

Providing confidence in standard based testing  
through expertise and global partnering.

**SDL ATLAS LLC**

3934 Airway Drive  
Rock Hill, SC 29732-9200, USA

Telephone: +1 803 329 2110  
Facsimile: +1 803 329 2133  
email: [info@sdatlas.com](mailto:info@sdatlas.com)

**SDL ATLAS LTD.**

1/F (South-East) & 2F, Shenjian Mansion,  
Central District (West), Hi-Tech Park,  
Nanshan, Shenzhen, 518057, P.R.C.

Telephone: +86 (755) 2671 1168  
Facsimile: +86 (755) 2671 1337  
email: [info@sdatlas.com.cn](mailto:info@sdatlas.com.cn)

**SDL ATLAS LTD.**

3J, Garment Centre,  
576 Castle Peak Road,  
Kowloon, Hong Kong.

Telephone: (852) 3443 4888  
Facsimile: (852) 3443 4999  
email: [info@sdatlas.com.cn](mailto:info@sdatlas.com.cn)



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## WELCOME TO SDL ATLAS

SDL Atlas is pleased to provide this comprehensive catalog as a guide to our broad line of instruments, consumables, services and laboratory accessories.

Our goal is to provide confidence in standard based testing through expertise and global partnering. You will find that all of our products meet the highest quality requirements, conform to international standards, and provide a professional appearance for laboratories.

This catalog acts as an easy reference tool for anyone in the textile testing industry. Over 600 products can be found in these pages to create the most complete offering available in the industry. Testing categories include fiber, yarn, and fabric, as well as safety testing for textile applications. Also included is a full offering of consumables required to perform repeatable tests.

We invite you to visit our website, [www.sdlatlas.com](http://www.sdlatlas.com), to see the very latest updates and news and to use the enhanced search capabilities that can ease the search for the right products to meet a specific test.

## OUR HISTORY

SDL Atlas is comprised of companies with a long history of service to the textile industry. SDL Atlas reflects the unification of Chicago-based Atlas Textile Test Products with SDL, a respected manufacturer and distributor of testing instruments. SDL Atlas also included Textile Innovators, a leading source of standardized consumable test materials. By combining the strength and knowledge of these three companies, SDL Atlas is clearly the largest, most complete global source of textile testing, quality control and laboratory equipment.



## MANUFACTURING

Most of the SDL Atlas products featured in this catalog are designed and manufactured in our own facilities under rigidly controlled conditions. While highly skilled, veteran SDL Atlas craftsmen supply expertise in sheet metal work, welding and machining, other quality-conscious professionals focus on mechanical, electrical and electronic assembly. Our design and rapid prototyping yield high-performance, highly reliable products that deliver extended service with little or no required maintenance.



Assembly of Martindale in Shenzhen, China

## AFFILIATIONS

### AFFILIATIONS WITH PROFESSIONAL BODIES, INSTITUTIONS AND RESEARCH INSTITUTES

Ongoing relationships with professional bodies within the global textile industry help to maintain our leading position in the manufacture, supply and service of textile testing and laboratory equipment. A selection of these bodies and our affiliation follows. We thank all of these organizations for the unwavering support we have received in the past and which we expect to continue in the future.



SOCIETY OF DYERS  
AND COLORISTS



THE TEXTILE INSTITUTE,  
MANCHESTER, ENGLAND



THE BRITISH STANDARDS INSTITUTION  
CHISWICK, LONDON, ENGLAND



THE UNIVERSITY  
OF LEEDS



THE UNITED STATES DEPARTMENT OF  
AGRICULTURE, NEW ORLEANS, USA



THE BRITISH TEXTILE MACHINERY  
ASSOCIATION, MANCHESTER,  
ENGLAND



AMERICAN ASSOCIATION OF  
TEXTILE CHEMIST AND  
COLORISTS



THE UNIVERSITY OF MANCHESTER  
INSTITUTE OF SCIENCE AND  
TECHNOLOGY, MANCHESTER,  
ENGLAND



THE INTERNATIONAL TEXTILE  
MANUFACTURERS FEDERATION,  
ZURICH, SWITZERLAND



## Textile Innovators

DIVISION OF SDL ATLAS

A major source of consumable testing materials, Textile Innovators, targets its specialized products to textile manufacturers as well as the detergent and laundry machine industries. The division provides skeins and balanced pieces; flammability testing; and ballast and wash standards for fabrics, multifiber fabrics and soiled fabrics. Available materials include natural fibers such as cotton, wool, silk and linen and synthetic products including Rayon, Nylon, acetate and polyester. The company offers a variety of services: fabric cutting and sewing, special dyeing, splitting fabric into ribbons and washing. Services are applied to materials supplied by Textile Innovators or provided by individual customers.



### PRODUCTS

**MULTIFIBER FABRICS.** Filling (weft) or warp stripe, all styles for all AATCC, ASTM, ISO, BS and related standards supplied in rolls or cut pieces.

**STANDARD ADJACENT FABRICS.** Acetate, Viscose, Nylon, Cotton, Wool, Silk, Polyester, Acrylic, Linen and blends. Supplied in rolls or custom pieces.

**DYESTUFF STANDARDIZATION.** Various fabrics and blends available.

**ASSOCIATION OF HOME APPLIANCE MANUFACTURERS.** Standard soiled and unsoiled fabrics, washloads, soils and detergents.

**BALLAST AND WASH STANDARDS.** Soiled and unsoiled fabrics, washloads, soils and detergents to DOE, IEC, AATCC, ISO, UL and related standards.

**CHEMICAL SPECIALITIES MANUFACTURING ASSOCIATION.**

Specialist softeners, detergents and fabrics.

**SOILED FABRICS.** Cotton, cotton/polyester, wool fabrics with standardized soils to WFK, EMPA or CFT specifications.

**AATCC QUALITY CONTROL AIDS AND SUPPLIES.** Ballast, crocking cloth, crocking calibration fabric, skeins, multifiber, detergents and light fastness standards. Test equipment and standards, carpet soils.

**SDC/ISO QUALITY CONTROL AIDS AND SUPPLIES.** Makeweights, Crocking cloth, multifiber, detergents and light fastness standards.

**FLAMMABILITY TESTING.** Foam pads, ignition cribs and fabrics to suit CDCA, BSI, ISO and UFAC test methods.

**ABRASION FABRICS AND OTHER ABRADENTS.** Abradents for Wyzenbeek, Martindale, Taber, UWT and all other known abrasion tests including Trizact uniform abrasents by 3M. Backing pads, felt, foam and cotton duck.

**ASSOCIATED SERVICES.** Ozone testing, home laundry, Launder-Ometer™, dye cutting, sewing and overlocking.

*We can supply any kind of fabric or have custom fabric made per customer's specifications upon request. Experts can provide consultancy and technical or skilled labor on a per hour basis. Please ask for a complete consumables catalog.*





To ensure the highest possible performance, every SDL Atlas product is subjected to complete testing and calibration. Our production centers around the world conduct tests and calibrations in full compliance with international standards. Upon completion, products carry applicable certifications such as CE, EMC and Machinery Safety Regulation.

The SDL International Group was the first in the Textile Testing and Quality Control Equipment Industry to be awarded ISO 9000 certification in March 1993. This means that all departments including manufacturing, service, sales and administration are continuously self-assessed and regularly checked by quality assessors to ensure that we provide you with the best quality products and service before, during and after the sales process.

SDL Atlas is accredited by the UK Accreditation Service for Specific Instruments. This allows us to provide UKAS-Traceable Calibration Certificates with new instruments and during subsequent re-calibrations. Most countries affiliated with UKAS through their standards bodies require these certificates.



SDL ATLAS IS CERTIFIED  
BY THE UK ACCREDITATION SERVICE



## SDL ATLAS TecNet, TECHNICAL SOLUTIONS

Our TecNet team reflects the SDL Atlas pledge to provide customers with the most comprehensive technical support around. This cross-disciplined team includes textile technologists, hardware and software engineers, mechanical and instrumentation engineers, test and calibration experts and installation and maintenance technicians.

TecNet support is available on many levels. Our working laboratory, conditioned to international standards for temperature and relative humidity, welcomes customers for pre-sale product demonstrations and sample testing. We train customer technicians at our facilities and at their sites. Installation, commissioning and after-sales service and calibration are done at customer locations. TechNet also sponsors workshops to help customers learn about major instrument repairs, rebuilds and overhauls.



The TecNet Team



## SALES NETWORK

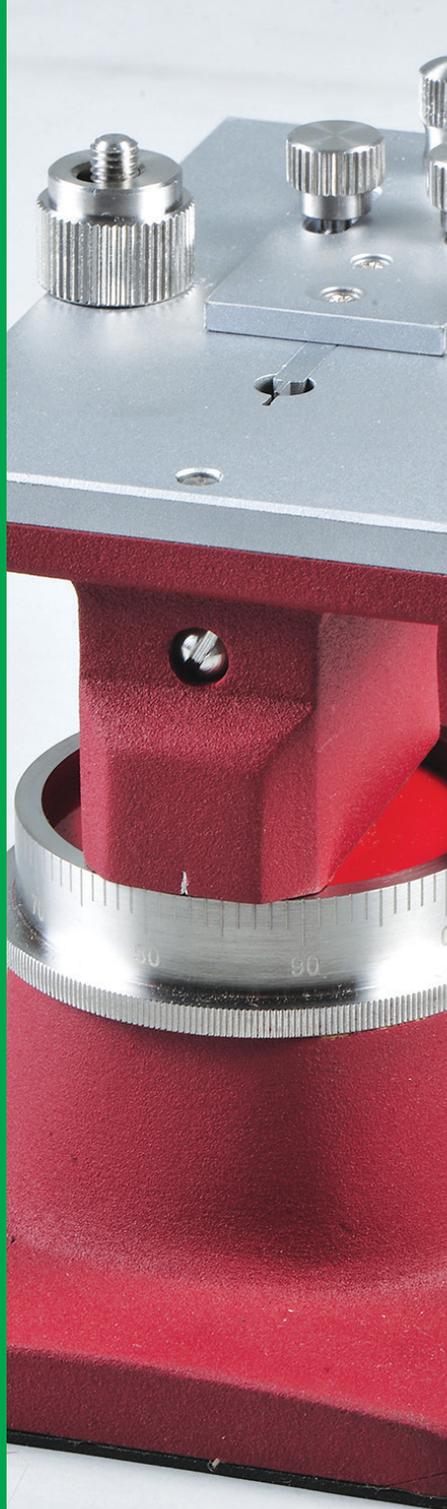
An essential part of our service to our customers is the vast, expanding SDL Atlas network of sales representatives, agents and distributors. These dedicated professionals know our quality textile testing and laboratory equipment products best and provide valuable assistance and guidance in their applications to benefit customers.

The SDL Atlas network spans the globe with more than 80 staffed service centers and agents in nearly 100 countries. Most distributors maintain an inventory of spare parts, test consumables and related test equipment accessories and can coordinate availability of installation and service engineers trained to our demanding standards.



Algeria	Cyprus	Indonesia	Mauritius	Portugal	Tunisia
Argentina	Czech Republic	Israel	Mexico	Romania	Turkey
Australia	Denmark	Italy	Morocco	Saudi Arabia	Uganda
Austria	Dominican Republic	Ivory Coast	Namibia	Singapore	UK
Bangladesh	Ecuador	Jamaica	Nepal	Slovakia	United Arab
Barbados	Egypt	Japan	Netherlands	South Africa	Mirates
Belgium	Eire	Jordan	New Zealand	Spain	Uruguay
Bolivia	Falklands	Kenya	Nicaragua	Sri Lanka	USA
Botswana	Finland	Korea	Nigeria	Sudan	Venezuela
Brazil	France	Kuwait	Norway	Swaziland	Vietnam
Bulgaria	Germany	Lithuania	Oman	Sweden	Yemen
Cameroon	Greece	Luxembourg	Pakistan	Switzerland	Yugoslavia
Canada	Guatemala	Macedonia	Paraguay	Taiwan	Zambia
Chile	Hong Kong	Madagascar	Peru	Tanzania	Zimbabwe
China	Hungary	Malawi	Philippines	Thailand	
Colombia	India	Malaysia	Poland	Trinidad	

# FIBER TESTING





Contains all the equipment and consumables used in making fiber and yarn cross sections by the plate and modified cork methods recommended by AATCC.

#### SIZE

WEIGHT 1 kg / 2.2 lbs

DIMENSIONS 200 mm (w) x 150 mm (d) x 100 mm (h) /  
8 in (w) x 6 in (d) x 4 in (h)

#### ORDERING INFORMATION

202159 Microscopy Cross Section Kit

202758 Dissecting/Pick Counting Needles with  
Handle (Pack of 12)

#### STANDARDS:

AATCC20



Lint and Trash Analyzer MK2 (Cotton Model). To determine lint, trash and dust content within a sample of cotton fiber up to 100 grams. Also used to determine non-fiber content of synthetic fibers and to open and clean fibers for further testing. The analyzer uses the carding principle with air separation of lint and non-lint content.

Lint and Trash Analyzer MK2 (Wool Model). To determine vegetable and other foreign matter content in raw wool. Wool tops and waste and preparation of samples for fineness testing. Also suitable for determining the yield of high value fibers such as cashmere and angora, as well as determining non-fiber content of long staple synthetic fibers.

#### SIZE

WEIGHT 100 kg / 220 lbs

DIMENSIONS 750 mm (w) x 1000 mm (d) x 600 mm (h) /  
30 in (w) x 40 in (d) x 24 in (h)

#### STANDARDS:

ITMF

#### ORDERING INFORMATION

202586 Lint and Trash Analyzer (Cotton Model)

200770 Lint and Trash Analyzer MK2 (Wool Model)

203634 Primary Filter Assembly

203635 Secondary Filter Assembly

To produce fiber cross sections of microscopic examination, measurement and identification.

**SIZE**

WEIGHT	3 kg / 6.6 lbs
DIMENSIONS	75 mm (w) x 150 mm (d) x 100 mm (h) / 3 in (w) x 6 in (d) x 4 in (h)

**ORDERING INFORMATION**

105217	Precision Fiber Microtome
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**STANDARDS:**

ISO 137

BS 2043

ASTM D2130

Woolmark TM 24

GB 10685



## Pressley Fiber Bundle Strength Tester

To determine the tensile strength of natural fibers. Includes 1 pair of clamps and spacer, torque vice and wrench, cutter, comb and tweezers. A 5 mg x 0.01 mg capacity balance is required but not included.

**SIZE**

WEIGHT	3.2 kg / 7 lbs
DIMENSIONS	330 mm (w) x 100 mm (d) x 125 mm (h) / 13 in (w) x 4 in (d) x 5 in (h)

**ORDERING INFORMATION**

104008	Pressley Fiber Bundle Strength Tester
104009	Clamps & Spacer (1 pair)
104010	Leather Clamp Facings (pack of 30)

**STANDARDS:**

ASTM D1445

ASTM D2524

BS 5116

ISO 3060



## Sliver and Roving Reel

Hand operated, to determine the linear density (count) of slivers and rovings. Fitted with roving bobbin stand, digital counter and precision cutter. Specify 1 meter or 1 yard circumference.

**SIZE**

WEIGHT	20 kg / 45 lbs
DIMENSIONS	280 mm (w) x 430 mm (d) x 600 mm (h) / 11 in (w) x 17 in (d) x 24 in (h)

**ORDERING INFORMATION**

300059	Sliver and Roving Reel Meter
300060	Sliver and Roving Reel Yard





To determine the oil or finish content of wool or synthetic samples by solvent percolation and evaporation. Suitable for fiber, yarn or fabric. Available with 1, 2 or 3 extraction units. To be fully compliant with Edana method ERT 155, it needs a large extraction tube- 12 mm (OD), 10 mm (ID). (Full title of new method is: DETERMINATION OF ACETONE EXTRACTABLE FINISH ON NONWOVENS).

#### SIZE

WEIGHT 4.4 kg / 9.7 lbs

DIMENSIONS 170 mm (w) x 170 mm (d) x 380 mm (h) /  
7 in (w) x 7 in (d) x 15 in (h)

#### ORDERING INFORMATION

105265 Rapid Oil Extraction Apparatus Single

105266 Rapid Oil Extraction Apparatus Double

105267 Rapid Oil Extraction Apparatus Triple

105268 Foil Residue Trays (Pack of 50)



To determine the moisture content and regain percentage of textile materials. Drying is performed by circulation of warm air electrically heated, regulated by an electronic temperature controller (range 0°/180°C, accuracy  $\pm 1^\circ\text{C}$ ). The material to be tested is dried within a metal container suspended from an electronic balance. Two successive weights of the same value determine the point at which moisture content can be calculated. Includes an electronic balance with 2100 g capacity and 0.01 g accuracy. The sample is weighed automatically by means of a basket connected to the balance.

#### SIZE

WEIGHT 130 kg / 286 lbs

DIMENSIONS 1000 mm (w) x 700 mm (d) x 1280 mm (h) /  
40 in (w) x 28 in (d) x 54 in (h)

#### ORDERING INFORMATION

300064 Moisture Regain Oven

#### STANDARDS:

ASTM D2564

BS 4784

ISO 6741

# YARN TESTING





Consists of an electronic balance (220 grams x 0.001 grams) with internal and external custom software which calculates yarn, sliver and roving counts as well as fabric yield in various systems and provides statistics on any number of tests including totals, average, CV and SD. Includes cables and security data key, USB, and connects to any PC and printer. PC and Printer are not available.

**SIZE**

WEIGHT 5.8 kg / 13 lbs

DIMENSIONS 354 mm (w) x 100 mm (d) x 230 mm (h) /  
14 in (w) x 4 in (d) x 9 in (h)**ORDERING INFORMATION**

Y006 Electronic Yarn Count System

**STANDARDS:**

ASTM D1907

ASTM D2646

ASTM D3776

BS 2471

BS EN 12127

ISO 2060

ISO 3801

IWSTM 13

IWTO 22-82



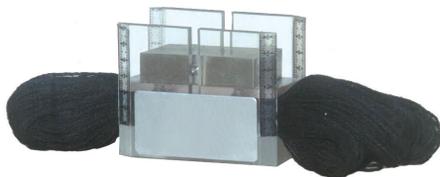
To measure the hardness of yarn cones or beams of yarn or fabric. Suitable for loosely wound bobbins of synthetic fibers and closely wound natural fibers, yarns and threads. Analog scale from 0-100 with 5 mm diameter indenter (supplied in fitted box).

**SIZE**

WEIGHT 0.5 kg / 1.1 lbs

DIMENSIONS 58 mm (w) x 50 mm (d) x 110 mm (h) /  
3 in (w) x 2 in (d) x 5 in (h)**ORDERING INFORMATION**

303151 Mechanical Yarn Package Density Tester



Simple device to define the volume occupied at a given pressure by the mass of a specified amount of the yarn. Unit of bulk =  $\text{cm}^3/\text{g}$ . The apparatus consists of a channel with graduated scales on each corner in which a skein is placed containing a known number of ends. A load of 500 g is applied to produce a pressure of 10 g per  $\text{cm}^2$ .

**SIZE**

WEIGHT 1 kg / 2.2lbs

DIMENSIONS 100 mm (w) x 75 mm (d) x 100 mm (h) /  
4 in (w) x 3 in (d) x 4 in (h)**ORDERING INFORMATION**

303506 Yarn Bulkometer

To determine the coefficient of friction of moving yarns and assess the need for lubrication or suitability for further processes (in fitted case).

Drive Unit, with friction tester mounting and tension device, to convert the portable yarn friction tester into a laboratory unit.

**SIZE**

WEIGHT	7 kg / 15 lbs
DIMENSIONS	400 mm (w) x 300 mm (d) x 220 mm (h) / 16 in (w) x 12 in (d) x 9 in (h)

**ORDERING INFORMATION**

Y096A	Portable Mechanical Yarn Friction Tester
Y096B	Drive Unit

**STANDARDS:**

ASTM D3108



For monitoring the quality of spun yarn or detecting broken filaments. The portable battery-powered unit uses an infrared detecting head, while low power circuitry ensures a long battery life, typically 10 hours. A two line intelligent display (LCD) shows the measurement time (seconds) and count. If the batteries are low on charge, a message will appear requesting the batteries to be charged.

Measurement time is selectable in increments of 5 or 10 seconds. Minimum is 5 seconds and the maximum is 95 seconds. For broken filament detection there is a continuous mode where the Hair Scan will monitor until the operator decides to finish. Measuring head can be fixed permanently in the threadline.

The Hair Monitor is supplied with a standard measuring head size of 3 mm. This dimension was set many years ago by Shirley Institute for their Yarn Hairiness Meter first built in the 1960's. We also offer a range of heads from 1 mm to 5 mm that can be specified in increments of 0.1 mm with different dimensions between the yarn guide and the detecting hole.

It is important to specify a non-standard head requirement when ordering.



**SIZE**

WEIGHT	0.5 kg / 1 lb
DIMENSIONS	80 mm (w) x 35 mm (d) x 160 mm (h) / 3 in (w) x 1.5 in (d) x 6.5 in (h)

**ORDERING INFORMATION**

303158	Hair Scan Portable Yarn Hairiness Monitor. Non-Standard Heads are available by special order
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To produce skeins of yarn of a predetermined length and number of turns for count and/or strength testing, 1 meter, 36" or 54" circumference collapsible swift (specify). Complete with yarn package stand and pretension device, fitted with predetermined counter. Available in hand operated and electronic versions.

**SIZE**

WEIGHT 35 kg / 77 lbs

DIMENSIONS 500 mm (w) x 650 mm (d) x 560 mm (h) /  
20 in (w) x 26 in (d) x 22 in (h)

**ORDERING INFORMATION**

105413 Wrap Reel Hand Operated (1m)

105414 Wrap Reel Hand Operated (1yd)

105415 Wrap Reel Hand Operated (54")

**STANDARDS:**

ASTM D1907

ASTM D2260

DIN 53830

ISO 2060



To produce skeins of yarn of a predetermined length and number of turns for count and/or strength testing, 1 Meter, 36" or 54" circumference collapsible swift (specify). Complete with yarn package stand and pretension device, fitted with predetermined counter. Available in hand operated and electronic versions.

**SIZE**

WEIGHT 45 kg / 99 lbs

DIMENSIONS 500 mm (w) x 650 mm (d) x 560 mm (h) /  
20 in (w) x 26 in (d) x 22 in (h)

**ORDERING INFORMATION**

105405 Wrap Reel Electronic (1m)

105406 Wrap Reel Electronic (1yd)

105407 Wrap Reel Electronic (54")

**STANDARDS:**

ASTM D1907

ASTM D2260

BS 2010

DIN 53830

ISO 2060

To determine yarn twist in single or plied yarns, quadrant type with auto stop & reverse for conventional or untwist/re-twist methods. Test length adjustable up to 50 cm / 20 inches for S & Z twist yarn. Available in hand operated and electronic versions.

**SIZE**

WEIGHT	15 kg / 33 lbs
DIMENSIONS	940 mm (w) x 260 mm (d) x 290 mm (h) / 38 in (w) x 10 in (d) x 12 in (h)

**ORDERING INFORMATION**

105352	Twist Tester Hand Operated
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**STANDARDS:**

ASTM D1422	ASTM D1423	BS 2085	DIN 53832	ISO 2061	IWTO 25-70
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To determine yarn twist in single or plied yarns, quadrant type with auto stop & reverse for conventional or untwist/re-twist methods. Test length adjustable up to 50 cm / 20 inches for S & Z twist yarn.

**SIZE**

WEIGHT	16 kg / 36 lbs
DIMENSIONS	1070 mm (w) x 300 mm (d) x 290 mm (h) / 43 in (w) x 12 in (d) x 12 in (h)

**ORDERING INFORMATION**

105353	Twist Tester Electronic
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**STANDARDS:**

ASTM D1422	ASTM D1423	BS 2085	DIN 53832	ISO 2061	IWTO 25-70
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To assess the evenness, hairiness, neps and other imperfections in a representative sample of yarn wound at a pre-determined pitch onto a tapered black board. Variable pitch traverse 8-19 wraps per centimeter, variable winding speed drive, with yarn package stand and 2 black anodized aluminium boards 225 x 600 x 155 mm dimensions. Assessment against photographic comparison standards (not included).

**SIZE**

WEIGHT	24 kg / 53 lbs
DIMENSIONS	910 mm (w) x 330 mm (d) x 530 mm (h) / 36.5 in (w) x 13 in (d) x 21 in (h)

**ORDERING INFORMATION**

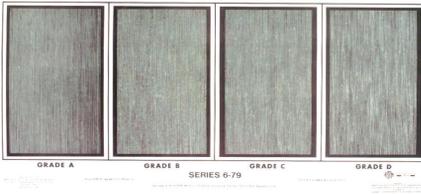
201040	Yarn Examining Machine
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**STANDARDS:**

ASTM D2255
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**ASTM COTTON YARN APPEARANCE STANDARDS**  
FOR RANGE OF YARN COUNTS  
75-135 (30s, 36s, 42s)



Grades A, B, C, D (mounted). Specify No. 1-12, 12-24, 24-36, 36-50, 50-75, or 75-135 (English cotton count). Priced Individually.

**SIZE**

**WEIGHT** 1.2 kg / 2.5 lbs  
**DIMENSIONS** 635 mm (w) x 10 mm (d) x 380 mm (h) / 25 in (w) x 0.4 in (d) x 15 in (h)

**ORDERING INFORMATION**

- 202059 Standards 1-12 count
- 202058 Standards 12-24 count
- 202057 Standards 24-36 count
- 202056 Standards 36-50 count
- 202055 Standards 50-75 count
- 202054 Standards 75-135 count

**STANDARDS:**  
**ASTM D2255**



To determine the amount of starch or solids percentage in a sizing solution.

**SIZE**

**WEIGHT** 0.24 kg / 0.5 lbs  
**DIMENSIONS** 20 mm (w) x 20 mm (d) x 170 mm (h) / 0.75 in (w) x 0.75 in (d) x 6.7 in (h)

**ORDERING INFORMATION**

- 200966 Size Concentration Refractometer



Conversion slide rule for all major yarn count systems. With metric/imperial equivalents on reverse, PVC wallet, supplied with SDL Atlas logo.

**SIZE**

**WEIGHT** N/A  
**DIMENSIONS** 190 mm (w) x 75 mm (d) x 0 mm (h) / 7.5 in (w) x 3 in (d) x 0 in (h)

To determine correct tension for particular fabric qualities in weaving and preparation. Accurate and robust mechanical operation, dial readout 0-100 centesimal scale.

**SIZE**

WEIGHT 0.5 kg / 1 lbs

DIMENSIONS 150 mm (w) x 75 mm (d) x 100 mm (h) /  
6 in (w) x 3 in (d) x 4 in (h)

**ORDERING INFORMATION**

201105 Warp Tension Meter



To prepare samples for further testing or to produce small quantity lends. Produces a fiber mat or web 200 x 500 mm.

**SIZE**

WEIGHT 6.5 kg / 14 lbs

DIMENSIONS 460 mm (w) x 250 mm (d) x 190 mm (h) /  
18 in (w) x 10 in (d) x 7.5 in (h)

**ORDERING INFORMATION**

200978 Sample Carder



Motorized hand-spinning system to produce trial yarns from top, sliver or fiber mat.

**SIZE**

WEIGHT 4.5 kg / 10 lbs

DIMENSIONS 280 mm (w) x 230 mm (d) x 230 mm (h) /  
11 in (w) x 9 in (d) x 9 in (h)

**ORDERING INFORMATION**

200977 Sample Spinner





# FABRIC TESTING

To determine recovery properties of fabrics by creasing in a loading device for a predetermined time using a weight suitable for the test method specified (BS, ISO, AATCC). After transferring the specimen to the clamp of the tester, the specimen is allowed to recover and the angle of recovery is recorded.

**SIZE**

WEIGHT	3 kg / 6.6 lbs
DIMENSIONS	250 mm (w) x 200 mm (d) x 350 mm (h) / 10 in (w) x 8 in (d) x 12 in (h)

**ORDERING INFORMATION**

103894	Crease Recovery Tester
200924	Tissue Paper 200 mm x 300 mm (100 sheets)

**STANDARDS:**

AATCC 66	ISO 2313	M&S P22	BS EN 22313
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## Fabric Stiffness Tester

## M003B

To determine the bending height, flexural rigidity and bending modulus of fabrics by simple procedures and calculations.

**SIZE**

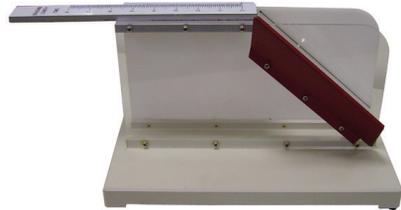
WEIGHT	3.6 kg / 8 lbs
DIMENSIONS	350 mm (w) x 150 mm (d) x 200 mm (h) / 14 in (w) x 6 in (d) x 8 in (h)

**ORDERING INFORMATION**

104018	Fabric Stiffness Tester
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**STANDARDS:**

ASTM D1388	BS 3356	DIN 53362	ERT 50-2
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## ST300 Softness Tester

## M003C/E

Designed for use in the leather industry and in the textile industry for coated fabrics and other soft materials. Deflection of the material whilst clamped above an aperture of a known diameter is measured when subjected to a specific load applied by a pin of a smaller diameter. The deflection is read on the analog or digital gauges. Available in analog (graduated in 0.1 mm divisions) or digital (displaying figures to 0.01 mm or 0.0005 inch) version.

**SIZE**

WEIGHT	5.5 kg / 12 lbs
DIMENSIONS	70 mm (w) x 490 mm (d) x 170 mm (h) / 3 in (w) x 19 in (d) x 7 in (h)

**ORDERING INFORMATION**

300769	Softness Tester - Analogue
201022	Softness Tester - Digital
300770	Software Package

**STANDARDS:**

ISO 17235	IUP 36
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**STANDARDS:**

ASTM D4032

Determines fabric stiffness using the ASTM circular bend test method. A plunger of 25.4mm (1 in) diameter pushes the fabric through a 38mm (1.5 in) diameter orifice for a distance of 57mm (2.25 in) in 1.7 seconds, and the maximum force is recorded. Provided with pneumatic cylinder, controls and battery-operated digital force gauge (switchable) 50 kgf / 500 N / 100 lb or 25 kgf / 250 N / 50 lb with peak-hold facility.

**SIZE**

WEIGHT 22 kg / 48 lbs

DIMENSIONS 500 mm (w) x 500 mm (d) x 600 mm (h) /  
20 in (w) x 20 in (d) x 24 in (h)**ORDERING INFORMATION**202544 Digital Pneumatic Stiffness Tester  
(25 kgf / 250 N / 50 lb)202543 Digital Pneumatic Stiffness Tester  
(50 kgf / 500 N / 100 lb)

To calculate the crimp in yarn affected by knitting or weaving, to determine actual yarn usage. Threads are removed from a strip of fabrics of known length, straightened by a tension, then measured in the straightened state. Two tension ranges available (0-35 g and 0-175 g) and test length is 120 cm (48 inches).

**SIZE**

WEIGHT 4 kg / 9 lbs

DIMENSIONS 1500 mm (w) x 80 mm (d) x 40 mm (h) /  
60 in (w) x 3.5 in (d) x 1.5 in (h)**ORDERING INFORMATION**

105676 Crimp Tester

**STANDARDS:**

ISO 7211

BS 2863

BS 2865

BS 2866

Woolmark TM 169



Diffused artificial daylight light source (color temperature 5000° K - BS 950 part 2) with 3 mm glass working surface 234 mm x 305 mm (9.2" x 12.2").

**SIZE**

WEIGHT 2 kg / 4.4 lbs

DIMENSIONS 350 mm (w) x 250 mm (d) x 100 mm (h) /  
14 in (w) x 10 in (d) x 4 in (h)**ORDERING INFORMATION**

200927 Portable Lightbox



To determine the ballistic tearing strength of textiles, paper or board. Three interchangeable pendulums ranging from 8,000 to 64,000 Millinewtons (mN) can be selected separately for multiple test method compliance.

**SIZE**

WEIGHT	15 kg / 33 lbs
DIMENSIONS	458 mm (w) x 190 mm (d) x 324 mm (h) / 18 in (w) x 7.5 in (d) x 12.8 in (h)

**ORDERING INFORMATION**

103988	Elmendorf Tearing Tester
103989	Pendulum A (8000 mN)
103990	Pendulum B (16000 mN)
103993	Additional Weight C (16000 mN)
103994	Additional Weight D (48000 mN)
103995	Calibration Weight A
103996	Calibration Weight B
103997	Calibration Weight C
103998	Calibration Weight D
103986	Cutting Blade
103987	Cutting Blade (M&S Supplier Only)

**STANDARDS:**

ASTM D1424	BS 4253 / 4468 / 3424	DIN 53862
	ISO 6382-2 / 13937	M&S P29
Next 17	WSP 100.1.R3 (12)	GB / T 3917.1
	BS EN ISO 4674-2 (1998)	EN 21974



The PowerTear is the most versatile Elmendorf tearing tester of its kind available. It is designed to provide accurate results while being easy to use. Paper, cardboard, plastic, textiles, and nonwovens are all materials that can be tested using the PowerTear. Electronic braking and two button release make the instrument safe while a rotary encoder, pendulum balance control, and a bearing on the release pin make it accurate and reliable. Lever clamps make sample loading faster and easier for the operator. The versatility of the PowerTear allows for a wide range of capability for testing both light and heavy weight materials.

- Test weights and check weights A-D included (8 N, 16 N, 32 N, 64 N)
- Test weight and check weight E available separately (128 N)
- Lever clamps for quick and easy sample loading
- Rotary encoder provides greatest accuracy available
- Electronic braking system halts the pendulum after the test for user safety
- Seven units of measure from which to choose
- Ability to adjust zero balance of pendulum
- Solid base plate provides stable test platform and eliminates instrument shift
- Two hand release mechanism keeps operators safe
- Results display on the instrument's LCD display
- Software included for downloading and storing results



#### STANDARDS: TEXTILES

ASTM D 1424	DIN 53862	EN ISO 13937-1	ISO 4674-2	ISO 9290	M&S P29	NEXT 17	NFG07-149
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#### STANDARDS: NONWOVENS

ASTM D 5734	WSP 100.1
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#### STANDARDS: PAPER

APPIA P 400	ASTM D 689	BS 4468	CSA D9	DIN 53128	EN 21974	GB/T 455
ISO 1974	JIS P 8116	PAPTAC D9	SCAN P11	SNV 198482	TAPPI T414	UNI 6444

#### STANDARDS: PLASTICS

ASTM D1922	GB/T11999	ISO 6383-2	JIS K7128-2	NFT54 141
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#### SIZE

WEIGHT	85kg / 188lbs
DIMENSIONS	420mm(w) x 620mm(d) x 430mm (h) 16in (w) x 24in (d) x 17in (h)

#### ORDERING INFORMATION

M008HE	PowerTear Elmendorf Tester 220V/110V
107014	E Pendulum Kit - Extend Capacity to 128N
103999	Spare Cutting Blade



Powerful and intelligent, the HydroPro Hydrostatic Head Tester is designed to help labs be more efficient while meeting global standards. The compact design can reach 3 bar of pressure using standard lab compressed air. The quick-test function allows users to perform other tasks during the first 80% of the standard test. An alarm indicates fail pressure is close and a technician should begin observing. The test area is well lit behind a clear shield for observing when droplets appear.

- Controller with easy test set up
- Maximum pressure 3 bar
- Quick Test feature saves technician time
- Automatic water refill between tests
- LED lighting of sample area
- Clear safety shield
- 100 cm<sup>2</sup> test head included

#### SIZE

WEIGHT	70 kg / 154 lbs
DIMENSIONS	480 mm (w) x 540 mm (d) x 600 mm (h) / 19 in (w) x 22 in (d) x 24 in (h)

#### ORDERING INFORMATION

##### INSTRUMENT

M018	HydroPro Hydrostatic Head Tester (Includes 100 cm <sup>2</sup> Test Head and Analysis Software)
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##### ACCESSORIES

100072	10 cm <sup>2</sup> Test Head
100075	19.63 cm <sup>2</sup> Test Head
100073	26 cm <sup>2</sup> Test Head
100074	28 cm <sup>2</sup> Test Head
100076	100 cm <sup>2</sup> Test Head
100160	Pore Size Attachment (BS 3321)

##### STANDARDS:

AATCC 127	BS 3321	ERT 120-1	ISO 811
AFNOR G07-057	BS EN 20811	ERT 160-0	ISO 9073-16
JIS1092.A	ASTM D751	EN 343	GB/T 4744
IST 080.4 (01)	IST 080.6 (01)	WSP 080.6.R4 (12)	



Swing arm cutting presses are ideally suited to cutting test samples from textiles, rubber and soft plastic prior to testing. Depending on resilience, several thicknesses can be cut at once with a cutting force of 20 tons. Control push buttons with time delay ensure complete operator safety. Maximum cutting area 18" (450mm) x 36" (900 mm). Cutting dies of any shape and size can be supplied.

#### SIZE

WEIGHT 880 kg / 1936 lbs

DIMENSIONS 960 mm (w) x 900 mm (d) x 1425 mm (h) /  
38 in (w) x 36 in (d) x 56 in (h)

#### ORDERING INFORMATION

201047 Hydraulic Sample Press SE20

200970 Spare Cutting Board



The CutPro is used for cutting samples into small pieces for chemical tests. This machine removes the time consuming labor of using scissors to cut up samples. It quickly and safely cuts samples into appropriate size pieces for chemical tests for formaldehyde, heavy metals, AZO dyes, among others. The machine has a static elimination system and a built in compressor with hose for cleaning between sample cuts to eliminate cross-sample contamination.

- Chemical test sample cutting done quickly & safely
- Samples cut in just two passes takes less than 20 seconds
- Blade has self-sharpening feature
- Static elimination system to keep debris from sticking
- Built in compressor and hose for cleaning between samples
- Powerful motor can handle all textiles as well as leather up to 4 mm thick
- Multiple sensors keep operators safe

#### SIZE

WEIGHT 55 kg / 121 lbs

DIMENSIONS 545 mm (w) x 375 mm (d) x 300 mm (h) /  
21.5 in (w) x 14.7 in (d) x 11.8 in (h)

#### ORDERING INFORMATION

M020D CutPro Sample Shredder

The AirPerm makes air permeability testing much more affordable while maintaining confidence that test results meet international and retailer standards. Designed to meet air permeability standards for paper, textiles, and non-wovens, the AirPerm provides quick, straightforward results in the unit of measure of your choice.

- Long, sturdy clamping arm over large test table
- Single press clamping/test initiation
- Single press sample release
- Automatic measuring range selection
- Quick change of test heads
- Automatic test head detection
- 8 selectable units of measure
- Samples up to 8 mm thick

### SIZE

WEIGHT	80 kg / 177 lbs
DIMENSIONS	900 mm (w) x 590 mm (d) x 1000 mm (h) / 36 in (w) x 24 in (d) x 40 in (h)

### ORDERING INFORMATION

#### INSTRUMENT

M021A	AirPerm Air Permeability Tester (Includes 20 cm <sup>2</sup> Test Head and Verification Plate for 20 cm <sup>2</sup> Test Head)
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#### ACCESSORIES

100200	5 cm <sup>2</sup> Test Head	100205	100 cm <sup>2</sup> Test Head
100201	20 cm <sup>2</sup> Test Head	100208	Optional Software
100202	25 cm <sup>2</sup> Test Head		
100203	38 cm <sup>2</sup> Test Head		
100204	50 cm <sup>2</sup> Test Head		



#### STANDARD

#### TEST HEAD SELECTION

	5 cm <sup>2</sup>	20 cm <sup>2</sup>	25 cm <sup>2</sup>	38 cm <sup>2</sup>	50 cm <sup>2</sup>	100 cm <sup>2</sup>
adidas TM 6.08		●				
ASTM D737	●			●		●
BS 5636	●					
DIN 53887		●			●	●
EDANA 140.1		●			●	
EDANA 140.2		●			●	
GB/T 5453	●	●			●	●
ISO 9237	●	●			●	●
JIS L 1096-A				●		
TAPPI T251				●		
WSP 70.1	●	●	●	●	●	●
Dense Samples						●

\*\*Black dots denote preferred test head. Red dots denote acceptable alternates.



## ORDERING INFORMATION

200941	Shirlastain A - 500 ml
200920	Shirlastain C - 500 ml
200919	Shirlastain D - 30 g

Shirlastain was originally developed to identify different fibers with an easy test, however, these stains have been found to have multiple applications in numerous industries. These include using Shirlastain A to detect coverage of silicone in Silicone Release Paper. Application of Shirlastain A to a sample of silicone release paper shows pinholes and voids within two minutes. Contains separate bands of 12 principle fibers to assist in fiber identification. Shirlastain Educational Testing Kit. includes ingredients and consumables for more than 40 tests with each Shirlastain type. Full instructions included.

Shirlastain A (500 ml - Liquid)  
 Shirlastain C (500 ml - Liquid)  
 Shirlastain D (30G m - Powder)

200896	Shirlastain Multifiber Fabric (1 m)
200956	Shirlastain Educational Testing Kit



To simply and economically determine the stretch and recovery of textile fabrics, both knitted and woven. The apparatus consists of a loading frame with clamps and a screw tensioning device, two 3 kg loading weights and sample cutting templates.

## SIZE

WEIGHT 12 kg / 26.5 lbs

DIMENSIONS 230 mm (w) x 500 mm (d) x 100 mm (h) /  
 9 in (w) x 20 in (d) x 4 in (h)

## ORDERING INFORMATION

104016 Fryma Fabric Extensometer

## STANDARDS:

BS 4294



## STANDARDS:

ASTM D1777

An inexpensive and accurate soft material thickness tester with counter balance designed to exert minimal load on sample through 1.129" (28.7 mm) diameter presser foot. Digital display of thickness up to 1/2" (13 mm) or 1" (25 mm). Supplied with a loading weight to provide a load of 0.6 psi (4.14 kPa). Other configurations available on application.

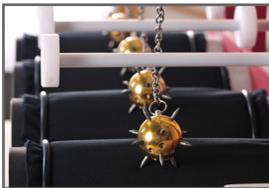
## SIZE

WEIGHT 3 kg / 6 lbs

DIMENSIONS 150 mm (w) x 125 mm (d) x 225 mm (h) /  
 6 in (w) x 5 in (d) x 9 in (h)

## ORDERING INFORMATION

M034E Feather Touch Digital Thickness Tester



The ICI Mace Snag Tester is designed to test the snagging resistance of heavy duty fabrics used in apparel, upholstery, and automotive interiors. The instrument comes with a viewing assessment cabinet and standard photographs.

- Four test stations
- Countdown controller
- Viewing assessment cabinet included
- Standard photographs included
- Pre-mounted felt sleeves included

#### SIZE

WEIGHT	90 kg / 198 lbs
DIMENSIONS	1007 mm (w) x 508 mm (d) x 405 mm (h) / 40 in (w) x 20 in (d) x 16 in (h)
Viewing Cabinet (included)	406 mm (w) x 600 mm (d) x 500 mm (h) / 16 in (w) x 24 in (d) x 20 in (h)

#### ORDERING INFORMATION

##### INSTRUMENT

M078	ICI Mace Snag Tester (Viewing Cabinet included)
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##### CONSUMABLES

104047	Tungsten Carbide Points (pack of 12)
104048	Felt Sleeves (pack of 4)
104049	Snagging Assessment Photographs

##### STANDARDS:

ASTM D3939	GB/T 11047	JIS L1058
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For carpet testing, with weight set 20-2000 GM/cm<sup>2</sup>, presser foot 412 mm<sup>2</sup>, range 0-25 mm x 0.01 mm.

**SIZE**

WEIGHT 20 kg / 44 lbs

DIMENSIONS 220 mm (w) x 210 mm (d) x 526 mm (h) /  
9 in (w) x 8 in (d) x 21 in (h)

**ORDERING INFORMATION**

103925 Digital Thickness Gauge

**STANDARDS:**

BS 4051

BS 4098

BS 4223

ISO 1765



To measure and calculate the coefficient of drape by tracing a shadow of the draped fabric on paper. Supplied with three templates with paper rings with diameter of 24 cm, 30 cm and/ or 36 cm (50 pcs each).

**SIZE**

WEIGHT 19 kg / 42 lbs

DIMENSIONS 500 mm (w) x 500 mm (d) x 500 mm (h) /  
20 in (w) x 20 in (d) x 20 in (h)

**ORDERING INFORMATION**

106454 Fabric Drape Tester

106607 Paper Ring 24 cm Dia (Pack of 500)

106608 Paper Ring 30 cm Dia (Pack of 500)

106609 Paper Ring 36 cm Dia (Pack of 500)

106610 Spare Lamp

**STANDARDS:**

BS 5058

BS EN 9073

AFNOR G07-109

ERT 90-1

UNI 8279



The QuickWash Plus gives fabric shrinkage information in a 12-15 minute test versus the 8-12 hours it takes a standard washer and dryer. This instrument is ideal for the factory floor and provides rapid, on the spot information on fabric in production so that the stenter frame, compactor, and sanforizer can be set to maximize fabric yield. This allows user to bypass the standard wash and dry cycles that take so long thus significantly reducing labor in the lab.

#### How the QuickWash saves users money

- Eliminates unnecessary production costs of over-conditioning fabric
- Maximizes fabric yield
- Eliminates most standard washer and dryer cycles which reduces:
  - Labor
  - Water usage
  - Electricity usage
  - Detergent usage

A chambered basket is agitated at high speed during the wash, rinse, and extraction cycles. Samples are then subjected to a controlled flow of heated air which causes a tumbling action while an infrared sensor measures the samples' surface temperature.

- 12-15 minute cycle time
- Quick results improve setup of finishing equipment
- Built to handle factory floor conditions
- Strong motor and drive shaft provide high speed agitation
- Safety interlock stops basket if cover is opened
- AATCC and ISO methods preprogrammed on controller

#### SIZE

WEIGHT 163 kg / 359 lbs

DIMENSIONS 690 mm (w) x 590 mm (d) x 640 mm (h) /  
27 in (w) x 23 in (d) x 25 in (h)

#### ORDERING INFORMATION

##### INSTRUMENT

M222QW QuickWash Plus

##### ACCESSORIES

202585 Stainless Steel Table

200779 Automatic Dispensing System (up to 4 liquid detergents)

201162 Four Chamber Sample Basket - for heavy samples

203058 Electric Water Heater

200908 QuickWash Ruler - M&S Standard

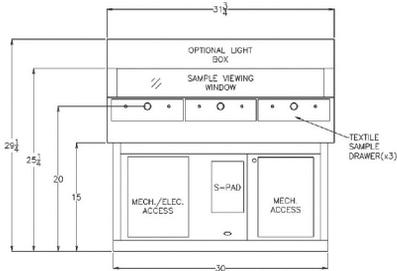
201052 QuickWash Template - M&S Standard

#### STANDARDS:

AATCC 187

ISO 23231

M&S P1D

**SIZE**

WEIGHT	137 kg / 300 lbs
DIMENSIONS	800 mm (w) x 850 mm (d) x 970 mm (h) / 32 in (w) x 33.5 in (d) x 38 in (h)

For conditioning textiles to consistent temperature and humidity for accurate color measurements. Allows user to set specifications based on temperature and humidity and achieve these conditions in minutes. Standard temperature and humidity settings 20 deg. C, 70 deg. F, 65% RH, variable settings as per chart require option M222RCV. Fabric sample size range up to 9" x 12" to 20 specimens per cycle depending on sample weight and size.

Capable of bringing fabric to normal conditioned state in minutes depending on fabric type and weight.

No Steam generator (reduces water and maintenance problems). Digital controller and output software allows real time graphs of RH and temperature on PC screen. Unique operating system allows temperature and humidity control within 0.5%.

Overhead lightbox option, D65 or other light sources available.

Full-width single drawer option available on request. Larger capacities and custom-built units available; custom to your requirements.

**ORDERING INFORMATION**

M222RC	Rapid Sample Conditioner
300818	Overhead Lightbox
200823	Variable Temperature & Humidity Option

**STANDARDS**

AATCC 158	ISO 3175	M&S P66	M&S P67
NEXT 9A			

Model 912S. 12kg (28 lb). Standardized Dry Cleaning Machine as specified in international standards and by major fabric specifiers for durability and shrinkage testing. The machine is equipped with computer control with manual override and includes patented heat recovery, eco drying systems and self cleaning solvent tanks. Electrically heated, steam heating on request.

Built-in air compressor, requires cold water, drainage and 3 phase electrical supply only.

**SIZE**

WEIGHT	1120 kg / 2470 lbs
DIMENSIONS	1460 mm (w) x 2100 mm (d) x 2000 mm (h) / 58 in (w) x 83 in (d) x 79 in (h)

**ORDERING INFO**

M223/3	Standardized Dry Cleaning Machine
M223/3MS	Standardized Dry Cleaning Machine - M&S Specification

Standard reference washing machine. Microprocessor controlled, up to 999 washing and drying programs can be designed as required, input via the keyboard and stored in memory. The unit is ready to work with BS, ISO, and IWS test programs.

Automatic Soap Dispenser for multiple washing-extracting cycles without intervention. Makeweights, stability templates and rules, reference detergents, bleaching agents and conditioners also available.

Individual memory cards for ISO, M&S, or other retailer test program for quick and easy test setting (Marks and Spencer cards are available for M&S accredited suppliers only).

#### ORDERING INFORMATION

M223CLS	Wascator FOM 71 LAB
201064	M&S Test Program (M&S Suppliers Only)
202805	ISO 6330:2000 Test Program
203603	ISO 6330:2012 Test Program
203753	H&M Test Program
M223B/H	Accessories and Consumables
204175	Electrolux Dryer T5130LAB



#### SIZE

WEIGHT	160 kg / 352 lbs
DIMENSIONS	720 mm (w) x 690 mm (d) x 1315 mm (h) / 28.5 in (w) x 27.5 in (d) x 52 in (h)

#### STANDARDS:

ISO 5077/6330	M&S P1 / P1A / P1B / P1C / P3A / P3B / P4 / P4A / P4B / P4C / P5A / P12 / P12A / P12B / P91 / P99A / P114 / P134 / P134A
IEC 456	NEXT TM 7 / 7A / 7B / 11 / 12 / 24 / 30 / 30A / 34 / 36A

#### Precision Tumble Dryer

M223/1/2

A standard domestic tumble dryer recommended by many fabric specifiers; 120 minute timer, 7 kg load, reversing action, 2 heat settings and 10-minute cooling time.

Precision Tumble Dryer with Digital Controller. A standard domestic tumble dryer which has been modified with the addition of an accurate electronic controller to control exhaust temperature to +/- 2° C and cycle time within one second. Capacity 7 kg, reversing action, 10 minutes cooling time.

#### SIZE

WEIGHT	29 kg / 64 lbs
DIMENSIONS	600 mm (w) x 600 mm (d) x 850 mm (h) / 24 in (w) x 24 in (d) x 30 in (h)

#### ORDERING INFORMATION

M223/1	Standard Tumble Dryer Domestic
M223/2	Precision Tumble Dryer Domestic with Digital Controller



#### STANDARDS:

ISO 6330	M&S P1A / P1B / P1C / P3A / P3B / P4 / P4A / P4B / P4C / P5 / P5A / P7 / P12 / P12A / P12B / P91 / P99A / P114 / P134 / P134A
	NEXT TM 7 / 7A / 7B / 9 / 10 / 11 / 12 / 24 / 30 / 30A / 34 / 36A



## ORDERING INFORMATION

201178	Polyester Makeweights. 30 x 30 cm, BS EN 6330 1994 NEXT Method 12 (25 piece pack)
201177	Polyester Makeweights 20 x 20 cm, BS EN 6330 2012 (20 piece pack)
201051	Stability Template and Shrinkage Rule. The stability template is used to cut fabric samples for determining dimensional changes after laundering or dry cleaning.  Percentage shrinkage $\pm$ can be read directly from the graduated scale over a 350 mm benchmark.
300834	Shrinkage Rule only for Wascator
201910	Shrinkage Rule only for Wascator. For Marks & Spencer suppliers only.
300835	Stability Template only for Wascator.
203309	Stability Template for Marks & Spencer suppliers only.
200964	Stability Template for NEXT
201058	Stability Rule for NEXT
202139	AATCC Shrinkage Scale. A plastic template used to mark fabric with 10" or 18" benchmarks for determining dimensional changes after laundering or dry cleaning. Reads directly in percent change.
201020	Illuminated Viewing Board for Marks & Spencer suppliers only.
201200	ECE Phosphate Reference Detergent "B" to ISO 105 C06 (1997) - 15 KG
203122	ECE Phosphate Reference Detergent "B" to ISO 105 C06 (1997) - 15 KG
201199	ECE Non-Phosphate Reference Detergent "A" to ISO 105 C08 (2001) - 2 KG
201197	ECE Non-Phosphate Reference Detergent "A" to ISO 105 C08 (2001) - 15 KG
202326	IEC "A" Non-Phosphate Reference Detergent to IEC 60456 - 2 KG
201198	IEC "A" Non-Phosphate Reference Detergent to IEC 60456 - 15 KG
201203	IEC "B" Phosphate Reference Detergent to IEC 60456 - 2 KG
300843	IEC "B" Phosphate Reference Detergent to IEC 60456 - 15 KG
201201	Low Temperature Bleaching Agent (Tetraacetyl-ethylene-diamine) 1 KG
201915	Sodium Perborate Tetrahydrate 2 KG
201902	AATCC Reference Detergent with optical brightener. Reference detergent with optical brightener (24 lb tub)
201858	AATCC Reference Detergent without optical brightener. Reference detergent without optical brightener (24 lb tub)
201129	Reference Fabric Conditioner (5 Liters). Larger quantities available

QuickTemp™ Water Temperature Controller - for programmable control of water temperatures during wash and rinse cycles in Home Laundering Machines.

QuickTemp™ Plus Water Temperature Controller - for programmable control of water temperature during wash and rinse cycles for up to 8 Home Laundering Machines. Uses multiplex sensors which monitor water temperature of each machine producing accurate repeatable results.

Both models include:

- Programmable control with keypad - LCD Interface
- Stores up to 9 different programs
- Separate wash/rinse temperatures
- Fahrenheit or Celsius selectable measurement
- Accurate control of fill water temperature
- Blends hot/cold inlet temperatures to achieve selected temperature (single machine)
- Simple wall-mount requiring little space

*It is recommended to be installed with new washers only and in cases of retrofit, installation should be done by an SDL Atlas service provider.*



**SIZE**

WEIGHT 1 kg / 2.2 lbs

DIMENSIONS 250 mm (w) x 190 mm (d) x 85 mm (h) / 10 in (w) x 7.5 in (d) x 3.5 in (h)

**ORDERING INFORMATION**

M222QT Home Laundering Machine Temperature Controller - Single Machine

M222QTP Home Laundering Machine Temperature Controller - 8 Machine

US Heavy Duty Washer

M223/4-5

Selected and certified for AATCC Test methods requiring repeated home laundering (methods 88 B+C, 124, 130, 135, 142, 143, 150, 172 and 179). Available in US domestic and international electrical specifications.

**SIZE**

WEIGHT 75 kg / 165 lbs

DIMENSIONS 699 mm (w) x 686 mm (d) x 1067 mm (h) / 28 in (w) x 27 in (d) x 42 in (h)

**ORDERING INFO**

M223/4 US Heavy Duty Washer 120V / 60 Hz

M223/5 US Heavy Duty Washer 220V / 50 Hz



**STANDARDS**

AATCC 88B+C, 124, 130, 135, 142, 143, 150, 159, 172, 179, 188

US Heavy Duty Dryer

M223/6-7

Selected and certified for AATCC Test methods requiring repeated home laundering (methods 88 B+C, 124, 130, 135, 142, 143, 150, 172 and 179). Available in US domestic and international electrical specifications.

**SIZE**

WEIGHT 52 kg / 115 lbs

DIMENSIONS 743 mm (w) x 686 mm (d) x 1095 mm (h) / 29 in (w) x 27 in (d) x 43 in (h)

**ORDERING INFO**

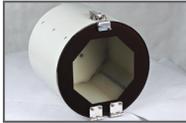
M223/6 US Heavy Duty Dryer 220V / 60 Hz

M223/7 US Heavy Duty Dryer 220V / 50 Hz



**STANDARDS**

AATCC 88B+C, 124, 130, 135, 142, 143, 150, 159, 172, 179, 188



The RotaPill Pilling and Snagging Tester offers numerous options for testing fabrics. From the standard ICI Pilling and Snagging Box to M&S drums to the Octagonal Snagging Drum, the RotaPill will make your testing reliable and easy. The color touchscreen controller has all the standard tests preloaded so tests can be started with just a couple of touches. Magnetic backed cork liners make cork changes easy without the need to remove the box from the drive.

- Two sizes available – 2 or 4 stations
- Operates ICI Pilling/Snagging Box, Octagonal Snagging Drum, & M&S Pilling & Snagging Drum
- Drives can accommodate different boxes and drums simultaneously
- Snagging points can be mounted in the pilling boxes – no need for different boxes
- Touch screen controller has standard tests preloaded
- Count down timer lets operator know when test will finish
- Cork liners held by magnets for easy changing – no need to remove boxes
- One piece, molded ICI boxes

#### STANDARDS:

adidas TM 4.08	BS 5811	BS 8479	EN ISO 12945-1	GB/T 4802.3	ICI TM 444	Woolmark TM152	M&S P18A
M&S P18B	M&S P21A	Next 19					

#### M227A SIZE *Included 2 Pilling Boxes*

WEIGHT	80 kg / 176 lbs
DIMENSIONS	830 mm (w) x 460 mm (d) x 720 mm (h) / 33 in (2) x 18.5 in (d) x 28.5 (h)

#### M227B SIZE *Included 4 Pilling Boxes*

WEIGHT	100 kg / 220 lbs
DIMENSIONS	830 mm (w) x 460 mm (d) x 935 mm (h) / 33 in (w) x 18.5 in (d) x 37 in (h)

#### ORDERING INFORMATION

##### INSTRUMENT

M227A	RotaPill Drive System - 2 station
M227B	RotaPill Drive System - 4 station

##### ACCESSORIES

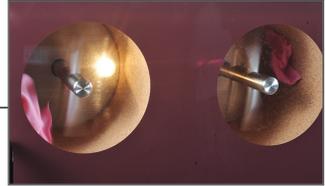
107700	ICI Pilling & Snagging Box with cork lined plates and four tubes
101031	EasyMount Sample Mounting Jig
101035	Standard Sample Mounting Jig
101034	Octagonal Snagging Drum for BS 8479 includes four sample tubes with locking rings (requires 200947 felt for covering sample tubes)
106873	M&S Pilling & Snagging Drum with liner, step, and 8 sample tubes with locking rings
106883	M&S Sample Template for M&S Pilling Test
106891	M&S Sample Template for M&S Snagging Test
106897	Glass Bean Bags (set of 4) for M&S Drum
106894	Pinned Snagging Bars (set of 3) to convert one M&S Drum for Snagging

##### ASSESSMENT

M227G	PillGrade Automatic Pilling Grading System
M227C	Pillscope Assessment Viewer
M227PAV	Universal Pilling Assessment Viewer
200999	M&S Holoscope Assessment Viewer
107608	Pilling Photographs (set of 15)

##### CONSUMABLES

101026	Sample Tubes (pack of 4) – for ICI Pilling Box
101027	Unmounted Cork Linings (pack of 6) – for ICI Pilling Box
107701	Snagging Points (set of 6) able to be mounted in 107700 Pilling Box
106841	M&S Sample Tubes & Locking Rings (set of 8)
106885	M&S Liner & Step for M&S Pilling & Snagging Drum
200947	Felt for BS 8478 Octagonal Snagging Drum Test (1 m x 1.5 m)



The longstanding standard instrument for ASTM D3512, the SDL Atlas Random Tumble Pilling Tester has provided consistency in pilling tests for decades. Along with the critically important cork liner, our instrument and consumables have provided confidence that results achieved today match those from when the ASTM standard was first created.

- Available with two or four chambers
- Chamber air jets to assist tumbling
- Comes with standard impellers for ASTM D3512
- Other impellers available
- Cork liners supplied with Certificate of Conformity

#### SIZE

WEIGHT	61 kg / 134 lbs
DIMENSIONS	470 mm (w) x 402 mm (d) x 680 mm (h) / 18.5 in (w) x 16 in (d) x 27 in (h)

#### ORDERING INFORMATION

##### INSTRUMENT

M227R	Random Tumble Pilling Tester (2 chamber)
M227S	Random Tumble Pilling Tester (4 chamber)

##### ACCESSORIES

200895	Photographic Standards for ASTM (set of 5)
100938	Impeller, French (2 each)
107576	Impeller, German (2 each)
100935	Flapper Kit (modify two standard impellers)

##### CONSUMABLES

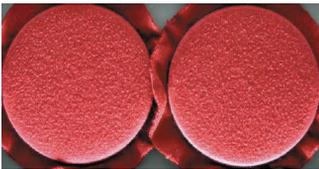
200771	Cork Liners (pack of 50)
202324	Cotton Sliver, Dyed 76 Grain (10 yards/9 meters)
400112	White Adhesive

##### STANDARDS:

ASTM D3512	ISO 12945-3	GB/T 4802.4
JIS L 1076-D	NF G07-132	DIN 53867



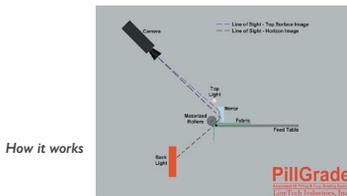
M227G Pillgrade



Pilling is defined by ASTM as "bunches of balls of tangled fibers which are held to the surface of a fabric by one or more fibers"



M227G Data Screen



How it works

## SIZE

WEIGHT 12 kg / 26 lbs

DIMENSIONS 600 mm (w) x 600 mm (d) 600 mm (h) /  
24 in (w) x 24 in (d) x 24 in (h)

## ORDERING INFO

M227G PillGrade Automated Pilling Grading System

## STANDARDS

ASTM D3512    ASTM D4970    ISO 12945-1

The PillGrade system is a 3D fabric scanning system that uses patent pending technology to objectively and repeatedly grade fabric swatches for surface properties. The system outputs pilling and fuzziness data, in addition to the 1.0-5.0 pilling grade according to both ASTM and ISO standards. PillGrade's unique approach to vision inspection enables the system to scan and grade fabrics of any weight, color and pattern.

### Advantages:

- Ensures objective, repeatable grades
- Ensures agreement throughout textile supply chain
- Easy and fast (~5 seconds) to operate
- Correlates to ASTM & ISO grade scale
- Compiles production/supplier pill data
- Measures and grades fuzziness

PillGrade also grades snags

### Fabric Types & Sizes:

Any woven, nonwoven, knit, fleece, automotive, any blend or material.  
Fabric patterns and colors are "invisible" to PillGrade.  
Specimen size range is 4" x 4" (10 cm x 10 cm) to 6" x 6" (150 mm x 150 mm)

### Output:

- Printout (with area for attaching specimen)
- Excel data file (.csv format)
- PDF for e-mailing (with Acrobat installation)

### Data:

- Quantity of pills
- Histogram of pill sizes
- Average pill size
- Pill density (pill / in<sup>2</sup> and pills / cm<sup>2</sup>)
- Fuzz loft
- Multiple specimen averaging test
- 1.0 - 5.0 pilling grade

### PillGrade includes:

- Enclosure with rubber feet
- Motorized feed system
- Industrial CCD camera with optics
- LED back light module
- LED top light module
- Control electronics
- Control panel
- PillGrade software

### Minimum PC Requirements:

- 5 GB HDD
- 1.5 GHz CPU
- 256 MB RAM
- 2 X USB ports OR 1 x USB port and 1 x 9 pin serial port
- 1 available IEEE-1394 (firewire) port (either on board or PCI card)
- Windows 2000 or Windows XP operating system

Power:  
100-240 V AC / 50-60 Hz (please specify)

Viewer for the assessment of pilling on fabrics against 5 standard photographs with Halogen high incident angled illumination. 5 sided drum fitted with comparison photographs of knitted or woven fabrics not included but required.

Holoscope viewer for assessment of pilling on fabric with Holoscopic Viewing System. 5 sided Holograms with comparisons of knitted or woven fabrics not included but required.

**SIZE**

WEIGHT 6 kg / 13 lbs

DIMENSIONS 200 mm (w) x 380 mm (d) x 430 mm (h) /  
8 in (w) x 15 in (d) x 17 in (h)

**ORDERING INFO**

M227C Pillscope Assessment Viewer

200955 Knitted Fabric Drum

200954 Woven Fabric Drum

201000 Snagging Drum - M&S only

200999 Holoscope Assessment Viewer for M&S

200953 Knitted Fabric Holoscope for M&S

200952 Woven Fabric Holoscope for M&S

**STANDARDS**

BS 5811

M&S P17

M&S P18A (Holoscope Only)

M&S P21A

Suitable for all standards where the assessment of pilling on fabrics is necessary, whether against control fabrics or photographs. It uses D65 Artificial Daylight (with CWF optionally available).

Suitable for:

- Martindale Pilling
- ICI Pilling
- ICI Snagging
- Random Tumble Pilling
- Brush/Sponge Pilling

**SIZE**

WEIGHT 10 kg / 22 lbs

DIMENSIONS 340 mm (w) x 240 mm (d) x 280 mm (h) /  
14 in (w) x 10 in (d) x 11 in (h)

**ORDERING INFO**

M227PAV Universal Pilling Assessment Viewer

**STANDARDS**

ASTM D3511	ASTM D3512	ASTM D3514	ASTM D4970	ASTM D5362	BS 5811	ISO 12945-1
NEXT 19	NEXT 26	SN 198525	ISO 12945-2	ISO 12945-3	Arcadia AG 26	
Woolmark TM 152		Woolmark TM 196				

**SIZE**

WEIGHT 75 kg / 165 lb

DIMENSIONS 660 mm (w) x 660 mm (d) x 950 mm (h) /  
26 in (w) x 24 in (d) x 37 in (h)**ORDERING INFORMATION****INSTRUMENT**

M228B Rotawash - 8 Washpot Capacity

M228C Rotawash - 12 Washpot Capacity

**ACCESSORIES**

103829 550 ml Washpot

103855 1200 ml Washpot

**CONSUMABLES**103856 Wash Pot Seals for 550 ml Washpot  
(pack of 8)103857 Wash Pot Seals for 1200 ml Washpot  
(pack of 8)

Colorfastness to washing is easy and affordable with the Rotawash. Available in an 8 or 12 washpot model, this instrument can handle either the 550 ml or 1200 ml washpots. Washpots just press into place. The instrument is all stainless steel to provide years of reliable service in a wet environment. The touchscreen controller is preloaded with the most popular tests and provides information on when the test will be completed.

- Two sizes available – 8 or 12 washpot capacity
- All stainless steel
- Handles 550 ml and 1200 ml washpots
- Touch screen controller with standard tests preloaded
- Able to program and save custom tests
- Count down timer tells operator when test will be finished
- Selectable languages English, Chinese, Spanish, and Turkish
- Door safety switch stops rotor if opened
- Rotor jog button eases loading and unloading

**STANDARDS: M228 / M228AA**

AATCC 61	AATCC 86	AATCC 132	AATCC 190	GB/T 3921	GB/T 5711	GB/T 12490	
ISO 105-C09	ISO 105-C10	ISO 105-D01	ISO 105-E03	ISO 105-E12	Woolmark TM7	Woolmark TM115	
FTM S 191 Method 5622	M&S C4A	M&S C5	M&S C10A	M&S C11	M&S C26	M&S C37	M&S C49A

**ADDITIONAL ORDERING INFO FOR M228 / M228AA****ACCESSORIES**

103852 Stainless Steel Balls (pack of 100)

107381 Stainless Steel Discs (pack of 25)

**CONSUMABLES**103832 Teflon Gasket for 550 ml Container or  
Washpot (pack of 20)**ISO**

204167 Soap Powder – FBA Free (2 kg)

203118 Multifiber DW Adjacent Fabric SDC (50 m roll)

**AATCC**201858 AATCC Reference Detergent Without Optical  
Brightener (24 lb tub)**M&S**

204167 Soap Powder - FBA Free (2 kg)

402266 M&amp;S Lyocell Multifiber (50 m roll)



### SIZE

**WEIGHT** 135 kg / 297 lb

**DIMENSIONS** 1172 mm (w) x 645 mm (d) x 1175 mm (h) /  
46.8 in (w) x 25.8 in (d) x 47 in (h)

### ORDERING INFORMATION

#### INSTRUMENT

M228AA Launder-Ometer

#### ACCESSORIES

103814 550 ml Container

103830 1200 ml Container

#### CONSUMABLES

103831 Neoprene Gasket for 550 ml Container  
(pack of 20)

103833 Neoprene Gasket for 1200 ml Container  
(pack of 20)

202650	Rubber Balls (pack of 200)
103834	Teflon Gasket for 1200 ml Container or Washpot (pack of 20)
201200	ECE Phosphate Reference Detergent (2 kg)
200882	Multifiber FA 2" x 2" Heat Sealed (1000 pieces)
201200	ECE Phosphate Reference Detergent (2 kg)

AATCC specified the Launder-Ometer as the only approved colorfastness to washing instrument for over 50 years. It has proven its reliability and durability over these many decades. The all stainless steel construction stands up to the hard environment of wet labs. The Launder-Ometer now comes with an easy opening door and quick-lock retention bars for the containers to ease loading and unloading.

- AATCC specified instrument for more than fifty years
- Large 20 container capacity
- All stainless steel
- Handles 550 ml and 1200 ml containers
- Easy open door
- Quick-lock retention bars
- Door safety switch stops rotor if opened

ISO 105-C01	ISO 105-C02	ISO 105-C03	ISO 105-C04	ISO 105-C05	ISO 105-C06	ISO 105-C08
Woolmark TM177	Woolmark TM193	Woolmark TM199	Woolmark TM240	Woolmark TM241	FTMS 191 Method 5614	
M&S P3B	M&S P12A	M&S P137	Next 2	Next 2A	Next 3	Next 3A
					Next 5	JIS L 0850
						JIS L 0879



The Autoburst is a hydraulic bursting tester with advanced testing controls. The instrument has automatic flow control allowing bursts to be achieved within the specified time of the standard. The advanced software provides diaphragm correction calculations for consistent results. These features, along with a maximum capacity of 6000 kPa (871 psi), make the Autoburst the most versatile burst tester on the market.

- Use for textile, nonwovens, paper, corrugated, plastic film, packaging
- Hydraulic pressure to 6000 kPa (871 psi)
- Quick change bells
- Diaphragm correction
- Automatic flow rate adjustment
- Software analysis for full results
- Distension measurement up to 70 mm
- Two button clamping for safety
- Integrated safety shield

## ORDERING INFORMATION

### INSTRUMENT

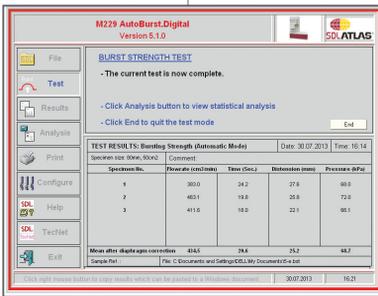
M229	Autoburst (Includes processor, monitor, keyboard and mouse)
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### ACCESSORIES

101264	30 mm Test Kit (7.1 cm <sup>2</sup> )
101267	30.5 mm Test Kit (7.3 cm <sup>2</sup> )
101268	31 mm Test Kit (7.55 cm <sup>2</sup> )
101265	31.5 mm Test Kit (7.8 cm <sup>2</sup> )
101262	35.7 mm Test Kit (10 cm <sup>2</sup> )
101263	79.8 mm Test Kit (50 cm <sup>2</sup> )

### CONSUMABLES

101266	Rubber Diaphragms (pack of 10)
--------	--------------------------------



## SIZE

WEIGHT 140 kg / 309 lbs

DIMENSIONS 780 mm (w) x 480 mm (d) x 910 mm (h) /  
31 in (w) x 19 in (d) x 36 in (h)

## STANDARD

## TEST HEAD SELECTION

	30.5 mm (7.3 cm <sup>2</sup> )	31 mm (7.55 cm <sup>2</sup> )	31.5 mm (7.8 cm <sup>2</sup> )	35.7 mm (10 cm <sup>2</sup> )	79.8 mm (50 cm <sup>2</sup> )
ASTM D3786		●			
BS 3424-6-B	●		●	●	
EN 12332-2				●	
ERT 80-4-20			●		
FZ/T 01030	●				
ISO 13938-1	●			●	●
ISO 3303-B			●		
GB/T 7742.1					●
WSP 030.1.R3 (12)	●		●		
WSP 030.2.R3 (12)	●			●	●
Distension Height	40 mm	40 mm	40 mm	40 mm	70 mm

This list of standards is a partial listing of the most common textile standards. The instrument can also be used for packaging, paper, plastic and foil.



The PnuBurst provides unparalleled capabilities in a pneumatic bursting tester. Automatic flow control ensures bursts are achieved within the proper time according to standards. The instrument also provides diaphragm correction calculations to give accurate bursting pressures. A laser measurement system is used for distension height. The color touch screen controller provides full test controls including clamping pressure and Marks & Spencer controls. Included software captures all of the data from standard burst tests for analysis. An optional software allows users to program special sequences such as cyclic testing or stretch and hold testing. Stretch and hold can be set to hold a given distension or a given pressure. With a maximum capacity of 1500 kPa (200 psi), the PnuBurst is the most powerful pneumatic burst tester on the market.

- Maximum pneumatic pressure 1500 kPa (200 psi)
- Touch screen controller (English, Spanish, Chinese, Turkish)
- Most common standards are preprogrammed
- Quick change bells
- Diaphragm correction
- Automatic flow rate adjustment
- Software analysis for full results
- Laser distension measurement up to 70mm
- Two button clamping for safety
- Integrated safety shield
- M&S approved

**SIZE**

WEIGHT	80 kg / 177 lbs
DIMENSIONS	480 mm (w) x 560 mm (d) x 805 mm (h) / 19 in (w) x 22 in (d) x 32 in (h)

**ORDERING INFORMATION**

<b>INSTRUMENT</b>	
M229P	PnuBurst

**CONSUMABLES**

101441	Rubber Diaphragms - Standard (pack of 10)
107675	Rubber Diaphragms - Heavy Duty (pack of 10)

**ACCESSORIES**

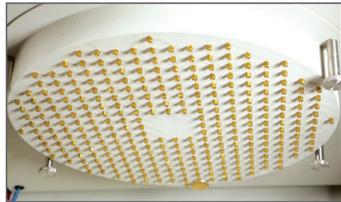
107186	30 mm Test Kit (7.1 cm <sup>2</sup> )
107707	30.5 mm Test Kit (7.3 cm <sup>2</sup> )
107708	31 mm Test Kit (7.55 cm <sup>2</sup> )
107709	35.7 mm Test Kit (10 cm <sup>2</sup> )
107710	79.8 mm Test Kit (50 cm <sup>2</sup> )
107188	80 mm Test Kit (50.3cm <sup>2</sup> )
107711	113 mm Test Kit (100 cm <sup>2</sup> )
104646	Air Booster/Regulator (if lab pressure is unable to achieve max pressure of 1500 kPa)
107712	Advanced Software (for running special test sequences)

**STANDARD**

**TEST HEAD SELECTION**

	30 mm (7.1 cm <sup>2</sup> )	30.5 mm (7.3 cm <sup>2</sup> )	31 mm (7.55 cm <sup>2</sup> )	35.7 mm (10 cm <sup>2</sup> )	79.8 mm (50 cm <sup>2</sup> )	80 mm (50.3 cm <sup>2</sup> )	113 mm (100 cm <sup>2</sup> )
adidas 4.09					•		
ASTM D3786			•				
EDANA 80.4			•	•			
GB/T 7742.2		•			•		•
ISO 13938-2		•		•	•		•
M&S P27	•					•	
Next 22	•						
Woolmark TM29			•				
Distension Height	40 mm	40 mm	40 mm	40 mm	70 mm	70 mm	70 mm

Instrument can also be used for packaging, paper, plastic and foil.



The Bundesmann provides a water repellency test for fabrics that are being contacted during use such as a rain jacket. Samples are mounted over a cup and are rubbed from underneath during the test. Three hundred precision stainless steel drop formers provide simulated rain falling from a height of 150 cm. Samples mount onto holders outside of the tester and then are easily set in place on top of the cups.

- Four test stations inclined at 15°
- Automatic sample wipers
- 300 Precision stainless steel drop formers
- Drip tray
- Easy mount sample holders
- Water flow meter
- Water filter

#### STANDARDS:

BS EN 29865

DIN EN 29865

ISO 9865

GB/T 14577

NF G07-058

#### SIZE

WEIGHT 177 kg / 390 lbs

DIMENSIONS 760 mm (w) x 760 mm (d) x 2100 mm (h) /  
30 in (w) x 30 in (d) x 83 in (h)

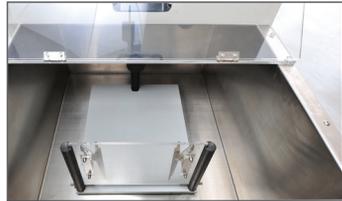
#### ORDERING INFORMATION

##### INSTRUMENT

M230 Bundesmann Water Repellency Tester

##### ACCESSORIES

103895 Bundesmann Centrifuge



The Rain Tester provides a water repellency test for fabrics with different intensities of water impact at specified water temperature. Samples are mounted vertically while the simulated rain is sprayed horizontally. Samples are backed with a standard blotting paper that is weighed before and after the test. The Rain Tester provides precise control of the test through a color touch screen controller including water column height, water temperature, and test time.

- Color touch screen controller
- AATCC and ISO tests preprogrammed
- Water temperature control per standard requirements
- Test time controlled automatically
- Recycle test water
- Available with 1500 mm (60 in) or 2400 mm (94 in) column
- Water level maintained automatically in reservoir tank

#### SIZE

WEIGHT 150 kg / 330 lbs

DIMENSIONS 800 mm (w) x 740 mm (d) x 2450 mm / 3250 mm (h) / 32 in (w) x 29 in (d) x 97 in/128 in (h)

#### ORDERING INFORMATION

##### INSTRUMENT

M230D15 Rain Tester with 1500 mm column

M230D24 Rain Tester with 2400 mm column

##### ACCESSORIES

100798 2400 mm column to convert M230D15 to M230D24

##### CONSUMABLES

202141 AATCC Blotting Paper 500 x 1000 mm (125 sheets)

#### STANDARDS:

AATCC 35

BS EN ISO 22958

GB/T 23221



To determine colorfastness to water and perspiration of textiles. Provided with 2 stainless steel frames each with a capacity of 20 samples of 10 cm x 4 cm held between acrylic separator plates. Loading weights for BS, ISO and AATCC standards are included. An electric incubator is required available but not included.

**SIZE**

**WEIGHT** 2.5 kg / 5 lbs (tester)  
3.6 kg / 8 lbs (tester with AATCC weight)  
4.1 kg / 9 lbs (tester with ISO weight)

**DIMENSIONS** 205 mm (w) x 76 mm (d) x 15 mm (h) /  
8 in (w) x 3 in (d) x 6 in (h)  
(tester without weight)

**ORDERING INFORMATION**

105215	Acrylic Plates (Pack of 42) for Perspirometer
202538	Glass Plates & Petri Deishes M&S
300924	Plastic Dishes & Glass Plates SDC
G209A	Oven/Incubator 33 Liters
G209B	Oven/Incubator 120 Liters
202683	Set of Chemicals for and ISO perspiration tests

**STANDARDS:**

AATC 15/106/107/135

BS 1006

DIN 54005/54006/54007/54020

ISO 105-E01/E02/E04/X18

NEXT 4/4A

Woolmark TM 6/174/175

M&amp;S C6/C7/C20B

Tesco TM137/01

GB/T 3922/5713/5714/18886



To determine the colorfastness to water and perspiration in textiles. A stainless steel frame with a capacity of 20 samples of 10 cm x 4 cm held between acrylic separator plates, loading weights not included. Comply with AATCC and ISO test methods by add on individual weights: 3.36 kg (8 lb) for AATCC, and additional weight 0.47 kg (1 lb) for ISO. An electric incubator is required.

**SIZE**

**WEIGHT** 2.5 kg / 5 lbs (tester)  
3.6 kg / 8 lbs (tester with AATCC weight)  
4.1 kg / 9 lbs (tester with ISO weight)

**DIMENSIONS** 205 mm (w) x 76 mm (d) x 15 mm (h) /  
8 in (w) x 3 in (d) x 6 in (h)  
(tester without weight)

**ORDERING INFORMATION**

105212	Perspiration Tester (Single Unit)
107839	Weight Set for AATCC and ISO Tests
105215	Acrylic Plates (Pack of 42)
202683	Set of Chemicals for AATCC and ISO
G209A	Oven/Incubator 33 Liters
G209B	Oven/Incubator 120 Liters

**STANDARDS:**

AATC 15/106/107/135

BS 1006

DIN 54005/54006/54007/54020

ISO 105-E01/E02/E04/X18

NEXT 4/4A

Woolmark TM 6/174/175

M&amp;S C20B

Tesco TM137/01

GB/T 3922/5713/5714/18886

To determine the surface wetting resistance of fabrics. Comprising a metal framework allowing distilled water to be sprayed through a nozzle onto a test specimen at 45° and 150 mm below the nozzle. The appearance of the specimen is compared against an optional photographic scale.

Optional Photographic Rating Chart available. (AATCC)

#### SIZE

WEIGHT	5 kg / 11 lbs
DIMENSIONS	230 mm (w) x 250 mm (d) x 500 mm (h) / 9 in (w) x 10 in (d) x 20 in (h)

#### ORDERING INFORMATION

105346	Spray Rating Tester
202150	Photographic Rating Chart (AATCC)
102528	Spare Nozzle and Rubber Sleeve

#### STANDARDS:

ISO 4920	M&S P23	AATCC 22
Next 23	BS EN 24920	BS 3702
GB/T 4745	WSP 080.1.R4(12)	IST 80.1 (01) 8.1





Many European and ISO flammability tests require apparel fabrics and vertically oriented fabrics to be tested with an instrument such as the AutoFlamm including home textiles such as curtains or drapes and bedding or table cloths that will hang down from some furniture. This automated instrument has a motor driven gas burner and micro switches activated by trip threads. The AutoFlamm has clearly marked settings for the most common standards for easy set up. The handheld touchscreen controller has all of the most popular standards preprogrammed. An optional radiator assembly can also be added to meet BS EN 13772.

- Remote touch screen controller
- Motorized test activation
- Microswitches activated by trip threads
- Clearly marked settings for popular standards
- Optional radiator assembly

#### SIZE

WEIGHT 100 kg / 221 lbs

DIMENSIONS 560 mm (w) x 650 mm (d) x 1250 mm (h) /  
22 in (w) x 26 in (d) x 49 in (h)

#### ORDERING INFORMATION

##### INSTRUMENT

M233B AutoFlamm

##### Includes:

- 6 pin frames & templates
- Filter paper holder
- 2 burners
- 1 pack of marker thread



#### STANDARD

STANDARD	Test Frame	Filter Paper	Marker Thread	Radiator Assembly	Burner	Gas Used
BS EN 13722: 2003	100467	100475	100477	100466	100474	Propane
BS 5438:1976 Test 1 & 2	100471				100473	Butane
BS 5438:1976 Test 3	100472		100477		100473	Butane
BS 5438:1989 Test 2	100472		100477		100474	Butane
EN ISO 15025:2002	100470	100475			100474	Propane/Butane
EN ISO 6940:1995	100469/100467				100474	Propane/Butane
EN ISO 6940:2004	100469				100474	Propane/Butane
EN ISO 6941:1995 & 2003	100468		100477		100474	Propane/Butane
EN ISO 6941:2003	100468		100477		100474	Propane/Butane
EN 1101:1995	100469/100467				100474	Propane/Butane
EN 1102:1995	100468	100475	100477		100474	Propane/Butane
EN 1103:1995	100468	100476	100477			Propane

To determine the comparative burn rates and burn resistance of textiles, particularly those for automotive interior use. Comprised of draft free stainless steel cabinet with observation window, sample holder and door mounted burner. Manual control of timing and gas supply.

Optional Automatic Gas Control System including solenoid control gas valve and automatic ignition timer and controls.

#### SIZE

WEIGHT	11 kg / 23 lbs
DIMENSIONS	390 mm (w) x 200 mm (d) x 390 mm (h) / 15 in (w) x 8 in (d) x 15 in (h)

#### ORDERING INFORMATION

M233F	Horizontal Flammability Tester
200264	Automatic Gas Control System
200242	Manual Gas Control System

#### STANDARDS:

ASTM D5132	BS AU 1690	SAE J369	FMV SS 302
JIS D1201			



To determine the burning characteristics of textiles under controlled conditions. Stainless steel test cabinet with glass observation panel provided with automatic timing of flame spread in 0.1 second increments from ignition. Automatic or manual flame impingement for 1, 5 or 20 seconds. Brushing Device including Nylon Brush is available per request.

#### SIZE

WEIGHT	27 kg / 60 lbs
DIMENSIONS	420 mm (w) x 260 mm (d) x 526 mm (h) / 17 in (w) x 11 in (d) x 21 in (h)

#### ORDERING INFORMATION

M233G	45° Automatic Flammability Tester
103805	Brushing Device and Brush
103800	Burner (pack of 5)
103806	Sample Holder (pack of 5)

#### STANDARDS:

ASTM D1230	CALIF TB 117	CFR 16-1610	FTMS 191-5908
NFPA 702	GB/T 14644		



**SIZE**

**WEIGHT** 163 kg / 360 lbs

**DIMENSIONS** 1220 mm (w) x 610 mm (d) x 1400 mm (h) /  
48 in (w) x 24 in (d) x 55 in (h) (Exterior)

1220 mm (w) x 600 mm (d) x 1120 mm (h) /  
48 in (w) x 23.5 in (d) x 44 in (h) (Interior)

**ORDERING INFORMATION**

M233HVU Atlas HVUL2 Horizontal/Vertical Flame Chamber

For the flammability testing of plastic materials used in consumer electronic devices and appliances. Stainless steel construction with black interior and large sliding window for easy viewing. Includes a fully adjustable specimen support and precision gas flow controls. 3 red LED timers mounted on inside back wall of chamber allow for precise and simplified operation. Remote control timing and reset help ensure accurate test results.

Large volume (>0.75 m<sup>3</sup>), draft free chamber has flexible iris hand access ports, sliding tempered glass viewing window and interior light.

**Includes:**

- Gas control system has electrical shut-off solenoid, local gas flow meter, pressure regulator and gauge.
- Digital timers (3) with 0.1 second resolution.
- Flame confirmation kit (ASTM D5207).
- Variable speed exhaust blower with damper.

**STANDARDS:**

ASTM D0635/3801/4804/4986/5048	ISO 9772.3/9773
IEC 60707 PART 11-10/60695 PART 11-20	UL 94

**SIZE**

**WEIGHT** 38 kg / 85 lbs

**DIMENSIONS** 340 mm (w) x 330 mm (d) x 840 mm (h) /  
13.5 in (w) x 13 in (d) x 33 in (h)

Vertical Flammability Chamber for measuring the vertical flame spread for children's sleepwear, fabrics, other textile materials or resilient filling materials used in upholstered furniture. Comprises a draft free stainless steel cabinet with glass observation panel window and back wall painted black for easy test viewing. Specimen holders, burner and associated hardware are dependent on the test standard and must be specified. Separate enclosure for manual gas controls is located away from the flame chamber for operator convenience.

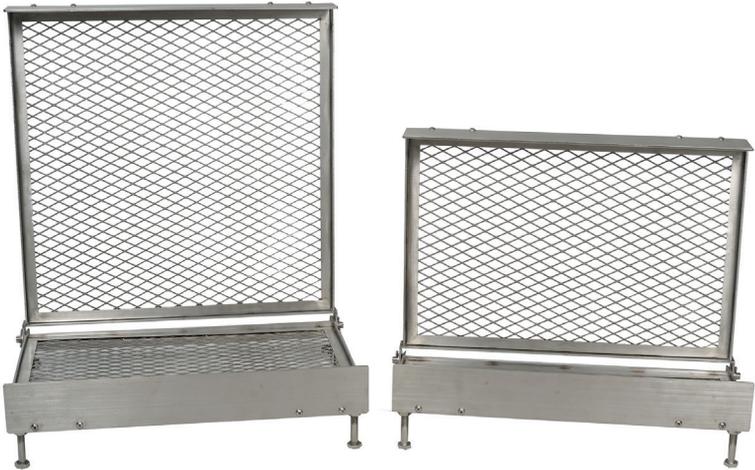
Optional Automatic Gas Control System including solenoid control gas valve and automatic ignition timer and controls.

**ORDERING INFORMATION**

M233M	Vertical Flammability Chamber
107210	Enhanced AGC with Non-Lingering Burner
105400	Manual Gas Control System
105395	Accessories for ASTM D6413 (formerly FTMS 191-5903.1)
105396	Accessories for 16 CFR 1615/1616 (Childrens Sleepwear)
105397	Accessories for CALIF TB-117 (Resilient Filling Materials Vertical)

**STANDARDS:**

ASTM D6413	CALIF TB-117	16 CFR Parts 1615
16 CFR Parts 1616	GB/T 5455	



For determining the ignitability of material combinations for upholstered seating. The test rigs are covered with standard foam and fabric under test. The assembly is then ignited using one of the standard ignition sources and the combustion process is monitored.

Includes large and small test rig, timer, flow meter.

Optional accessories include foam pads, wooden cribs, burner tube, cutting templates, and standard cigarettes.

**SIZE**

WEIGHT	18 kg / 40 lbs
DIMENSIONS	450 mm (w) x 300 mm (d) x 450 mm (h) / 18 in (w) x 12 in (d) x 18 in (h)

**ORDERING INFORMATION**

104025	Flammability Test Rig (Upholstery) to EU Standards
300949	Number 4 wooden crib (pack of 10)
300950	Number 5 wooden crib (pack of 10)
300951	Number 6 wooden crib (pack of 10)
300952	Number 7 wooden crib (Pack of 10)
104020	Burner Tube
104019	Cutting Templates
201012	450 x 450 x 75 mm low density foam ref VP45 (pack of 50)
201011	450 x 300 x 75 mm low density foam ref VP45 (pack of 50)
300954	450 x 150 x 75 mm low density foam ref VP45 (pack of 50)
300955	450 x 305 x 75 mm medium density foam VP60 (pack of 50)
300956	450 x 150 x 75 mm medium density foam VP60 (pack of 50)
300957	432 x 445 x 75 mm medium density foam VP60 (pack of 50)
201010	450 x 300 x 75 mm high density foam CM25H (pack of 50)
202640	450 x 150 x 75 mm high density foam CM25H (pack of 50)
201009	450 x 450 x 75 mm high density foam CM25H (pack of 50)

**STANDARDS:**

BS 5852 PARTS 1 and 2	ISO 8191 PARTS 1 and 2
EN 1021 PARTS 1 and 2	



9-Position Martindale

### INSTRUMENT AND FEATURES

The Martindale is a versatile instrument capable of multiple abrasion and pilling tests. It uses precision components to deliver the exact abrasion or pilling movement required by all international and retailer standards. The touch screen controller, with the most common functions accessible in one or two touches, makes this the easiest Martindale in the market to use. Our 9-position instrument is designed to conserve valuable bench space while providing maximum testing capacity.

- Touch screen controller with individual station counters
- Light weight motion plate and storage rack
- Multiple speeds can be used for custom tests
- Test head choices include standard abrasion, pilling, sock abrasion, and many custom setups
- 6, 8, or 9 position base uses the least bench space of large martindales
- Available in a small four-position base
- UKAS Calibration Certificate available upon request

### INSTRUMENT ORDERING INFORMATION

		Width	Depth	Height	Weight
M235	4 Position Martindale	665 mm / 26 in	540 mm / 21.3 in	340 mm / 13.4 in	72 kg / 159 lbs
M235/3	6 Position Martindale	880 mm / 34.7 in	615 mm / 24.2 in	340 mm / 13.4 in	115 kg / 253 lbs
M235/8	8 Position Martindale	880 mm / 34.7 in	615 mm / 24.2 in	340 mm / 13.4 in	115 kg / 253 lbs
M235/9A	9 Position Martindale	880 mm / 34.7 in	615 mm / 24.2 in	340 mm / 13.4 in	115 kg / 253 lbs

### INCLUDES

One per position - sample holder, 9kPa and 12kPa weights for standard abrasion tests, and standard mounting device.

### ACCESSORIES ORDERING INFORMATION

105148	ISO Pilling Test Accessories (one position)
105153	Mounting Device for Pilling Sample
105151	Sock Abrasion Attachment (one position)
105158	Mounting Device for Sock Abrasion Sample
103911	38mm Test Specimen Cutter
103916	140mm Cutter for Abradent & Backing Felt
107703	Abrasion Station Enhancement Kit (one position)
107704	Acrylic Holder for Abrasion & Pilling Kits



4-Position Model

### STANDARDS: ABRASION

ARCADIA AG 32, 34, 35	ASTM D4966	BS 2543	BS 3424	BS 5690	EN 13770	EN 14325	EN 14465			
EN 14605	EN 15973	EN 16094	EN 388	EN 343	EN 530	EN 943	GB/T 13775	GB/T 21196	IS 12673	ISO 12947
ISO 17704	ISO 17076-2	ISO 20344	ISO 26082-1	ISO 5470-2	IUP 48-2	IUP 53-1	WTO40	JIS L1096	M&S P19	M&S P140
Next 18	PV 3975	SABS 1009	SFS 4328	SN 198529	VDA 230-211	VDA 230-212	Woolmark 112			

### STANDARDS: PILLING

ARCADIA AG 26	ASTM D4970	GB/T 4802.2	ISO 12945-2	M&S P17, 18C	Next 26	SN 198525	Woolmark 196
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### STANDARDS: NON WOVEN

WSP 020.5.R3 (12)

### CONSUMABLES ORDERING INFORMATION

201017	Standard Abradent Fabric SM25 (1.6 m x 5 m)
200910	Felt Discs, 90 mm for Pilling Test (pack of 20)
200971	Felt Discs, Woven 140 mm (pack of 20)
200947	Felt, Woven (1 m x 1.5 m) for ISO 12947, 12945-2, and BS EN 13770
200946	Felt Discs, Nonwoven 140mm (pack of 20) for ASTM and M&S Standards
200945	Felt, Nonwoven (1 m x 1.5 m) for ASTM and M&S Standards
200972	Backing Foam (4 sheets each 1.5 m x 0.5 m)
105136	Sample Retaining Rings - For Pilling Heads (Pack of 20)
200944	OAKLEY Abrasion Sheets F2 for Protective Gloves EN 388 (pack of 20)
107765	Klingspor PL31B Gritt I80 abrasive paper for EN388, pack of 50 sheets

200943	Silicon Carbide Paper Sheets, P180G for Coated Fabrics EN530 (pack of 25)
201077	Trizact Synthetic Abrasion Discs 35 Microns for controlled abrasion of synthetic fabrics, self-adhesive (pack of 25 - green)
203289	Trizact Synthetic Abrasion Discs 5 Microns for controlled abrasion of synthetic fabrics, self-adhesive (pack of 25 - orange)

### EVALUATION ORDERING INFORMATION

201013	SM150 Photographs - IWVS & ASTM Pilling Tests (4 sets)
201015	EMPA Photographs - Woven
201016	EMPA Photographs - Knitted
300879	Pilling Photographs M&S P17 Method I



The Circular Locus Tester swiftly tests surface deterioration and quality of fabrics (wool, chemical fiber, mixed, kitted and woven fabrics). Using an active friction system, fabric is rubbed against a nylon brush and abrasive or an abrasive only under controlled conditions. Results of the test are achieved in minutes. The relative motion of the locus specimen grip and the abrasive platform is a circle with a relative speed of  $60 \pm 1$  r/min. The grip offers pressure to the specimen which is adjustable with a tolerance of  $\pm 1\%$ . For added control and safety, the machine is equipped with a self-stop switch. It can perform standards JJG 040-1990 and GB/T 4802.1-1997.

#### SIZE

WEIGHT 30 kg / 66 lbs

DIMENSIONS 500 mm (w) x 330 mm (d) x 270 mm (h) /  
20 in (w) x 13 in (d) x 15 in (h)

#### ORDERING INFORMATION

105200 Circular Locus Tester

#### STANDARDS:

JJG 040-1990

GB/T 4802.1 - 1997

To cut out the circular test samples simply and accurately from materials including woven, nonwoven and knitted textiles, carpet, felts and foam. Individual circular cutters in various diameters are available for different test methods or application: 100 cm<sup>2</sup> (5 or 10 mm depth), 10 cm<sup>2</sup>, 50 cm<sup>2</sup>, 38 mm and 140 mm. All circular cutters are supplied with 12 spare blades and 1 cutting pad. Spare blades in packs of 100 pcs also supplied.

Manual Sample Cutting Set consists of a graduated cutting mat 60 x 45 cm, the yellow rotary cutter with one spare blade and a straight knife with snap-off blade and one spare blade.

#### SIZE

WEIGHT 2 kg / 4.4 lbs

DIMENSIONS 160 mm (w) x 160 mm (d) x 110 mm (h) /  
6.5 in (w) x 6.5 in (d) x 4.5 in (h)

#### ORDERING INFORMATION

##### INSTRUMENTS

200934	Manual Sample Cutter Set
103901	Cutter - 100 cm <sup>2</sup> x 5mm depth of cut (supplied in FabricYield System M236/1)
103913	Cutter - 10 cm <sup>2</sup> x 5 mm depth of cut
103914	Cutter - 50 cm <sup>2</sup> x 5 mm depth of cut
103908	Cutter - 100 cm <sup>2</sup> x 10 mm depth of cut, for thicker structures like carpets and felts.
103911	Cutter - 38 mm dia x 5 mm depth of cut, for Martindale test sample and backing foam cutting



##### INSTRUMENTS (CONTINUED)

103916	Cutter - 140 mm dia x 5 mm depth cut, for Martindale abrased fabric and backing felt cutting
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##### ACCESSORIES

103915	Spare blades for cutters: 103901, 103914 & 103916 (pack of 100)
103909	Spare blades for cutters: 103913 & 103911 (pack of 100)
103906	Spare blades for cutters: 103908 (pack of 100)
103899	Spare cutting pads (pack of 10), for all circular cutters

## Fabric Yield Package

M236/1-2

M236/1 combines a circular sample cutter 100 cm<sup>2</sup> x 5 mm depth of cut, cutting pad and 12 spare blades, with a programmed battery-operated electronic balance to provide an accurate, portable system for determining fabric yield in g/m<sup>2</sup> and oz/yd<sup>2</sup>. A sample of 100 cm<sup>2</sup> is cut and placed on the scale which is switchable from g/m<sup>2</sup> to oz/yd<sup>2</sup>.

M236/2 combines a universal manual lever sample press with 68.35 mm (2.698 in) diameter die, ejector and 100 cutting pads, together with a programmed battery-operated electronic balance. Provides an accurate, portable system for determining fabric yield in g/m<sup>2</sup> and oz/yd<sup>2</sup>. Eight (8) samples are cut across the fabric width and placed on the scale which is switchable from g/m<sup>2</sup> to oz/yd<sup>2</sup>.

#### SIZE

WEIGHT 8 kg / 18 lbs

DIMENSIONS 200 mm (w) x 200 mm (d) x 200 mm (h) /  
8 in (w) x 8 in (d) x 8 in (h)

#### ORDERING INFORMATION

M236/1	FabricYield Package (1 Sample)
M236/2	FabricYield Package (8 Samples)

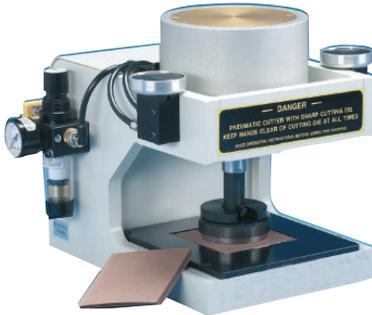


##### ORDERING INFORMATION (CONTINUED)

103915	Spare blades for 103901 cutter in M236/1 (pack of 100)
103899	Spare cutting pads (pack of 10), for circular cutters
201110	Circular Die 68.53mm (2.698 in) dia. for U.S. Fabric Yield System
201140	Cutting pads for M236/2 (pack of 100)

##### STANDARDS:

ASTM D3776/2646	ISO 3801	BS 3424/2471
BS EN 12127	M&S P65/65A (for M236/1)	
NEXT 20 (for M236/1)		

**STANDARDS:**

ASTM D3776/2646

BS 3424/2471

BS EN 12127

ISO 3801

M&amp;S P65/P65A

Heavy-duty tabletop press with 125 mm (6 in.) bore air cylinder, 50 mm (2 in.) cutting depth and 152.4 mm x 152.4 mm (6 x 6 in.) cutting table. Pneumatic activation at 100 PSI (7 Bars) produces 1282 kg (2825 lb) of cutting force, which can easily cut through multiple fabric layers. Provided with automatic sample ejection and two hand control for safety and regulator filter. Completely air operated - no wiring required (laboratory standard compressed air supply required). Included 2.6974 inch die and 100 cutting pads (4.4424 or other special die shapes and sizes available on application).

**SIZE**

WEIGHT 59 kg / 130 lbs

DIMENSIONS 450 mm (w) x 480 mm (d) x 450 mm (h) / 18 in (w) x 19 in (d) x 18 in (h)

**ORDERING INFORMATION**

300993 Pneumatic Sample Press

300994 Circular Die 100 cm<sup>2</sup> (113 mm / 4.44 in dia.) for European Fabric Yield System

201110 Circular Die 68.53 mm (2.698 in) dia. for U.S. Fabric Yield System

300995 Cutting Pads 6" x 6" (pack of 100)

G265 Silent Laboratory Compressor (Optional)  
Larger capacities available on request**STANDARDS:**

BS 1006 UK/TN

To determine the colorfastness and degradation due to the effects of sunlight on textiles. Standard model fitted with 500 watt mercury blended tungsten lamp, presettable timer and time elapsed counter. Can be fitted with type C & D sample holders within which humidity can be controlled using saturated salts.

Rapid Light Fastness Tester. Rapid fade model fitted with 400 watt mercury tungsten high power lamp with transformer, presettable timer and time elapsed counter. Can be fitted with type D sample holders.

**SIZE**

WEIGHT 23 kg / 51 lbs

DIMENSIONS 450 mm (w) x 480 mm (d) x 480 mm (h) / 18 in (w) x 19 in (d) x 18 in (h)

**ORDERING INFORMATION**

M237 Light Fastness Tester (Standard)

M237A Light Fastness Tester (Rapid Fade)

104611 Cylindrical Cell (pack of 50)

104612 Water-cooled Cell

104936 Spare Lamp (Standard)

105664 Spare Lamp (Rapid Fade)

300267 Light Fastness Standards

CPS+ Benchtop Xenon Arc system is the ideal instrument for initial accelerated lightfastness and photostability testing. It features:

- Microprocessor control for programming cycles and end point, with programming keypad and black/white display
- 1500 Watt air-cooled xenon lamp
- Control and display of irradiance value between 250 and 765 W/m<sup>2</sup> measured at 300-800nm
- Direct setting and control of Black Standard temperature (BST)
- 2 pre-programmed tests plus storage of 6 user-defined tests with up to 6 segments each.
- Complete test report via RS232 serial interface for data transmission to a PC or printer. Optional software available.
- Exposure area 560 cm<sup>2</sup> to expose flat samples or 3D specimens
- Special optical filters simulate various spectral test conditions.

#### SIZE

WEIGHT	29 kg / 64 lbs
DIMENSIONS	780 mm (w) x 350 mm (d) x 350 mm (h) / 31 in (w) x 14 in (d) x 14 in (h)



#### ORDERING INFORMATION

M237HE	Suntest CPS+ Xenon Arc Tester
201324	Spare Xenon Arc Lamp 1500W
201323	Spare Air Filters (pack of 10)
M237P	Black panel temperature sensor
301026	Flooding system for testing the weather resistance of materials by cyclic sample immersion throughout test program (For CPS+ Model Only)
201249	UV filter 290 nm
201248	Windows Glass Filter, 310 nm

XLS+ Benchtop Xenon Arc system is designed for accelerated lightfastness and photostability testing with larger exposure area. The features includes:

- Touch screen control with color display to monitor and display test parameters
- 1700 Watt air-cooled xenon lamp
- Control and display of irradiance value at 300-400 nm or 300-800 nm
- Direct setting and control of Black Standard Temperature (BST) in the range of 45-100° C. Optional Black Panel Temperature (BPT) per request. (Additional exchange kit required)
- Stores up to 10 pre-programmed tests with up to 12 segments each
- Complete test report via RS232 serial interface for data transmission to a PC or printer. Optional software available
- Exposure area 1100 cm<sup>2</sup> to expose flat samples or 3D specimens
- Special optical filters simulate various spectral test conditions

#### SIZE

WEIGHT	90 kg / 198 lbs
DIMENSIONS	900 mm (w) x 540 mm (d) x 620 mm (h) / 35.5 in (w) x 22 in (d) x 24.5 in (h)



#### ORDERING INFORMATION

M237XLS+	Suntest XLS+(Enhanced) Xenon Arc Tester
M237JX	Spare Xenon Arc Lamp 2200W
M237KX	Spare Air Filters (pack of 10)
M237P	Black panel temperature sensor
M237QX	Flooding system for testing the weather resistance of materials by cyclic sample immersion throughout test program (For XLS+ Model Only)
M237SX	UV filter 290 nm
M237WX	Windows Glass Filter, 310 nm

**SIZE**

WEIGHT 410 kg / 905 lbs

DIMENSIONS 970 mm (w) x 840 mm (d) x 1830 mm (h) /  
38 in (w) x 33 in (d) x 72 in (h)**ORDERING INFORMATION**

M237U	Ci3000+ Fade-Ometer®
M237U1	Ci3000+ Weather-Ometer®. Preprogrammed with standard weathering and light fatness tests. Equipped with specimen and rack sprays and performs both light and dark cycles.
M237U2	Dual Black Panel Temperature Measurement/Control
M237U3	LiquidAir™ Heat Exchanger
M237U4	Six Channel Recorder
M237U5	Water Purity/AROTM System
M237U6	CE compliance package
M237U7	Monitoring of Second Wavelength
M237U8	Textile Kit

**STANDARDS: FADE-OMETER**

AATCC 16E	ISO 105 B02/B06	JASO M346
PSA D 47 1431	ASTM G 155-CYCLE 4	

Compact, affordable xenon arc instruments with sophisticated controls for optimal weathering and lightfastness testing.

**M237U** Ci3000+ Xenon Fade-Ometer®. Preprogrammed with standard textile Lightfastness tests for Light-only operation.

**M237U1** Ci3000+ Xenon Weather-Ometer®, Preprogrammed with standard Weathering and Lightfastness tests. Equipped with specimen and rack sprays and performs both Light and Dark cycles. Ci3000+ Weather-Ometer® also includes Multi-Language Capability as standard.

**Both models feature:**

- Light source: 4500 watt water cooled xenon arc lamp
- Microprocessor based test control
- Menu-driven control with user friendly touch screen entry
- LCD touch screen display of all test parameters
- Custom program capability and storage for additional userdefined tests
- Direct setting and control of irradiance, blank panel temperature, relative humidity and chamber air temperature
- Automatic blower control speed for accurate chamber temperature
- Vibra-Sonic™ humidification system
- Humidity range: Light Cycle: 10-75%, Dark Cycle (Weather-Ometer model only): 10-100%
- Patented Smart Damper™ for tight control of temperature and humidity
- Smart Light Monitor™ system to ensure correct monitoring filters are installed
- Automatic calibration of light monitor control
- On screen diagnostic circuit display
- 20 specimen holder capacity
- Total exposure area: approx.2188 cm<sup>2</sup> (399 in<sup>2</sup>)

Requires water source, both Deionized and Tap, and compressed air source - 0.11 m<sup>3</sup>/min(4 ft<sup>3</sup>/min)@550 kPa (80 psi).

Options include six channel chart recorder, dual ASTM BPT black panel and DIN BST black standard temperature control, monitoring of second wavelength, LiquidAir™ xenon lamp cooling system and CE compliance package.

**STANDARDS: WEATHER-OMETER**

AATCC 16E	ISO 105 B02/B06	JASO M346
PSA D 47 1431	ASTM G 155-CYCLE 4	
ISO 105 B04		

In Atlas Xenotest series, the 220 model is regarded as the textile testing specialist, meeting all common textile standards.

The Xenotest 440's twin-lamp test chamber with XenoLogic™ technology enables faster testing. Powered by two 2200 W Xenon lamps, the 440 can reach 2-sun irradiance levels for significantly shorter test times.

#### Xenotest® 220/220+ features with:

- 2310 cm<sup>2</sup> exposure area, with rotating specimen rack holds 38 test specimens with size 13.5 cm x 4.5 cm
- 2200 W air-cooled xenon lamp
- Full color multiple language touch screen user interface with online networking features to monitor irradiance, Black Standard Temperature (BST), Chamber Temperature (CHT), and Relative Humidity (RH).
- Radio-controlled on-rack light and 300-400 nm BST monitor XENOSENSIV® with selectable dual control of chamber and BST.
- Pre-programmed textile standards includes ISO 105-B02, 105-B04, and AATCC TM16-2004 (Option 3) with application kits supplied.
- Ultrasonic humidifier with 60 liter integrated water reservoir
- Specimen spray option available

#### Xenotest® 440 features with:

- 2310 cm<sup>2</sup> exposure area, installed with rotating specimen rack contains with 38 test positions (specimen size: 13.5 cm x 4.5 cm); or 33 (10.0 cm x 6.8 cm); or 22 (13.5 cm x 5.5 cm); or 11 (29.5 cm x 7.0 cm)
- 2 x 2200 W air-cooled xenon lamps enables high irradiance up to 120 W/m<sup>2</sup> (300-400 nm). Equipped with XenoLogic™ lamp operating technology to extend lamp service life.
- Full color multiple language touchscreen user interface with
- online networking features to monitor irradiance, Black Standard Temperature (BST), Chamber Temperature (CHT), and Relative Humidity (RH).
- Radio-controlled on-rack light and 300-400 nm BST monitor XENOSENSIV®.
- Pre-programmed lightfastness and weathering standards
- Ultrasonic humidifier with 60-liter integrated water reservoir
- Specimen spray system available

#### STANDARDS: Xenotest® 220/220+

ISO 105-B02, B04	GB/T 8427	M&S C9, C9A
AATCC TM 16.1-2012(Option 3)		TM 169(Option 2&3)
AATCC TM 169 (option 2 & 3)		



#### SIZE: Xenotest® 220/220+

WEIGHT	280 kg / 619 lbs
DIMENSIONS	900 mm (w) x 780 mm (d) x 1800 mm (h) / 36 in (w) x 31 in (d) x 72 in (h)

#### SIZE: Xenotest® 440

WEIGHT	290 kg / 641 lbs
DIMENSIONS	900 mm (w) x 780 mm (d) x 1800 mm (h) / 36 in (w) x 31 in (d) x 72 in (h)

#### ORDERING INFORMATION

203792	Xenotest®220 Lightfastness Instrument
203807	Xenotest®220+ Lightfastness Instrument
203962	Xenotest®440 Light Exposure and Weathering Testing Instrument
202839	Application-Kit 105 B02 for Xenotest 220/220+/440
202840	Application-Kit TM16-2004 for Xenotest 220/220+/440
203866	Application-Kit 105 B04(Non-Aging) for Xenotest 220/220+
203963	Application-Kit Weathering (Non-Aging) for Xenotest 440
202848	Xenon Lamp NXE 2203 for Xenotest 220/220+, Each
203965	Xenon Lamp NXE 2203 for Xenotest 440, Set of 2

#### STANDARDS: Xenotest® 440

ISO 105-B02, B04, B06, B10, 4892-2, 11341, 16474-2		
GB/T 8427	VDA 75202	AATCC TM 16.1-2012 (Option 1, 2, 3)
TM 169(Option 2&3)	ASTM G151, G155, D2565	



A compact, state-of-the-art design. Xenotest Alpha is the universal weathering instrument for testing the lightfastness and weatherability of materials under normal, high temperature and High Energy conditions.

#### Xenotest® Alpha features

- Air-cooled xenon lamp with adjustable power range: 0.8-2.5 kVA
- Microprocessor control
- Measurement and control of irradiance (in W/m<sup>2</sup>) and Black Standard Temperature at sample level with XENOSENSIV
- Program-assisted self-calibration of irradiance and Black Standard Temperature with optional master sensor
- Temperature control selectable by test chamber (up to 70° C) or Black Standard Temperature or both simultaneously
- Measurement and control of relative humidity (range 10-95%)
- Ultrasonic humidification system
- Water spray system for weathering tests
- Integrated water reservoir for storage of ultra-pure water; automatic refill when connected to supply line
- Easy access to sample holder, lamp, filter system by the user
- Adapter for absorption filter system or non-aging XENOCHROME filter system
- 11 specimen holders
- Selectable turning and non-turning mode
- Max. sample capacity: approx. 1320 cm<sup>2</sup> (205 in<sup>2</sup>)
- Serial RS232 interface (RS485 by request)

Requires lab air conditioning (max. 200 m<sup>3</sup>/hr) and water source for humidity and weathering control (max. 2 l/h)

Options include XenoCal BB (300-400 nm) UV sensor, Thermoprinter, XenoCal Black Standard Thermometer, Black Panel Thermometer and XenoCal White Standard Thermometer.

#### SIZE

WEIGHT 280 kg / 616 lbs

DIMENSIONS 900 mm (w) x 780 mm (d) x 1800 mm (h) /  
36 in (w) x 31 in (d) x 72 in (h)

#### ORDERING INFORMATION

M237X	Xenotest® Alpha
M237X-A	XenoCal BB(300-400nm) UV Sensor
M237X-B	Thermoprinter
M237X-C	Xenocal Black Standard Thermometer
M237X-D	Black Panel Thermometer
M237X-E	XenoCal White Standard Thermometer
M237X-F	Textile Testing Kit

#### STANDARDS

AATCC TM 16, Option H, TM 169

M&S C9/C9A

ISO 105 B02/B04/B06

ASTM G 155-CYCLE 4

Nike TM 2006

Adidas Color Fastness

To determine colorfastness of textiles to dry or wet rubbing, fitted with hand crank/counter. Provided with a steel specimen holder and 16 mm diameter test finger.

**SIZE**

WEIGHT 6 kg / 13 lbs

DIMENSIONS 160 mm (w) x 600 mm (d) x 215 mm (h) /  
6.5 in (w) x 24 in (d) x 8.5 in (h)

**ORDERING INFORMATION**

103873	Crockmeter/Rubbing Fastness Tester
301058	Pre-cut Crocking Cloths, 50 x 50 mm (pack of 500) AATCC/ISO Standard
201185	Pre-Cut Crocking Cloths, 50 x 50 mm (pack of 500) SDC
103871	Crockmeter Calibration Fabric (pack of 25)
103872	Emery Paper for Crockmeter (Pack of 25 sheets)
201194	Grey Scale (Staining) ISO/BS Standards
202161	Grey Scale (Staining) AATCC Standards

**STANDARDS**

AATCC 8/165	ISO 105 D02/ X12	M&S C8/C8A/ C25/C52
ASTM D6279	GB/T 3920/ 5712	NEXT 6/10



To determine the colorfastness of textiles to dry or wet rubbing. Motorized for frequent use and long run tests, fitted with digital electronic pre-settable counter for strokes up to 9999.

**SIZE**

WEIGHT 9.5 kg / 21 lbs

DIMENSIONS 225 mm (w) x 600 mm (d) x 270 mm (h) /  
9 in (w) x 24 in (d) x 11 in (h)

**ORDERING INFORMATION**

M238BB	Electronic Crockmeter
301058	Pre-Cut Crocking Cloths, 50 x 50 mm(Pack of 500) AATCC/ISO Standards
201185	Pre-Cut Crocking Cloths, 50 x 50 mm (pack of 500) SDC
103871	Crockmeter Calibration Fabric (pack of 25)
103872	Emery Paper for Crockmeter (Pack of 25 sheets)
201194	Grey Scale (Staining) ISO/BS Standards
202161	Grey Scale (Staining) AATCC Standards

**STANDARDS**

AATCC 8/165	ISO 105 D02/ X12	M&S C8/C8A/ C25/C52
GB/T 3920/ 5712	NEXT 6/10	





To determine the colorfastness of textiles to dry or wet rubbing particularly for printer fabrics. Applies 1134 grams of pressure on a 16 mm finger and rotates 1.125 turns clockwise then counter-clockwise. The operating handle is however turned in one direction only.

**SIZE**

WEIGHT 5.5 kg / 12 lbs

DIMENSIONS 250 mm (w) x 150 mm (d) x 250 mm (h) /  
10 in (w) x 6 in (d) x 10 in (h)

**ORDERING INFORMATION**

M238E Rotary Crockmeter

301058 Pre-Cut Crocking Cloths, 50 x 50 mm  
(pack of 500) AATCC/ISO Standards

201185 Pre-Cut Crocking Cloths, 50 x 50 mm  
(pack of 500) SDC

103871 Crockmeter Calibration Fabric (pack of 25)

103872 Emery Paper for Crockmeter (pack of 25)

201194 Grey Scale (Staining) ISO/BS Standards

202161 Grey Scale (Staining) AATCC Standards

**STANDARDS:**

AATCC 116

ISO 105 X16



For evaluating a material's resistance to rubbing motion. Unit is a six station, benchtop machine which includes clamps for sample attachment to moving platen and clamps for weighted rubbing arm for attachment of rubbing material. Cycle counter automatically stops machine at end of test cycles. Test samples are visually evaluated.

Includes two sets of test heads (6 heads each set) weighing 200 g and 500 g each, complete set of weights (6 each) of 100 g, 300 g, 400 g and 800 g which fit either test head. Each test arm is counterbalanced to offset arm weight. Suitable for dry and wet rubbing tests.

**SIZE**

WEIGHT 68 kg / 150 lbs

DIMENSIONS 225 mm (w) x 600 mm (d) x 270 mm (h) /  
9 in (w) x 24 in (d) x 11 in (h)

**ORDERING INFORMATION**

M238G Colorfastness/Rubbing (Gakushin) Tester

**STANDARDS:**

JIS 10801, 0849, 0862, 1084 TR 396B

NES M0155

To determine the number of threads per cm or inch in textile fabrics.

**STANDARDS:**

ASTM D3775

BS EN 1049

ISO 7211

IWTO 39-87

**ORDERING INFORMATION**

201045	4" / 100 mm - Dual scale with traversing lens and pointer
200904	1" x 1" Square aperture, folding metal construction
202756	25 x 25 mm square aperture, folding metal construction
202773	10 x 10 mm square aperture, folding metal construction
202774	50 x 50 mm square aperture, folding metal construction
200921	25 x 25 mm square aperture, with traversing pointer and folding metal construction
202757	1" x 1" square aperture, with traversing pointer and folding metal construction
202758	Dissecting/Pick Counting Needles with Handle (pack of 12)

**Calibrated Steel Rulers****M240N-R**

As specified in many International standards for the measurement of fabric width and length, also measurement and marking of fabric samples before or after testing. Supplied with ISO 17025 Calibration Certificates. Available in 12"/300 mm, 24"/600 mm and 39"/1000 mm lengths with metric and imperial markings. Flexible Steel tape measure 117"/3000 mm with ISO 17025 Calibration Certificate.

**ORDERING INFORMATION**

301073	Calibrated steel ruler 12"/300 mm with ISO 17025 certificate
301075	Calibrated steel ruler 24"/600 mm with ISO 17025 certificate
301077	Calibrated steel ruler 39"/1000 mm with ISO 17025 certificate
301079	Calibrated steel tape measure 117"/3000 mm with ISO 17025 certificate

**Automatic Pick Counter****M240X**

For fast, convenient and accurate determination of the thread density of woven fabrics and loop density of knitted fabrics. It works with moving test specimens allowing thread density measurements taken directly at production machine or loom. Handy size and ability to determine extremely high thread densities makes it a state-of-the-art alternative to the traditional pick glass or other more cumbersome electronic counting systems.

Measuring range (mm or in) is from 8-300 threads/cm (20-750 threads/in) divided in 17 subranges approximately 1:1.5 wide. Test length is 29 mm (1.1 in). Includes calibration check plate and RS232 data port. Optional stand available.

**SIZE**

WEIGHT	0.2 kg / 2.2 lbs
DIMENSIONS	66 mm (w) x 32 mm (d) x 128 mm (h) / 2.6 in (w) x 1.25 in (d) x 5 in (h)

**ORDERING INFORMATION**

201075	Automatic Pick Counter
200986	Alignment Aid
200985	Power Adapter



To distinguish between imperfections in fabric construction and streaking due to dyeing and finishing. By the controlled application of heat, pressure and cooling, a permanent impression of a test fabric is made from Optical quality polystyrene film, allowing objective analysis of external imperfections without the confusion of color or pattern.

This instrument is produced in limited quantities so delivery times may vary.

**SIZE**

WEIGHT 27 kg / 59 lbs

DIMENSIONS 380 mm (w) x 460 mm (d) x 200 mm (h) /  
15 in (w) x 18 in (d) x 8 in (h)

**ORDERING INFORMATION**

M242 Fabric Streak Analyser

202350 Clear Polystyrene Film (Pack of 100)



The Scorch Tester determines colorfastness and shrinkage to hot pressing and dry heat. This instrument is available in two different hot plate sizes. The top plate has a unique hinge and spring pin design to ensure even pressure across the sample. Each plate temperature is individually controlled and a timer is also integrated with the device.

- Two sizes available
- Individually controlled plate temperatures
- Temperature range Ambient - 230°C
- Balanced top plate for even pressure
- Integrated timer

**SIZE**

WEIGHT 16 kg / 35 lbs

DIMENSIONS 231 mm (w) x 440 mm (d) x 244 mm (h) /  
9.1 in (w) x 17.3 in (d) x 9.6 in (h)

**ORDERING INFORMATION****INSTRUMENT**

M247A Scorch / Sublimation Tester - 102 x 29 mm plates  
(4" x 1.13")

M247B Scorch / Sublimation Tester - 125 x 125 mm plates  
(5" x 5")

**STANDARDS:**

AATCC 92	AATCC 114	AATCC 117	AATCC 133
GB/T 5718	GB/T 6152	ISO 105-P01	ISO 105-X11
JIS L 0850	JIS L 0879		

**ASSESSMENT**

202161 AATCC Grey Scale (Staining)

202162 AATCC Grey Scale (Color Change)

201194 ISO/BS Grey Scale (Staining)

201195 ISO/BS Grey Scale (Color Change)

**CONSUMABLES**

G246F Multifiber Fabric (see section 246F)  
FA (#10) or FAA (#10A) in uncut or cold cut form.

200871 Hot Press Kit for M247A

201124 Hot Press Kit for M247B

203869 Cotton Limbriac 145 cm wide (1 meter)

To rapidly determine wet and dry abrasion resistance of flexible materials including textiles, paper, leather and plastics. Samples are rapidly tumbled within a cylindrical test chamber lined with an appropriate abrasive material. The tumbling action is provided by a propeller shaped rotor for a predetermined time at a predetermined speed. Can be specified with rotors and liners for ASTM/AATCC tests or for Marks and Spencer Tests (Accredited Suppliers only).

#### SIZE

WEIGHT	15 kg / 34 lbs
DIMENSIONS	200 mm (w) x 450 mm (d) x 250 mm (h) / 8 in (w) x 18 in (d) x 10 in (h)

#### ORDERING INFORMATION

M249	AATCC Accelerator
200948	Impeller, ASTM & AATCC
201019	Impeller, M&S
202750	Fine Abrasive Liner (ASTM & AATCC)-For Accelerator- (Pack of 50) 500 grit Aluminum Oxide (Standard)
202346	Medium Abrasive Liner (ASTM & AATCC)-For Accelerator- (Pack of 50) 240 grit Aluminum Oxide (Special applications)
200905	Hard Abrasive Liner, M&S



#### STANDARDS:

AATCC 93 M&S P26

## Steaming Cylinder with Integral Steam Generator

M254

Steaming Cylinder With Integral Steam Generator. To determine the shrinkage of unstressed fabric samples subjected to steaming in a closed chamber. Provided with a stainless steel fabric supporting frame to accommodate 4 samples and an automatic timer.

Steaming Stability Template. The Steaming Stability Template is suitable for use with steaming cylinders when testing fabrics for relaxation shrinkage. It is used to mark the fabrics before testing using a benchmark of 250 mm and to read shrinkage directly in percentage after testing.

#### SIZE

WEIGHT	45 kg / 98 lbs
DIMENSIONS	400 mm (w) x 600 mm (d) x 300 mm (h) / 16 in (w) x 24 in (d) x 12 in (h)

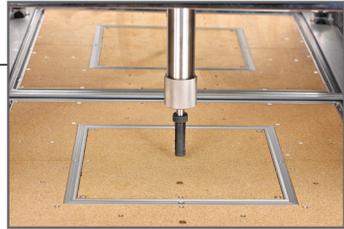
#### ORDERING INFORMATION

M254	Steaming Cylinder with Integral Steam Generator
105270	Steaming Stability Template
303257	Texpen Indelible Marking Pens, Yellow (pack of 6)
303255	Texpen Indelible Marking Pens, Black (pack of 6)



#### STANDARDS:

BS4323 ISO 3005 M&SP8 NEXTTM 15



Often referred to as the “Skin Model”, the Sweating Guarded Hotplate (SGHP) measures thermal properties and water vapor resistance of fabrics and other materials under steady state conditions. The test simulates the heat and mass transfer process which occurs next to human skin.

The SGHP is a complete unit that has the hotplate and controls integrated into a chamber that is maintained at precise temperature, humidity, and airflow conditions. Being a purpose built instrument from the chamber to the hotplate to the controls, there are no integration issues that can come with using hotplates and chambers from different manufacturers.

The hotplate itself is another key feature of the SGHP. It is a sintered (porous) bronze plate that gives the best simulation of human skin versus other plates that have a distinct pattern of drilled holes.

## SIZE

WEIGHT	500 kg / 1090 lbs
DIMENSIONS	1260 mm (w) x 950 mm (d) x 1800 mm (h) / 50 in (w) x 38 in (d) x 71 in (h)

## ORDERING INFORMATION

### INSTRUMENT

M259B	Sweating Guarded Hotplate
301101	Installation, Set-up, Operator Training

### ACCESSORIES

202685	Calibrated Resin Board
106649	Edge Correction Foams (Pack of 10 thicknesses) 520 mm x 520 mm

### CONSUMABLES

106652	Cellophane Sheets (pack of 250) 540 mm x 540 mm
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- Purpose built instrument ensures integration of all controls
- Sintered bronze plate gives best simulation of human skin
- Hot plate size 250 mm x 250 mm
- Air flow maintained at  $1 \pm 0.05$  m/s at 15 mm above working platform
- Individual temperature control of hotplate, side, and bottom guards
- Samples up to 70 mm thick can be tested
- Color touch screen controller
- Laptop computer and analysis software included

## STANDARDS:

ASTM D1518	ASTM D1518-11a Option 2	ASTM F1868	EN 343	ISO 11092	GB/T 11048
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The aluminium lightweight gauge is designed to measure the thickness of leather and textiles. Different models include:

**Model J50**, 10 mm x 0.01 mm measuring range, 50 mm throat depth, 30 mm dia. flat anvils

**Model J100**, 10 mm x 0.01 mm measuring range x 100 mm throat depth, 30 mm dia. flat anvils

**Model J200**, 10 mm x 0.01 mm measuring range x 200 mm throat depth, 30 mm dia. flat anvils

**Model J200/30**, 30 mm x 0.01 mm measuring range x 200 mm throat depth x 30 mm dia. flat anvils

**SIZE**

WEIGHT 0.3 / 0.45 / 1.1 kg - 0.7 / 1 / 2.5 lbs

**ORDERING INFORMATION**

202759 Portable Thickness Gauge Model J50

200996 Portable Thickness Gauge Model J100

202760 Portable Thickness Gauge Model J200

202761 Portable Thickness Gauge Model J200/30



Protective Clothing Equipment

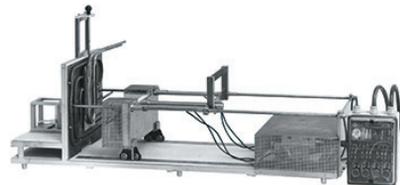
SDL Atlas produces a full range of special protective clothing equipment designed and built to specific requirements. Some examples are shown here. Contact our offices about these items or your special requirements.

X1176 - This test cell is used in several ASTM standards including ASTM F1670, F1671, F903, ISO 13994. The test cell is comprised of several layers including the test layer. By means of suction various test liquids are drawn through, and the pressure required to penetrate the test layer is recorded.

X637B - Protective clothing equipment to evaluate the behavior of material and material assemblies when exposed to a significant source of radiant heat in accordance with BS EN ISO 6942. The material assembly is subjected to a calibrated radiant heat source and the degree to which the heat is transferred through the sample is measured by a calorimeter. The equipment comprises a source of radiant heat, specimen support frame, calorimeter linked to a recording device.



X1176



X637B

**ORDERING INFORMATION**

401731 X1176

303118 X637B



To determine the resistance of textiles and textile composites (particularly performance wear fabrics) to water vapor penetration. The apparatus consists of 8 containers with water reservoirs, a standard permeable fabric cover, sample holder ring and precision drive.

**SIZE**

WEIGHT 20 kg / 44 lbs

DIMENSIONS 1000 mm (w) x 450 mm (d) x 300 mm (h) /  
40 in (w) x 18 in (d) x 12 in (h)

**ORDERING INFORMATION**

M261 Water Vapor Permeability Tester

200951 Standard Fabric 1000 x 1000 mm

**STANDARDS:**

BS 3424-34

BS 7209

ISO 8096



This water vapor permeability tester utilizes the inverted cup method. The PermaVape has six test stations over a bath that can be heated to the required temperature of 23°C and maintained evenly throughout the bath through a circulation pump. The test station platform is easily adjustable to ensure that the samples are immersed to the proper depth in the bath. Annex C of ISO 15496 gives detailed examples of why the inverted cup method is a more accurate test than the dry desiccant cup method. Each test requires two membranes which are a consumable. The instrument is supplied with one package of membranes that contains 50 sheets.

**SIZE**

WEIGHT 20 kg / 44 lbs

DIMENSIONS 572 mm (w) x 450 mm (d) x 460 mm (h) /  
23 in (w) x 18 in (d) x 19 in (h)

**ORDERING INFORMATION**

M261P PermaVape

107269 Membranes (pack of 50)

107078 Measuring Cup

107272 O-Ring (pack of 6)

**STANDARDS:**

ISO 15496

To test the degradation to water resistance of coated fabrics due to crumpling and flexing in use. The equipment tests a tube of fabric by twisting it through 90° stretching alternately and compressing the tube at the same time. After completion of the test the fabric is tested for resistance to penetration by water. Fitted with an electronic predetermined counter with automatic stop at a predetermined number of cycles. Fitted with acrylic plastic interlock safety cover.

**SIZE**

WEIGHT	50 kg / 110 lbs
DIMENSIONS	520 mm (w) x 270 mm (d) x 400 mm (h) / 21 in (w) x 11 in (d) x 16 in (h)

**ORDERING INFORMATION**

203010	Crumpleflex Tester
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**STANDARDS:**

BS 3424.9	ISO 7854-1995
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## Taber Wear and Abrasion Testers

## M270

To determine the wear resistance of all kinds of structures including metals, paints, plated surfaces, coated materials, textiles, leather and rubber. Uses the X pattern of abrasion produced by a rotary action of abrasive wheels. Supplied with a full range of auxiliary weights, specimen holders, abrasive wheels and vacuum units, fitted with membrane keypad including a predetermined electronic counter. Single head and dual head models available.

Diamond Wheel Refacer. For refacing abrasive wheels used on the Taber Wear and Abrasion Tester.

Model 5000 Sample Cutter. The Rotary Sample Cutter cuts specimens of a correct configuration from the Taber Wear and Abrasion Tester.

**SIZE: SINGLE HEAD**

WEIGHT	20 kg / 45 lbs
DIMENSIONS	270 mm (w) x 400 mm (d) x 250 mm (h) / 11 in (w) x 16 in (d) x 10 in (h)

**ORDERING INFORMATION**

200398	Taber Wear & Abrasion Tester
200399	Taber Dual Wear & Abrasion Tester
200854	Calibrate Wheels CS10
200853	Calibrate Wheels H18
200847	Refacing Discs S-11 (pack of 100)
301118	Specimen Plates S-16 (pack of 10)
200846	Specimen Cards S-36 (pack of 50)
200397	Wheel Refacer
301127	Sample Cutter

**STANDARDS:**

ASTM D3884	ISO 5470
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**M272****AATCC Wrinkle Recovery Tester**

To determine a fabric's ability to recover after wrinkling under a predetermined load for a set period of time. Set of 3-D plastic replicas are available to grade fabrics.

**SIZE**

**WEIGHT** 9.5 kg / 21 lbs

**DIMENSIONS** 150 mm (w) x 150 mm (d) x 330 mm (h) /  
6 in (w) x 6 in (d) x 13 in (h)

**ORDERING INFORMATION**

200979 AATCC Wrinkle Recovery Tester

202149 Plastic Replicas (set of 5)

**STANDARDS:**

AATCC 128

ISO 9867

**M274****Flat Bed Press**

To determine the colorfastness of textiles of all kinds to domestic or industrial ironing. The instrument is formed by two parallel and smooth plates: the upper plate warms and exerts a pressure of 4 kPa on the specimen. The determination can be performed at different temperatures and in three ways:

Temperature is set according to the kind of fiber composing the specimen (Min to Max. temp: 70 - 200°C);

1. Dry ironing
2. Humid ironing
3. Wet ironing

**SIZE**

**WEIGHT** 10 kg / 22 lbs

**DIMENSIONS** 650 mm (w) x 510 mm (d) x 200 mm (h) /  
26 in (w) x 20.5 in (d) x 8 in (h)

**ORDERING INFORMATION**

201092 Flat Bed Press

**STANDARDS:**

UNI EN ISO 105-X11

**M274A****Miele Rotary Ironer**

Conveniently determines the ironability of various fabrics. With certain modifications the Rotary Ironer is suitable for specific Marks and Spencer Plc test methods but in this form is restricted to accredited M&S suppliers.

**SIZE**

**WEIGHT** 50 kg / 110 lbs

**DIMENSIONS** 1000 mm (w) x 420 mm (d) x 940 mm (h) /  
40 in (w) x 17 in (d) x 37.5 in (h)

**ORDERING INFORMATION**

200988 Miele Rotary Ironer

203921 Miele Rotary Ironer, M&S

**STANDARDS:**

NEXT 24

To determine the abrasion resistance of fabrics when rubbed against a standard abradant or a wire mesh screen with a backward and forward motion over a curved surface. Of specific interest to automotive and furniture fabric manufacturers working to US standards. Motor driven with 4 abrasion heads and electronic digital counter to control the number of cycles.

- Modern ergonomic design
- Suction manifolds to connect to auxilliary vacuum cleaner
- Sealed transmission drive for quieter operation

#### SIZE

WEIGHT	75 kg / 165 lbs
DIMENSIONS	500 mm (w) x 500 mm (d) x 600 mm (h) / 20 in (w) x 20 in (d) x 24 in (h)

#### ORDERING INFORMATION

M278	Wyzenbeek Abrasion Tester
201128	Rubber pads (pack of 8)
201154	Wire mesh screens (pack of 4)
201098	Abradant Fabric #10 cotton duck - 60 in x 5 yds

#### STANDARDS:

ASTM D4157



## Needle Detectors

M279AA-DD

The Conveyor Type needle Detector is a free standing conveyORIZED digital Needle Detector for garments. Accepts non-metals and all approved non-ferrous zips and poppers. It will reject any ferrous or nickle contamination, typically staples and needle fragments equivalent to a 1.0 mm ferrous sphere. The unit has a belt speed of approximately 25 to 30 meters per minute and an aperture size of 24" (700 mm) width x 7" (175 mm) height. In case of a reject, belt stops with an audible alarm and signal light is activated. Full digital technology and control.

The Flat Bed Needle Detector can detect the broken needles in sewn items placed on the flat detecting surface.

The Portable Needle Detector easily detects the exact position of needle contamination in rejected garments

#### SIZE: CONVEYER TYPE

WEIGHT	300 kg / 660 lbs
DIMENSIONS	1500 mm (w) x 920 mm (d) x 950 mm (h) / 60 in (w) x 36 in (d) x 37 in (h)



201886 Conveyor Type  
Needle Detector

201922 Flat Bed  
Needle Detector

201921 Portable  
Needle Detector

#### ORDERING INFORMATION

201886	Conveyor Type Needle Detector
201922	Flat Bed Needle Detector
201921	Portable Needle Detector
201701	Calibration Card Holding Rack without calibration cards
203665	Calibration Kit - Includes holding rack and two calibration cards

**SIZE**

**WEIGHT** 102 kg / 225 lbs

**DIMENSIONS** 330 mm (w) x 500 mm (d) x 460 mm (h) /  
13 in (w) x 19.5 in (d) x 18 in (h)

**ORDERING INFORMATION****INSTRUMENT**

M282 UWT Universal Wear Tester

**ACCESSORIES**

105692 Frosting Attachment

105693 Edge and Fold Abrasion Clamp

The UWT is used to test wear and abrasion resistance of fabrics for apparel, shoes, upholstery, automotive, and many other areas. The instrument, also known as a Stoll Quartermaster Abrasion Tester is designed to run numerous tests with five different possible setups.

- Inflated Diaphragm (included)
- Flex Abrasion (included)
- Frosting Attachment (optional) – This set includes a sample holder with a felt pad and a sample mounting device.
- Elastomeric Pad/Pilling Test (optional) – A special elastomeric base pad is attached to the specimen holder of the optional Frosting Attachment and another elastomeric friction pad is mounted on the abrasion head.
- Edge Abrasion (optional) – This sample holder provides three options of holding a sample for abrasion of an edge or a fold in a fabric.

**ASSESSMENT**

202135 Three sets of 5 Photographic Standards for ASTM D 3514

**CONSUMABLES**

200241 Elastomeric Friction Pad and Base Pad

200253 Abradent, 320J (50 yd roll)

200255 Abradent, 600A (50 yd roll)

200257 Abradent, 0 (50 yd roll)

106390 Flex Bar, Carbide Tipped

106688 Verification Ribbon (50 yd roll)

301138 Preparation Fabric for ASTM D3514  
(1 yd x 60" wide)

105861 Frosting Screen

106225 Diaphragm with Electrical Contact

106226 Diaphragm without Electrical Contact

	Inflated Diaphragm (included)	Flex Abrasion (included)	Elastomeric Pad (Optional)	Frosting (Optional)
ATTC 119				•
AATCC 120				•
ASTM D3154			•	
ASTM D3885		•		
ASTM D3886	•			
FED-STD-191A-5300		•		
FED-STD-191A-5302	•			
FED-STD-191A-5303				•
FLTM BN 112-01	•			
FLTM BN 112-03	•			
FZ/T 01121	•			
Hyundai/Kia MS 200-20	•			
IST 20.1 (01) 3.1	•			
IST 20.2 (01) 3.9		•		
WSP 020.1.R3 (12)	•			
WSP 020.2.R3 (12)		•		



The Ozone Exposure Chamber provides a safe and reliable test environment to check textiles for colorfastness to ozone. The instrument includes a high output ozone generator, a touch screen controller, and closed loop control of the ozone concentration in the chamber. Up to twenty four specimens can be mounted on the rotating rack. The unit does not require a fume hood or exhaust piping because all exhaust from chamber passes through an ozone scrubber. For additional safety of the user, the chamber door has safety interlock so it can't be opened until the ozone is cleared and a negative chamber air pressure is maintained to ensure there are no leaks. User interface available in English, Spanish, Turkish, and Chinese.

- High output ozone generator - maximum 10 ppm
- Touch screen controller with four language options
- Closed loop control of ozone levels
- Can be programmed to warm up at set time
- LED lighting in chamber
- Large viewing window with UV blocking glass
- UV blocking glass on chamber door
- Ozone scrubber, door interlock, and negative chamber pressure provide safety
- Operating environment 20-25°C and 50-70% Rh
- Instrument does not need to be in a fume hood or connected to exhaust

#### SIZE

WEIGHT 50 kg / 110 lbs

DIMENSIONS 780 mm (w) x 480 mm (d) x 500 mm (h) /  
31 in (w) x 19 in (d) x 20 in (h)

#### ORDERING INFORMATION

##### INSTRUMENT

M287B Ozone Exposure Chamber Plus

##### CONSUMABLE

106494 Ozone Scrubber

##### ASSESSMENT

202162 AATCC Grey Scale (Color Change)

201195 ISO/BS Grey Scale (Color Change)

#### STANDARDS:

AATCC 109

GB/T 11039.3

ISO 105-G03

The MMT is the only instrument on the market that can precisely measure the liquid management properties of performance and technical fabrics, ensuring the comfort and protection that consumers demand.

To measure the dynamic liquid transport properties, a sample is placed horizontally in the instrument between the upper and lower sensors. These sensors are made of concentric rings of pins. A solution, representing perspiration, is dropped on the center of the upper facing (skin side) of the test sample. As the solution moves through and across the sample, the changes in electrical resistance are measured and recorded.

One 2-minute test gives a comprehensive profile of a fabric's performance, producing the following data:

- Overall Moisture Management Capability
- Accumulative One-Way Transport Capability
- Wetting Time for top and bottom surfaces
- Absorption Rate for top and bottom surfaces
- Max Wetted Radius for top and bottom surfaces
- Spreading Speed for top and bottom surfaces

## STANDARDS

AATCC 195

GB/T 21655.2

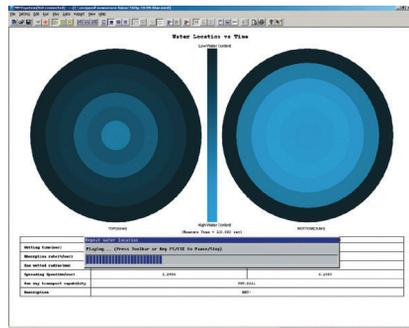
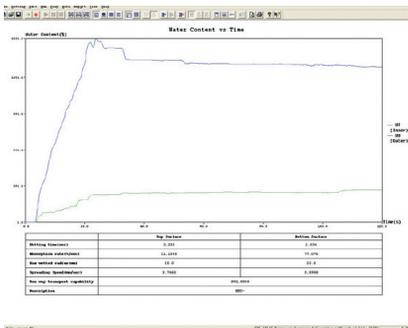
## SIZE

WEIGHT 27 kg / 59.5 lbs

DIMENSIONS 210 mm (w) x 320 mm (d) x 250 mm (h)  
8.3 in (w) x 12.6 in (d) x 10 in (h)

## ORDERING INFORMATION

M290 MMT (Moisture Management Tester)



To determine the fogging characteristics of automotive interior trim of textiles, plastic or leather. Fogging is the residue deposited on interior glass of chemicals released from materials under specific temperature conditions. It is a combination of a choice of 6-position horizon fog testing system / heating unit (AC or PC), cooling system and the accessory kit for the Gravimetric or Reflectometric test method. A minimum of 40 L of oils required for operation.

Trim samples are placed in the beakers under a retaining ring and the beakers are sealed and standardized glass plates clamped by a cover plate. The samples are subjected to accurate cycles of heating and cooling after which access material amount on the glass plates (Reflectometric) or the material mass gathered on the foil (Gravimetric).



#### ORDERING INFORMATION

201127	Fogging Test Chamber AC-FTS
401996	Cooling unit, for 201127 Fogging Test Chamber AC-FTS
401998	Gravimetric Accessory Kit
401999	Reflectometric Accessory Kit
402000	10 Liter Bath Oil (Available only in US and Canada)

#### SIZE

WEIGHT 43 kg / 96 lb

DIMENSIONS 590 mm (w) x 600 mm (d) x 425 mm (h) /  
23.5 in (w) x 24 in (d) x 17 in (h)

#### STANDARDS:

SAE J1756

To determine colorfastness to drycleaning and chlorinated pool water; to prepare samples for flammability testing. Comprised of stainless steel rotating test chamber of 7650 ml capacity, variable speed drive with digital timer and displays.

#### SIZE

WEIGHT 80 kg / 176 lbs

DIMENSIONS 720 mm (w) x 490 mm (d) x 620 mm (h) /  
28 in (w) x 19 in (d) x 24 in (h)

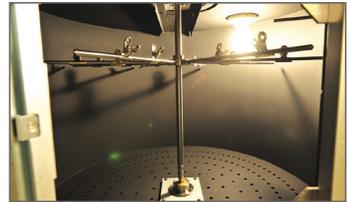
#### ORDERING INFORMATION

M292 Dry Cleaning and Washing Cylinder

#### STANDARDS:

AATCC 162 16 CFR Part 1610





The Gas Fume Chamber tests the colorfastness of textiles when exposed to atmospheric oxides of nitrogen caused by the combustion of gases. The instrument is equipped with a Bunsen burner and rotating rack. As the testing occurs over an extended time in an unobserved environment, a number of mechanisms have been incorporated to insure the safety of the operator including gas pressure regulation, unburnt gas detectors, extinguished flame alarm, and an interlocked flame ignition system among others.

- Rotating rack with large capacity
- Temperature controller to maintain chamber under maximum setting
- Chamber light and viewing window
- Multiple safety mechanisms built-in

#### SIZE

**WEIGHT** 140 kg / 309 lbs

**DIMENSIONS** 780 mm (w) x 670 mm (d) x 1110 mm (h) /  
31 in (w) x 27 in (d) x 44 in (h)

#### ORDERING INFORMATION

##### INSTRUMENT

M291 Gas Fume Chamber

##### CONSUMABLES

200213 Standard Fading Control (50 yard roll)

##### ASSESSMENT

202162 AATCC Grey Scale (Color Change)

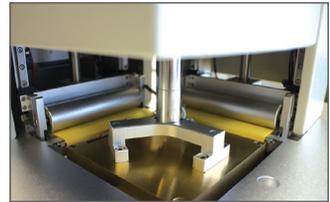
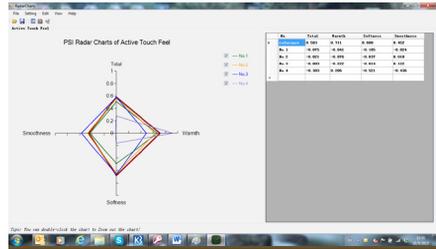
201195 ISO/BS Grey Scale (Color Change)

#### STANDARDS:

AATC 23

GB/T1 1039

ISO 105-G02



The innovative FTT measures skin touch properties of textiles objectively and quantitatively. The comprehensive, sophisticated design of the FTT enables it to measure all the mechanical and surface properties of fabric in one simple test. Previously only possible on the very expensive and technically complicated Kawabata instruments, the FTT now makes hand measurement possible for everyone.

In just a five minute test the FTT measures:

- Thickness
- Compression
- Bending
- Roughness
- Friction
- Thermal Properties

These provide 18 indices for each side of the fabric, in both warp and weft directions, which are used to predict the subjective primary sensory indices (PSI) of hand feel and touch feel: Smoothness, Softness, Warmth and Total Hand/Touch Feel. These objective

measurements are valuable tools for product research and development. They can also be transferred to the QC Evaluation Software to create an electronic standard against which different lots of production fabrics can be measured. Much as a spectrophotometer is used for color, the FTT can measure, communicate, and compare fabric hand through a global supply chain.

#### SIZE

WEIGHT 85 kg / 188 lbs

DIMENSIONS 510 mm (w) x 600 mm (d) 840 mm (h) /  
10 in (w) x 12 in (d) x 17 in (h)

#### ORDERING INFORMATION

##### INSTRUMENT

M293 FTT® (Fabric Touch Tester)

107740 QC Evaluation Software



# DYEING TESTING

To evenly squeeze or extract excess liquid from fabric. 12" (300 mm) working width with neoprene rollers 2 1/8" (54 mm) diameter. Drive speed 25 mm (1") per second. Dead weight loading up to 105 lb (50 kg) x 5 lb (2.3 kg). Detachable liquor trough (optional).

**SIZE**

WEIGHT	35 kg / 77 lbs
DIMENSIONS	640 mm (w) x 250 mm (d) x 300 mm (h) / 25 in (w) x 10 in (d) x 12 in (h)

**ORDERING INFORMATION**

D394	Laboratory Wringer/Padder
400920	Optional Liquor Trough



**STANDARDS:**

AATCC 92

**Pneumatic Heavy Duty Padder Vertical (Model P-A0)**

Suitable for carrying out all PAD-STEAM processes with saturated steam, offers the shortest distance between padder and steaming chamber. Roller width 300 mm diameter 125 mm.

The range comprises:

- Horizontal type with two padding rollers. Pneumatic pressure application
- Steaming chamber with fabric holding capacity of 6 m, with double glazed inspection window
- Adjustable fabric speed control, standard dwell time inside the steaming chamber from 20-120 sec with digital indication type
- Chemicals trough provided about 500 cc capacity with automatic drop-off and spray washing
- Water sealed bath with temperature regulator for automatic cooling control
- Temperature range between 98-104° with digital and analog indication type
- On request can be combined with 2-8 section roller washing machine
- Easily accessible control and display panel



**SIZE**

WEIGHT	340 kg / 748 lbs
DIMENSIONS	980 mm (w) x 560 mm (d) x 1500 mm (h) / 39 in (w) x 22 in (d) x 60 in (h)

**ORDERING INFORMATION**

105218	Pneumatic Heavy Duty Padder Vertical
G265	Silent Laboratory Compressor (Optional) Larger capacities available on request

**Pneumatic Heavy Duty Padder Horizontal (Model P-B0)**

Dyeing, Finishing and Impregnating Padder, similar to vertical padding mangle. Floor model.

- Roller width 450 mm diameter 125 mm
- Pneumatic load adjustment
- Fabric speed 10 RPM (on request can be supplied with variable revolving speed system)
- Content of liquor trough approx 1000 cc
- Padding rollers of 70 shore hardness
- Safety device
- Air compressor can be supplied on request
- Suitable for discontinuous operation in conjunction with our MINI-DRYER or MINI-STENTER

**ORDERING INFORMATION**

107139	Pneumatic Heavy Duty Padder Horizontal
G265	Silent Laboratory Compressor (Optional) Larger capacities available on request



**SIZE**

WEIGHT	370 kg / 814 lbs
DIMENSIONS	1000 mm (w) x 600 mm (d) x 1160 mm (h) / 40 in (w) x 24 in (d) x 45.5 in (h)

**ORDERING INFORMATION**

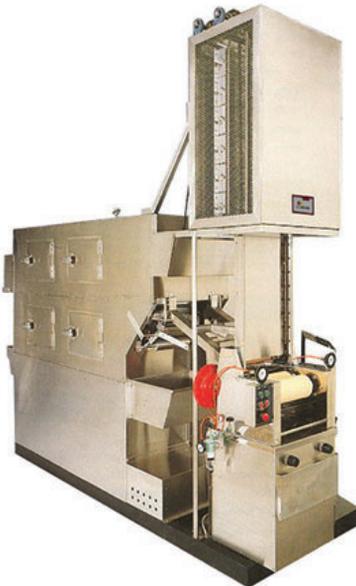
105219	Pad-Steam Range
G265	Silent Laboratory Compressor (Optional) Larger capacities available on request

Heavy duty padder with stand, for all dyeing, impregnating and padding processes. Floor model.

- Roller width 450 mm diameter 125 mm
- Pneumatic load adjustment with 3-ton nip pressure at 5 kg / cm<sup>2</sup>
- Padding roller pressure adjustable independently on left/right side
- Fix revolving speed of 10 RPM (vari-speed conally system is optional)
- Padding rollers of 70 shore hardness (optionally designed for special degree of hardness)
- Content of liquor trough approx. 1000 cc
- Safety devices include a safety rod which prevents incorrect handling, emergency button and a knee pedal to stop the machine operation
- Suitable for discontinuous operation in conjunction with our MINI-DRYER or MINI-STENTER
- Air compressor can be supplied on request

**SIZE**

WEIGHT	320 kg / 704 lbs
DIMENSIONS	600 mm (w) x 1300 mm (d) x 1400 mm (h) / 24 in (w) x 52 in (d) x 56 in (h)



Thermosol range with infrared zone suitable for working out dye formulas and for research work.

Pad - Infrared ray heater - Intermediate dryer Thermosol. On this type of machine, the test fabric, padded by the horizontal pneumatic-type padder, is held on both ends by special clip bars; this complete sample holder is mounted on the chains which are running endlessly through the machine. The test fabric is first led through the infrared pre-heater, then the intermediate dryer and finally the thermosoling zone. After testing, the test fabric is taken off automatically from the carrying chains and drops down into the reserve box.

- Roller width 300 mm, diameter 125 mm.
- Dyestuff trough provided about capacity 100 cc x w

**SIZE**

WEIGHT	1600 kg / 3520 lbs
DIMENSIONS	1200 mm (w) x 3500 mm (d) x 2900 mm (h) / 48 in (w) x 140 in (d) x 114 in (h)

**ORDERING INFORMATION**

107668	Pad-Thermosol Range
G265	Silent Laboratory Compressor (Optional) Larger capacities available on request

Removes excess water from dyed or washed samples before hot air or line drying. 2000 g /4.4 lbs. Capacity at 2850 RPM.

- Removes 90% of moisture in 10-20 seconds
- Table or wall mounting for space saving
- Ideal for rapid color measurement

#### SIZE

WEIGHT	23 kg / 51 lbs
DIMENSIONS	380 mm (w) x 380 mm (d) x 600 mm (h) / 15 in (w) x 15 in (d) x 24 in (h)

#### ORDERING INFORMATION

300003	Laboratory Centrifuge
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To air-dry samples after centrifuging. Capacity 0.5 kg (1.1 lb). 1.5 kw/1.5 kw dual power hot air/cold air with adjustable ventilation. Temperature sensing with electronic thermometer. Stainless steel interior construction.

#### SIZE

WEIGHT	30 kg / 66 lbs
DIMENSIONS	500 mm (w) x 270 mm (d) x 670 mm (h) / 20 in (w) x 11 in (d) x 27 in (h)

#### ORDERING INFORMATION

300005	Laboratory Hot Air Dryer
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Suitable for all drying, setting, baking and thermosoling processes. Table model.

- Sample size up to max. 36 cm x 42 cm
- Automatic pin frame transport with preselectable dwell times from 10 sec. to 6 min.
- Electric heating 6KW; temperature range 20 -250°C with air circulating fan
- Specially-designed pin frame to hold all types of sample fabrics in length and/or width
- Suitable for discontinuous operation with padding mangle, type AIR PAD

#### SIZE

WEIGHT 250 kg / 550 lbs

DIMENSIONS 650 mm (w) x 1046 mm (d) x 950 mm (h) /  
26 in (w) x 42 in (d) x 38 in (h)

#### ORDERING INFORMATION

D398 Minidryer/Stenter



Saturated and HT-Steamer, suitable for the chemical and dyestuff industry, finishing plants, research institutes and general textile industry. Basic design as MINI-DRYER, model R-3, owing the wide adjusting ranges regarding temperature, humidity, dwelling time. This apparatus can be used for

- Drying, curing and thermofixation 20°-250°
- Steaming with saturated steam 102°C±2°
- HT steaming at temperatures between 100°- 250°C
- Test fabric size max. 350 x 400 mm
- Automatic pin frame transport with preselectable dwell time from 10 sec to 60 min.
- The ceiling is slanted and an additional heating is fixed at the entrance slit in order to avoid formation of drop water
- Moisture controller with regulation 10-100% steam generator can be supplied on request
- Suitable for discontinuous operation in conjunction with lab padder, type AIR PAD

#### SIZE

WEIGHT 380 kg / 840 lbs

DIMENSIONS 660 mm (w) x 1620 mm (d) x 955 mm (h) /  
26 in (w) x 64 in (d) x 38 in (h)

#### ORDERING INFORMATION

D398A Minidryer/Stenter and Steamer



The SDL ECO Infrared Lab Dyeing System is a state-of-the-art dyeing unit. Unit produces accurate laboratory sample dyeings with level and reproducible results and accommodates up to 20 positions with a low liquor ratio for synthetic and natural fibers.

The SDL ECO moves the beakers in a circular rotation with advanced infrared heating technology, eliminating glycol contamination and cumbersome beaker cleaning. Specially pressure-tested beakers offer maximum safety for atmospheric and high-temperature dyeing. The easy to operate multi-step controller makes operator error virtually impossible. Dyebatch temperature is measured directly by a PT-100 probe inside the beaker. Important process information is easily viewed during the dyeing process.

The SDL ECO is suitable for all types of substrates. It is ergonomically designed for fast, convenient use. State-of-the-art technology contributes to accurate temperature control and low energy consumption.

SDL ECO Infrared Lab Dyeing System.

- State-of-the-art technology at an affordable price
- Glycol-free infrared heating system
- Accurate temperature control
- Increased productivity of laboratory samples
- High temperature, safety tested pressure dyeing beakers
- Easy to operate multi step controller

Suitable for all fibers and substrates.

**SIZE**

WEIGHT	69 kg / 152 lbs
DIMENSIONS	570 mm (w) x 680 mm (d) x 670 mm (h) / 22.4 in (w) x 26.8 in (d) x 26.4 in (h)

**ORDERING INFORMATION**

300020	SDL ECO Infrared Lab Dyeing System with 150 cc Beakers
300023	with 300 cc Beakers
300027	with 500 cc Beakers
300030	with 1000 cc Beakers
202727	with 5 liter drum

**STANDARDS:**

ASTM E0313

An affordable sphere spectrophotometer, designed to give fast, precise and accurate color measurement information on textile materials.

Provides absolute and difference measurements for the following colorimetric systems; Lab, Y11925, WI Taube, Deltaemc, Deltalab, DeltaWI73, L\*a\*b\*, Reflectance, WI98, MI, DeltaE00, Deltareflectance, DeltaWI Berger, L\*C\*h°, Munsell Notation, WI73, MI6172, DeltaE94, DeltaY98, DeltaWI Hunter, XYZ, Gray Scale, WI Berger, Gloss, DeltaXYZ, DeltaYI73, DeltaWI Stensby, Yxy, YI98, WI Hunter, DeltaL\*a\*b\*, DeltaYxy, DeltaY11925, DeltaWI Taube, L\*u\*v\*, YI73, WI Stensby, DeltaL\*C\*h°, DeltaL\*u\*v\*, DeltaWI98, Averging, 555 Shade Sort, Verbal Difference, Power Management. These values can be obtained from any of nine illuminants with 2° or 10° observer angle. 0-200% reflectance for measurement range.

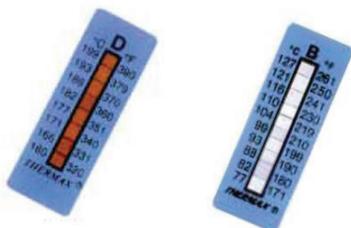
Spectral range from 400 to 700 nm with 10 nm spectral interval (measured & output). Stores up to 1,000 standards with tolerances for easy pass/fail measurement. Status LED and Hi-Res color LCD display provide visual confirmation.

**SIZE**

WEIGHT 1.1 kg / 2.4lbs

DIMENSIONS 213 mm(w) x 91 mm (d) x 109 mm (h) /  
8.5 in (w) x 3.6 in (d) x 4.3 in (h)**ORDERING INFORMATION**

201977 Color and Shade Difference Meter



Change color to indicate maximum temperature achieved in textile processing. Self adhesive and unaffected by oil, water or steam. Ranges available from 40°C (105°F) to 26°C (500°F)

**SIZE**DIMENSIONS 15 mm (w) x 45 mm (d) x 0 mm (h) /  
0.6 in (w) x 1.75 in (d) x 0 in (h)**ORDERING INFORMATION**202985 40-71°C/105-160°F  
Temperature Indicating Strips (Pack of 100)202986 77-127°C/171-261°F  
Temperature Indicating Strips (Pack of 100)202473 116-154°C/241-309°F  
Temperature Indicating Strips (Pack of 100)202340 160-199°C/320-390°F  
Temperature Indicating Strips (Pack of 100)202341 204-260°C/399-500°F  
Temperature Indicating Strips (Pack of 100)

Combined with Magnetic Stirrer. Temperature control from 5-540°C, stirring speeds from 60-1200 rpm. Heating surface size 18.4 x 18.4 cm.

#### SIZE

WEIGHT 5 kg /11 lbs

DIMENSIONS 21 mm (w) x 33 mm (d) x 10 mm (h) /  
8.5 in (w) x 13 in (d) x 4 in (h)

#### ORDERING INFORMATION

D441 Ceramic Hotplate / Stirrer



Complete with stand and spindle set - direct display of viscosity in centipoise or millipascal/seconds, percent torque, spindle number and speed (18 speeds 0.3-100 RPM). Complete with set of spindles for low or medium viscosity. Complete with hard carrying case. Measures viscosities of dye solutions, pastes, sizing compounds, lubricants or adhesives.

#### SIZE

WEIGHT 8kg /18 lbs

DIMENSIONS 175 mm (w) x 75 mm (d) x 75 mm (h) /  
14 in (w) x 8 in (d) x 32 in (h)

#### ORDERING INFORMATION

203874 Digital Rotational Viscometer





# UNIVERSAL TESTING MACHINES



The ST series of electromechanical testing machines from Tinus Olsen are designed to test a wide range of materials in tensions, compression, flexure, shear, and peel.

A variety of self-identifying loadcells are available at differing capacities that give precise applied load measurements from the smallest test specimen to ones that go to full machine capacity. Test machines become complete, powerful test systems with the addition of grips to hold the specimen, strain measurement instrumentation and Tinus Olsen's Horizon Data Analysis software.

The Tinus Olsen benchtop range of ST models feature both single and twin column frames. The single column models have frame capacities of 1 kN (100 kgf / 200 lbf) and 5 kN (500 kgf / 1100 lbf), while dual column models are available in capacities of 10 kN (1000 kgf / 2200 lbf), 25 kN (2500 kgf / 5000 lbf), and 50 kN (5000 kgf / 11000 lbf), and are designed to test a vast range of materials and finished products.

New design allows rapid change of machine capacity from as little as 0.2% of the capacity of the smallest loadcell to the maximum frame capacity in a very simple process. Also, the machines can be operated at speeds ranging from a minimum of 0.001 mm/min (0.04 thousandths of an inch per minute) to a maximum of up to 1000 mm/min (40 inches per minute), depending on frame size, which accommodates a wide range of material and specimens.

**Features**

- Test frame can be extended by up to 254 mm / 10 inches (single column) or 400 mm / 16 inches (Twin column) to increase test area size
- Different system interface options are available: tethered handheld interface, wireless Bluetooth interface panel, or virtual machine controller.
- Meets or exceeds the requirements of national and international standards for material testing systems
- (Single column) or 8 (Twin column) full length T slots built into machine column to allow accessories to securely mount to the test frame
- Built-in pneumatic distribution ports that provide local air supply to pneumatic grips

**ORDERING INFORMATION**

204115	1ST Single Column Load Frame, 1 kN / 200 lbf capacity
402444	5ST Single Column Load Frame, 5 kN / 1100 lbf capacity
204116	10ST Twin Column Load Frame, 10 kN / 2200 lbf capacity
204117	25ST Twin Column Load Frame, 25 kN / 5000 lbf capacity
204118	50ST Twin Column Load Frame, 50 kN / 11000 lbf capacity
204129	HMC Handheld User Interface
204130	PROTERM Handheld User Interface
202803	Primary Platform for Horizon Software
203679 / 203410	Textiles Library for Horizon Software

All ST series can be used with selection of handheld interfaces or a virtual machine interface running on a connected PC.

The PROTERM model is the familiar handheld controller which is tethered to the machine by an articulated arm. With its larger, tactile, sealed keypad, this controller is ideal for operators who use gloves to load and unload specimens and prefer a push button keypad. It can be used for basic operation of the tester and can initiate a test, but must be used with Horizon software.

Model HMC is the wireless handheld interface which is connected to the machine by a Bluetooth link. This interface features an Android-based operating platform and can be used to control the machine by itself or in conjunction with Horizon software. Three channel display of test machine channels and selectable multi unit display of channel values. Safe operating radius of a maximum of 10 m and will operate in 'safe' mode if the range is exceeded. Controls machine movement during test set up and initiates a test directly from the built-in control pad. Test procedure involving up to steps can be set up and run directly on the HMC interface.

**PROTERM**

Required or Option	Option in support of testing machine corsshead positioning, specimen insertion and monitoring of machine status. ** Cannot be used to perform materials testing
Tactile Push Button Type	Black elastomeric keys with epoxy caps
Language	Supports global language character sets
Screen	Monochrome supertwist LCD 5 lines (3 live sources, 2 status lines)
Size (L x W x D)	192 x 128 pixels
	209 mm x 104.1 mm x 29.2 mm
	8.25 in x 4.10 in x 1.15 in
Weight	340 g / 0.75 lb



PROTERM



HMC

**HMC**

Required or Option	Option
Technology Platform	Android v.4.1.1 (Jelly Bean)
Language	Supports global language character sets
Touch Screen	Color touch screen, multi touch capacitive, rain resistant and inductive stylus
Display	141 mm diagonal super AMOLED 720 x 1280 pixels
Size (L x W x D)	232 mm x 99 mm x 29 mm
	9.1 in x 3.9 in x 1.14 in
Weight	442 g / 1 lb



1ST Testing Machine



5ST Testing Machine

**TECHNICAL SPECIFICATIONS**

Model		1ST	5ST
Capacity		1 kN / 100 kg / 200 lbf	5 kN / 500 kg / 1000 lbf
Maximum Sample Diameter		NA mm / NA in	NA mm / NA in
Load Cells		5N, 10N, 25N, 50N, 100N, 250N, 500N, 1kN	5N, 10N, 25N, 50N, 100N, 250N, 500N, 1kN, 2.5kN, 5kN
Distance between columns		NA mm / NA in	NA mm / NA in
Maximum Crosshead Travel (excluding grips)		755 mm / 30 in	755 mm / 30 in
Testing Speed Range	mm/min	0.001 to 1000	0.001 to 1000 to 2kN 0.001 to 500 to 5kN
	in/min	0.00004 to 40	0.00004 to 40 to 400lbf 0.00004 to 20 to 1000lb
Jog Speed		NA mm / NA in	NA mm / NA in
Return Speed	mm	0.001 to 1500	0.001 to 1500
	in	0.00004 to 60	0.00004 to 60
Resolution	mm	0.1	0.1
	in	0.000004	0.000004
Accuracy		+/- 0.005%	+/- 0.005%
Dimensions W x D x H	mm	511 x 467 x 1168	511 x 467 x 1168
	in	20 x 18 x 46	20 x 18 x 46
Weight	kg	46 kg / 101 lb	46 kg / 101 lb
Controller Interface	HMC	Y	Y
	Proterm	Y	Y
Software	Horizon	Y	Y

1. Load weighting system meets or exceeds the requirements of the following standards: ASTM E4, ISO7500-1, EN10002-2. It is recommended that systems are verified at installation in accordance with ASTM E4 and ISO 75001.

2. Strain measurement meets or exceeds the requirements of the following standards: ASTM E83, ISO9513 and EN 10002-4.



10ST Testing Machine



25ST Testing Machine



50ST Testing Machine

**TECHNICAL SPECIFICATIONS**

Model		10ST	25ST	50ST
Capacity		10 kN / 1000 kg / 2000 lbf	25 kN / 2500 kg / 5000 lbf	50 kN / 5000 kg / 11000 lbf
Maximum Sample Diameter		NA mm / NA in	NA mm / NA in	NA mm / NA in
Load Cells		5N, 10N, 25N, 50N, 100N, 250N, 500N, 1kN, 2.5kN, 5kN, 10kN	5N, 10N, 25N, 50N, 100N, 250N, 500N, 1kN, 2.5kN, 5kN, 10kN, 25kN	5N, 10N, 25N, 50N, 100N, 250N, 500N, 1kN, 2.5kN, 5kN, 10kN, 25kN, 50kN
Distance between columns		410 mm / 16 in	410 mm / 16 in	410 mm / 16 in
Maximum Crosshead Travel (excluding grips)		1090 mm / 43 in	1090 mm / 43 in	1090 mm / 43 in
Testing Speed Range	mm/min	0.001 to 1000 to 10kN	0.001 to 1000 to 10kN 0.001 to 500 to 25kN	0.001 to 500 to 20kN 0.001 to 250 to 50kN
	in/min	0.00004 to 40 to 2000lbf	0.00004 to 40 to 2000lbf 0.00004 to 20 to 5000lb	0.00004 to 20 to 4000lbf 0.00004 to 10 to 11000lb
Jog Speed		NA mm / NA in	NA mm / NA in	NA mm / NA in
Return Speed	mm	0.001 to 1000	0.001 to 1000	0.001 to 500
	in	0.00004 to 40	0.00004 to 40	0.00004 to 20
Resolution	mm	0.1	0.1	0.1
	in	0.000004	0.000004	0.000004
Accuracy		+/- 0.005%	+/- 0.005%	+/- 0.005%
Dimensions W x D x H	mm	729 x 506 x 1265	729 x 506 x 1265	729 x 506 x 1265
	in	29 x 20 x 64	29 x 20 x 64	29 x 20 x 64
Weight		130 kg / 287 lb	130 kg / 287 lb	130 kg / 287 lb
Controller Interface	HMC	Y	Y	Y
	Proterm	Y	Y	Y
Software	Horizon	Y	Y	Y

1. Load weighting system meets or exceeds the requirements of the following standards: ASTM E4, ISO7500-1, EN10002-2. It is recommended that systems are verified at installation in accordance with ASTM E4 and ISO 75001.

2. Strain measurement meets or exceeds the requirements of the following standards: ASTM E83, ISO9513 and EN 10002-4.

Universal Testing Machine 1ST special version is designed for low force/extension single fiber testing. Fitted with special 10 N / 1000 gf loadcell and lightweight pneumatic grips. Speed 0.001 to 1000 mm/min. Maximum 755 mm travel (Optional Tension Clips computer testing software is available for order separately). Extension resolution 0.001 mm. HMC wireless Bluetooth handheld controller included.

Please see our Tinius Olsen Section Pages 73-75 for information on other grips/accessories for this device.

#### SIZE

WEIGHT 46 kg / 101 lbs

DIMENSIONS 511 mm (w) x 467 mm (d) x 1168 (h) /  
20 in (w) x 18 in (d) x 46 in (h)

#### ORDERING INFORMATION

204173 F012 Single Fiber Strength Tester

200982 Tension Clips (Set)

202803 Horizon Testing Software (computer not included)

#### STANDARDS:

ISO 5070

BS 3411

BISFA



## 5ST Single End Yarn Strength Tester

Y263A

To determine the breaking load and extension of single yarns and threads up to 250 N, 25 kgf, 50 lbf or 100 N, 10 kgf, 20 lbf load range depending on choice of load cell (one or both may be ordered). Special-purpose version of 5ST single column universal tester provided with HT60 manual horn-type yarn grips. Speed 0.001 to 1000 mm / min. Maximum 755 mm travel (excluded grip). Extension resolution 0.001 mm HMC wireless Bluetooth handheld controller included.

Optional computer testing software is available for order separately.

#### SIZE

WEIGHT 46 kg / 101 lbs

DIMENSIONS 490 mm (w) x 450 mm (d) x 1140 (h) /  
20 in (w) x 18 in (d) x 45 in (h)

#### ORDERING INFORMATION

Y263A 5ST Single End Yarn Strength Tester with HT60 Grips, excludes load cell

402445 100 N, 10 kgf, 20 lbf load cell (ST series)

402929 250 N, 25 kgf, 50 lbf load cell (ST series)

202803 Horizon Testing Software (computer not included)

#### STANDARDS:

ASTM D2256

BS 1932

ISO 2062



**LOAD CELLS**

<b>STANDARD Z-BEAM</b>	5N	10N	25N	50N	100N
Order Code	200574	200575	200576	200577	200578
Fitting	M6x1 (F)	M6x1 (F)	M8x1.25(F)	M8x1.25(F)	M8x1.25(F)

	250N	500N	1kN	2.5kN	5kN
Order Code	200579	200580	200581	200582	200583
Fitting	M8x1.25(F)	M8x1.25(F)	M8x1.25(F)	M8x1.25(F)	M12x1.75(F)

	10kN	25kN	50kN
Order Code	200584	200585	200586
Fitting	M12x1.75(F)	M16x2 (F)	M16x2 (F)

<b>SHEAR WEB</b>	1kN	5kN	10kN
Order Code	99-999-1040/9	99-999-1040/13	99-999-1040/4



Standard Z Beam



Shear Web Load Cell

**GENERAL PURPOSE PNEUMATIC GRIPS**

Model (Max Load)	HT45 (5kN)	HT42 (500N)
Order Code	200617	200627
Minimum Load Cell	500N	50N
Replaceable Jaw Faces*		
25 x 25 mm rubber coated	200616	200626
25 x 50 mm rubber coated	200615	200625
25 x 75 mm rubber coated	200614	200624
25 x 100 mm rubber coated	300581	N/A
R3 x 75 mm line contact	200604	200621
HT 401 Pneumatic controller	200678	200678
Footswitch	200679	200678
Spare Rubber Sheet 150 x 150 mm	200690	200690



HT45

**GENERAL PURPOSE MANUAL GRIPS**

Model (Max Load)	HT40 (20kN)	121-014 (5kN)	121-003 (2kN)
Order Code	202595	200617	203161
Type	Heavy Duty	Medium Duty	Light Duty
Minimum Load Cell	500N	250N	50N
Replaceable Jaw Faces*			
25 x 25 mm rubber coated	300535	204067	Fixed Jaw Face* Includes 25 x 65 mm rubber coated
25 x 50 mm rubber coated	300536	99-1005662	
25 x 75 mm rubber coated	300537	204066	
Largest rubber	300532 (50 x 100 mm)	204063 (50 x 80 mm)	

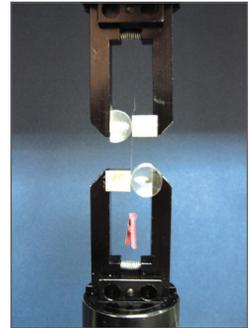


121-014

\*other sizes and types of jaw face are available for selection

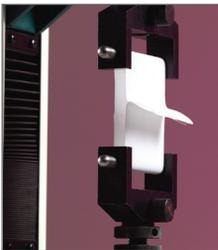
**YARN/FILAMENTS GRIPS\***

Model (Max Load)	121-013 (100N)	131-007 (1kN)	HT58 (100N)	HT57 (1.5kN)
Order Code	203162	203143	200603	202880
Minimum Load Cell	5N	25N	5N	500N
Operation	Manual	Manual	Pneumatic	Pneumatic



**LOOP BARS\***

Model	S428	MER 150	S620	Universal
Order code	200637	300524	200636	ask for details
Dimension	Φ4 x 100mm	Φ4 x 75mm	Φ6.5 x 80mm	Φ4, 5, 6, 8, 10 & 13 x 120mm
Standard	BS4952	BS4952	ASTM D4964	General



**BRA WIRE ATTACHMENTS & BURSTING FIXTURES\***

Model	BraWire (M&S)	BraWire (NEXT)	General Ball Burst Fixture
Order code	200650	202462	104948
Standard	M&S	NEXT	ASTM D3787, D6797, D751 EN 12232-1, GB/T 8878, 19976 FZ/T 01030



\*other fixtures to suit specific application are available for selection



**ATTACHMENT STRENGTH\***

Model	Popper	Lower Clamp	Button Box
Order code	300454	203769	300457**
Standard	BS7907	BS7907	BS7907

\*\*requires insert plate



Model	Diamante lower	Diamante upper
Order code	300438	300439
Standard	BS7909	BS7909



**ZIPPER TESTING\***

Model	S700	S435	HT23	S415
Order code	300757	300756	300444	300755
Test name	Element slippage	Element Pull off	Stop Holder	Slider Pull
Standard	BS 3084 ASTM D2061	BS 3084 ASTM D2061	BS 3084 ASTM D2061	BS 3084 ASTM D2061



**FRICTION & PILLING FIXTURE\***

Model	FT200	PT180	PT190	PT1000
Order code	200653	200655	200654	99-1002037/1
Test name	Coef. of friction	180° Peel	90° Peel	Climbing Drum
Standard	ISO 8295 ASTM D1894			BS 5350 ASTM D1781



\*other fixtures to suit specific application are available for selection

Building on our long history of providing solutions to an enormous variety of testing problems, we offer a comprehensive software program - Horizon, that makes testing simple, precise, and efficient. Horizon software goes far beyond data collection and presentation. It will help you automate your operations, from R&D to the charting and analysis of QC testing. Horizon provides a library of standard, specific, and application focused test routines that have been developed in close cooperation with our customers around the world and to the standards they are using.

Among the many valuable features offered by Horizon are:

a test routine library; simultaneous multiple machine control; test, output, method, and result editors; and multilayered security

Horizon also includes the following features:

- Generation of user customized reports
- Ability to recall, re-plot and rescale test curves
- User-configurable machine parameter and control settings
- Multiple layered security with individual log-ins for different assigned operator access rights
- Networking capabilities, ensuring identical test methods are used for multiple machine users; LIMS or EPR integration

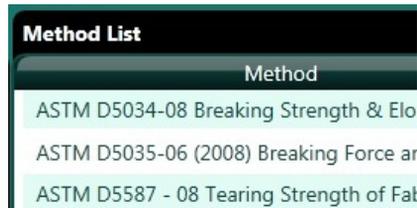
Horizon is rich with capabilities that improve productivity and enable you to build, access, and use a modern, powerful materials testing database. It employs the latest Windows environments to create an intuitive user experience. Built-in tutorials, on-line help, and help desk access provide additional user support.

**ORDERING INFORMATION**

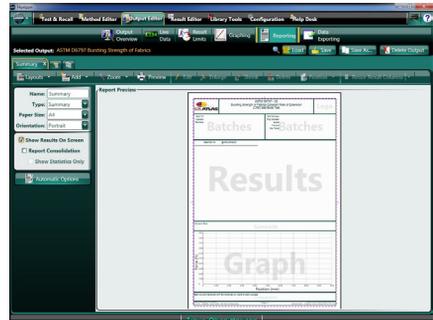
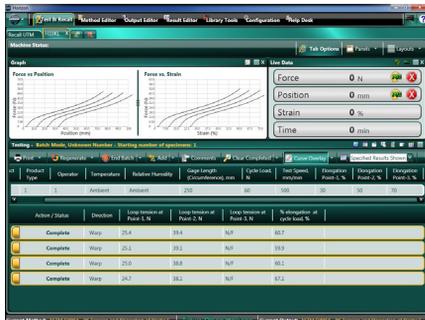
202803 Horizon for Textiles Software Package



Methods Library



Pre-written Standard Methods



More than 300 pre-programmed textile test methods are embedded into the Unique Textile Software Package and more are added regularly. New methods approved for use by SDL Atlas and Tinius Olsen will be downloadable on request.

Inclusion of methods within the software ensures tests are carried out using the correct parameters such as speed, pretension, gage length, units and report formats, among others. We work with most International Standards Organizations, Major Retailers (e.g. Marks & Spencer, NEXT...etc.) and Textile Manufacturers as well as Government and Military Specifiers.

If you or your organization is involved in writing or setting Textile Standards requiring the use of Universal Testers and you are not included in our list, please contact us.

#### **Horizon 10.2.1.0 Test Routines Database Test Methods Available**

*The test methods database for Horizon is continuously growing to cover more national/international/retailer specific testing standards. Please check with SDL Atlas for the latest full list of test methods.*

Standard Type	Title	Test Type
AATCC	AATCC TM 136: 2003 Bond Strength of Bonded and Laminated Fabric	Tensile
ABNT	ABNT NBR 10334:2003 Baby's Dummies (6-2) Structural Integrity	Tensile
ABNT	ABNT NBR 10334:2003 Baby's Dummies (6-3) Biting Resistance	Compression
ABNT	ABNT NBR 10334:2003 Baby's Dummies (6-4&5) Traction Resistance	Tensile
Adidas	Adidas TM 4.10: 2007 Tensile Strength - Strip Method	Tensile
Adidas	Adidas TM 4.11: 2007 Tensile Strength - Woven Fabrics (Grab method)	Tensile
Adidas	Adidas TM 4.12: 2004 Elongation and Resilience of Elastic Fabrics	Cycle
Adidas	Adidas TM 4.13: 2007 Seam Slippage - Woven Fabrics	Seam
Adidas	Adidas TM 4.14: 2006 Tear force of Woven Fabrics (Single tear)	Tear
Adidas	Adidas TM 4.15: 2006 Button Hole Tearing Strength - Rugby	Tensile
Adidas	Adidas TM 4.27: 2011 Elongation, Recovery and Modulus of Elastic Fabrics C-Clamp	Cycle
Arcadia Group	Arcadia Group AG101:2012 slide fasteners - Annex B	Tensile
Arcadia Group	Arcadia Group AG101:2012 slide fasteners - Annex C	Tensile
Arcadia Group	Arcadia Group AG101:2012 slide fasteners - Annex D	Tensile
Arcadia Group	Arcadia Group AG101:2012 slide fasteners - Annex E	Tensile
Arcadia Group	Arcadia Group AG101:2012 slide fasteners - Annex G	Tensile
Arcadia Group	Arcadia Group AG101:2012 slide fasteners - Annex H	Tensile
Arcadia Group	Arcadia Group AG101:2012 slide fasteners - Annex I	Tensile
Arcadia Group	Arcadia Group AG101:2012 slide fasteners - Annex J	Tensile
Arcadia Group	Arcadia Goup AG105:2012 Seam strength	Seam
Arcadia Group	Arcadia group AG106:2012 Buttons - tension test	Tensile
Arcadia Group	Arcadia group AG109:2012 Strap strength and attachment	Tensile
Arcadia Group	Arcadia group AG111:2012 Buckle assembly attachment strength	Tensile
Arcadia Group	Arcadia group AG29:2012 Residual Extension of Knitted elastic fabrics	Tensile
Arcadia Group	Arcadia group AG36:2012 Tensile strength, seam slippage and strength	Seam
Arcadia Group	Arcadia group AG37:2012 Tensile strength using Grab method	Tensile
Arcadia Group	Arcadia group AG38:2012 Seam Method for fabrics containing Elastanes-fixed load	Seam
Arcadia Group	Arcadia group AG78:2012 Tear strength for Leather-Baumann	Tear
Arcadia Group	Arcadia group AG79:2012 Tear strength for Leather-Baumann single tear	Tear
Arcadia Group	Arcadia group AG80:2012 Toy safety standard EN71 part 1	Tensile
Arcadia Group	Arcadia group AG81:2012 Seam tensile properties of fabrics and made up textile articles	Seam

Standard Type	Title	Test Type
Arcadia Group	Arcadia group AG82:2012 Slippage resistance of yarns at seams in woven fabrics	Seam
AS	AS 2432: 2009 Baby's Dummies Appendix B - Shield Test	Tensile
AS	AS 2432: 2009 Baby's Dummies Appendix C - Protrusion Test	Compression
AS	AS 2432: 2009 Baby's Dummies Appendix D - Tensile Test	Tensile
AS	AS 2432: 2009 Baby's Dummies Appendix E - Compression Test	Compression
AS	AS 2432: 2009 Baby's Dummies Appendix F - Bite Test	Compression
AS	AS 2432: 2009 Baby's Dummies Appendix H - Tear Test	Tear
ASTM	ASTM D 2261 - 14 Tearing Strength of Fabrics - Tongue (Single Rip)	Tear
ASTM	ASTM D 3574 - 05 Procedure A - IFD Hysteresis Loss	Cycle
ASTM	ASTM D 3574 - 05 Procedure B - CFD Hysteresis Loss	Cycle
ASTM	ASTM D 3574 - 05 Test B1 - Indentation force deflection test	Compression
ASTM	ASTM D 3574 - 05 Test B2 - Indentation Residual gage length test	Compression
ASTM	ASTM D 3574 - 05 Test C - Compression force deflection test	Compression
ASTM	ASTM D 3574 - 05 Test E - Tensile test (Grip separation)	Tensile
ASTM	ASTM D 3574 - 05 Test F - Tear resistance test	Tear
ASTM	ASTM D 5169 - 98 (2010) Shear Strength of Hook and Loop Touch Fasteners	Tensile
ASTM	ASTM D 5170 - 98 (2010) Peel Strength of Hook and Loop Touch Fasteners	Peel
ASTM	ASTM D 1683-04: Failure in Sewn Seam of Woven Apparel Fabrics	Seam
ASTM	ASTM D 1683-11: Failure in Sewn Seam of Woven Apparel Fabrics	Seam
ASTM	ASTM D 1894-08: Static and Kinetic Coefficients of Friction of Plastic Film and Sheeting	Tensile
ASTM	ASTM D 1938-08:Tear-Propagation Resistance of Highly Extensible Film	Tear
ASTM	ASTM D 1938-08:Tear-Propagation Resistance of Low-Extensible Film	Tear
ASTM	ASTM D 2061-07 (2013) 14.1 Chain Crosswise Strength	Tensile
ASTM	ASTM D 2061-07 (2013) 14.2 Element Pull-Off	Tensile
ASTM	ASTM D 2061-07 (2013) 14.3 Element Slippage, Lengthwise	Tensile
ASTM	ASTM D 2061-07 (2013) 22.2 Top Stop Holding	Tensile
ASTM	ASTM D 2061-07 (2013) 22.3 Bottom Stop Holding, Slider	Tensile
ASTM	ASTM D 2061-07 (2013) 22.4 Bottom Stop Holding, Crosswise	Tensile
ASTM	ASTM D 2061-07 (2013) 22.5 Bottom Stop Holding, Stringer Separation	Tensile
ASTM	ASTM D 2061-07 (2013) 22.6 Bridge Top Stop, Stringer Separation	Tensile
ASTM	ASTM D 2061-07 (2013) 30.1 Separable Pin, Pull-Off	Tensile
ASTM	ASTM D 2061-07 (2013) 30.2 Fixed Retainer, Pull Off	Tensile
ASTM	ASTM D 2061-07 (2013) 30.3 Separating Unit, Crosswise	Tensile
ASTM	ASTM D 2061-07 (2013) 39 Cushioned Compression Utility	Compression
ASTM	ASTM D 2061-07 (2013) 49.1 Slider Deflection and Recovery, Mouth	Tensile
ASTM	ASTM D 2061-07 (2013) 49.2 Slider Deflection and Recovery, Pull	Tensile
ASTM	ASTM D 2061-07 (2013) 74.1 Resistance to Pull-Off of Slider Pull	Tensile
ASTM	ASTM D 2061-07 (2013) 84.1 Resistance to Angular Pull-Off of Slider Pull	Tensile
ASTM	ASTM D 2061-07 (2013) 94.1 Holding Strength of Slider Lock	Tensile
ASTM	ASTM D 2256-09 Tensile Properties of Yarns Single Strand Method	Tensile
ASTM	ASTM D 2261-11 Tear Strength of Fabrics - Tongue (Single Rip)	Tear
ASTM	ASTM D 3822-07 Tensile Properties of Single Textile Fibres	Tensile
ASTM	ASTM D4964 - 96 Tension and Elongation of Elastic Fabrics (CRE)	Tensile
ASTM	ASTM D5034-08 Breaking Strength & Elongation of Textile Fabrics -Grab Strength	Tensile

Standard Type	Title	Test Type
ASTM	ASTM D5035-06 (2008) Breaking Force and Elongation of Textile Fabrics (Strip Method)	Tensile
ASTM	ASTM D5587 - 08 Tearing Strength of Fabrics - Trapezoid	Tear
ASTM	ASTM D434: Resistance to Slippage of Yarns in Woven Fabrics Using a Standard Seam	Seam
ASTM	ASTM D434: 1995 Resistance to Slippage of Yarns in Woven Fabrics Using a Standard Seam	Seam
ASTM	ASTM D624-00: Tear Strength of Vulcanized Rubber	Tear
ASTM	ASTM D790-10: Flexure - Strain From Position	Flexure (achieved by compression)
ASTM	ASTM D882 - 12: Tensile Properties of Thin Plastic Sheeting	Tensile
ASTM	ASTM D903-98: Peel or Stripping Strength of Adhesive Bonds	Peel
ASTM	ASTM D6614 - 07 Stretch Properties of Textile Fabrics - CRE	Tensile
ASTM	ASTM D751 - 06 (45) Adhesion of Coating to Fabric	Peel
ASTM	ASTM D882-10: Tensile Properties of Thin Plastic Sheeting	Tensile
ASTM	ASTM F963 - 11 Toy Safety (8-10) Compression Test	Compression
ASTM	ASTM F963 - 11 Toy Safety (8-9) Tensile Removal of Components	Tensile
ASTM	ASTM F963 - 11 Toy Safety (8-9-1) Seams in Stuffed and Bean-Bag toys	Seam
BS	BS 3424-5: 1982 Coated Fabrics - Part 5: Method 7A Median Value Tongue Tear	Tear
BS	BS 3084: 2006 Slide fasteners - Annex J Open-end fastener single stringer	Tensile
BS	BS 3084: 2006 Slide fasteners - Annex B Strength of Puller Attachment	Tensile
BS	BS 3084: 2006 Slide fasteners - Annex C Strength of closed end	Tensile
BS	BS 3084: 2006 Slide fasteners - Annex D Strength of top stop	Tensile
BS	BS 3084: 2006 Slide fasteners - Annex E Strength of Open-end faster box	Tensile
BS	BS 3084: 2006 Slide fasteners - Annex G Lateral strength of fastener	Tensile
BS	BS 3084: 2006 Slide fasteners - Annex H Lateral strength of open-end attachment	Tensile
BS	BS 3084: 2006 Slide fasteners - Annex I Strength of slider locking device	Tensile
BS	BS 3424-5: 1982 Coated Fabrics - Part 5: Method 7A Median Value Tongue Tear	Tear
BS	BS 4162: 1983 Section 4 - Strength of Buttons	Tensile
BS	BS 5131 Section 5.11: 1981 Footwear - Strength of buckle fastening assemblies	Tensile
BS	BS 7505: 1995 Bandages (1) - Elastic properties of Flat non-adhesive fabric	Cycle
BS	BS 7505: 1995 Bandages (2) - Elastic properties of Flat non-adhesive fabric	Cycle
BS	BS 7505: 1995 Bandages (3A) - Elastic properties of Flat non-adhesive fabric	Cycle
BS	BS 7505: 1995 Bandages (3B) - Elastic properties of Flat non-adhesive fabric	Cycle
BS	BS 7505: 1995 Bandages (3C) - Elastic properties of Flat non-adhesive fabric	Cycle
BS	BS 7505: 1995 Bandages (3D) - Elastic properties of Flat non-adhesive fabric	Cycle
BS EN	BS EN 388: 2003 Protective gloves - puncture resistance	Compression
BS EN	BS EN 863: 1996 Protective clothing - Puncture resistance	Compression
CFR	16 CFR 1500 Toy Safety (5x) Bite Test	Compression
CFR	16 CFR 1500 Toy Safety (5x) Compression Test	Compression
CFR	16 CFR 1500 Toy Safety (5x) Tension Test	Tensile
	Compression with Hysteresis to Target Displacement	Compression

	Compression with Hysteresis to Target Force	Compression
DIN	DIN 53 354: 1981 Artificial Leather Tensile Test	Tensile
EN	EN 12771: 1999 Footwear - Outsoles - Tear strength	Tear
EN	EN 1400: 2013 (E) (8-3-2) Shield in Compression	Compression
EN	EN 1400: 2013 (E) (8-3-2) Shield in Tension	Tensile
EN	EN 1400: 2013 (E) (9-1-2 as per 9-7-2-2) Post Impact Resistance Tensile with Break	Tensile
EN	EN 1400: 2013 (E) (9-2) Puncture Resistance	Compression
EN	EN 1400: 2013 (E) (9-3 as per 9-7-2-2) Post Tear Resistance Tensile with Break	Tensile
EN	EN 1400: 2013 (E) (9-4) Knob, Plug and-or cover retention	Tensile
EN	EN 1400: 2013 (E) (9-5-2) Biting Endurance	Compression
EN	EN 1400: 2013 (E) (9-6-2 as per 9-7-2-2) Post Rotation Endurance Tensile with Break	Tensile
EN	EN 1400: 2013 (E) (9-7-2-2) Tensile Test with break	Tensile
EN	EN 14350-1: 2004 (6-3-1) Child use and care articles - Tear resistance	Tear
EN	EN 14350-1: 2004 (6-3-2) Child use and care articles - Tensile	Tensile
EN	EN 14350-1: 2004 (6-7) Child use and care articles - Security/Retention	Tensile
EN	EN 14350-1: 2004 (6-8) Child use and care articles - Flexibility	Cycle
EN	EN 14372: 2004 (6-2-3) Child Cutlery and Feeding Utensils - Tensile	Tensile
EN	EN 14372: 2004 (6-2-4) Child Cutlery and Feeding Utensils -Tear resistance	Tear
EN	EN 14372: 2004 (6-2-5) Child Cutlery and Feeding Utensils - Strength:Rigidity	Tensile
EN	EN 14704-1: 2005 Elasticity of fabrics - Part 1: Strip Tests (Fixed Elongation)	Cycle
EN	EN 14704-1: 2005 Elasticity of fabrics - Part 1: Strip Tests (Fixed Load)	Cycle
EN	EN 15598: 2008 Terry fabrics - resistance to pile loop extraction	Tensile
EN	EN 29073-3: 1992 Determination of Tensile Strength & Elongation	Tensile
EN	EN 60811-1-1: 1995 Insulation and sheathing materials of electric cables	Tensile
EN	EN 71-1: 2005 + A9: 2009 Toy Safety - Compression test (8.8)	Compression
EN	EN 71-1: 2005 + A9: 2009 Toy Safety - Tension test (8.4)	Tensile
EN	EN 71-1: 2009 Toy Safety - Pull and Hold	Tensile
EN	EN 993-6: 1995 MOR (3pt) for Dense Shaped refractory products	Flexural
EN	EN 993-6: 1995 MOR (3pt) for Dense Shaped refractory products with MOE	Flexural
EN ISO	EN ISO 13934-1: 1999 Textiles -Maximum Breaking Force and Elongation (Strip method)	Tensile
EN ISO	EN ISO 13934-2: 1999 + 13935: 1999 + 13936-1: 2004 Seam Properties	Tensile
EN ISO	EN ISO 13934-2: 1999 + 13935-2: 1999 + 13936-1: 2004 Seam Properties	Seam
EN ISO	"EN ISO 13934-2: 1999 Textiles-Tensile properties of fabrics maximum force -Grab Method"	Tensile
EN ISO	EN ISO 13934-2: 2014 Textiles - Maximum force using the Grab method	Tensile
EN ISO	EN ISO 13935-2: 1999 + 13936-2: 2004 Seam Properties (Modified)-Fixed Load	Seam
EN ISO	EN ISO 13936-1: 2004 Slippage Resistance - Fixed Opening Method	Seam
EN ISO	EN ISO 13936-2: 2004 Slippage Resistance - Fixed Load Method	Seam
EN ISO	EN ISO 13937-2: 2000 Tear force of trouser-shaped test specimens (Single tear method)	Tear
EN ISO	EN ISO 13937-3: 2000 Tear force of wing-shaped test specimens (Single tear method)	Tear

Standard Type	Title	Test Type
EN ISO	EN ISO 13937-4:2000 Tear force of tongue-shaped test specimens (Double tear test)	Tear
EN ISO	EN ISO 1421: 1998 Rubber- or Plastics-coated fabrics - Method 1: Strip - Tensile strength and elongation at break	Tensile
EN ISO	EN ISO 1421: 1998 Rubber- or Plastics-coated fabrics - Method 2: Grab - Tensile strength and elongation at break	Tensile
EN ISO	EN ISO 2062:1995 (2009) Yarn from Packages Breaking force and Elongation	Tensile
EN ISO	EN ISO 2411: 2000 Adhesion of Rubber- or Plastic-Coated Fabrics	Tensile
EN ISO	EN ISO 3376: 2002 Leather - Tensile Strength and Extension	Tensile
EN ISO	EN ISO 3377-1: 2002 Leather - Tear load Pt1 Single edge tear	Tear
EN ISO	EN ISO 3377-2: 2002 Leather - Tear load Pt2 Double edge tear	Tear
EN ISO	EN ISO 3386-1: 1997 Polymeric or cellular flexible compression - Pt1 Low density	Compression
EN ISO	EN ISO 3386-1: 1997 Polymeric or cellular flexible compression (Auto) - Pt1 Low density	Compression
EN ISO	EN ISO 3386-2: 1998 Flexible cellular polymeric materials compression - Pt2 High density	Compression
EN ISO	EN ISO 4674-1 (A) Rubber- or plastic coated fabrics Tear resistance - Tongued (double tear)	Tear
EN ISO	EN ISO 4674-1 (B) Rubber- or plastic coated fabrics Tear resistance - Trouser-shaped (single tear)	Tear
EN ISO	EN ISO 5079: 1996 Textile Fibres - Breaking force and elongation at break	Tensile
EN ISO	EN ISO 9073-4: 1997 Textiles - nonwovens Tear resistance	Tear
EN ISO	EN ISO 9073-5: 2008 Textiles - nonwovens - Part 5 penetration resistance (Ball Burst)	Compression
Fiat	Fiat Auto 50423: 1985 Compression of Expanded cellular materials	Compression
Fiat	Fiat Auto 50441-01 Tensile Loading Test - Fabrics and water repellent fabrics	Tensile
Fiat	Fiat Auto 50442 Tear Test on Slit Specimen	Tear
FINAT	FINAT TM 9: 2001 Loop tack	Tensile
Ford	Ford BN 119-01 Seam Strength of Textile Trim materials	Seam
Ford	Ford BN 151-05 180 Degree Peel Adhesion Strength of Laminates	Peel
GAP	GAP Inc S1033 Stretch & Recovery - Foundation or Swimwear Fabric method	Cycle
GB/T	GB/T 19976-2005 Textiles - Bursting Strength - Steel Ball	Compression
Generic	Generic 180deg peel	Peel
Generic	Generic climbing drum peel	Peel
Generic	Generic compression - Force vs. Position	Compression
Generic	Generic Compression - Force vs. Time	Compression
Generic	Generic Compression - Set Initial Platen to Zero and Park Separation	Compression
Generic	Generic Compression - Stress vs. Strain (from Position)	Compression
Generic	Generic Compression Cycle	Compression
Generic	Generic Compression to Load - multicycle	Compression
Generic	Generic Compression with Deflectometer - Force vs. Deflection	Compression
Generic	Generic Flexure 3PT	Compression
Generic	Generic Flexure 3PT - MOE, MOR	Compression
Generic	Generic Flexure 3PT with Deflectometer - MOE, MOR	Compression
Generic	Generic Flexure 4PT	Compression
Generic	Generic Flexure 4PT - MOE, MOR	Compression
Generic	Generic Friction (Peel method)	Peel

Standard Type	Title	Test Type
Generic	Generic Paper Test (Horizontal Extensometer Air Bearing Test)	Tensile
Generic	Generic Peel or Tear - First and Last Peak with Margins	Peel/Tear
Generic	Generic Peel or Tear - Whole Trace	Peel/Tear
Generic	Generic Spring Compression	Compression
Generic	Generic Step Loading with hold - Compression	Compression
Generic	Generic Tensile - Force vs. Position	Tensile
Generic	Generic Tensile - Force vs. Position (With Energy)	Tensile
Generic	Generic Tensile - Force vs. Time	Tensile
Generic	Generic Tensile - Force vs. Time (Including All Rates)	Tensile
Generic	Generic Tensile - r Value on Horizontal	Tensile
Generic	Generic Tensile - Stress vs. Strain (from Position with Modulus Force/Length)	Tensile
Generic	Generic Tensile - Stress vs. Strain (from Position)	Tensile
Generic	Generic Tensile - Stress vs. Strain (Manual Machine, Position Disabled)	Tensile
Generic	Generic Tensile - Stress vs. Strain using Environmental Chamber	Tensile
Generic	Generic Tensile - True Stress & Strain	Tensile
Generic	Generic Tensile on Horizontal	Tensile
Generic	Generic Tensile on Horizontal without Clamp or Preload Segments	Tensile
Generic	Generic Tensile with Laser Extensometer	Tensile
Generic	Generic Tensile with Video Extensometer (Embedded)	Tensile
Generic	Generic Tensile with Video Extensometer (External)	Tensile
Generic	Generic Yarn Tensile	Tensile
GMW	GMW3010 Tensile and Elongation Properties	Tensile
GMW	GMW3010 Tensile and Elongation Properties (Ext)	Tensile
GMW	GMW3320 Laminate Bond Strength	Peel
GMW	GMW3326 Tearing Strength of Textile Materials by Trapezoid Method	Tear
Green Textile	Green Textile ASTM D2261 - 11 Tearing Strength of Fabrics - Tongue (Single Rip)	Tear
Green Textile	Green Textile ASTM D4533-91 Trapezoid Tearing Strength of Geotextiles	Tear
Green Textile	Green Textile ASTM D5034 Breaking Strength & Elongation - Grab Test	Tensile
Green Textile	Green Textile TSL 5100 G 4.32 Toyota Circular Modulus.	Tensile
ISO	ISO 10319: 2008 Tensile Properties of Geotextiles by the Wide-Width Strip Method	Tensile
ISO	ISO 11644: 2009 Leather - Test for Adhesion finish	Adhesion
ISO	ISO 34-1: 2004 Rubber - Tear Strength (Method B or C)	Tear
ISO	ISO 36: 2005 Rubber - Adhesion to Textile Fabrics	Peel
ISO	ISO 6133-1981 Rubber and Plastics - Tear and Adhesion Strength	Tear
ISO	ISO 6916-2: 2001 Annex B Deflection of Flexible Mouldings and Extrusions	Compression
ISO	ISO 8124-1: 2009 Toy Safety (5-24-6-1) Tension Test	Tensile
ISO	ISO 8124-1: 2009 Toy Safety (5-24-6-2) Seams in Stuffed and Bean-Bag toys	Seam
ISO	ISO 8124-1: 2009 Toy Safety (5-24-6-3) Pompoms tension test	Tensile
ISO	ISO 8124-1: 2009 Toy Safety (5-24-6-4) Protective components	Tensile
ISO	ISO 8124-1: 2009 Toy Safety (5-24-7) Compression Test	Compression
ISO	ISO 9863-1: 2005 Geosynthetics - Method B Thickness at three pressures (Single layers)	Compression
LS&CO	LS&CO ASTM D1683-11: Failure in Sewn Seams of Woven Apparel Fabrics	Seam
LS&CO	LS&CO Breaking Strength - Grab Method (ASTM D5034)	Tensile

Standard Type	Title	Test Type
LS&CO	LS&CO Method 11: 1999 Beltloop Attachment Strength	Tensile
LS&CO	LS&CO Method 25B: 2005 Button or Fastener attachment Strength	Tensile
LS&CO	LS&CO Method 39: 2003 Sundries Testing - Hasp Strength	Tensile
LS&CO	LS&CO Method 50: 2004 Sundries Testing - Internal Waistbands	Tensile
LTD	LTD 03: 2010 Stretch fabrics - Power and Recovery	Tensile
LTD	LTD 06: 2009 Elastics - Load, Elongation & Recovery	Tensile
LTD	LTD 07: 2009 Bra band elongation	Tensile
LTD	LTD 10: 2009 Comfort value - Seamless garments load and elongation	Tensile
LTD	LTD 11: 2009 Length-Width seamless fabrics in tube and garment form load and elongation	Tensile
LTD	LTD 14: 2009 Hook and Eye pull out strength	Tensile
LTD	LTD 15: 2009 Clear elastics load, elongation & tensile strain	Tensile
LTD	LTD 16: 2009 Bra Hook to Eye attachment strength	Tensile
LTD	LTD 17: 2009 Hooks, clasps, rings and slides strength	Tensile
LTD	LTD 19: 2009 Four pound load and elongation of seamless tubes and garments	Tensile
LTD	LTD 23: 2009 Wire Casing - Pin Penetration	Tensile
LTD	LTD 24: 2009 Seam stretchability of Knitted garments	Seam
LTD	LTD 26: 2009 Functional jewelry breaking strength	Tensile
LTD	LTD 27: 2009 Bra Underwire Extension	Tensile
M&S	M&S P11: 2001 Tensile Strength	Seam
M&S	M&S P115: 2006 Security of Attachment (Handbags and Belts) - 20 kgF	Tensile
M&S	M&S P115: 2008 Security of Attachment of Accessories to Garments - 10 kgF	Tensile
M&S	M&S P115A: 2006 Security of Attachment of Poppers to Garments - 10 kgF	Tensile
M&S	M&S P115B: 2009 Test to failure Security of Attachment of Accessories to Garments	Tensile
M&S	M&S P115C: 2009 Test to failure Security of Attachment of Poppers to Garments	Tensile
M&S	"M&S P115H: 2008 Security of Attachment of Handles and Straps on Handbags and Laptop bags"	Tensile
M&S	M&S P11A: 2004 Tensile Strength - Bra Wire Casing	Tensile
M&S	M&S P11B: 2006 Tensile Strength of Rings and Sliders	Tensile
M&S	M&S P12: 2006 Fabric Slippage	Seam
M&S	M&S P122: 2001 Strength of Buttons	Tensile
M&S	M&S P124: 2007 Security of Attachment of Component Parts of Fabric Covered Buttons	Tensile
M&S	M&S P12A: 2007 Fabric Slippage (including all Stretch Wovens) - Fixed load	Seam
M&S	M&S P12B: 2007 Garment Seam Slippage and Seam Strength - Fixed Load	Seam
M&S	M&S P12C: 2006 Garment Slippage	Seam
M&S	M&S P13: 2004 Peel Bond Strength	Tensile
M&S	M&S P13A: 2004 Peel Bond Strength for Handbag and Belt Fabrics	Tensile
M&S	M&S P14: 2004 Extension and Modulus of Elastomerics	Tensile
M&S	M&S P141: 2003 Single Stringer Top Stop Test	Tensile
M&S	M&S P14A: 2004 Extension and Modulus of Stretch Laces	Tensile
M&S	M&S P14C: 2001 Extension and Modulus of Bare Rubber Tapes	Tensile

Standard Type	Title	Test Type
M&S	M&S P15 part 1: 2004 Extn and Residual Extn of Stretch Woven Fabrics	Tensile
M&S	M&S P15A:2003 Extension, Modulus and Residual Extension of Stretch Fabrics	Tensile
M&S	M&S P15B: 2001 Recoverability of stretch leggings (Knee bagging)	Tensile
M&S	M&S P35: 2001 Bauman Tear Strength	Tensile
M&S	M&S P42: 2004 Single Tear Strength	Tensile
M&S	M&S P43: 2004 Breaking Load & Extension of Woven and Coated Fabrics	Tensile
M&S	M&S P70: 2001 Strength testing of Sewing Threads	Tensile
M&S	M&S P98: 2008 Tear Strength Wing Rip	Tensile
NEXT	NEXT Method 16: 2006 Grab Strength and Seam Slippage of Woven Fabrics	Seam
NEXT	NEXT Method 16a: 2006 Seam Slippage of Garment Production Seams	Seam
NEXT	NEXT Method 21: 2009 Extension and Modulus	Tensile
NEXT	NEXT Method 21a: 2006 Extension and Recovery	Cycle
NEXT	NEXT Method 25: 2006 Resistance to Tearing - Wing Rip	Tear
NEXT	NEXT Method 27: 2006 Breaking Strength and Elongation (Ravelled Strip)	Tensile
NEXT	NEXT Method 36: 2006 Bra Wire Casing	Tensile
NEXT	NEXT Method 37: 2006 Button Strength	Tensile
NEXT	NEXT Method 42: 2006 Attachment Strength of Components and Embellishments	Tensile
NEXT	NEXT Method 45: 2006 Handle Attachment Strength	Tensile
NEXT	NEXT Method 46: 2006 Strength of Belt Buckles	Tensile
NFG	NF G 30-102B Medical Hosiery	Tensile
PSA	PSA D11 1157: 2001 Adhesives and Trim materials 180° peel	Peel
Renault	Renault D41 1029: --D Tensile Strength - Textiles, Coated Textiles and Leather	Tensile
Renault	"Renault D41 1126: --D Tearing Fabrics, Plastified Fabrics, Plastic Strips, Carpets and Leathers"	Tear
Renault	Renault D41 1588: --F Tensile Seam Strength of Filling materials	Tensile
Renault	Renault D45 1124: --C Residual deformation of Textiles and Coated Textiles	Tensile
SATRA	SATRA PM141: 1994 Footwear - Breaking force of Buckles - three point bend	Tensile
TOIHM	TOIHM 0001: 2011 Tensile Strength & % Elongation	Tensile
TOIHM	TOIHM 0001: 2011 Tensile Strength & % Elongation (corrected GL)	Tensile
TOIHM	TOIHM 001 Textiles-Tensile properties of fabrics maximum force -Grab Method	Tensile
TOIHM	"TOIHM 002 Textiles -Maximum Breaking Force and Elongation (Strip method) corrected GL"	Tensile
TOIHM	TOIHM 003 Textiles -Components Strength	Tensile
TOIHM	TOIHM 004 Textiles Attachment Strength of Accessories	Tensile
TPJLR	TPJLR 52.058; 2009 Adhesive Bond Strength - 90° or 180° Peel	Peel
TPJLR	TPJLR 52.417; 2009 Seam Strength of Textile Trim Materials	Seam
TPJLR	TPJLR 52.425; 2011 Trapezoid Tear Strength	Tear
Volkswagen	Volkswagen AG PV 3946 Upholstery material - Seam properties	Seam
Volkswagen	Volkswagen AG PV 3955 Upholstery Cover Material - Seam Slippage; Woven Fabrics	Seam
Volvo	Volvo STD 1024 - 2851 Interlaminar strength	Tensile
Volvo	Volvo STD 423 - 0035 Tensile Strength of Seams	Tensile



# GENERAL TESTING



The phenolic yellowing test is used to predict if white or pastel colored fabrics or garments will yellow during shipping or storage.

The SDL Atlas Phenotest consumables are produced, tested, and packaged to assure reliable service in use. The impregnated papers, which come in quantities of 30, 100, or 150, are supplied with a Certificate of Conformance and a batch number. They are packed in a vacuum-sealed bag that can be resealed after opening.

The control fabric is also tested to ensure that it will turn yellow to indicate that a test was performed successfully. The BHT-free polythene film is precut to make use easy.

## ORDERING INFORMATION

### CONSUMABLES

107345	Impregnated Test Papers 100 mm x 75 mm (pack of 30)
107346	Impregnated Test Papers 100 mm x 75 mm (pack of 100)
106432	Impregnated Test Papers 100 mm x 75 mm (pack of 150)
203038	Control Fabrics (pack of 30)
107650	BHT-free Polythene Film 400 mm x 200 mm (pack of 100)

### ASSESSMENT

201194	ISO/BS Grey Scale (Staining)
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### INSTRUMENT

105211	Perspirometer Kit (see M231)
200929	Glass Plates 100 x 40 x 3 mm (set of 10)
G209A	Oven/Incubator (30 liters)
G209B	Oven/Incubator (120 liters)

### STANDARDS:

adidas 5.10	Arcadia AG 16	ISO 105-X18
M&S C20B	Next 43	



Select Analyst self-contained main water purification systems produce laboratory water equivalents to double distilled quality. Supplied complete with an internal (20 L) or external (50 L) reservoir on a selective basis, with a water quality indicator and installation kit. Units up to a capacity of 500 liters per day available. LCD touch screen panel for easy menu navigation providing fingertip diagnostic functionality.

#### Typical Water Quality:

Inorganics residue: > 1MΩ.cm

pH: Neutral

Bacteria: >99% Rejection

TOC: < 50 ppb

#### SIZE

WEIGHT 28 kg / 13 lbs (shipping)  
46 kg / 20 lbs (working)

DIMENSIONS 440 mm (w) x 560 mm (d) x 750 mm (h) /  
18 in (w) x 22 in (d) x 30 in (h)

#### ORDERING INFORMATION

204102 Analyst Water Purifier 20 L/Day at 12 L/Hr  
(Internal Tank)

204103 Analyst Water Purifier 50 L/Day at 12 L/Hr  
(External Tank)

300090 Pretreatment Cartridge and Polishing  
Cartridge

#### STANDARDS:

BS 3978

ISO 3696

Small, economical, completely pre-assembled Reverse Osmosis Water Systems including pretreatment sections, high performance RO Units, Pressure type Water Storage Tanks, and DI Water "Polishers". Except for the Pressure Tank, the systems are pre-assembled and provided with quick connect/disconnect fittings for easy low-cost installation. Ideal for use with Xenon Arc Weather-Ometers and Fade-Ometers.

- Economical to purchase, install and operate
- TFC Membrane with 98% Rejection
- Includes Booster Pump and Electric Shutoff valve for higher performance
- Capacity of 200, 300, 400 Gallons/Day
- Delivers RO or RO/DI Water under pressure
- Includes Pretreatment, RO, RO Quality Monitor, Storage Tank, Post DI Water "Polisher"
- Choice of RO water for Corrosion/Humidity

- Cabinets or RO/DI water for high purity
- Compact Frame: floor or wall mounting
- Larger Pressure Storage Tanks up to 86 Gallons
- 115 or 220/230 Volt, 50/60 Hz for selection



A200 RO System with 14 gallon tank



A400 RO System with 34 gallon tank

Model	A200 300079	A300 300081	A400 300083
Production Capacity, Permeate Water	200 GPD/8GPH**	265 GPD/11GPH**	375 GPD/16GPH**
Membrane Element, No., Rejection rate	TFC,2,98%	TFC,3,98%	TFC,3,98%
System Recovery Rate	38%	44%	46%
Pressure Pump & Electric Shut-off Valve	Included	Included	2 Pumps Included
<b>Feedwater Limits:</b>			
Pressure Regulator Required	40-60 psi		
Temperature	40-110 F		
Hardness & Iron	Less than 7 Grains / Gal. and 0.3 ppm Iron-All models		
pH	3-11		
Pump & Tank Shut-off Pressure	40 psi		
Standard Tank Size	14 Gal. (9 Gal. drawdown)	34 Gal. (18 Gal. drawdown)	
Optional Tanks	34 Gal. (18 Gal. drawdown)	"44 Gal. (24 Gal. drawdown) 86 Gal. (47 Gal. drawdown)"	
Permeate Quality Monitor, Digital 0-999ppm	Included		
Feedwater Pretreatment, Two 20" Filters	5 Micron Sediment and Carbon Block Cartridges, 2.5" x 20"		
System Dimension (W x D x H) mm / inch	508 mm x 254 mm x 762 mm / 20 in x 10 in x 30 in		
<b>Tank Dimension (Diam x H) mm / inch</b>			
Standard Tank	"14 Gal. 407 mm x 585 mm 16 in x 23 in	"34 Gal. 560 mm x 762 mm / 22 in x 30 in	
Optional Tank	"34 Gal. 560 mm x 762 mm 22 in x 30 in	"44 Gal. 560 mm x 940 mm / 22 in x 37 in	
<b>Weights kg/ lbs</b>			
System	17.3 kg / 38 lbs	18.2 kg / 40 lbs	20.5 kg / 45 lbs
Standard Tank 34 Gal.	10.9 kg / 24 lbs	27.7 kg / 61 lbs	
Optional Tank 44 Gal.		31.8 kg / 70 lbs	
Electrical: Booster Pump & Shut-off valve	115V or 220/230V, 50/60 Hz		
Permeate Water Quality Monitor	115V, 50/60Hz		

Production of RO Permeate/Product water is listed for 77 F. (25C) feedwater temperature. Production is reduced by 1.5% for each deg. F below 77 F. Example, at 45 F., production is reduced by 50%. Feedwater pressure and quality, tank pressure and maintenance of filters and membranes also affect production.



## ORDERING INFORMATION

300079	Reverse Osmosis System 200 GPD
300081	Reverse Osmosis System 300 GPD
300083	Reverse Osmosis System 400 GPD
G003A1	Deionized Water Quality Monitor (specify 115VAC or 230VAC)
300078	Connection Kit for Atlas Light fastness Testers
300080	One year operating supply package for 200 GPD
402336	One year operating supply package for 300 GPD
300084	One year operating supply package for 400 GPD
300085	230 V Transformer
300086	34-Gallon optional tank
300087	44-Gallon optional tank



Available in fine, medium and broad ball-tips to cover all fabric types. Selection depends on the surface structure of the fabric; the finest tip used on fine, tightly woven fabric, and the broadest on open, coarse fabric. The inks are totally resistant to all textile processes including dry cleaning. Colors available: yellow, black, and white.

## SIZE

WEIGHT 0.5 kg / 1.1 lbs

DIMENSIONS 100 mm (w) x 100 mm (d) x 150 mm (h) /  
4 in (w) x 4 in (d) x 6 in (h)

## ORDERING INFORMATION

G037A	Texpen Indelible Textile Marking Pens. Fine (Pack of 6). Specify yellow, black, blue, orange, red or white
G037B	Dalomarker 2T Indelible Textile Marking Pens. Medium, general purpose (pack of 6). Specify yellow, black, blue, orange, red or white
G037D	Dalomarker 4T Indelible Textile Marking Pens. Broad general purpose (Pack of 6). Specify color

To determine the speed and freeze motion of reciprocating or rotating objects. Battery operated with external battery and charger, 60 to 30,000 flashes/min, 350 Lux at a distance of 50 cm, xenon-long life flash tube, 0 - 359° phase shift adjustment,  $\pm 0.1\%$  reading accuracy. Optional external trigger. Controls flashrate by input from measured object.

**SIZE**

WEIGHT	2 kg / 4.4 lbs
DIMENSIONS	185 mm (w) x 120 mm (d) x 120 mm (h) / 7.5 in (w) x 5 in (d) x 5 in (h)

**ORDERING INFORMATION**

300102	Digital White-Light Stroboscope
300103	Spare Flashlamp
G105E	Optical External Trigger



For taking non-contact RPM measurements and inspecting moving parts. Handheld with LCD display, NiMH battery, 1200 Lux flash at a distance of 20 cm to the object,  $\pm 0.01\%$  reading accuracy,  $\pm 1$ RPM resolution, Flash range 30 - 12500 FPM. May be externally triggered.

**SIZE**

WEIGHT	0.5 kg / 1.1 lbs
DIMENSIONS	240 mm (w) x 65 mm (d) x 40 mm (h) / 9.5 in (w) x 3 in (d) x 2 in (h)

**ORDERING INFORMATION**

300105	Pocket Stroboscope
300106	Spare Xenon flash tube



Professional model laser optical/contact tachometer kit in fitted hard case with unique inverting display and laser optical system offering best performance for all applications with a range up to 2 meters (80 inches). Contact adaptor allows surface measurement of revolutionary and linear speeds. 3-99999 RPM capacity, product counter and timer, on target indicator and low battery indicator. Disposable battery powered, yarn length/speed adaptor available.

**SIZE**

WEIGHT	0.35 kg / 0.75 lbs
DIMENSIONS	250 mm (w) x 100 mm (d) x 50 mm (h) / 10 in (w) x 4 in (d) x 2 in (h)

**ORDERING INFORMATION**

201073	Electronic Laser Tachometer
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**STANDARDS: G201 A**

16 CFR CPSC USA    ASTM F963(USA)  
EN 71 (Europe)

The SDL Atlas Group has developed the most comprehensive range of Child-related products testing equipment available in the world today in collaboration with major commercial testing organizations and end users. The Products have been designed to comply with international safety standards such as

**G201A 1-3 Sharp Point Tester**

To determine whether accessible sharp points on child-related products are likely to cause injury. If the accessible sharp point penetrates a specified depth into the small rectangular opening of the tester, the LED is illuminated to indicate that the point is unacceptably sharp. Child-related products intended for use by children under 8 years old are subject to this requirement before or after use and abuse testing

**ORDERING INFORMATION**

105342	ASTM Sharp Point Tester With Weight
105343	EN Sharp Point Tester With Weight
201800	ISO 17025 Certificate, Sharp Point



G201A 1-3 Sharp Point Tester

**G201A 4-6 Sharp Edge Tester**

To determine whether accessible edges on child-related products are likely to cause injury. A self adhesive PEFE tape is attached to a mandrel, which is then rotated for a single 360- degree revolution along the accessible edge being tested. If the tape is cut in half or longer in length (approx. 13 mm), the edge is identified as a hazardous sharp edge. Child-related products intended for use by children under 8 years old are subject to this requirement before or after use and abuse testing.

**ORDERING INFORMATION**

202062	Sharp Edge Tester, 220V
203280	Sharp Edge Tester, 110V
201939	PTFE Tape for Sharp Edge Tester
201802	ISO 17025 Certificate, Sharp Edge

**G201A 7-8 Accessibility Probes**

To determine whether any part or component of a child-related products can be contacted by the probe. The probe simulates the finger of the infant or child touching the accessible points or edges of a child-related products, which may then be subject to tests of sharp points or sharp edges. Accessibility probes are designed for two age groups.

**ORDERING INFORMATION**

202076	Accessibility Probe A (0-36 months)
202075	Accessibility Probe B (37-96 months)

**G201A 9-10 Small Parts Cylinder**

To determine whether child-related products & other articles intended for use by children under 3 years old present choking, aspiration, or ingestion hazards because of small parts. If any objects can fit completely into the cylinder without compressing & in any orientation, it is defined as a "Small Part". Its internal dimensions simulate the fully expanded throat of a child under 3 years old.

**ORDERING INFORMATION**

105272	Small Parts Cylinder (Metal)
105273	Small Parts Cylinder (Plastic)
201803	ISO 17025 Certificate, Small Part



G201A 9-10 Small Parts Cylinder

**M289 Button Impact Tester**

To determine the impact resistance of plastic sew-through flange buttons to a falling mass of 0.84 kg (29.5 oz), released from a height of 67 mm (2.625 inches) or other heights as required. Cracking, chipping or breakage constitute failure.

**ORDERING INFORMATION**

201085	Button Impact Tester
303637	ISO 17025 Certificate, Button Impact Tester

**G201A 11-16 Torque Test Kit**

To determine whether components of child-related products can be removed by a certain torque force. A torque-measuring device is used in conjunction with a torque clamp to record the applied force. Any projection, part or assembly of a child-related products that a child can grasp with at least the thumb and forefinger or the teeth shall be subject to the torque test.

**ORDERING INFORMATION**

201905	Torque Gauge 9BTG
105335	Torque Clamp (Central Screw Type)
105334	Torque Test Clamp (Standard)
105336	Flat Vise Clamp
201944	Table Vise
200786	ISO 17025 Certificate, Torque Gauge

**G201A 17-26 Tension Test Kit**

To determine whether the components of child-related products can be removed by tensile force. A force gauge is used in conjunction with a clamp to record the force applied. Any projection, part or assembly of a child-related product that a child can grasp with at least the thumb and forefinger or the teeth shall be subject to the tension test.

**ORDERING INFORMATION**

201737	Push/Pull Gauge Fb-20K
201733	Push/Pull Gauge Fb-50LB
201730	Push/Pull Gauge Fb-20N
105322	Three Pronged Clamp
105323	Two Pronged Clamp with Screw
105702	Seam Test Clamp
105325	Long Nose Vise Grip
105326	General Vise Grip
201727	ISO 17025 Certificate, Push/Pull Gauge

**G201A 27-28 Impact Flooring Medium**

A standardized surface onto which a child-related product can be dropped from a certain height to simulate possible damage which may occur by falling from a crib, table or counter top or other impact situations. After testing, the child-related product is examined for possible hazards such as sharp edges, sharp points and small parts.

**ORDERING INFORMATION**

201979	US Impact Medium (set of 9)
202069	EN Impact Medium



G201A-21



G201A-23



105273

**G201A 29-30 Bite Test Clamp**

Simulates a child biting the accessible area of child-related products. The child-related products is then tested to ascertain whether or not any hazards result from the bite test such as sharp points/sharp edges/small parts.

**ORDERING INFORMATION**

105276	Bite Test Clamp
201804	ISO 17025 Certificate, Bite Test

**G201A 31 Compression Head**

To simulate the subjecting of a child-related product to mechanical damage through compressing or other action likely to be performed by a child. After testing, the product may be tested for sharp edges, sharp points & small parts.

**ORDERING INFORMATION**

202060	Compression Head for Force Gauge
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**G201A 32-33 Flexure Tester**

To determine whether metallic wires or materials used for stiffening or retention of form in child-related products can be easily bent or broken. Potential hazards of sharp points and sharp edges.

**ORDERING INFORMATION**

202071	US Flexure Tester (set of 2)
202070	EN Flexure Tester (set of 2)

**G201A 34 Test Fixture for Small Balls**

To determine whether loose balls in child-related products intended for children under 36 months will pass entirely through the test fixture under the influence of their own weight and without compression. A ball which can pass through the test fixture is determined to be a "Small Ball".

**ORDERING INFORMATION**

105227	Test Fixture for Small Balls
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**G201A 35-37 Rattle Text Fixtures**

To determine whether rattles for infants of up to 18 months old present choking or suffocating hazards. The rattle is placed in the opening of test fixture. If any part of the rattle can pass through the opening without being pushed or pulled, the rattle has failed. For other rattles incorporating nearly spherical, hemispherical or circular flared ends, a Supplemental Rattle Test Fixture is available.

**ORDERING INFORMATION**

202074	Rattle Test Fixture (Oval)
202073	Supplemental Rattle Fixture
201805	ISO 17025 Certificate, Rattle Test

**G201A 38 Pacifier Test Fixture**

To determine whether the pacifiers for infants present choking or suffocating hazards, A pacifier is placed centrally in the opening of test fixture. The nipple is subjected to a tensile force of lbs and held for 10 seconds. If the shield is pulled through the fixture, the pacifier has failed.

**ORDERING INFORMATION**

202072	Pacifier Test Fixture
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**G201A 39 1 kg Impact Tester**

To simulate the mechanical damage through an impact action likely to be performed by a child. Assessment of sharp edges, sharp points and small parts may be carried out after impact.

**ORDERING INFORMATION**

202061	1 KG Impact Tester
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G201A-29 Bite Text Clamp



G201A-34 Text Fixture for Small Balls

To determine the holding or breaking strength of prong-ring attached snap fasteners onto garments. Consists of an Upper Snap Clamp, a Lower Fabric Clamp & Force Gauge mounted on a Stand. The snap component is gripped by the Upper Snap Clamp and the garment is fixed to the lower Fabric Clamp. By turning the Top Flywheel, the operator can apply a specific force and the holding force or the breaking strength can be recorded. Capability can be enhanced with clamps and accessories for testing of other Snaps, Jean Buttons, Four Hole Buttons & Garments Accessories such as Zippers, Bows, Appliqué, Toggles, Hooks/Bars, and D-Rings, amongst others.

The detachment of a snap or other part may be classified as small parts; while broken small parts may require sharp point and sharp edge testing. As a result, additional testing equipment may be recommended, such as:

- Small Parts Cylinder (G201A9-10)
- Sharp Point Tester (G201A1-3)
- Sharp Edge Tester (G201A4-6)
- Button Impact Tester (M289)

SDL Atlas Ltd. is an authorized licensee of YKK Corporation's Hong Kong Patent No. 1076507, China Patent No. 03812516.1, US Patent No. 7152489, Japan Patent No. 4268127, Taiwan Patent No. I 249614, India Patent No. 203545, Vietnam Patent No. 5774 and

**SIZE: Standard / Gap / H&M**

WEIGHT	23 kg / 50 lbs
DIMENSIONS	225 mm (w) x 280 mm (d) x 735 mm (h) / 9 in (w) x 11 in (d) x 29 in (h)

**SIZE: NIKE**

WEIGHT	27 kg / 60 lbs
DIMENSIONS	225 mm (w) x 280 mm (d) x 735 mm (h) / 9 in (w) x 11 in (d) x 29 in (h)



G201AA46



G201A44



105339

-Continues on the next page

Order Code	Item Description	Retailer Packages				Application
		Standard	Gap	H&M	NIKE	
		★ Included	X Not Included			
105282	Snap Tester W/FB-30 K	★	X	X	X	Standard Package
105283	Snap Tester W/FB-30 K for Gap	★	★	X	X	Baby Snaps only
105284	Snap Tester W/FB-30 K for H&M	X	X	★	X	Snaps/ Buttons/ Garment Accessories
105286	Snap Tester W/FB-100 LB for Nike	X	X	X	★	Snaps/ Buttons/ Garment Accessories
201736	Force Gauge - FB 30 KG	★	★	★	X	Displays force up to 30 kg capacity
201732	Force Gauge - FB 100 LB	X	X	X	★	Displays force up to 100 lb capacity
105310	Bench Top Stand W/ Plate for GAP	★	★	X	★	Accurate force application
105311	Bench Top Stand W/ Plate for H&M	X	X	★	X	Accurate force application
105320	Calibration Weight, 15 LB	★	★	★	★	To verify the accuracy of Force Gauges
107662	General Upper Snap Toggle Clamp (LIGNE 12-16)	★	★	★	★	For female snap parts
105294	Upper Stud Clamp	★	★	★	★	For male snap parts
105300	Lower Grasp Button Kit	★	X	★	★	Accessory for Lower Fabric Clamp for Jean buttons & larger buttons up to 30 Ligne
105301	Upper Grasp Button Clamp	★	X	X	★	For Jean Buttons & Four Hole Buttons
105303	Lower Fabric Clamp, Rubber cushion (Modify)	★	★	★	★	To grip fabric sample with constant force to avoid slippage
105290	Upper Snap Clamp (Capacity 100LB)	X	X	X	★	For larger female snaps up to 100lb capacity
105295	Upper Stud Clamp (Capacity 100LB)	X	X	X	★	For larger male snaps up to 100lb capacity
105338	Extended Peg Hook for Snap Tester	X	X	X	★	Hook for Zipper Pulls
105339	Zipper Pull Tab Test Fixture	X	X	X	★	To hold Zipper Pulls
105328	Seam Clamp 4" with screw connector	X	X	X	★	To grip Side Tabs/ Bows/ Tassels
105356	Two Pronged Clamp with screw connector	X	X	X	★	Two prongs for D-rings, Zipper Stops, Hooks/Bars
105329	Locker Plier with screw connector	X	X	X	★	For small metallic decorations such as Applique
105304	Vise for snap tester	X	X	X	★	Lower Vise Grip for different sample sizes
105313	Special Back Plate for NIKE FB-100 LB	X	X	X	★	To extend the maximum travelling height of Force Gauge
105341	Goggles	X	X	★	★	Eye protection

## \*Remarks:

Standard Package also complies with the test requirements of other retailers such as Levi's, AMC, Target, Federated, C&A, and M&S amongst many. H&M Package (G201AA2) also includes Small Part Cylinder (Plastic) (G201A9) & Long Nose Vise Grip (G201A23) & Three Pronged Clamp (G201A20). Nike Package (G201AA3) is for testing of snaps/ buttons and garment accessories only. To comply with Nike's Safety Requirements, additional equipment should be ordered as follows:

- 105272 Small Parts Cylinder (Metal)
- 105273 Small Parts Cylinder (Plastic)
- 105277 Small Balls Fixture
- 105342 ASTM Sharp Point Tester with Weight
- 201905 Torque Clamp Model 9 BTG
- 105335 Torque Clamp (Central Screw Type)
- 201944 Table Vise



105301



105304

Motorized instrument for determining the holding or breaking strength of snap fasteners onto garments. The motorized device eliminates operator variability such as application of the load, consistent holding force at the top end, precision hold times, and provides more accurate measurements via a load cell and digital display. The force range up to 50 kg (100 lb, 500 N) with travel distance at 100 mm (4"). Selective hold loads with 15 lb, 17 lb, 20 lb and 90 N by dead weight system and up to 99 sec hold time for testing.

The SnapRite is supplied with an Upper Snap Clamp (Linge 12-16), Upper Stud Clamp, and a Lower Fabric Clamp. Capability can be enhanced with clamps & accessories for testing of other Snaps, Jean Buttons, Four Hole Buttons & Garments Accessories such as Zippers, Bows, Appliqué, Toggles, Hooks/Bars, and D-Rings, amongst others.

The detachment of a snap or other part may be classed as small parts; while broken small parts may require sharp point & sharp edge testing. As a result, additional testing equipment may be recommended, such as:

Small Parts Cylinder (G201A9-10)  
 Sharp Point Tester (G201A1-3)  
 Sharp Edge Tester (G201A4-6)  
 Button Impact Tester (M289)

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#### SIZE

WEIGHT	40 kg / 88 lbs
DIMENSIONS	410 mm (w) x 450 mm (d) x 780 mm (h) / 16 in (w) x 17 in (d) x 30 in (h)

#### ORDERING INFORMATION

G201	Snap Rite
105301	Upper Grasp Button Kit
105290	Upper Snap Clamp (Capacity 100 lb)
105295	Upper Stud Clamp (Capacity 100 lb)
105338	Extended Peg Hook
105339	Zipper Pull Tab Fixture
105356	Two Pronged Clamp with Screw Connector
105329	Lock Pliers with Screw Connector
105304	Vice Snap Tester
105341	Goggles
107664	General Upper Snap Toggle Clamp (ligne 16-21)
107666	General Upper Snap Toggle Clamp (ligne 21-30)
107213	Lower Grasp Button Kit (ligne 16-30)



#### STANDARDS:

ASTM D7142-2	CFR 1500	ASTM F 963
EN 71 Part 1	GB/T 6675	ISO 8124
M&S P115A		

**SIZE**

WEIGHT 0.2 kg / 0.5 lbs

DIMENSIONS 76 mm (w) x 45 mm (d) x 164 mm (h) /  
3 in (w) x 2 in (d) x 6.5 in (h)**STANDARDS:**

M&amp;S C7

M&amp;S C11

M&amp;S C59

EN 1413

NEXT TM33

To perform pH, ORP and temperature measurement with automatic calibration, temperature compensation and buffer recognition. Test range from -2 to 16pH,  $\pm 699.9$  mV;  $\pm 1999$  mV and -20 to 120°C / -4 to 248°F with accuracy at  $\pm 0.01$  pH,  $\pm 0.2$  mV;  $\pm 1$  mV and  $\pm 0.4^\circ\text{C}$  /  $\pm 0.8^\circ\text{F}$ .

Automatic one or two point calibration function with three memorized buffer values (pH 4.01, pH 7.01 and pH 10.01).

**ORDERING INFORMATION**

201219	Digital pH/Temperature Meter
201220	Electrode Holder and Cantilever Stand
200968	Buffer Solutions 20ml, 10 each pH 4, 7 and 10, Ready Prepared in Sachets

**SIZE**

WEIGHT 0.2 kg / 0.5 lbs

DIMENSIONS 75 mm (w) x 100 mm (d) x 200 mm (h) /  
3 in (w) x 4 in (d) x 8 in (h)

To measure the pH of any surface, wet or dry. Can detect acid or alkali residues in 15-30 seconds. Reads from 0-13 pH with included color chart. Long lasting, use for thousands of individual tests. Also measures pH of solutions when used with a neutral surface such as glass or porcelain. Supplied in packs of 3 mechanical pencils and 2 charts.

**ORDERING INFORMATION**

201122	Surface pH Pencils (pack of 3)
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**SIZE**

WEIGHT 0.3 kg / 0.7 lbs

DIMENSIONS 72 mm (w) x 36 mm (d) x 185 mm (h) /  
3 in (w) x 1.5 in (d) x 7.5 in (h)

This waterproof pH meter has large dual-level LCD displaying both the pH and temperature along with an operational guide. Test range from -2 to 16 pH and -20 to 120°C / -4 to 248°F with accuracy at  $\pm 0.01$  pH and  $\pm 0.4^\circ\text{C}$  /  $\pm 0.8^\circ\text{F}$ .

The pH calibration procedure is automatic with five memorized pH buffer values and buffer recognition to simplify the calibration process.

Complete with pH electrode, temperature probe, calibration buffer solutions, plastic beaker, batteries and hard carrying case.

**ORDERING INFORMATION**

201103	Digital pH/Temperature Meter & Printer
201220	Electrode Holder and Cantilever Stand
200968	Buffer Solutions 20 ml, 10 each pH 4, 7 and 10, Ready Prepared in Sachets
300114	Mains Adaptor (220 or 110v)

Handheld model with large multi-level LCD display that shows both pH and temperature simultaneously. pH range is from -2.0 to 16.0 pH with a 0.1 pH resolution and an accuracy of +/- 0.1 pH. It also features a replaceable electrode with a stainless steel round connector.

**SIZE**

WEIGHT 0.01 kg / 0.02 lbs

DIMENSIONS 40 mm (w) x 26 mm (d) x 163 mm (h) /  
1.6 in (w) x 1 in (d) x 6.5 in (h)

**ORDERING INFORMATION**

201106 Pocket pH Meter



Electronic/battery operated (700 hours continuous). -40 to + 140°C x 0.1°C, LCD Display, teflon-coated hinged probe, pocket clip.

**SIZE**

WEIGHT 0.05 kg / 0.1 lbs

DIMENSIONS 30 mm (w) x 20 mm (d) x 150 mm (h) /  
1.2 in (w) x 0.8 in (d) x 6 in (h)

**ORDERING INFORMATION**

201109 Pocket Temperature Meter



All pH meters should be calibrated periodically using standardized solutions at different pH levels. These 20 ml sachets offer an accurate and inexpensive answer. The buffer is produced in accordance with ISO 3696/BS3978 standards. A pack consists of 10 each 20 ml sachets pH 4.01, 7.01, 10.01.

**SIZE**

WEIGHT 0.6 kg / 1.3 lbs

DIMENSIONS 50 mm (w) x 5 mm (d) x 125 mm (h) /  
2 in (w) x 0.25 in (d) x 5 in (h)

**ORDERING INFORMATION**

200968 Buffer Solutions 10 each 20 ml Sachets pH  
4.01, 7.01, 10.01



©Acquaveve



For accurate measurement of superheated surfaces, gases and liquids. With Thermocouple K-Type roller surface probe and general purpose probe (liquids and gases) - 50°C to 199.9°C and 200 to 1350°C, with accuracy  $\pm 0.2^\circ\text{C}$ . Battery operated with 1600 hours of battery life, LCD display with max/min temperature memory, hold facility and switchable  $^\circ\text{C}/^\circ\text{F}$  readout.

**SIZE**

WEIGHT 0.25 kg / 0.55 lbs

DIMENSIONS 80 mm (w) x 36 mm (d) x 150 mm (h) /  
3 in (w) x 1.5 in (d) x 6 in (h)

**ORDERING INFORMATION**

300119 Electronic High Temperature Thermometer



250° scale x 500 divisions. Ranges from 0-5 mg x 0.01 mg to 0-1000 mg x 2.0 mg. Also available scaled 0-500 denier for yarns (90 mm sample). Complete with pan, hook and draught excluder.

**SIZE**

WEIGHT 3.9 kg / 9 lbs

DIMENSIONS 320 mm (w) x 240 mm (d) x 410 mm (h) /  
13 in (w) x 10 in (d) x 16.5 in (h)

**ORDERING INFORMATION**

300123 Torsion Balance 0-5 mg x 0.01 mg

402324 Torsion Balance 0-10 mg x 0.02 mg

300124 Torsion Balance 0-50 mg x 0.1 mg

G203B100 Torsion Balance 0-100 mg x 0.2 mg

G203B500 Torsion Balance 0-500 mg x 1.00 mg

G203B1000 Torsion Balance 0-1000 mg x 2.0 mg

150 g x 0.01 g - Portability with precision. Large LCD display, AC adapter or battery operation, tactile switching, net wt and stability indication, auto shutoff, 100 mm dia. SS pan, auto calibration, includes calibration weight, programmed for grams/sq meters and ounces/sq yard.

**SIZE**

WEIGHT	1 kg / 2.2 lbs
DIMENSIONS	145 mm (w) x 210 mm (d) x 170 mm (h) / 6 in (w) x 8 in (d) x 7 in (h)

**ORDERING INFORMATION**

G204	150 g x 0.01 g
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**STANDARDS:**

M&S C4A / C5 / C7 / C10 / C10A / C26 / C49A / P3B / P4B / P5 / P5A / P25 / P53 / P65

NEXT 2A / 6 / 12 / 30

Adventurer Electronic Balances

G204/1A - 4A

The economical way to weigh with precision. Wide viewing angle color touchscreen display with dual USB and RS232 interface. Large stainless steel pan, sealed front panel and spill ring. Draft shield available for specific models.

**SIZE**

WEIGHT	6 kg / 13 lbs
DIMENSIONS	355 mm (w) x 230 mm (d) x 340 mm (h) / 14 in (w) x 9 in (d) x 13.5 in (h)

**ORDERING INFORMATION**

300128	220 g x 0.001 / ± 0.001, 13 cm dia. pan, with Draft Shield
300130	420 g x 0.001 / ± 0.001, 13 cm dia. pan, with Draft Shield
300131	620 g x 0.001 / ± 0.01, 17.5 x 19.5 cm pan
300132	1520 g x 0.001 / ± 0.01, 17.5 x 19.5 cm pan
300133	2200 g x 0.001 / ± 0.01, 17.5 x 19.5 cm pan
300134	4200 g x 0.001 / ± 0.01, 17.5 x 19.5 cm pan



Code	300128	300130	300131	300132	300133	300134
Capacity (g)	220	420	620	1520	2200	4200
Readability / Repeatability (g)	0.001 / ±0.001		0.01 / ±0.01			
Pan size (mm)	13 (dia)		17.5 x 19.5			
Draft Shield available	Yes		No			

**STANDARDS:**

M&S C4A / C5 / C7 / C10 / C10A / C26 / C49A / P3B / P4B / P5 / P5A / P26 / P53

NEXT 2/6/7/7A/7B/9/10/11/12/30/36A



Explorer Electronic Analytical and Top Pan Balances. Sealed housing, auto calibration, USB and RS232 interface, programmable readout mode, large color touch-screen display. Draft shield available for specific model.

**SIZE**

**WEIGHT** 7 kg / 15 lbs

**DIMENSIONS** 230 mm (w) x 393 mm (d) x 350 mm (h) /  
9 in (w) x 15.5 in (d) x 14 in (h)

**ORDERING INFORMATION**

200870 120 g x 0.0001 / 0.001 gm, 9 cm dia. pan,  
with Draft Shield

**ORDERING INFORMATION (continued)**

300136 220 g x 0.001 g, 13 cm dia. pan,  
with Draft Shield

202521 420 g x 0.001 g, 13 cm dia. pan,  
with Draft Shield

300139 620 g x 0.001 g, 13 cm dia. pan,  
with Draft Shield

300141 2200 g x 0.01 g, 13 cm dia. pan

300142 4200 g x 0.01 g, 19 x 20 cm dia. pan

300145 6200 g x 0.01 g, 19 x 20 cm dia. pan

300146 10200 g x 0.01 g, 19 x 20 cm dia. pan

Code	200870	300136	202521	300139	300141	300142	300145	300146
Capacity (g)	120	220	420	620	2200	4200	6200	10200
Readability / Repeatability (g)	0.0001 / 0.001		0.001		0.01		0.01	
Pan size (mm)	9 (dia.)		13 (dia.)		13 (dia.)		19 x 20 cm	
Draft Shield available		Yes			No		No	

**STANDARDS:**

M&S C4A / C5 / C7 / C10 / C10A / C11 / C26 / C37 / C49A / P3B / P4B / P5 / P5A / P26 / P53

NEXT 2/2A / 6 / 7 / 7A / 7B / 9 / 10 / 11 / 12 / 30 / 36A



To determine and chart temperature and relative humidity over a selected period. Dual chart switchable, 1 day or 7 days with quartz clock, drive charts and pens 0-40°C, 0-90% RH.

**SIZE**

**WEIGHT** 3 kg / 7 lbs

**DIMENSIONS** 336 mm (w) x 148 mm (d) x 295 mm (h) /  
13.4 in (w) x 5.9 in (d) x 11.8 in (h)

**ORDERING INFORMATION**

201696 Electronica Thermohygraph

201697 Charts 1 or 7 days (pack of 50)

202726 Felt Tip Pens (pack of 4)

**STANDARDS:**

ERT 60-1

ASTM D1776

A more accurate and sophisticated recorder than G206. Air is drawn over the sensing elements by an electrically driven fan. The mechanism allows a rapid reaction transfer to the circular chart of small changes in temperature and humidity. 7 day charts (100 supplied), electronic clock, and pens. 0-40° C, 20-100% RH.

**SIZE**

WEIGHT	10 kg / 22 lbs
DIMENSIONS	370 mm (w) x 170 mm (d) x 360 mm (h) / 15 in (w) x 6.5 in (d) x 14.5 in (h)

**ORDERING INFORMATION**

300156	Electronic Temperature and Humidity Recorder
202591	Charts 7 Day (pack of 100)
300161	Felt Tip Pens Red (pack of 3)
202921	Felt Tip Pens Green (pack of 3)

**STANDARDS:**

ERT 60-1

M&amp;S PG

ASTM D1776



## Whirling Hygrometer

## G207

To determine relative humidity and temperature. With relative humidity slide rule and carrying case -15°C to +40°C

**SIZE**

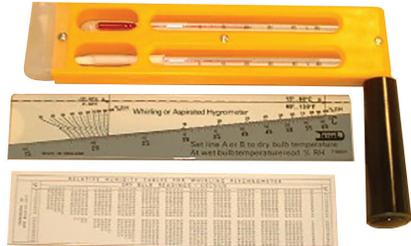
WEIGHT	0.3 kg / 0.7 lbs
DIMENSIONS	230 mm (w) x 30 mm (d) x 145 mm (h) / 9 in (w) x 1.2 in (d) x 6 in (h)

**ORDERING INFORMATION**

G207	Whirling Hygrometer
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**STANDARDS:**

ERT 60-1



## Digital Relative Humidity &amp; Temperature Meter

## G207A

Battery operated 0-60°C x 1%, 15-90% RH x 2%, liquid crystal display, fitted case. Optional calibration kit available.

**SIZE**

WEIGHT	0.3 kg / 0.7 lbs
DIMENSIONS	200 mm (w) x 200 mm (d) x 75 mm (h) / 8 in (w) x 8 in (d) x 3 in (h)

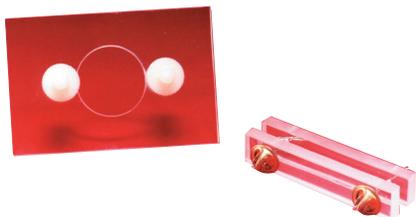
**ORDERING INFORMATION**

300162	Digital Relative Humidity & Temperature Meter
300164	Calibration Kit

**STANDARDS:**

ERT 60-1





A set of two clear acrylic holders to mount yarn or fabrics for microscopic viewing. The fabric holder can be used to look at a cut or folded edge.

**SIZE**

WEIGHT 0.2 kg / 0.4 lbs

DIMENSIONS 75 mm (w) x 50 mm (d) x 25 mm (h) /  
3 in (w) x 2 in (d) x 1 in (h)

**ORDERING INFORMATION**

300167 Microscopy Yarn and Fabric Holder Set

**STANDARDS:**

M&S PG

ERT 60-1



For the examination of textiles up to 1000 times magnification. Eye pieces 10x, objectives 4x, 10x, 40x and 100x, 12 V/20 W Halogen illumination with intensity adjustment, 45° inclined Monocular head with 360° rotatable head, coarse and fine focusing, vertical travel range 27 mm.

**SIZE**

WEIGHT 4 kg / 8.8 lbs

DIMENSIONS 220 mm (w) x 300 mm (d) x 420 mm (h) /  
9 in (w) x 12 in (d) x 17 in (h)

**ORDERING INFORMATION**

300168 Precision Monocular Microscope



For the examination of textiles up to 1000 times magnification. Eyepieces 10x, objectives 4x, 10x, 40x, 100x, 6 V / 30 W quartz Halogen illumination with intensity control, 30° inclined Trinocular head with 360° rotatable head, coarse and fine focusing, vertical travel range 20 mm. Large mechanical stage with built-in X-Y verniers. Extra viewing port to cameras, video or standard.

**SIZE**

WEIGHT 4 kg / 8.8 lbs

DIMENSIONS 220 mm (w) x 300 mm (d) x 420 mm (h) /  
9 in (w) x 12 in (d) x 17 in (h)

**ORDERING INFORMATION**

300169 Precision Trinocular Microscope



Precision binocular sliding head microscope 30° inclined and built-in analog/digital camera, with video capture card allows output to suitable PC via USB port (cable included). Widefield 10x eyepieces and achromatic super contrast objectives for total magnification of 4x, 10x, 40x and 100x. Coaxial mechanical stage with slide holder, 20W halogen illumination with intensity control, white balance switch supplied with blue, green, yellow. Includes powerful image analysis software capable of capturing images, on-screen measurement, storage and retrieval.

#### ORDERING INFORMATION

200768	Compound Digital Microscope System
300172	As G208B1, add Polarising Set fitted and calibrated
200170	20 watt, spare bulb
300183	Optional Advanced Software V3.2



Digital stereo zoom binocular head microscope, 45° inclined with built-in high resolution CCD Camera and video capture card allows output to suitable PC via USB port (cable included). Wide field 10x eyepieces, 4:1 zoom ratio, magnification range from 1X to 4X and pole type stand with large working base. Frosted glass stage plate, 10W halogen incident and 10W Halogen transmitted illumination. Supplied with software, USB, S-Video & RCA cable, dust cover and calibration slide.

#### ORDERING INFORMATION

300176	Stereo Zoom Digital Microscope System
300177	10 watt spare bulb
300183	Optional Advanced Software V3.2

Gives unparalleled sharp and brilliant vision with wide field of view with 30x magnification. Build-in light and easy focusing system. Operated by 2 standard 1.5 V batteries.

**SIZE**

WEIGHT 0.7 kg / 0.15 lbs

DIMENSIONS 50 mm (w) x 22 mm (d) x 140 mm (h) /  
2 in (w) x 0.9 in (d) x 5.5 in (h)

**ORDERING INFORMATION**

300173 Portable Microscope



45° trinocular head microscope to examine the textile with large viewing area and provides sharp, three-dimensional images. 0.7 - 4.5x magnification with stepless adjustment, eyepieces 10x, and 1:6 zoom rate. Compact R2GG stand with halogen incident and transmitted light. Extra viewing port is available for cameras, video or standard.

**SIZE**

WEIGHT 4 kg / 8.8 lbs

DIMENSIONS 220 mm (w) x 300 mm (d) x 420 mm (h) /  
9 in (w) x 12 in (d) x 17 in (h)

**ORDERING INFORMATION**

300174 Stereo Zoom Microscope with Trinocular Head

300175 2 x eye piece

**STANDARDS:**

NEXT 18B / 18A / 18

M&S 19C / 19A / 19



45° binocular stereo microscope with Greenough zoom optical system. Widefield eyepieces 10x, 0.75x-4.5x magnified range and 1.6 zoom ratio. Compact R2GG stand with halogen incident and transmitted light.

**SIZE**

WEIGHT 4 kg / 8.8 lbs

DIMENSIONS 220 mm (w) x 300 mm (d) x 420 mm (h) /  
9 in (w) x 12 in (d) x 17 in (h)

**ORDERING INFORMATION**

300180 Stereo Microscope

**STANDARDS:**

M&S P19 / P19A / 19C

NEXT 18 / 18A / 18B





Dual purpose for both perspiration and oven-dry tests with high accuracy. 30 liter or 120 liter capacity. Dual temperature ranges and scales (25-110°C +/- 0.25°C, 50-250°C +/-0.75°C) stainless steel interior. Circulation fan and door thermometer, 2 shelves. Other sizes, temperature ranges and accuracies available upon request.

#### SIZE: 30 Liters

WEIGHT 20 kg / 44 lbs

DIMENSIONS External  
420 mm (w) x 430 mm (d) x 580 mm (h) /  
17 in (w) x 17.5 in (d) x 23 in (h)

Internal  
310 mm (w) x 300 mm (d) x 350 mm (h) /  
12.5 in (w) x 12 in (d) x 14 in (h)

#### SIZE: 120 Liters

WEIGHT 45 kg / 99 lbs

DIMENSIONS External  
600 mm (w) x 580 mm (d) x 810 mm (h) /  
24 in (w) x 23 in (d) x 32.5 in (h)

Internal  
480 mm (w) x 460 mm (d) x 550 mm (h) /  
19 in (w) x 18.5 in (d) x 22 in (h)

#### ORDERING INFORMATION

G209A Combined Laboratory Oven and Incubator,  
30 liters

G209B Combined Laboratory Oven and Incubator,  
120 liters

#### STANDARDS:

M&S C6 / C7 / C10 / C11

AATCC 15



Lightweight and compact design, ideal for measurement of a wide range of lighting types with easy, one-hand operation. Removal sensor for remote reading with protection cover. Provides selectable lux or foot-candle units for display and features a 3 1/2 digit backlit LCD and HOLD function.

#### SIZE

WEIGHT 0.2 kg / 0.4 lbs

DIMENSIONS 100 mm (w) x 25 mm (d) x 150 mm (h) /  
4 in (w) x 1 in (d) x 6 in (h)

#### ORDERING INFORMATION

201153 Lightmeter

Cost saving alternative for your Assessment Cabinet requirements. New high specification/low cost option to conventional light booths. With illuminant A and Horizon sunlight as standard, 3 other fluorescent light sources can also be specified, including D65 (CRI 98), TLD84 and UV. Light booths comply with BS 950 Part 1 and 16 CIES. X0.12.

Preset with programmable-sequence lighting and individual lighting life record function. Optional selection for remote control function of light source selection.

#### FUNCTIONAL FEATURES:

- Pre-heat time setting (10 seconds) for fluorescent
- Usage record (by on / off) for individual fluorescent
- Individual lighting life record function and over-time alarm
- Programmable-sequence lighting function
- Interlocking function for three light sources: D65, TLD84 and UV
- Optional light sources (change the name on display panel through program setting)
- Remote control of light source selection (Optional)



Switch Code	Lamp Options	
D65	Artificial Daylight D65	Correlated color temperature is 6500K. Within the tolerances prescribed in BS950: Part 1, Illuminant for color matching appraisal. Specified for most applications where there is a need to maintain color consistency and quality. Conforming highly to the CIE specifications, for accurate color matching.
TLD84	Narrow-Band Fluorescent	Narrow Band Triphosphor Fluorescent lamps. Correlated color temperature of 4000K. Used as an European Point of Sales Illuminant.
A	Illuminant 'A' (Inc A)	Correlated color temperature 2856K. Required by BS 950: Part 1 as a test for metamerism (CIE Illuminant 'A'). Used to check for color flaring. This is particularly important for those shades containing red and yellow coloring matters.
H	Horizon Daylight	Home lighting with correlated color temperature is 2300K.
UV	Ultra-Violet Blacklight (UV)	Use to detect the presence of Optical brightening Agents and/or Fluorescent dyes. Therefore it is useful when assessing white and Fluorescent shades to check the level present and its evenness.

#### SIZE: COLOR CHEX 60

WEIGHT	30 kg / 66 lbs
DIMENSIONS (Overall)	710 mm (w) x 410 mm (d) x 565 mm (h) / 28 in (w) x 16 in (d) x 22 in (h)
DIMENSIONS (Viewing Cavity)	710 mm (w) x 360 mm (d) x 380 mm (h) / 28 in (w) x 14 in (d) x 15 in (h)

#### SIZE: COLOR CHEX 120

WEIGHT	78 kg / 172 lbs
DIMENSIONS (Overall)	1300 mm (w) x 630 mm (d) x 810 mm (h) / 51 in (w) x 25 in (d) x 32 in (h)
DIMENSIONS (Viewing Cavity)	1260 mm (w) x 570 mm (d) x 590 mm (h) / 50 in (w) x 22 in (d) x 23 in (h)

#### ORDERING INFORMATION

G210/60	ColorChex 60 Color Assessment Cabinet
G210/120	ColorChex 120 Color Assessment Cabinet
G210/45	45-Degree Fixed Table for ColorChex Assessment Cabinet

#### STANDARDS:

ISO 105-C01 / C02 / C03 / C04 / C05 / C06 / C07 / C08 / C09 / X11 ASTM D1729 BS 950 PART 1

NEXT 1 / 2 / 3 / 3A / 4 / 4A / 5 / 6 / 7 / 7A / 7B / 9 / 9A / 10 / 18A / 18B / Color Assesment

ANSI/ANSI

CIES 16

CIES.X0.12

AATCC 8 / 15 / 16 / 23 / 61 / 109 / 116 / 117 / 132 / 133 / 190



For the visual assessment of color under controlled, standard light conditions. Cabinets incorporate a digital control panel, which includes features such as auto sequence, servicing indicator, warm up, power save, data recording and optional dimming. The new look control panel is also ergonomically designed to allow the user more comfort. Illuminants can be chosen as follows:

- D65** VeriVide "Artificial Daylight" fluorescent lamps conforming to Standard Illuminant D6500.
- D652** Additional level of "Artificial Daylight" for colours of low reflectance factor.
- 830 & 840P15** Philips Triphosphor fluorescent lamps. Often chosen as a "Point of Sale" illuminant.
- F** Filament (domestic) lighting and as a test for metamerism.
- UV** Ultraviolet light to reveal the presence of fluorescent dyes and bleaches.

#### WEIGHT

<b>CAC60</b>	25 kg / 55 lbs	<b>CAC120</b>	50 kg / 110lbs
<b>CAC60-5</b>	25 kg / 55 lbs	<b>CAC150</b>	55 kg / 122 lbs
		<b>Portable</b>	12 kg / 26 lbs

#### DIMENSIONS

	Width	Depth	Height		
	mm	inch	mm	inch	mm
					inch

<b>CAC60</b>					
Overall	710	28.5	540	21	545 22
Viewing Cavity	680	27	495	20	360 14

<b>CAC60-5</b>					
Overall	710	28.5	540	21	545 22
Viewing Cavity	680	27	495	20	360 14

<b>CAC120 &amp; CAC120-5</b>					
Overall	1290	52	620	25	755 30
Viewing Cavity	1260	50	590	23.5	570 22.5

<b>CAC150 &amp; CAC150-5</b>					
Overall	1560	62.5	620	25	755 30
Viewing Cavity	1530	61	585	23.5	570 22.5

<b>Portable</b>					
Overall	710	28	540	21	545 21.5
Viewing Cavity	680	27	500	20	335 13
Closed	690	27	160	6.5	340 13.5

#### ORDERING INFORMATION

G210A	VeriVide Color Assessment Cabinet CAC60
G210A5	VeriVide Color Assessment Cabinet CAC60-5
G210B	VeriVide Color Assessment Cabinet CAC120
G210B5	VeriVide Color Assessment Cabinet CAC120-5
G210C	VeriVide Color Assessment Cabinet CAC150
G210C5	VeriVide Color Assessment Cabinet CAC150-5
G210D	VeriVide Color Assessment Cabinet Portable
G210J	45 Degree Fixed Angle for VeriVide Color Assessment Cabinets
300215	Spare Lamps CAC60 (1 set)
300216	Spare Lamps CAC60-5 (1 set)
300218	Spare Lamps CAC120 (1 set)
300219	Spare Lamps CAC120-5 (1set)
300220	Spare Lamps CAC150 (1 set)
G210G5	Spare Lamps CAC150-5 (1 set)
300223	Spare Lamps Portable (1 set)

#### STANDARDS:

M&S C1 / C2 / C48 / P4C / P19C	BS 950	DIN 6173	NEXT 1 / 2 / 3 / 3A / 4 / 4A / 5 / 6 / 7 / 7A / 7B / 9 / 9A / 10 / 18A / 18B / Color Assessment
AATCC 8 / 15 / 16 / 23 / 61 / 109 / 116 / 117 / 132 / 133 / 190			ISO 105-C01 / C02 / C03 / C04 / C05 / C06 / C07 / C08 / C09 / X11

Cost saving alternative for your Assessment Cabinet requirements. The ColorChex N7 creates the perfect alternative to natural daylight. It allows color assessment to be carried out in accordance with Standards ASTM D 1729, BS 950 Part 1, DIN and ANSI.

The ColorChex Color N7 incorporates "illuminant A", in accordance with CIE standards and Horizon light sources. It has been designed to meet the needs of the American market with American retailers and manufacturers often specifying Horizon light. The ColorChex N7 contains five light sources that can include a selection of CIE illuminants, point of sale illuminants, UV, Illuminant A and Horizon.

The unit has a new design feature eliminating the need for screws when assembling the cabinet. The unit slots together, making it easier to assemble, and making it suitable for transporting if required. Other features include a built-in time elapsed meter for scheduling the replacement of individual lamps, membrane switching with electronic ballasts, and a specially selected white reflector.

#### SIZE

WEIGHT 25 kg / 55 lbs

DIMENSIONS 660 mm (w) x 315 mm (d) x 456 mm (h) /  
26 in (w) x 12.6 in (d) x 18 in (h)

#### ORDERING INFORMATION

G210N7 ColorChex N7 Assessment Cabinet



#### STANDARDS:

ASTM D1729 / D4966

BS 950 PART 1

DIN 6173

ANSI ANSI

AATCC 8 / 15 / 16 / 23 / 61 / 109 /

116 / 117 / 132 / 133 / 165 / 190

## VeriVide Viewing Board

## G210VB

For the evaluation of smoothness in appearance of flat fabric and seams, and the retention of pressed creases. Evaluation is performed using a standard lighting and viewing area by rating the appearance of specimens in comparison with appropriate reference standards. Lighting and evaluation should be carried out in a darkened room, using the equipment light source only. Any ambient light reflected could interfere with the rating results.

Viewing board incorporates either 2400 mm (8ft) or 1200 (4ft) Cool White lamps. The unit is switched and incorporates high frequency electronic control gear and can be either wall or mobile trolley mounted. May be built to customer specifications.

#### SIZE

WEIGHT 62 kg / 137 lbs

DIMENSIONS 1830 mm (w) x 270 mm (d) x 1830 mm (h) /  
72 in (w) x 11 in (d) x 72 in (h)



#### ORDERING INFORMATION

G210VB VeriVide Viewing Board

201035 Suitable for AATCC Test Methods using 4 foot lamps

201036 Suitable for AATCC Test Methods using 8 foot lamps

203077 Mobile stand for VeriVide Viewing Board

#### STANDARDS:

AATCC 128 / 143



PANTONE Textile Color System communicates color choices with ease and efficiency. Quickly pinpoint shades within each color group with over 2300 shades to choose from arranged chromatically.

#### Color Swatch Files.

The ultimate creative tool for those who need immediate access to over 2,300 textile color swatches. Three-volume set contains all colors in a 2" x 2" removable swatch format. Designers can create solid color palettes and combine for yarn dye and print combinations.

#### Color Planner - Cotton.

Compact reference book contains over 2,300 textile colors dyed on 100% cotton chips (5/8" x 5/8"). This easy desktop reference is the ideal color locator for those who need to make quick color decisions.

#### Color Specifier-Paper.

Features six larger-sized, tear-out chips for each color, 7 colors per page. The large format provides greater visualization, ideal for attaching to design sketches.

#### Color Specifier Replacement - Paper.

Individual replacement page contains 7 Pantone colors on page, with 6 tear-out chips for each color for easy removal.

#### Color Guide.

New larger-sized portable color-on-paper fan deck contains over 2,100 textile colors chromatically arranged for optimum viewing. Easy to bring along for sample shopping, client or vendor meetings and on-site reviews.

#### ORDERING INFORMATION

200216	Pantone Color Specifier – Paper
200265	Pantone Color Planner - Cotton
203523	Pantone Color Swatch Files - Cotton
200217	Pantone Color Guide - Paper
203524	Pantone Specifier Replacement paper Pages - Single Page



For determination of color vision anomalies and color aptitude. An essential test for technologists and assessors in color and color difference. Consists of four trays, each containing a segment of 85 color reference disks mounted in recessed area of individual black plastic caps. Color vision anomalies and color aptitude are detected by the ability of testee to place color caps in hue order. Score sheet yields numerical and graphical results. Color reference size is 1/16" (12 mm) diameter. Furnished with instruction manual and pad of 100 score sheets. Complete in fitted wooden case.

**SIZE**

WEIGHT 5 kg / 11 lbs

DIMENSIONS 550 mm (w) x 150 mm (d) x 75 mm (h) /  
22 in (w) x 6 in (d) x 3 in (h)**ORDERING INFORMATION**

201941 Farnsworth-Munsell 100 Hue Test Kit



A general and more rapid test for workers in textiles and other color-dependant industries. 24-plate version bound into book form, with instructions.

**SIZE**

WEIGHT 200 g / 0.4 lbs

DIMENSIONS 100 mm (w) x 25 mm (d) x 150 mm (h) /  
4 in (w) x 1 in (d) x 6 in (h)**ORDERING INFORMATION**

200994 Ishihara Color Blindness Test Chart Kits



To determine the moisture content percentage of fiber, yarn and fabric, natural, synthetics and blends. In the microprocessor, 18 measurement scales are stored to be used for testing different materials. For others, the absolute value of electric conductivity (0-100) must be converted, referring to the special conversion tables provided. Supplied with 1 connecting table, conversion scales, electrode holders, 3 electrodes for spools & bobbins, hanks and fabrics, fitted with carrying case.

**SIZE**

WEIGHT 1 kg / 2.2 lbs

DIMENSIONS 170 mm (w) x 250 mm (d) x 65 mm (h) /  
7 in (w) x 10 in (d) x 3 in (h)**ORDERING INFORMATION**

202818 Electronic Moisture Meter

202819 Calibration Kit





Similar to model G212, but built in USA for sale throughout North, Central and South America to facilitate installation and after-sales service. Textile testing laboratories require "Close control" of temperature and humidity worldwide. This specially-designed system ensures compliance with international standards. Two systems available to suit room volumes to 280 cubic meters (9000 cu.ft). Custom built units available for larger volume rooms. Digital display of temperature and humidity to control area at 20°C (70°F) +/- 2° and 65% RH +/- 2% (or other conditions as required). Installation is not include and may be required. For final offer and recommendations, complete questionnaire.

#### SIZE

WEIGHT 318 kg / 700 lbs

DIMENSIONS 800 mm (w) x 800 mm (d) x 2375 mm (h) / 32 in (w) x 32 in (d) x 94 in (h)

#### ORDERING INFORMATION

G212A1 Laboratory Air Conditioning Package System 9.6KW

G212B1 Laboratory Air Conditioning Package System 15KW

G212C1 1 year consumables and spares package (G212A1/B1)

#### STANDARDS:

ASTM D1776	DIN 50015	ISO 139
ISO 187	ERT 60-1	ITMF PGA

For the conditioning of samples prior to testing, provides conditions from 20% to 98% RH +/-2 and 0°C to 94°C +/- 0.5°C.

Three capacities available:

1.5 cu.ft/42 liters, Internal	Height 325 mm 13 inch	Width 350 mm 14 inch	Depth 325 mm 13 inch
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5.8 cu.ft/165 liters, Internal	Height 600 mm 24 inch	Width 500 mm 20 inch	Depth 450 mm 18 inch
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10 cu.ft/280 liters, Internal	Height 750mm 30 inch	Width 600 mm 24 inch	Depth 600 mm 24 inch
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Provided with

Manual Digital Set - Digital Indicating Controller for temperature and humidity. Stainless steel shelf - 2 positions. Forced air circulation. 2 inch access port and plug on left wall. Self-contained heating, refrigeration and steam generator humidifier. Vapor-tight welded stainless steel interior.

Optional Extras:

2 - channel automatic programmer with ramp and soak facilities.

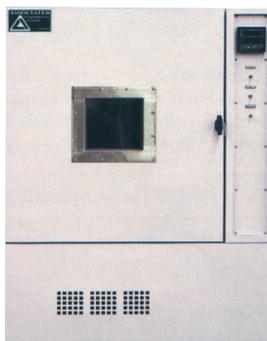
Self-contained recirculating humidity system with 6-gallon (24-liter) reservoir - (obviates need for piped de-ionised or de-mineralized water). Extra stainless steel shelf.

Note:

Custom-designed and built chambers of any required capacity up to room size, with conditions down to - 20°C are available. Quotations on request.

#### ORDERING INFORMATION

300254	Laboratory Conditioning Chamber 1.5 cu ft /42 liters
300255	Laboratory Conditioning Chamber 5.8 cu. ft / 165 liters
202853	laboratory Conditioning Chamber 10 cu. ft / 280 liters
401860	Channel Automatic Programmer
202854	Recirculating Humidity System
202855	Extra Stainless Steel Shelf



## G212F

## Conditioning Shelving Unit for Laboratory



Allows samples to gradually absorb laboratory conditions prior to testing. Consists of 4 heavy duty mesh shelves coated in white nylon, and 4 post supports with adjustable shelf locking devices chromium-plated steel.

**SIZE:**

WEIGHT	37 kg / 82 lbs
DIMENSIONS	1200 mm (w) x 600 mm (d) x 1525 mm (h) / 48 in (w) x 24 in (d) x 60 in (h)

**ORDERING INFORMATION**

303549	Conditioning Shelving Unit
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**STANDARDS:**

M&S C4A / C5 / C6 / C7 / C10 / C10A / C37 / C49A / P1A / P1B / P1C / P3A / P4 / P4B / P5 / P5A / P7 / P66 / P99A    NEXT 2/2A/5/12

## G246A

## AATCC/ISO Gray Scales



For assessment of change in color and staining in colorfastness testing 1-5 steps with half steps, in wallet

**SIZE**

WEIGHT	50g
DIMENSIONS	80 mm (w) x 230 mm (d) / 3 in (w) x 9 in (d)

**ORDERING INFORMATION**

201195	ISO/BS Grey Scale (Change in Color)
201194	ISO/BS Grey Scale (Staining)
202162	AATCC Grey Scale (Change in Color)
202161	AATCC Grey Scale (Staining)

**STANDARDS:**

NEXT 1/2/3/3A/4/4A/5/7A/7B/8/9/9A/18/18A/18B

M&S C4A / C6 / C7 / C9 / C9A / C10 / C10A / C11 / C12A / C13 / C14 / C26 / P4C / P19C

ISO 105-A02 / B01 / B02 / B04 / B06 / C01 / C02 / C03 / C04 / C05 / C06 / C07 / C08 / C09 / D01 / 02 / E01 / E02 / E03 / E04 / E07 / E08 / E09 / E11 / E12 / E13 / E14 / G02 / G03 / N03 / N04 / P01 / X05 / X11 / X12 / X16

GB/T250

## G246C-CC

## AATCC/ISO Light Fastness Standards



Blue wool fabric (pack of 8 graded 1-8) to meet ISO/SD/BS standards. Dimensions for each piece 240mm (9 1/2") x 150mm (6")

AATCC Light Fastness Standards.

**ORDERING INFORMATION**

300267	Light Fastness Standards ISO/BS (pack of 1-8)
G246CC	Light Fastness Standards AATCC

**STANDARDS:**

AATCC 16    BS 1006    ISO 105-B01 / B02 / B04 / B06    M&S C9 / C9A    NEXT 1

To mask non-relevant sample areas in color assessment tests.

**SIZE**

**DIMENSIONS** 170 mm (w) x 50 mm (d)  
7 in (w) x 2 in (d)

**ORDERING INFORMATION**

201192 Assessment and Grading Mask SDC

201078 Assessment and Grading Mask M&S

**STANDARDS:**

BS 1006

NEXT 1

NEXT Color Assessment



## AATCC Chromatic Transfer Scale, Nine Step

To visually evaluate color transfer or staining, using 60 color chips over 5 hues (red, yellow, green, blue and purple.)

**ORDERING INFORMATION**

202163 Chromatic Transfer Scale, Nine Step

**STANDARDS:**

AATCC 61 / 117 / 133 / EP8



## AATCC Crease Appearance Replicas

Five plastic replicas representing crease appearance with five being the best and one being the least crease retention after laundering. With storage case.

**SIZE**

**WEIGHT** 200 g / 0.45 lbs

**DIMENSIONS** 380 mm (w) x 90 mm (d) x 400 mm (h) /  
15 in (w) x 3.5 in (d) x 15.5 in (h)

**ORDERING INFORMATION**

202156 Crease Appearance Replicas

**STANDARDS:**

AATCC 88C / 143

M&amp;S P134 / 134A



SDL Atlas supplies quality multifiber adjacent fabrics that are consistent from lot to lot and have certificates of conformance for each lot. Used for numerous colorfastness and staining tests, multifiber fabrics come in different styles, makes, and cuts to meet different standards and tests. Please contact if you need any assistance in determining the correct multifiber fabric for your application.

**ISO DW**

Warp stripe available in rolls or cold cut pieces with pinked edges

Diacetate	202327 / 10 meter roll - SDC
Bleached Cotton	203118 / 50 meter roll - SDC
Spun Polyamide Nylon 6.6	201190 / Cut 4 x 10 cm, 250 pcs - SDC 300312 / Cut 5 x 10 cm, 250 pcs - SDC
Spun Polyester (Dacron 54)	401454 / 10 meter roll - TIC
Spun Polyacrylic (Orlon 75)	300286 Cut 4 x 10 cm, 1000 pcs - TIC 300287 Cut 5 x 10 cm, 1000 pcs - TIC
Worsted Wool	

**ISO TV**

Warp stripe used for high temperature wash test

Triacetate	200828 / 10 meter roll - TIC
Bleached Cotton	300317 / Cut 4 x 10 cm, 1000 pcs - TIC 300319 / Cut 5 x 10 cm, 1000 pcs - TIC
Spun Polyamide Nylon 6.6	
Spun Polyester (Dacron 54)	
Spun Polyacrylic (Orlon 75)	
Worsted Wool	

**M&S Lyocell**

Warp stripe specified by M&S

Lyocell	402265 / 10 meter roll - SDC LyoW
Bleached Cotton	402266 / 50 meter roll - SDC LyoW
Spun Polyamide Nylon 6.6	
Spun Polyester (Dacron 54)	
Spun Polyacrylic (Orlon 75)	
Worsted Wool	

**AATCC FA (#10)**

Filling stripes of the following with a 5 cm (2") repeat

Acetate	300310 / 1 yard x 45 inches wide
Bleached Cotton	200883 / 1 meter x 115 cm wide 203064 / Cold cut 2 x 2 inch (box of 1000)
Spun Polyamide Nylon 6.6	200882 / Heat sealed 2x2 inch (box of 1000) 300290 / Overcast 2 x 2 inch (box of 1000)
Spun Polyester (Dacron 54)	300292 / Cold cut 2 x 4 inch (box of 1000)
Spun Acrylic (Orlon)	300294 / Heat sealed 2 x 4 inch (box of 1000) 300293 / Overcast 2 x 4 inch (box of 1000)
Worsted Wool	

**ISO & M&S FAA (#10A)**

Filling stripes of the following with a 10 cm (4") repeat

Acetate	200881 / 1 meter x 115 cm wide
Bleached Cotton	300298 / Cold cut 4 x 10 cm (box of 1000)
Spun Nylon 6.6	200879 / Heat sealed 4 x 10 cm (box of 1000)
Spun Polyester (Dacron 54)	300299 / Overcast 4 x 10 cm (box of 1000) 300300 / Cold cut 5 x 10 cm (box of 1000)
Spun Acrylic (Orlon)	300302 / Heat sealed 5 x 10 cm (box of 1000)
Worsted Wool	300301 / Overcast 5 x 10 cm (box of 1000)

**AATCC FB (#1)**

Filling stripes of the following with a 5 cm (2") repeat

Acetate	300309 / 1 yard x 34 inches wide
Bleached Cotton	300304 / Cold cut 2 x 2 inch (box of 1000)
Spun Nylon 6.6	200884 / Heat sealed 2 x 2 inch (box of 1000)
Spun Silk	300305 / Overcast 2 x 2 inch (box of 1000)
Spun Rayon	300306 / Cold cut 2 x 4 inch (box of 1000)
Worsted Wool	300308 / Heat sealed 2 x 4 inch (box of 1000) 300307 / Overcast 2 x 4 inch (box of 1000)

Six plastic replicas used to visually evaluate the smoothness of fabrics after laundering. With storage case.

**SIZE**

WEIGHT 2 kg / 5 lbs

DIMENSIONS 380 mm (w) x 90 mm (d) x 390 mm (h) /  
15 in (w) x 3.5 in (d) x 15.5 in (h)

**ORDERING INFORMATION**

202158 Smoothness Appearance Replicas

**STANDARDS:**

AATCC 124 / 143 ISO 7768 M&S P91 / P134 / P134A

NEXT 24 / 30 / 30A



Used to visually evaluate smoothness of seams after laundering.

**SIZE**

WEIGHT 1 kg / 2.2 lbs

DIMENSIONS 380 mm (w) x 90 mm (d) x 390 mm (h) /  
15 in (w) x 3.5 in (d) x 15.5 in (h)

**ORDERING INFORMATION**

202157 Seam Smoothness Photographs (set of 2)

**STANDARDS:**

AATCC 88B / 143 ISO 7770 M&S P134 / P134A

NEXT 30A JIS L 1905



**G246M****AATCC Barre Assessment Scales**

For the visual assessment and grading of Barre, the optical result of physical or dye differences in yarns, geometric differences in fabric, or a combination of both.

**SIZE:**

**WEIGHT** 50 g / 0.1 lbs

**DIMENSIONS** 220 mm (w) x 355 mm (h) /  
9 in (w) x 14 in (h)

**ORDERING INFORMATION**

**G246M** Barre Assessment Scales (set 1-9)

**STANDARDS:**

**AATCC 178**

**G246N****Fluorescence Suppressor**

When a sample is observed to have lost color or have changed color during washing, this may be due to the effect of washing or the effect of the presence of optical brightener on the sample. This can be assessed using the fluorescence suppressor.

Both the tested and untested samples are placed side by side. The fluorescence suppressor is then placed over the 2 samples. If the observed difference is not present when viewed through the fluorescence suppressor, the change in shade or color loss is due to the effect of optical brightener.

**SIZE:**

**WEIGHT** 350 g / 0.65 lbs

**DIMENSIONS** 120 mm (w) x 110 mm (d) x 10 mm (h) /  
5 in (w) x 5 in (d) x 0.4 in (h)

**ORDERING INFORMATION**

**201196** Fluorescence Suppressor

**STANDARDS:**

**M&S P5**

**G246P****ISO Standard Depth Scales**

As the fastness of dyeing depends on the depth of color, it is necessary to specify standard depths when making comparisons. Dye manufacturers' pattern cards refer to these depths in fastness ratings for their products.

SDC standard depths are illustrated in a range of 6 steps each from 2/1 to 1/25 depth over a range of 18 hues plus 2 navies and 2 blacks.

**ORDERING INFORMATION**

**201193** Standard Depth Scales SDC/BS/ISO (set)

**STANDARDS:**

**AATCC EP4**

**BS 1006**

**ISO 105-A01**

For evaluating fabrics tested to method TM 130 for oily soil release during home laundering.

#### ORDERING INFORMATION

202155 AATCC Stain Release Replicas

#### STANDARDS:

AATCC 130



## Fluorescent Illuminated Magnifier

G250

Fitted with circular fluorescent lamp, spring-loaded positioning arm and table clamp. Standard lens power 3 diopters.

#### SIZE

WEIGHT 3.2 kg / 7 lbs

DIMENSIONS 560 mm (w) x 230 mm (d) x 120 mm (h) /  
22 in (w) x 9 in (d) x 5 in (h)

#### ORDERING INFORMATION

200993 Fluorescent Illuminated Magnifier  
300339 Spare Lamp



## Textile Standards and Test Methods

G253/020

SDL Atlas is a supplier of all recognized test methods and standards in original copyright form. Recommended lists of standards for textiles for any particular application are available on request. Ask for a quotation on any world standard, advising standard number, year and title.

#### ORDERING INFORMATION

G253/001 AATCC Technical Manual, including All Test Methods(Latest Available Edition)

G253/002 ASTM Book of Textile Standards and Test Methods(Volumes 07.01 and 07.02, Latest Available Edition)



## Silent Laboratory Compressor

G265

Suitable for the provision of instrument quality compressed air with silent operation. Maximum pressure 8 bars (120 psi), tank size 25 L (6.6 U.S. gallons), maximum displacement 32 liters/minute (1.13 cubic feet/minute). Noise level 45 dB(A) at 1 meter. Supplied complete with intake air filter, outlet air/oil filter/regulator and fittings. Larger capacities available, details on application.

#### SIZE

WEIGHT 33 kg / 74 lbs

DIMENSIONS 380 mm (w) x 380 mm (d) x 550 mm (h) /  
15 in (w) x 15 in (d) x 22 in (h)

#### ORDERING INFORMATION

G265 Silent Laboratory Compressor



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