.

Test programs are available in the control unit.

The operator can create and save new programs.

Boiler for vapour production **code 3370 2** is available as optional.

Built in accordance with: ISO DIN 53894 and TM-290

Power supply: 380V, 50/60 Hz, three-phase + N - 15 kW

Weight: 300 kg

Ironing board dimensions: 600x800 mm

Dimensions: (L)1400 x (W)1000 x (H)1600 mm

Scorch-fastness

312A

To determine colour fastness to hot pressing and dry heat and to perform sublimation tests.

Heating plates dimensions 125x125 mm (5"x5").

Temperature range from 125 °C to +230 °C.

Pressure: 4 Kpa

Built in accordance with: ISO 105 X11, AATCC 117, 133, BS 1006

Power supply: 220 V, 50 Hz, single-phase

Weight: 15 kg

Dimensions: 260(L) x 460(W) x 240(H) mm

Available also code 312B: 5 plates, dimensions 102x29 mm, (4"x1.13").



code 312B

Perspirometer

257A

Incubator

251L

Instruments to check :

colour fastness to perspiration in compliance with the following standards : UNI EN ISO 105- E04; BS 1006; BS EN 20105; AATCC 15; IWS TM 175

colour fastness to swimming pool and sea water in compliance with the following standards UNI EN ISO 105 E01; BS 1006; BS EN 20105; AATCC 106; AATCC 107; IWS TM 6.

colour yellowing to phenol in compliance with ISO and AATCC standards (on approval).

The system is composed of:

code 257A - Perspirometer; standard weight of 5 kg; set of plexiglas 20 plates 100x40 mm complete with two metallic containers.

code 251L - Incubator cabinet with measuring scale from +5°C to 78°C (+/-0,8°C at 37°C accuracy).

Electric power supply: 220/110 V, 50/60 Hz, single-phase

Weight: 45kg

Inner dimensions: 300 (L) x 240 (W) x 300 (H) mm

Outside dimensions: 550 (L) x 350 (W) x 420 (H) mm

Optional:

Multifibre fabrics DW 010 (ISO 105 e BS 1006) **Code 257 424**

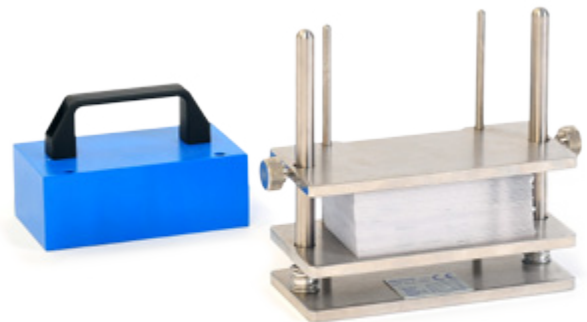
Grey scale A03 (ISO 105 e BS 1006) to assess colour staining **Code 267A**

Grey scale A02 (ISO 105 e BS 1006) to assess colour fastness **Code 267C**

Kit of chemicals to reproduce acid and alkaline perspiration (in compliance with ISO, BSi, IWS, IWSTM) **Code 257.8**

Weight 4,54 Kg for AATCC standard **Code 257 4**

Set of glass 10 plates 100x40x3 mm **Code 257 18**



picture: 251L + 257A

Solarbox 1500

325A



Equipment for the analysis of the colour fastness to the light of a 1500W Xenon lamp. The following parameters are monitored, controlled and stabilized:

temperature measured on the specimen with the B.S.T. method
lamp irradiance.

Possibility of specimen irradiance (one filter is included at customer's choice, other filters are supplied as optional):

UV 310 filter + IR (exposure behind the window) **Code 325.34**

UV 280 filter + IR (external exposure) **Code 325.38**

UV 280 filter (external exposure) **Code 325.42**

UV 310 filter (exposure behind the window) **Code 325.46**

Timer included.

Optional: see optional accessories available for Xenon-Lab.

Built according to: ISO 105, BS 1006.

Power supply: 220 V, 50 Hz, single phase.

Weight: kg 29

Dimensions: (L)750 x (W)390 x (H)400 mm.



Xenon-Lab

325E

Equipment for the analysis of the colour fastness to the light of a 1500W Xenon lamp in a chamber with preset humidity, controlled with ultrasonic device.

Filter UV 310 nm for the simulation of indoor conditions.

Possibility of specimen irradiance: see Solarbox description for filter specifications.

Optional:

Set of Blue standard scale for the light fastness (50 units) **Code 325 2**

Humidity test control fabric (Htc) **Code 325 30**

Grey scale type A02 **Code 267C**

Set of 3 sample holders 100(x3) **Code 193A**

Built according to: ISO 105 B02 (except A.1.4); BS 1006

Power supply: 230 V 50/60 Hz.

Weight: 60 Kg.

Dimensions: (L)750 x (W)390 x (H)1000 mm

Inner chamber dimensions: 280x200 mm.

Wascator

310B

High precision washing machine officially acknowledged as a standard reference for washing tests on fabrics. Wascator is also suitable for checking effects of washing detergents and chemical products.

Equipped with microprocessor for setting several programs of different functioning cycles.

Optional:

Polyester make weight **Code 310.72**

ECE reference detergent **Code 310.4**

Sodium Perborate **Code 310.8**

Stability template and percentage rule for checking the dimensional stability **Code 310.14**

Built in accordance with: UNI EN ISO 6330-5077, BS EN 26630, IWSTM 31

Power supply: 380 V, 50 Hz, three-phase

Weight: 195 kg

Dimensions: (L)720x(W)690x(H)1315 mm



Tumble Dryer

3111

Recommended model to dry samples, washed with Wascator. Capacity: 5 kg - Timer: 99,99 min.

Equipped with electronic processor for accurate temperature control within +/- 1°C.

Built in accordance with: M&S P1A, P3A, P3B, P4A, P12, P91, P99A, P134, BS EN ISO 26330

Power supply: 220/110V, 50/60 Hz, single-phase

Weight: 35 kg

Dimensions: (L)600x(W)600x(H)850 mm.



Dry Cleaning Machine

310F

Dry cleaning machine internationally acknowledged as a standard reference to check the dimensional stability of fabrics to dry washing.

Equipped with an electronic device for the control of the different washing programs.

Complete with drying system.

Built in accordance with the following international Standards: ISO EN 3175, AATCC 158

Power supply: three-phase 380V, 50 Hz

Net weight: 1200 kg

Dimensions: (L) 1460 X (W) 2100 X (H) 2000 mm





Top-loading Home Laundry Washing Machine

310C

Washing machine with loading system from the top, to simulate domestic washing cycles. Equipment selected and certified by AATCC.

Built in accordance with: AATCC 88B+, 124, 130, 135, 142, 143, 150, 172, 179

Power supply: 120V/60HZ or 220V/50HZ (to be specified when placing the order)

Weight: 73 Kg

Dimensions: (L)685 x (W)660 x (H)1100 mm



Front-loading Home Tumble Dryer

3111A

Tumble dryer machine with loading system from the front, to dry samples after the Home Laundry Washing Machine. Equipment selected and certified by AATCC, to perform domestic drying cycles.

Built in accordance with: AATCC 88B+C, 124, 130, 135, 142, 143, 150, 172, 179

Power supply: 120V/60HZ or 220V/50HZ (to be specified when placing the order)

Weight: 60 Kg

Dimensions: (L)740 x (W)710 x (H)1100 mm.



Autowash II

311L

Instrument to determine the colour fastness to dry-cleaning or washing. Fitted with a computerised electronic temperature controller, accuracy +/- 1°C. It can be used also for atmospheric dyeing up to +98°C. Structure wholly made of very strong stainless steel.

Dual speed selection: 40 rpm (as requested by the standards for colour fastness) and 22 rpm (for dyeing tests).

Model designed to contain up to 8 interchangeable beakers of either 550cc or 1200cc for colour fastness testing, depending on the specific standard (European or American) in use.

Suitable for soaping.

Optional:

Code 311L.18

Stainless steel beakers 550 cc for color fastness

Code 311L.20

Stainless steel beakers 1200 cc for color fastness

Code 311M

Available 16 positions model

Built according to: ISO 105, BS 1006, AA TCC 2, 3, 28, 61, 62, 86, 132.

Electric power supply: 3 x 400 V three-phase + N - 50hz (5,3 kW)

Weight: 135 kg

Dimensions: (L)1025 x (W)757 x (H)1127 mm

Grey scale

For checking colour staining and fastness according to ISO 105 (BS 1006).

Available in two models:

Grey scale A02 for colour fastness tests **Code 267C**

Grey scale A03 for colour staining tests **Code 267A**

AATCC grey scales for colour staining test and for colour fastness tests are also available:

Colour staining tests (AATCC) **Code 267D**

Colour fastness tests (AATCC) **Code 267E**

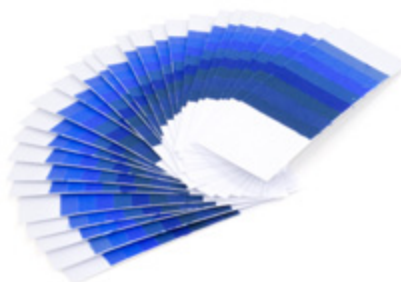


Blue scale

325.2

Set of 50 cards each with 8 stuck blue scale gradations, pure wool.

To test colour fastness of cloths exposed to light, in accordance with ISO standard 105 (BS 1006). ATCC



Standard Adjacent Fabrics

Suitable for colour staining tests according to ISO 105 standards (BS 1006).

Available in the following versions:

F01 Wool (10x4 cm – 50 pcs.) **Code 323.8**

F02 cotton (limbric) (10x4 cm – 50 pcs.) **Code 323.6**

F02 Viscose (1 m) **Code 323.10**

F03 Polyamide (Nylon 6.6) (1 m) **Code 323.12**

F04 Polyester (1 m) **Code 323.14**

F05 Acrylic (1 m) **Code 323.16**

F09 Cotton rubbing cloth (Lawn) (500 pcs.) **Code 198.422**

D01 Cotton for dry cleaning (Drill) (1 m) **Code 323.4**



Multifibre DW 010

257.424

Standard fabrics for colour staining tests according to ISO 105 (BS 1006) norms, F10. The fabrics are made of fibres: secondary cellulose, acetate, cotton, polyamide, polyester, acrylic and wool. Supplied in packages of 10 m length



Multifibre TV

257.426

Same as DW010, but for washing tests at high temperature



AATCC Crease Appearance Replicas 3109.2

Set of 5 standard references to visually evaluate the crease in the fabrics after washing.

Built in accordance with: AATCC 88C, AATCC 143, M&S P134



AATCC/ISO Smoothness Appearance Replicas 310.74

Set of 6 standard references for the visual assessment of the fabric smoothness after washing.

Built in accordance with: AATCC 124, AATCC 143, M&S P91, M&S P134 ISO 7768

Soap powder 310.10

To perform tests of colour fastness to washing, as per the ISO 105 (BS 1006), CO1-CO5 standards.



ECE/IEC reference detergent

Detergent with or without bleaching agents, to be used for the colour fastness tests to washing, following the ISO standards.

- | | |
|--------------------------------|--------------------|
| ECE without phosphate (A) 2 Kg | Code 310.32 |
| ECE with phosphate (B) 2 Kg | Code 310.04 |
| IEC without phosphate (A) 2 Kg | Code 310.16 |
| IEC with phosphate (B) 2 Kg | Code 310.40 |

Vapour Permeability Tester 3122

To check the resistance of textiles to water vapour penetration.

The system is composed of:

- N.3 pots complete with covers and gaskets
- N.1 laboratory glass dryer, diameter 300 mm
- N.1 25 ml pipette
- Electronic balance not included
- Built in accordance with: UNI 4818 - 26
- Weight: 20 kg
- Dimensions: 400(L) x 400(W) x 400 (H) mm



Water Vapour Test 3395

Instrument to analyse the water vapour permeability of leather, industrial fabrics and all permeable materials. Sample rotation speed: 75 ± 5 rpm. Ventilation system: with 3 blades rotating at 1400 ± 100 rpm.

The equipment is composed by:

- assembly with rotating beaker holder for 6 positions, with rapid release system
- 6 glass beakers
- protection system for the operator
- Built according to the ISO EN 420 International Standard, for testing "Protective Gloves" and to the ISO EN 20344 and ISO EN 14268 for leather.
- Power supply: 220V - 50 Hz
- Weight: 25 Kg
- Dimensions: (L) 550 x (W) 650 x (H) 500 mm



Static-Lab 291B

Equipment suitable for checking the static electricity properties of cloths, protective fabrics, shoe fabrics and leather materials.

It is composed by:

- electronic control panel for the digital reading of the static electricity values (Ohm)
- connecting cables
- measuring heads for the static electricity reading in both the "surface" and "vertical" methods

It is built in accordance with the ISO EN 1149-1 and ISO EN 1149-2 international standards.

N.B.: before the static electricity measurement, sample has to be conditioned at $23^{\circ}\text{C} \pm 1^{\circ}$ and R.H. $25\% \pm 5\%$, with Climatest **code 1722**.

- Power supply: 220V / 50 Hz – single phase.
- Weight: 5 Kg.
- Dimensions: (L) 500 x (W) 300 x (H) 300 mm.





Glove Tester

3394A

Equipment for checking the resistance of protective cloths to cutting. Suitable to perform tests on protective gloves against accidents, according to the EN 388 standard.

Accessories supplied with the equipment:

n° 1 pack of aluminium paper with 0.01 mm thickness

n° 1 pack of paper (filter) 65g/mq

n° 1 pack of reference fabric

n° 2 sample holders

n° 10 blades

Consumables (not included):

aluminium foil with 0.01 mm thickness

Code 3394A.2

paper (filter) 65g/mq

Code 3394A.4

reference fabric

Code 3394A.6

additional blade

Code 3394A.8

Power supply: 220V -50Hz. Weight: 25 Kg.

Dimensions: (L)500 x (W)300 x (H)420 mm.



Impact Abrasion Lab

2563

Laboratory instrument suitable to:

Determine quality of protective suits like motorider suits (both one piece and detached), gloves etc. Made to protect motor-bikers from injuries caused by impact against the road surface.

Determine the resistance to abrasion of wrist, knee, elbow and hand protections.

Supplied complete with timer in seconds, meter counter for abrasion, device to apply a pressure of 49N onto specimens, waste suction device and safety device for the operator.

Built in accordance with the following international Standards: ISO EN 13595-2, ISO EN 14120, UNI EN 13594

Power supply: three-phase 380V, 50 Hz

Compressed air supply: 5 bar

Net weight: 150 kg

Dimensions: (L) 1500 X (W) 500 X (H) 1500 mm



Air & Water Leakage Lab 2571

Instrument to check the resistance of protective gloves and shoes to air or water pressure, and verify possible leakage points. Supplied complete with accessories to support gloves and shoes and blowing device.

Built according to EN 374-2.

Power supply: 220V – 50 Hz single phase.

Air pressure: 6 Bar.

Net weight: 30 Kg

Dimensions: (L) 800 x (W) 600 x (H) 600 mm

YARN AND FABRIC DYEING/FINISHING

p 70	Double Lab-Knitter	Code	294F
p 70	Fabric Colour	Code	323D
p 71	Auto-Chroma IR	Code	323EA
p 72	Dyeing Lab Machine-Plus	Code	323U
p 72	Dyeing Lab Machine/6	Code	323M
p 72	H.T. Auto-Dyeing Machine/3	Code	323T
p 73	H.T. Dyeing Lab Machine/2	Code	323P
p 73	Jigger-Lab	Code	3112
p 73	Padder-Lab	Code	3399
p 74	Coating Lab Machine	Code	3114
p 74	Fabric Lab Dryer	Code	3106
p 74	Rotabox		
p 75	Fabric Vapour Lab	Code	3107
p 75	Pad Steam Lab	Code	3398
p 75	Stenter Lab Dryer	Code	3106A
p 76	Cone Dyeing Lab	Code	3230A
p 76	Light-Lab	Code	173B
p 76	Rotacolor	Code	323B
p 77	Centrifuge Hydroextractor	Code	336B
p 77	Hotplate Stirrer	Code	3121A
p 77	Laboratory Table	Code	3397
p 77	Minidryer	Code	336C
p 78	Spectro Lab	Code	3393A



Double Lab-Knitter

294F

High precision single cylinder laboratory knitting machine for the production of tubular knitted fabric for checking dyeing uniformity and evaluate dye affinity.

Equipped with two cylinders 3,3/4" diameter, selectable number of needles and fineness. (see the chart below)

Endowed with fabric fineness regulation mechanism

Automatic oiling device

Ergonomic control pad complete with:

electronic yarn length meter

variable speed regulation by means of a potentiometer

Led indicators monitoring machine functions

Optional:

Electronic tensioner **code 2940 100**

Two cylinders fitted in the machine. Other are available as optional.

Power supply: 380V- 50 Hz - three-phase

Weight: 180 Kg

Dimensions: (L)1200 x (W)1050x (H)1750 mm.

List of available cylinders

Code	n°of needles for filaments	Needle gauge	Count range for filaments	Count range for spun yarn*
294E 1320	320	75	Dtex 10-100	Ne 80-100
294E 1260	260	70	Dtex 30-150	Ne 60-80
294E 1240	240	48	Dtex 70-300	Ne 40-60
294E 1220	220	48	Dtex 100-400	Ne 20-40
294E 1140	140	36	Dtex 200-1000	Ne 12-20
294E 1112	112	24	Dtex 400-2000	Ne 8-12

* Cylinder capacity should be confirmed by yarn testing as cylinder selection is affected by yarn count, composition and friction.



Fabric Color

323D

Instrument for dyeing tubular fabrics and knitted cloths manufactured with the Laboratory Knitting Machine and for other kind of orthogonal fabrics.

Dyeing capacity: 500 grams max, according to the textile technical characteristics, in drum Ø 200 x 400 mm.

Max. temperature 98°C.

Equipped with a program for cleaning, dyeing and rinsing, with hand-driven drain of the water used for the cleaning and rinsing cycle.

On request, models with different dyeing capacity (2 Kg - 5 Kg) are available.

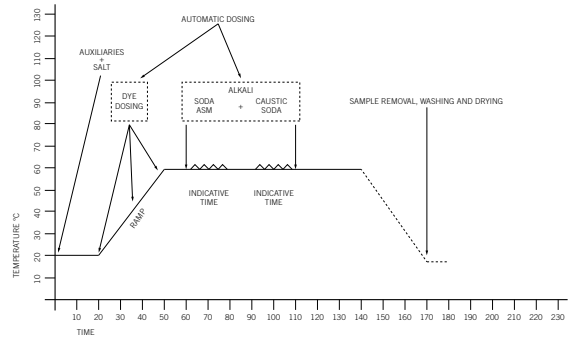
Power supply: 380 V, 50 Hz, three-phase + N

Weight: 125 kg

Dimensions: (L) 1100 x (W) 700 x (H) 790 mm



A typical isotherm cotton dyeing program
Reactive Dye at 60°C



Auto-Chroma IR “click - valve”* Infra-red dyeing machine.

For the first time ever a Lab Infra-red dyeing machine that works on fill it & shut it principle. Very thoughtfully designed and tested by a set of expert dyers and chemists, for durability, repeatability, reproducibility, color rendering.

Main features:

Semi-automatic Laboratory IR dyeing machine with patented pot design
Programmed temperature control for raise, hold, and cooling
Total chemical dosing control

Thanks to these and other details mentioned further users can achieve innovative and accurate performances for lab dyeing at reduced costs with the accuracy and uniformity never reached before with an IR machine

Suitable to dye pieces of fabric, yarn, fibre and blends

Suitable for all types of dyes, and dyeing methods

This fully automatic chemical dosing and temp & time control is achieved by a specially designed dye pot. Each pot has 2 special automatic dosing reservoirs with “click-valve”*.

The temperature range for heating and cooling are ambient to 135°C , rate of heating from 0,1 up to 4 deg / min.

Cooling by means of water heat exchanger and air circulation fan above 500 meter cube/hour

The automatic dosing eliminated the stop start operations, eg stop to add dye, stop to add alkali, so on

The Auto Chroma 1 patented “click - valve”* system will dose precise amounts of Dye, Auxiliaries, Alkali etc. as per the program set by the operator.

The instrument is equipped with an elegant colour “touch screen”.

The machine as supplied with several dyeing programs designed by experts (eg, Pes, Cot, Cot/Pes, Wool, etc..).

Note: Stock Solutions have to be prepared manually or using the Mesdan Automatic Dispenser, Box Rotacolor **Code 323GA**.

Special 300cc pots design (patent pending world-wide) allows for use of only one type of pot for all liquor ratio which covers the following volumes: 100 - 150 - 200 - 250 and 300cc,

special volumes capacity pots to dye 500cc to 1000cc liquor are available on request.

The maximum number of pots on a standard machine is 12. On special request, 24 pot machines can be supplied.

With the elegant colour “touch screen” the operator can program, store, recall and run a number of dyeing sequences (temperature setting up to 135°C) and personalized programs. The saved programs can be easily recalled again for the next occasions of dyeing , so even a small change to a standard program is saved, e.g. if an additional auxiliary is added for turquoise shades that program is saved in the machine and can be recalled when lab trials of turquoise colors is undertaken.

The essential innovative advantages of this dyeing machine are:

Easy of use

Touch screen control panel

Save and recall memory system

Low liquor ratio dyeing are possible

Mesdan IR excludes the negative effect called “temperature dips and hot spots “ which influences dyeing results between samples of the same type

Time factor: drastic dyeing time reduction due to the automatic dosing of dyestuff, alkali and auxiliaries

Dye accuracy factor: due to micro-metric step by step dosing and the fact that the machine does not need to be stopped (as is the case with other IR machines with manual/syringe dosing)

Reproducibility factor: due to the special pot design (patented world-wide) the sample absorbs the color in absolute perfect manner

Ergonomic factor: definitively the most silent IR machine nowadays available

Auto Chroma IR is made in Europe and built entirely out of the best quality stainless steel, practically indestructible.

Power supply: 380 - 400 V 50 Hz - Wires 3 phase / 1N / 1 E
Net weight: 150Kg

Dimensions: (L) 1250 x (P) 700 x (H) 700 mm

* Patented



Dyeing Lab Machine/6 323M

Laboratory equipment (with 6 dyeing positions) suitable to dye, universally at atmospheric pressure, textile natural and synthetic fibres or blends, pieces, flocks or skeins. Particularly suitable for dyeing with reagent, direct, acid, acrylic and indanthrene colours.

Available stainless steel beakers with 100-200-300-400-500-600 c.c. capacity.

Temperature regulation (max 98°C) by means of a microprocessor programmer.

Indirect automatic cooling with water, by means of an electrovalve. Vertical movement of the samples.

Power supply : 220V – 50 Hz single phase

Weight: 70 Kg.

Dimensions: (L) 740 x (W)460 x (H) 660 mm.

Dyeing Lab Machine-Plus 323U

Laboratory equipment suitable to dye, universally at atmospheric pressure, textile natural and synthetic fibres or blends, pieces, flocks or skeins, Endowed with two dyeing baths which can be used simultaneously at different temperature.

One dyeing bath is endowed with 5 stainless steel beakers of available capacity 100-200-300-400-500 -600 cc. This bath is ideal for dyeing tests of small samples (10/50g) in different colours. The other bath is endowed with a stainless steel dyeing basin suitable for simultaneous dyeing of samples with a maximum weight of 150-200 g.

Adjustable temperature (max 98°C) by means of two microprocessors with a memory capacity of 20 programmes.

Power supply: 380V - 50 Hz three-phase

Weight: 150 Kg



H.T.Auto-Dyeing Machine/3 323T

Laboratory unit for both atmospheric dyeing (+98°C) and high temperature dyeing (+130°C) of fibre, hank and fabric samples with a maximum weight of 30 g. Instrument ideal for dyeing by means of reactive and acid dyeing agents for high quality materials. The dyeing results obtained with this laboratory instrument are the same as those obtained in the regular production.

Model with three dyeing positions.

Equipped with microprocessor programmer with graphic display, able to store up to 60 different dyeing programs.

Each dyeing position is complete with:

- one basin for the automatic injection of the dyeing chemicals
- two basins for the automatic injection of chemical auxiliaries
- automatic continuous washing
- automatic bath filling
- automatic drain of the dyeing bath

one sample holding basket endowed with both clockwise and counter-clockwise rotational movement, adjustable in minutes.

Power supply: 380V - 50 Hz

Weight: 60 Kg

Dimensions: (L) 730 X (W) 800 X (H) 750 mm



H.T. Dyeing Lab Machine/2 323P

Laboratory equipment for dyeing textile natural and synthetic fibres or blends, which can be used for both atmospheric and/or the high temperature dyeing, without the use of polyethylene glycol. Endowed with 2 completely independent dyeing positions of 800cc capacity each.

Particularly suitable for the preparation of small samples of 40 or 80 g material. Ideal for weaving mills to check yarn dyeing defects in a small sample of fabric.

Temperature regulation (max 135°C) controlled by two micro-processor programmes.

Electronic heating of dyeing bath.

Power supply: 220V - 50 Hz

Weight: 80 Kg

Dimensions: (L) 820 x (W) 510 x (H) 780 mm



Padder-Lab

3399

HORIZONTAL Padder-Lab. Laboratory equipment for the foulard dyeing of fabric samples. Fabrics are cold dyed, squeezed on rollers and then rolled up for the storage. It's also possible to dye small A4-size fabric samples.

Roller length: 300 mm.

Adjustable speed form 0 to 12,5 m/min, by means of a potentiometer.

On request the VERTICAL Padder-Lab, is available ideal for the preparation of fabric auxiliary products in the process of printing and finishing.

Power supply: 380V - 50 Hz three-phase

Weight: 130 Kg.

Dimensions : (L) 1000 x (W) 600 x (H) 730 mm.



Jigger-Lab

3112

Laboratory equipment for dyeing fabric samples of natural and synthetic fibres or blends. During dyeing the fabric passes flat in a basin with repetitive cycles.

The dyeing bath can be heated up to 95°C. The fabric can be around 2 meters long.

Roller length: 600 mm.

Dyeing tank max capacity: 5 litres.

Adjustable temperature (max 95°C) by means of a microprocessor with display, with a memory capacity of 20 programmes.

Power supply: 380V - 50 Hz three-phase + N

Weight: 150 Kg

Dimensions: (L) 1600 x (W) 670 x (H) 800 mm.





Fabric Lab Dryer

3106

Hand operated instrument to dry, fix and vulcanise fabric samples after dyeing or impregnation.

The instrument is also suitable for thermo fixing fabric samples before washing to check their shrinkage.

Equipped with two sample fastening tables, dimensions 450x450 mm.

Hand-driven model.

Adjustable temperature from 50° to 210°C.

Complete with timer.

Power supply: 220/110 V, 50/60 Hz, single-phase.

Weight: 95 kg

Dimensions: (L) 1000 x (W) 900 x (H) 900 mm



Coating Lab Machine

3114

Laboratory equipment in stainless steel for the manual coating of fabric samples by blade (450x450mm).

For printing industries, RAM or FABRIC DRYER are recommended to dry the sample.

Weight: 40 Kg

Dimensions: (L) 650 x (W) 550 x (H) 400 mm



Rotabox

Laboratory equipment for the automatic dosing, preparation, weighing and drawing of chemical solutions and mother-solutions.

The instrument enables automatic weighing of powder dyestuff poured into the beaker and determines a perfect dosage according to the programme set-up on the computer.

Programming of recipes with automatic drawing from 25 stock bottles. It includes the preparation unit of mother-solutions.

Equipped with n. 2 scales with weighing capacity from 0 to 2000 g. Reading precision 0,001 g.

Dosing choice with cold or warm water.

Electronic regulation of the water temperature.

Personal computer included, monitor and printer included.

List of the weights of empty bottles used for dosing.

Possibility to execute in sequence the memorised recipes starting from any available recipe.

Possibility to memorise the expiry date of mother-solution and dyestuff.

Sound signal when the solution is ready.

Safety device for possible overflow of solution from the beaker.

Automatic drawing of liquid dyestuff from 25 stock bottles (capacity 600cc.) and automatic weighing.

Quickly interchangeable beakers without preparatory operations of washing and drying.

Unit built of stainless steel.

Power supply: 220 V single-phases - 50hz.

Stenter Lab Dryer

3106A

Small miniature RAMEUSE, suitable to dry dyed fabric samples, but especially to hot fix the fabrics.

High quality model, with separated heating and drying phases on the two fabric faces.

Forced air ventilation device to automatically control and preset temperature up to 220°C.

Possibility to adjust the warm air flow from the blowers (separately for lower and upper blower).

Equipped with FABRIC HOLDER LOOM (450x450 mm) with pins (automatic extraction) and with an adjustable slider.

Control panel with timer for time test.

Power supply: 380V - 50 Hz three phase

Weight: 350 Kg

Dimensions: (L) 1130 x (W) 1345 x (H) 770 mm



Fabric Vapor Lab

3107

Instrument to fix and vulcanise fabric samples before printing. The steaming cycle takes place in saturated steam at 98°C (heating through electric resistances), both with direct and indirect exposure.

Equipped with sample fastening table, dimensions 450 x 450mm. Complete with timer.

A model with vapour supplied by the customer is also available, **code 3107A**.

Power supply: 380 V, 50 Hz, three-phase

Weight: 110 kg

Dimensions: (L) 1100 x (W) 900 x (H) 500 mm



Pad Steam Lab

3398

Ideal for the printing houses who desire to duplicate in the laboratory the dyeing results they obtain in production.

It is possible to work with saturated vapour (up to 100°C), produced internally or with high temperature heated vapour (up to 170°C) coming from an external source.

Roller length: 300 mm. Adjustable speed from 0,2 to 5 m/min, by means of a potentiometer.

Equipped with 1 dyeing basin – max capacity 1,5 litres. Staying time of sample under treatment from 8 seconds to 30 minutes. Electric or steam heating.

Equipped with 1 washing tank, with pertinent squeezer (the second and/or the third washing tanks with pertinent squeezers are available on demand).

Power supply : 380V +N; 50 Hz three-phase

Weight: 350 Kg.

Dimensions : (L) 920 x (W) 1850 x (H) 1930 mm.





Cone Dyeing Lab

323P1

Laboratory unit for preparation of yarns and fabrics and/or for dyeing textile natural, synthetic fibres or blends (piece, flock, hank or reel).

Equipped with n. 1 glass container inner diameter 180 mm.-usable height 250 mm.

Temperature regulation (max. 98° C.) controlled by micro-processor programmer, with maximum capacity of memory 20 programmes, with 30 steps each one.

Circulation pump with flow going from outside inwards and vice-versa. Electrical valve for bath loading. Manual valve for bath drain. Supplied with one type of material holder by choice (piece, flock, hank or reel).

Indirect heating by means of electric resistance.

Indirect automatic cooling with water by means of electro-valve.

Continuous washing in automatic.

Unit made of stainless steel.

Power supply: 380 V, 50 Hz, three-phase + N

Dimensions: (L) 800 x (W) 650 x (H) 1350 mm



Rotacolor

323B

Instrument for dyeing fibres, yarns and fabrics.

Model with 6 positions, each one with 300 cc stainless steel beakers.

Fitted with an electronic pre-selector for temperature regulation from 0°C to 135°C and timer for setting dyeing cycles.

Automatic indirect water cooling with electro-valve.

On request, as optional, 10 beakers and a microprocessor program with graphic display are available.

Power supply: 380 V, 50 Hz, three-phase + N.

Weight: 125 kg

Dimensions: (L) 1100 x (W) 700 x (H) 790 mm

Light-Lab

173B

Light chamber for sampling.

With the following 4 light sources:

Daylight lamp D65 6500k **Code 173 74**

TLD 18W/840 extra white light **Code 173 46**

TLD 18W/08 UV lamp **Code 173 66**

35W incandescent tungsten light **Code 173 42**

Complete with hour counter device.

Optional: 45° wiewer

Built in accordance with the following standards: BS 950 Pont:1, DIN 6173

Power supply: single-phase 220V, 50/60

Weight: 30 Kg

Internal dimensions: (L) 675 x (W) 395 x (H) 370 mm

External dimensions: (L) 715 x (W) 415 x (H) 600 mm



Centrifuge Hydroextrator 336B

Laboratory mini centrifuge to eliminate in a quick and safe way the excess of water contained in yarn and fabric samples.

Maximum load capacity: 4.5 kg

Drying speed: 2800 revolutions.

Power supply: 220 V, 50 Hz, single-phase

Dimensions: (Ø) 350 x (H) 600 mm.



Minidryer 336C

Rapid dryer for fabrics samples and yarn skeins. Drying cycle with first step 1 minute long with cold air, hot air step with adjustable duration, 1 minute final step with cold air to cool down sample and sample holder area. Possibility of drying with warm air or cold air.

Upper grid in stainless steel 500 x 500 mm

Built in accordance with: DIN 51221/1, BS EN 10002/2

Dimension: (L) 700 x (W) 740 x (H) 950 mm.

Net weight: 30 kg

Power supply: 220 V single-phases - 50hz.



Hotplate / Stirrer 3121A

Magnetic stirrer with ceramic plate.

Stirring speed 50-1300 rpm.

Temperature control up to 540°C.

Top plate dimensions 200x200 mm.

Heating surface 11,5x11,5 cm.

Power supply: 220 V, 50 Hz, single-phase (800W).

Weight: 3,9 kg

Dimensions: (L) 205 x (W) 335 x (H) 96 mm.



Laboratory Table 3397

Laboratory table equipment, convenient and practical support for all operations and for all needs you could have in chemical and physical tests laboratory, in chemicals, dyestuff, wet and moist samples handling, etc...

Unit built of stainless steel to prevent rust, easy to clean, model realized with two shelves, sink and taps, with a closed cabinet, equipped with a manual pad and a warm air drying sample unit.

Power supply: 220 V single-phases - 50hz.

Net weight: 224 kg

Dimension: 2800(L) x 700(W) x 1180(H) mm.





High tech Spectrophotometer for bench use, for the accurate measuring of big volumes of samples.

Model complete with inner self-testing and self-configuration to guarantee accurate and repeatable measurements.

Complete with three measuring areas (of 22, 10 and 6 mm), automatically identified.

It can work both in the horizontal and in the vertical position. Spectro Lab can perform both reflection measurements (on fabrics, yarns, fibres, other) and transmission measurements (liquids).

Technical features:

tri-beam diffused 8°, 6" sphere (15.24 cm), 2D array/holographic grading

repeatability (on white ceramics): 0,03 RMS delta ECIELab

inter-instrument agreement Avg 0,15 delta ECIELab

pulsed Xenon lightning system, D65 calibrated

spectro range: from 360 to 750 nm with 10 nm interval

photometric range: 0% - 200%, accuracy: 0.01%

measuring time: 2.5 seconds

USB/RS-232 interface for connection to an external PC (optional)

Power supply: single phase 220V 50/60 Hz

Net weight: 12 kg

Dimensions: 23x47x25 (H) cm

Optional:

QC Quality Control software code 3393A.10

Basic software for the quality control in the laboratory.

Run in Windows. It permits you to display and save data, graphs, spectro-graphs, trend profiles, colour differences under the different CIE scales, L*A*B*76, CMC, CIE94, FMC2 metamerism indexes, visual colour, whiteness and yellowness indexes.

as alternative to the QC software:

Colour Matching-Recipe software code 3393A.12

Innovative and advanced software consisting of the QC Quality Control software and a complete Colour Matching software to prepare and correct colours when preparing dyeing lab recipes. It includes the basic QC software and an easy and accurate method for the insertion of the dyeing agents with the related reflection curves, to ensure accurate recipe formulation. An easy reading method ensures the immediate display of the inserted colour, thus guaranteeing the identification of possible discrepancies.

The recipe formulation program can formulate and correct recipes in an easy and accurate way.

Most important: the colours and the recipes must be inserted directly by the operator, if an assistance of a Mesdan technician is required, it must be quoted separately.

MISCELLANEOUS

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p 80	Electronic Tachometer	Code	1810E
p 80	Electronic Tachometer	Code	1810H
p 80	Electronic Tachometer	Code	1810C
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p 81	Electronic Tensiometer ZEF/ZED		
p 81	Tensiometer Zivy		
p 81	Warp Tensiometer DXK model		
p 82	Electronic Tensiometer DTMB		
p 82	Electronic Tensiometer ETB/ETPB		
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Electronic Tachometer 1810C

Digital contact reading from 0.1 to 25000 rpm and from 0.02 to 3810 m/min.

The incorporated microcomputer enables reading of values also in the following measuring scales:

revolutions per minute, revolutions per hour, yard/min., yard/hour, m/hour, feet and inches per min. and per hour.

Length: cm, m, inches, feet and yards.

Storage capacity of the last 10 measurements including minimum and maximum values.

Power supply: 1,5V battery x 2.



Electronic Tachometer 1810G

Contact reading.

Measuring range from 1 to 25000 rpm and from 0,1 to 3810 m/min. with accuracy ± 1 rpm (from 1 to 599 rpm), and $\pm 0,01\%$ of reading (from 600 to 25000 rpm).

Complete with accessories.

Equipped with a set of rubber ferrules.

Power supply: 1,5V battery x 3.



Electronic Tachometer 1810E

Optical model for contact and non-contact measurements. Measuring range from 6 to 99999 rpm with accuracy ± 1 revolution (non-contact) and from 1 to 25000 rpm (contact). Measuring distance 2 m max.

Equipped with microcomputer for the storage of the last 13 measurements, minimum and maximum values included.

Power supply: 1,5V battery x 2.



Electronic Tachometer 1810H

Optical model for contact and non-contact measurements. Measuring range from 6 to 99.999 rpm with accuracy ± 1 rpm (from 6 to 599 rpm), and $\pm 0,01\%$ of reading (from 600 to 99999 rpm).

Measuring distance 2 m max.

Available model for non-contact measurements, only (code 1810L).

Power supply: 1,5V battery x 3.

Tensiometer Zivy

Available in the following scales:

TEN 5K 1 - 5 g (cN)	Code	182A
TEN 12K 2 - 12 g (cN)	Code	182B
TEN 30K 5 - 30 g (cN)	Code	182C
TEN 70K 10 - 70 g (cN)	Code	182E
TEN 120K 20 - 120 g (cN)	Code	182F
TEN 170K 50 - 170 g (cN)	Code	182G



Electronic Tensiometer ZEF/ZED

Digital reading. Recommended for knitting, hosiery, warping and assembling machines.

Available reading scales:

from 0,5 to 100 cN with accuracy 0,1 cN	Code	1836
from 1 to 500 cN with accuracy 1 cN	Code	1837



Electronic high sensibility Tensiometer Honigman

Particularly suitable for high precision analysis, such as on texturing, hosiery and knitting machines.

The device is composed of:

Analogical reading with setting at 100%, 50% and 20% of maximum value measurable by the sensor in use: **code 184M**

Connecting cable

Measuring sensor to be chosen among the following:

0 - 10 cN	Code	184A
0 - 20 cN	Code	184B
0 - 50 cN	Code	184D
0 -100 cN	Code	184E
0 -200 cN	Code	184F



Warp Tensiometer DXK model

To determine correct tension on warps both statically and dynamically.

Measuring roller with 10 mm roller to simultaneously measure from 5 to 10 yarns.

Available in 3 versions:

DXK-300 with scale from 20 to 300 cN	Code	2876
DXK-1000 with scale from 100 to 1000 cN	Code	2877
DXK-2000 with scale from 200 to 2000 cN	Code	2878

For dynamic analysis, it is recommended the Tensiometer DXK complete with the optional "Air Damping" tension absorber.

Code 286.126



Electronic Tensiometer DTMB



Digital reading. Particularly suitable for winding, twisting, warping machines. Distance between the two outer rollers: 65 mm. Reading of the real working tension and of tension peaks. Equipped with rolls suitable for yarn speeds up to 2000 m/min. As optional, special rollers are available for yarn speeds up to 5000 m/min.

The following reading scales are available:

from 0 to 200 cN	Code	183L
from 0 to 500 cN	Code	183R
from 50 to 1000 cN	Code	183T
from 200 to 2000 cN	Code	183N

Power supply: 1.5 V battery x4.

Electronic Tensiometer ETB/ETPB



Digital reading. Recommended for texturing machines, automatic winders, warping machines and any textile machine where the lack of space makes the measuring difficult.

Distance between the two rollers is 24 mm.

The following three models are available:

from 1 to 200 cN with rollers suitable for yarn speed up to 2000 m/min. Resolution 1 cN	Code	1830G
from 1 to 500 cN with rollers suitable for yarn speed up to 2000 m/min. Resolution 1 cN	Code	1830H
from 0,5 to 100 cN (0,1 cN accuracy) with ceramic heads suitable for yarn speed up to 6000 m/min. Resolution 0,1 cN	Code	1830I

Models with software are available.

Power supply: 9 V battery.

Mechanical Tensiometer DX2



Particularly suitable for winders, twisters and warping machines.

The following reading scales are available:

from 10 to 50 cN	Code	286N
from 20 to 200 cN	Code	286P
from 20 to 400 cN	Code	286A
from 50 to 1000 cN	Code	286D
from 200 to 2000 cN	Code	286W
from 400 to 5000 cN	Code	286Y

Mechanical Tensiometer ZF2/ZD2



Particularly suitable for knitting and hosiery machines.

The following reading scales are available:

from 1 to 5 cN	Code	286F
from 1 to 12 cN	Code	286S
from 3 to 30 cN	Code	286G
from 5 to 50 cN	Code	286H
from 10 to 100 cN	Code	286I
from 20 to 200 cN	Code	286L

Stroboscope

Analogical reading, scale from 200 to 18000 rpm
Power supply: single-phase 220 V – 50/60 Hz **Code 186 A**

Digital reading, scale from 30 to 30000 rpm
Power supply: single-phase 220 V – 50/60 Hz **Code 186 M**

Digital reading, scale from 30 to 30000 rpm
Powered by rechargeable battery **Code 186 L**

Analogical reading, scale from 200 to 18000 rpm **Code 186 D**

Powered by rechargeable battery.



Strobo-Lab

186H

Digital reading stroboscope with built-in rechargeable battery.
Complete with a special high luminosity lamp, for easier reading,
even in case of high frequencies.
Measuring range from 300 to 25000 rpm.
Accuracy +/- 1 rpm.
Power supply: 220 V single-phases - 50hz.



Battery powered digital Stroboscope

186F

Special model with high luminosity lamp.
Reading range from 0 to 30000 rpm with accuracy +/- 1rpm.
Complete with built-in rechargeable battery.



Phonometer

243

Digital instrument of class 2.
Measuring range from 30 to 130 dB.
Features: instantaneous measuring, max hold and battery level.



Thermo-anemometer

297

Digital reading instrument to measure air speed and temperature. Measuring range: air speed from 0 to 20 m/sec (+/-5% of reading or +/-0.025 m/s whichever is greater) air temperature from -18°C to 93°C (+/- 0.3°C)

Equipped with telescopic probe.

Power supply: 1,5 V battery.



Electronic Psychrometer 288C

For the direct reading of the environmental temperature and humidity. Measuring range from -20°C to +80°C and from 5% to 98% R.H. (accuracy +/- 1,5% R.H. in range from 10% to 90%). Digital reading.

As optional the following calibration solutions are available:

11,3% Rh solution

Code 288 2

33,0% Rh solution

Code 288 4

75,4% Rh solution

Code 288 6

Power supply: 9 V battery.



Sling Psychrometer

196B

Portable model for reading environmental humidity percentage and temperature.

Reading scale from 0 to 100% R.H. and from 0°C to + 45°C. Measuring principle by means of a dry bulb thermometer and a wet bulb thermometer.



“Assmann” Psychrometer 196C

Portable model with dry or wet bulb to determine the environmental humidity and temperature.

Endowed with two mercury thermometers with measuring range from 0°C to 50°C (accuracy +/- 0.2°C).

Complete with electric fan.

Power supply: 1,5 V battery.

Writing Thermo-hygrograph 180B

For the graphic reading of the environmental temperature and humidity.

Measuring range from 0°C to +40°C (accuracy +/- 1,5%) and from 0 to 100% R.H.(accuracy +/- 3% from 0 to 40% R.H.; +/- 5% from 40 to 100% R.H.).

Complete with 52 weekly diagrams.

The measuring principle is achieved by means of a bundle of hair.

Power supply: 1,5 V battery.



Electronic Thermo-hygrograph 180c

Compact portable instrument (can be also used in fixed position) to determine and record the temperature and relative humidity in the environment.

Temperature range: from -20°C to +50°C with $\pm 1^\circ\text{C}$ accuracy

Humidity range : 0-100% R.H. with accuracy of $\pm 3\%$ R.H. from 10 to 90% R.H. (temperature 25°C)

Recording step: selectable in 3 weeks, 6 weeks, 3 months, 6 months.

Weight: 2,1Kg

Dimensions: (L)300 x (W)245 x (H)105 mm.



Digital Thermometer 244B

Measuring range: -200 + 1370°C

Resolution: 0,1°C up to 600°C

Instrument accuracy: $\pm 0,5^\circ\text{C}$ from 0 to +200°C, $\pm 2^\circ\text{C}$ from +200°C over the end scale and from -0,1°C to -200 °C.

Different types of immersion, contact and air probes are available on request.

Power supply: 3 battery 1,5V



Optical Pyrometer 296D

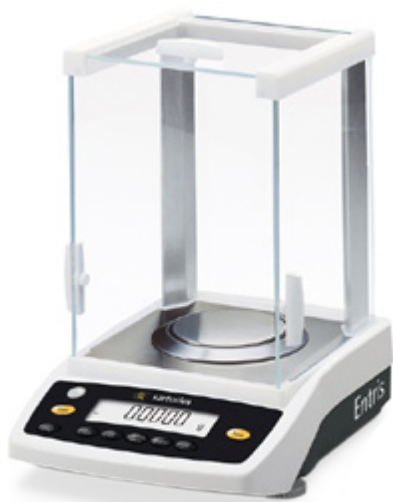
Electronic infrared thermometer for temperature measurement at distance.

Measuring scale from -50°C to 1000°C, with accuracy $\pm 2\%$ of rdg

Adjustable emission with maximum peak function and acoustic alarm.

Power supply: 2 x 1.5 V battery





“Sartorius”analytic balance 165.702

Weighing capacity 120 g and accuracy 0,0001 g.
Digital reading. RS232 interface port.
Pan size 90 mm \varnothing .

Power supply: single-phase 220 V /110 V, 50/60 Hz
Weight: 3.2 kg
Dimensions: (L) 200 x (W) 270 x (H) 299 mm



“Sartorius”precision balance 165.704

Weighing capacity 320 g and accuracy 0,001 g.
Digital reading. RS232 interface port.
Pan size 115 mm \varnothing .

Power supply: single-phase 220 V /110 V, 50/60 Hz
Weight: 2.2 kg
Dimensions: (L) 189 x (W) 251 x (H) 70 mm



“Sartorius”multi-purpose balance 165.708

Weighing capacity 820 g and accuracy 0,01 g.
Digital reading. RS232 interface port.
Pan size 150 mm \varnothing .

Power supply: single-phase 220 V/110 V, 50/60 Hz
Weight: 2.2 kg
Dimensions: (L) 200 x (W) 270 x (H) 70 mm



Thermo-balance 165.502

Capacity 150 g and accuracy 0,001 g. RS232 interface port.
Infrared heating system, with range from 40 to 220°C.
Main available information: dry material weight %, lost weight of the material (mg), humidity %.

Power supply: 220 V/110 V, 50/60 Hz, single phase
Weight: 5.5 kg
Dimensions: (L)200 x (W)270 x (H)160 mm

Other balance versions are available on request.

Digital Force tester

194D

To check the traction and compression strength; provided with RS 232 port.

Available measuring units: N, kgf, lbf.

Available also in the version with measuring range from 0 to 49.3N (accuracy 0.01N).

Different models are available on demand.

Recommended for the control of the drawing rollers in the spinning frames.

Power supply: battery / power supply

Weight: 0.4 Kg

Dimensions: (L)215 x (W)65 x (H)51 mm.



Refractometer

266A

Portable model, suitable for the determination of the percentage of dry material in a solution, such as sizing.

Measuring range: 0 - 32%.



Yarn meter

298E

Equipment to measure yarn tension, length and speed at the machine.

Maximum yarn speed: 1000 m/min.

Length measuring unit: m or inch (accuracy +/- 1cm or +/- 1inch).

Tension measuring range: 0-50 cN.

Power supply: 2 rechargeable 1.2V batteries.



Yarn meter

298D

Reading of two different values:

yarn speed from 0,1 to 1999 m/min.

quantity of absorbed yarn during a pre-set time, from 0.02 to 99999 m.

Digital reading.

Power supply: 9 V battery x 2.

Weight: 220 g





Portable Ph-meter

322C

Measuring scale from 0.00 to 14.00 pH.
 Equipped with both pH probe and temperature probe.
 Probe on request.
 Accuracy: 0.01 pH.
 Application range: from -50°C to +400°C.
 Power supply: 3 x 1,5 V battery



Stationary Ph-meter

322G

Laboratory PH-meter with printer. It can also measure temperature.
 Measuring range: -2.00 - 16.00 pH. Accuracy : +/- 0.01
 Measuring range: from -20°C to + 120.0°C.
 Resolution +/- 0.1°C.
 Weight: 1.3 Kg
 Dimensions: (L)235 x (W)222 x (H)109 mm.



Viscosimeter

3220

Rotational viscosimeter for quick measurement of viscosity in compliance with ISO 2555 and with ASTM standards.
 Rotational speeds: 54 between 0.01 rpm and 200 rpm.
 Accuracy: +/- 1% FSD.
 Viscosity range:
 A (R-Version): 100 mPas - 40.000.000mPas. **Code 3220A**
 (L-Version): 15 mPas - 6.000.000 mPas **Code 3220**
 Power supply: 100V - 240V/50-60 Hz



UV's lamp

189A

"Triwood" portable model with 6 lamps of 6 W each.
 Suitable for the visual assessment of fibre impurities in yarn lots (for example: cotton with polyester).
 Power supply: 220V, 50/60 Hz single-phase.

Portable Thickness gauges

The following models are available:

Measuring depth 200 mm. Thickness reading range 30mm
Accuracy 0,1 mm **Code 188F**

Measuring depth 200 mm. Thickness reading range 10mm
Accuracy 0,01 mm **Code 188R**

Measuring depth 30 mm. Thickness reading range 1 mm
Accuracy 0,001 mm **Code 188G**

Measuring depth 200 mm. Thickness reading range 30mm
Accuracy 0,01 mm **Code 188Z**

Other models are available on request



Ultrasonic cleaning baths

Ultrasonic bath for a quick and perfect cleaning of glassware, spinnerets and texturing disks eliminating the toughest impurities hidden in holes and hollows.

The following models are available:

45 litres-22 kg – (L)500 x (W)300 x (H)520 mm **Code 3101C**

28 litres-13.4 kg – (L)505 x (W)300 x (H)200 mm **Code 3101B**

3 litres-3.2 kg – (L)240 x (W)137 x (H)100 mm **Code 3101A**

Complete with heating system from +30°C to +85°C

Optional: lid, internal basket and detergent to clean the internal basket.

Power supply: 220V, 50/60 Hz, single-phase



Melt-Flow Index

339

Automatic model with printer. To determine the fluidity index of thermoplastic materials exposed to heat.

The instrument carries out a volumetric procedure (MVI) and, by means of an optical system, determines the volume of the material extruded at a pre-set time. Equipped with a microprocessor that acquires, elaborates and displays both the single values and the mean values (max. 12 values).

Temperature range from +50°C to +400°C with accuracy 0,1°C.

An automatic model with serial interface - without printer - (**code 339B**) is available.

Built in accordance with the following standards:

ASTM D1238 B method, ASTM D2116, ASTM D3364, ISO R 1133, DIN 53735, UNI 5640, BS 2782/105.

Power supply: 220 V, 50/60 Hz - single-phase

Weight: 36 Kg

Dimensions: (L)250 x (W)330 x (H)630 mm



Certificate

In 2004 MESDAN obtained from Det Norske Veritas (DNV) the certification of Its Quality and Environmental Management system in conformity to UNI EN ISO 9001:2000 and UNI EN ISO 14001:1996 with validity for design, manufacture and calibration of textile laboratory instruments.

Since then MESDAN have successfully undergone through the periodical audits of the Certifying Body and complete re-assessment of certification of their Quality Systems.



MESDAN-LAB can issue calibration reports for their instruments complying with ISO 9001. In some countries they offer contractual calibration service for complete laboratories as well.

MESDAN closely supports their international customers in more than 70 different countries by means of a capillary network of sales and service centres which can provide qualified assistance in the choice of the most appropriate testing solution and technical assistance (information of nearest contacts can be searched in our website).

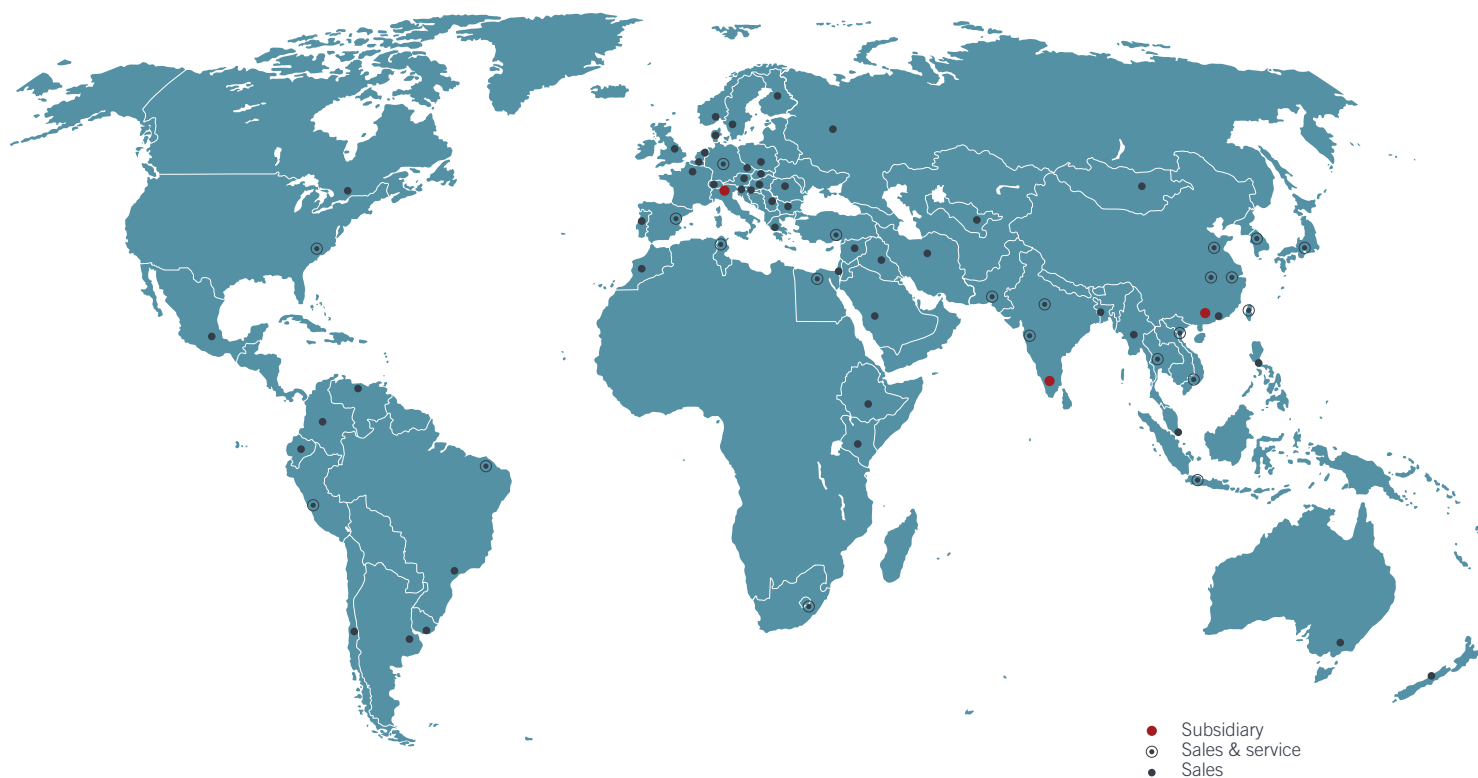
Mesdan affiliations





www.mesdan.it
Mesdan-Lab is a division of Mesdan S.p.a





Mesdan
headquarter



Mesdan-Lab
new plant



Mesdan

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