

FABRICS AND GARMENTS

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M003A

Crease Recovery Tester & Loading Device

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 recorded.

WEIGHT	3 kg	6.6 lb	
DIMENSIONS	Width	Depth	Height
	250 mm 10 inch	200 mm 8 inch	350 mm 12 inch
STANDARDS	AATCC 66	BS EN 22313	M&S P22
	ISO 2313	GB/T 3819	
ORDERING Info.	103894	Crease Recovery Tester	
	200924	Tissue Paper 200 x 300mm (100 sheets)	



M003B

Fabric Stiffness Tester

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

WEIGHT	3.6 kg	8 lb	
DIMENSIONS	Width	Depth	Height
	350 mm 12 inch	150 mm 6 inch	200 mm 8 inch
STANDARDS	ERT 50-2	ASTM D1388	BS 3356
	DIN 53362		
ORDERING Info.	104018	Fabric Stiffness Tester	



M003C/E

ST300 Softness Tester

Analogue or Digital. 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 analogue or digital gauges.

WEIGHT	5.5 kg	12 lb	
DIMENSIONS	Width	Depth	Height
	70 mm 3 inch	490 mm 19 inch	170 mm 7 inch
STANDARDS	IUP 36		

ORDERING INFORMATION	300769	Softness Tester Analogue
	201022	Softness Tester Digital
	300770	Software Package



M003F

Digital Pneumatic Stiffness Tester

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 50kgf/500N/100lb or 25kgf/250N/50lb (switchable) with peak-hold facility. Laboratory standard compressed air supply required.



WEIGHT	18 kg	40 lb	
DIMENSIONS	Width	Depth	Height
	500 mm	500 mm	600 mm
	20 inch	20 inch	24 inch

STANDARDS ASTM D4032

ORDERING Info. M003F/250 Digital Pneumatic Stiffness Tester(25kgf/250N/50lb)
M003F/500 Digital Pneumatic Stiffness Tester(50kgf/500N/100lb)

M004

Crimp Tester

To calculate the crimp in yarn affected by knitting or weaving, to determine actual yarn usage.



WEIGHT	4 kg	8.8 lb	
DIMENSIONS	Width	Depth	Height
	1500 mm	80 mm	40 mm
	60 inch	3.5 inch	1.5 inch

STANDARDS ISO 7211 BS 2863/2865/2866 IWSTM 169

ORDERING Info. 105676 Crimp Tester

M005F

Portable Lightbox

Diffused artificial daylight light source with glass working surface 234mm x 305mm (9.2" x 12.2").



WEIGHT	2 kg	4.4 lb	
DIMENSIONS	Width	Depth	Height
	350 mm	250 mm	100 mm
	14 inch	10 inch	4 inch

ORDERING Info. 200927 Portable Lightbox

M008

Elmendorf Tearing Tester

To determine the ballistic tearing strength of textiles, paper or board.
Range from 8000 to 64000 Millinewtons with suitable pendulum.
Pendulums not included.



WEIGHT	15 kg	33 lb	
DIMENSIONS	Width	Depth	Height
	458 mm	190 mm	324 mm
	18 inch	7 inch	13 inch
STANDARDS	ASTM D1424/D689	NEXT 17	
	M&S P29	BSEN ISO 13937/4674-2	BS 4468
DIN EN 21974	GB/T 3917.1	ISO 1974	

ORDERING INFORMATION	103988	Elmendorf Tearing Tester	103995	Calibration Weight A	103998	Calibration Weight D
	103989	Pendulum A	103996	Calibration Weight B	103986	Cutting Blade
	103990	Pendulum B	103997	Calibration Weight C	103987	Cutting Blade
	103993	Additional Weight C				(M&S Suppliers Only)
	103994	Additional Weight D				

M008HE

PowerTear High Energy Elmendorf Tearing Tester

The PowerTear High Energy Elmendorf Tearing Tester is the most versatile tearing tester of its kind available. Recently redesigned to increase functionality and provide for a more user friendly testing experience, the PowerTear features an innovative pendulum apparatus that is controlled and measured by a sophisticated microprocessor. Templates are provided for simplifying sample preparations and a series of testing weights are included with highest capacity weight sold separately. The PowerTear has an expanded test range to 128N to meet your testing requirements. SDL Atlas Elmendorf Tearing Testers are designed to determine ballistic tearing strength by propagating a single-rip tongue-type tear starting from a cut in a sample of paper, cardboard, plastic or woven and non-woven fabrics. The versatility of the SDL Atlas Elmendorf Testers allow for a wide range of capability for testing both light and heavy weight specimens.



Complete with pendulums to cover measuring ranges:
800 cN/grams (1.75 lb)
1600 cN/grams (3.5 lb)
3200 cN/grams (7.0 lb)
6400 cN/grams (14.0 lb)

12800 cN/grams (18.0 lb) available separately

Tearing strength in selectable units MN,CN,N,G,KG,OZ,LB is displayed on an integral 16 character LCD at the end of each test. The display also shows the number of samples (plies) and the pendulum being used. Start and stop safety solenoids hold the pendulum at the beginning and end of each test.

The instrument comes with USB output interface and software for connecting to a PC for testing and data storage allowing for searchable records.

WEIGHT	85 kg	188 lb		ORDERING Info.		
DIMENSIONS	Width	Depth	Height	M008HE	Power Tear Elmendorf Tester 220V/110V	
	420 mm	620 mm	430 mm	107014	E Pendulum Kit – Extend Capacity to 12800g	
	16 inch	24 inch	17 inch	103999	Spare Cutting Blade	
STANDARDS	ASTM D1424/689b-96a	ISO 1974/4674-2/13937-1S	NEXT 17	TAPPI T414	M&S P29	

M018

Hydrostatic Head Tester

Accurately and swiftly determines the resistance of fabrics (coated,uncoated & non wovens) to water penetration under pressure while firmly clamped in the test rig of standard area, by means of dynamic test method and static test method.

Laboratory standard compressed air supply is required to produce the pressure from 0-3 bar inside a built-in water tank filled with distilled water. The tank is linked to a test head to which the specimen is clamped quickly and easily by means of a hand wheel.

After the test has been started,the test pressure is automatically controlled. The test specimen is observed visually for evidence of penetration by water. The test area is well illuminated and an unobstructed observation of the sample from all sides greatly facilitates the visual drop detection.

A 100cm² test head is included with the instrument.

Includes RS232 output and Analysis software.



WEIGHT	70 kg	154 lb	
DIMENSIONS	Width	Depth	Height
	480 mm	540 mm	600 mm
	19 inch	22 inch	24 inch
STANDARDS	BS EN20811	AATCC 127	GB/T 4744
	BS 3321	BS 3424-26(29A/29C)	ERT 120-2-02
ISO 811	JIS L 1092A	Adidas TM 6.02	

ORDERING Info.

M018	Hydrostatic Head Tester with 100cm ² Test Head
G265	Silent Laboratory Compressor (Optional) Larger capacities available on request
100075	19.63cm ² Test Head
100074	28 cm ² Test Head
100160	Pore Size Attachment

M020C1

Hydraulic Sample Press Atom SE20

Swing arm cutting presses are ideally suited to cutting test samples from textiles, rubbers and soft plastics prior to testing. Depending on resilience several thicknesses can be cut at once with a cutting force of 22 tons. Control push buttons with time delay ensure complete operator safety. Maximum cutting area 18" (450mm) x 36" (900mm). Cutting dies of any shape and size can be supplied.

WEIGHT SE20	865 kg	1900 lb	
DIMENSIONS	Width	Depth	Height
	SE20 980 mm	900 mm	1410 mm
	39 inch	36 inch	56 inch
ORDERING Info.	201047	Hydraulic Sample Press SE20	
	200970	Spare Cutting Board	



M021A

Air Permeability Tester

Accurately and swiftly determines the resistance of fabrics (woven, knitted and non woven textile materials) to the passage of air (air flow) under constant pre-set air pressure while firmly clamped in the test rig of selected test head / area.

The specimen is loaded to the test area of the instrument easily by means of a clamping lever. By pressing down the clamping arm to start the test, a powerful, muffled vacuum pump draws air through an interchangeable test head with a circular opening. The pre-selected test pressure is automatically maintained, and after a few seconds the air permeability of the test specimen is digitally displayed in the pre-selected unit of measure. By pressing down the clamping arm a second time the test specimen is released and the vacuum pump is shutoff. Sample Holders. A 20cm² test head is included with the instrument.

5 sq.cm test area, 20sq.cm test area, 25sq.cm test area, 38sq.cm test area, 50 sq. cm test area. 100sq. cm test area.



WEIGHT	80 kg	177 lb	
DIMENSIONS	Width	Depth	Height
	900 mm	590 mm	1000 mm
	36 inch	24 inch	40 inch
STANDARDS	JIS L1096-A	ASTM D737	GB/T 5453
	BS EN ISO 9237	EDANA 140.2	Adidas TM 6.08
	ORDERING Info.		
M021A	Air Permeability Tester	100203	Sample Holder 38cm ²
100200	Sample Holder 5cm ²	100204	Sample Holder 50cm ²
100201	Sample Holder 20cm ²	100205	Sample Holder 100cm ²
100202	Sample Holder 25cm ²	100208	Software Disk with data cable

M029

Atlas UVTest Fluorescent UV Condensation Weathering Device

UVTEST FLUORESCENT UV CONDENSATION WEATHERING DEVICE - STANDARD TESTER WITH IRRADIANCE CONTROL - Standard Features:

- Easy-to-Use Touch Screen Display and Control Panel
- (4) Light Monitor Sensors (Not included with Basic Model)
- (23) 3'x 12" Specimen Holders Incl. (1) Black Panel and (46) 3' x 6" Aluminum Panels
- State-of-the-art Optical and Temperature Sensors
- Air Heater Protection
- Frame-integrated Float Switch and Viewing Window
- Set of (4) Adjustable-height Casters
- Integrated Bubble Level
- CE Label
- Power: 120 VAC, (16A) 50/60hz OR 230 VAC, (8A) 50/60hz 1 phase (Specify on order)

Note: Bulbs are not included in base prices. See M029A or M029B



WEIGHT	120 kg	265 lb	
DIMENSIONS	Width	Depth	Height
	1160 mm	530 mm	1420 mm
	46 inch	21 inch	56 inch
STANDARDS	ASTM G53/D4329	SAE J2020	
	ORDERING Info.		
M029	UVTest Standard model with Irradiance Control		
201463	340NM UVA LAMPS - (Pack of 12)		
201460	313NM UVB LAMPS - (Pack of 12)		
M029C	UVTest Standard model with Irradiance Control and Water Spray		
202554	Irradiance Calibrator		

M030

Shirlastain Fiber Identification Stains

Shirlastain A (500ML - Liquid)
Shirlastain C (500ML - Liquid)
Shirlastain D (30GM - Powder)

Shirlastain Multifibre Fabric.
Contains separate bands of 12
principle fibers to assist in fiber
identification.



ORDERING Info.	Product Code	Description
	200941	Shirlastain A - 500ML
	200920	Shirlastain C - 500ML
	200919	Shirlastain D - 30GM
	200896	Shirlastain Multifiber Fabric (1m)
	200956	Shirlastain Educational Testing Kit

M031

Fryma Fabric Extensiometer

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 3kg loading weights and sample cutting templates.



WEIGHT	20 kg	44 lb	
DIMENSIONS	Width	Depth	Height
	230 mm	500 mm	100 mm
	9 inch	20 inch	4 inch
STANDARDS	BS 4294		
ORDERING Info.	104016	Fryma Fabric Extensiometer	

M034E

Feather Touch Digital Thickness Tester

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



WEIGHT	3 kg	6 lb	
DIMENSIONS	Width	Depth	Height
	150 mm	125 mm	225 mm
	6 inch	5 inch	9 inch
STANDARDS	ASTM D1777		
ORDERING Info.	M034E	Feather Touch Digital Thickness Tester	

M078

ICI Mace Snag Tester

To rapidly determine the tendency of fabrics to snag, (pull yarn loops from the fabric) in normal wear. Complete with viewing cabinet and comparison photographs for different fabric constructions. Provided with 4 rotating test cylinders fitted with sleeves of test fabric, mace balls with tungsten carbide points and controlled by a predetermined electronic counter.



WEIGHT	90 kg	198 lb	
DIMENSIONS	Width	Depth	Height
	Tester	1007 mm 40 inch	508 mm 20 inch
Viewing Box	406 mm 16 inch	600 mm 24 inch	500 mm 20 inch
	STANDARDS ASTM D3939 GB/T 11047		
ORDERING Info.	M078	Mace Snag Tester & Viewing Cabinet	
	104047	Tungsten Carbide Points (Pack of 12)	
	104048	Felt Sleeves (Pack of 4)	
	104049	Snagging Photographs	

K094

Digital Thickness Gauge

For carpets, with weight set 20-2000 GM/cm², presser foot 412mm², range 0-25mm x 0.01mm.



WEIGHT	20 kg	44 lb	
DIMENSIONS	Width	Depth	Height
	220 mm 9 inch	210 mm 8 inch	526 mm 21 inch
STANDARDS	ISO 1765	BS 4051	BS 4098
	BS 4223		
ORDERING Info.	103925	Digital Thickness Gauge	

M213

Fabric Drape Tester

To measure and calculate the coefficient of drape by tracing a shadow of the draped fabric on paper. Includes 50 each Paper Rings as follows:-

Paper Ring 24CM diameter

Paper Ring 30CM diameter

Paper Ring 36CM diameter

WEIGHT	19 kg	42 lb	
DIMENSIONS	Width	Depth	Height
	500 mm	500 mm	500 mm
	20 inch	20 inch	20 inch
STANDARDS	BS 5058/EN 9073	UNI 8279	AFNOR G07-109
	ERT 90-1		
ORDERING Info.	106454	Fabric Drape Tester	
	106607	Paper Ring 24cm Dia (Pack of 500)	
	106608	Paper Ring 30cm Dia (Pack of 500)	
	106609	Paper Ring 36cm Dia (Pack of 500)	
	106610	Spare Lamp	



M222QW

QuickWash®

Accelerated washing and drying apparatus for knitted and woven fabrics to assess shrinkage in accordance with international test methods. Also useful for assessing fabric stability, color fastness, finish durability, spirality and pilling to washing/drying. Complete washing and drying cycles in less than 15 minutes. Fitted with stainless steel basket with 5 sample chambers. Keypad control of test parameters with manual or automatic operation. Hot and cold water supplies, drainage and compressed air required.

QuickWash Model EC300

- Digital water temperature controller and display.
- Digital air temperature controller and display with infrared sensor.
- Digital air pressure regulator and display
- Software control for variable air pressure.
- New membrane style keypad.
- Expanded memory for future software upgrades
- Optional fully automatic four liquid dispensing system.

Now available with programs for testing stain resistant and water repellent fabrics.

WEIGHT	137 kg	300 lb	
DIMENSIONS	Width	Depth	Height
	685 mm	635 mm	585 mm
	27 inch	25 inch	23 inch
STANDARDS	AATCC 187-2000	M&S P1D	ISO 23231
ORDERING Info.	M222QW	QuickWash System EC300	
	202585	Stainless Steel Table	
	200779	Automatic Dispensing System For Up To 4 Liquid Ingredients	
	201162	Additional 4 Chamber Fabric Basket For Heavy Samples	



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 Celcius 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



WEIGHT	1 kg	2.2 lb	
DIMENSIONS	Width	Depth	Height
	250 mm	190 mm	85 mm
	10 inch	7.5 inch	3.5 inch
ORDERING Info.	M222QT	Home Laundering Machine Temperature Controller-Single machine	
	M222QTP	Home Laundering Machine Temperature Controller-8 machine	

M222RC

Rapid Sample Conditioner

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"x12" to 20 specimens per cycle depending on sample weight and size.

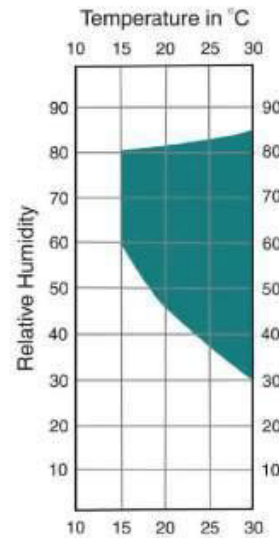
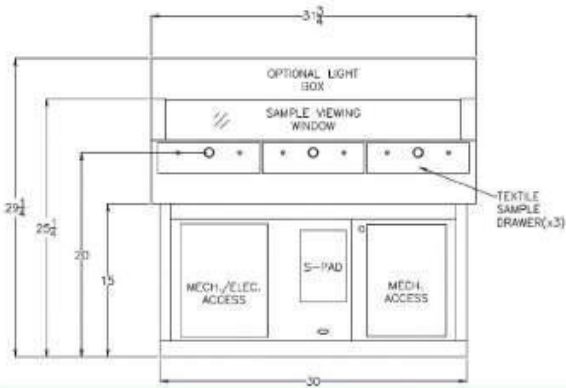
Capable of bringing fabric to normal conditioned state in minutes depending on fabric type and weight.

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.



Option M222RCV allows temperature and humidity combinations within the green area of this chart

WEIGHT	68 kg	150 lb	
DIMENSIONS	Width	Depth	Height
	800 mm	800 mm	650 mm
	32 inch	32 inch	26 inch
ORDERING Info.	M222RC	Rapid Sample Conditioner	
	300818	Overhead Lightbox	
	200823	Variable temperature and humidity option	

M223CLS

Wascator FOM 71 CLS LAB Washer-Extractor

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. **ISO 6330:2012 and ISO 6330:2000 are not included, and program cards M223CLSB and M223CLSC must be ordered separately.

Makeweights, stability templates and rules, reference detergents, bleaching agents and conditioners also available, see following specifications.

Marks and Spencer Test Program. Pre-programmed before delivery only. For M&S accredited suppliers only.



WEIGHT	200 kg	440 lb	
DIMENSIONS	Width	Depth	Height
	720 mm	740 mm	1450 mm
	28 inch	29 inch	57 inch
STANDARDS	ISO 5077/6330	M&S P1, P1A, P3A, P12, P91, P99, P99A, P134	
BS EN 25077/26330	IEC 456	Next TM7/7a/7b, TM12	
ORDERING Info.	M223CLS	Wascator FOM 71 LAB	
	201064	M+S Test Program (M+S Suppliers Only)	
	M223B/H	Accessories and Consumables	

M223/1/2

Precision Tumble Dryer

Standard Tumble Dryer. A standard domestic tumble dryer recommended by many fabric specifiers, 120 minute timer, 5kg 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 $\pm 2^{\circ}\text{C}$ and cycle time within one second. Capacity 5kg, reversing action, 10 minute cooling time.



WEIGHT	35 kg	77 lb	
DIMENSIONS	Width	Depth	Height
	600 mm	600 mm	850 mm
	24 inch	24 inch	30 inch
STANDARDS	M&S P1A, P3A, P3B, P4, P4A, P12, P99A, P91, P134		
NEXT 7	BS EN ISO 6330	Next TM7/7a/7b, TM12	
ORDERING Info.	M223/1	Standard Tumble Dryer Domestic	
	M223/2	Precision Tumble Dryer Domestic with Digital Controller	

- 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 2001 (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 350mm 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 \pm
- 201020 Illuminated Viewing Board for Marks & Spencer suppliers only.
- 201200 ECE Phosphate Reference Detergent "B" to ISO 105 C06 (1997) - 2KG
- 203122 ECE Phosphate Reference Detergent "B" to ISO 105 C06 (1997) - 15KG
- 201199 ECE Non-Phosphate Reference Detergent "A" to ISO 105 C08 (2001) - 2KG
- 201197 ECE Non-Phosphate Reference Detergent "A" to ISO 105 C08 (2001) - 15KG
- 202326 IEC "A" Non-Phosphate Reference Detergent to IEC 60456 - 2KG
- 201198 IEC "A" Non-Phosphate Reference Detergent to IEC 60456 - 15KG
- 201203 IEC "B" Phosphate Reference Detergent to IEC 60456 - 2KG
- 300843 IEC "B" Phosphate Reference Detergent to IEC 60456 - 15KG
- 201201 Low Temperature Bleaching Agent (Tetra-acytel-ethylene-diamine) 1KG
- 201915 Sodium Perborate Tetrahydrate 2KG
- 201902 AATCC Reference Detergent with optical brightener. Reference detergent with optical brightener (24lb tub)
- 201858 AATCC Reference Detergent without optical brightener. Reference Detergent without optical brightener (24lb tub)
- 201129 Reference Fabric Conditioner (5 Litres). Larger quantities available

ORDERING INFORMATION As above
Please ask for new complete test consumables catalog.



M223/3

Standardized Dry Cleaning Machine

Model 9125. 12kg (28lb). 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.



WEIGHT	1120 kg	2470 lb		
DIMENSIONS	Width	Depth	Height	
	1460 mm	2100 mm	2000 mm	
	58 inch	83 inch	79 inch	
STANDARDS	BS EN ISO 3175	M&S P66, P67	AATCC 158	
ORDERING Info.	M223/3	Standardized Dry Cleaning Machine		
	M223/3MS	Standardized Dry Cleaning Machine – M&S Specification		

M223/4-5

US Heavy Duty Washer

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.



WEIGHT	75 kg	165 lb		
DIMENSIONS	Width	Depth	Height	
	699 mm	686 mm	1067 mm	
	28 inch	27 inch	42 inch	
STANDARDS	AATCC 88B+C, 124, 130, 135, 142, 143, 150, 159, 172, 179, 188			
ORDERING Info.	M223/4	US Heavy Duty Washer 120V/60Hz		
	M223/5	US Heavy Duty Washer 220V/50Hz		

M223/6-7

US Heavy Duty Dryer

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.



WEIGHT	52 kg	115 lb		
DIMENSIONS	Width	Depth	Height	
	743 mm	686 mm	1095 mm	
	29 inch	27 inch	43 inch	
STANDARDS	AATCC 88B+C, 124, 130, 135, 142, 143, 150, 159, 172, 179, 188			
ORDERING INFORMATION	M223/6	US Heavy Duty Dryer 220V/60HZ		
	M223/7	US Heavy Duty Dryer 220V/50HZ		

M227A/B

ICI/M&S Pilling and Snagging Tester

A universal pilling and snagging tester drive system with 2 or 4 positions to rapidly replicate pilling or snagging on fabrics in a fraction of the time due to normal wear. Provided with unique controller allowing standard mode with speed settings of 30 or 60 rpm, optional reversing facility at 30 rpm and test cycle input. Provided with unique controller allowing selection between rotational speeds of 20, 30, 40, 45, 50, 60, 65 and 70 rpm. Programmable reversing function at 30 rpm and test cycle definition facilities. Cork liners mounted on removable plates to allow for rapid and accurate replacement.

Remark: Boxes & Mounting Jig NOT included, need order separately.

- M227A Universal Pilling and Snagging Tester Drive System 2 positions.
- M227B Universal Pilling and Snagging Tester Drive System 4 positions.
- 101032 ICIPilling Box, plastic construction complete with magnetic cork liners and 4 polyurethane sample mounting tubes.
- 101033 ICIPilling/Snagging Box, (with 6 Snagging Points).
- 106873 M+S Random Tumble Pilling/Snagging Drum, plastic construction with liner, step and 8 polyurethane sample mounting tubes and locking rings. M+S suppliers only.
- 101026 Polyurethane sample tubes for ICI pilling box (set of 4).
- 101027 Unmounted cork linings for ICI pilling/snagging box (set of 6).
- 101028 Snagging points for ICI pilling/snagging box (set of 6).
- 106841 Polyurethane Sample Tubes and Locking Rings - (set of 8) - For Marks and Spencer pilling/snagging drum and BS 8479 Octagonal snagging drum.
- 106885 Liner and Step for Marks & Spencer pilling/snagging drum (1 of each).
- 106883 Sample template for Marks & Spencer pilling/snagging drum or ICI pilling box.
- 106894 Pinned snagging bars for Marks & Spencer pilling/snagging drum (set of 3).
- 200914 Standard Glass Bean Bag for Marks & Spencer pilling/snagging drum (set of 4).
- 106891 Sample Template for Marks & Spencer Snagging Test.
- 101035 Standard fabric mounting jig.
- 101031 EasyMount Mounting Jig
- 101034 Octagonal Snagging Drum To BS 8479 Including 4 Polyurethane Sample Tubes and Locking Rings-For use with ICI pilling and snagging drive system 200947 felt for covering samples tubes is also required.
- 202643 Set Of Pilling Photographs

WEIGHT	85 kg	187 lb		
DIMENSIONS	Width	Depth	Height	
	820mm	480 mm	490 mm	
	33 inch	19 inch	20 inch	
STANDARDS	BS 5811/8479	IWSTM 152	NEXT 19	
	M&S P18, P18A, P18B, P21A	BS EN ISO 12945-1	GB/T 4802.3	
	Adidas TM 4.08			



M227B Four Position Pilling and Snagging Tester Drive System



Programming Console for Pilling and Snagging Tester



Octagonal Snagging Drum

ORDERING INFORMATION

Note: 101032, 101033 and 106873 order number of boxes or drums required.

M227G

Pillgrade Automatic Pilling Grading System

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" (10cm x 10cm) to 6" x 6" (150mm x 150mm).

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 (pills/in² and pills/cm²)
- 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
- 256MB RAM
- 2x USB ports OR 1x USB port and 1x 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 VAC / 50-60 Hz (please specify)

WEIGHT	12 kg	26 lb		
DIMENSIONS	Width	Depth	Height	
	600mm	600 mm	600 mm	
	24 inch	24 inch	24 inch	
STANDARDS	ASTM D3512	ASTM D4970	ISO 12945-1	
	ISO 12945-1			
ORDERING Info.	M227G	Pillgrade Automated Pilling grading system		



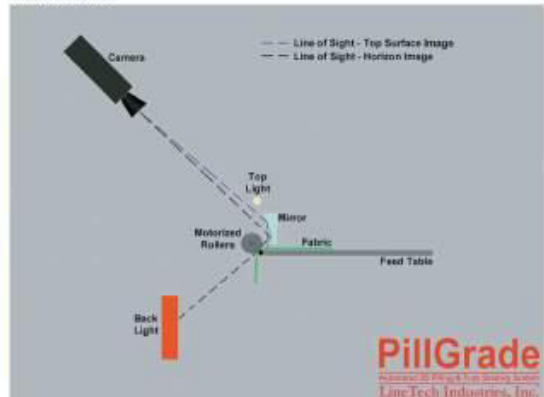
M227G Pillgrade

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



M227C

Pillscope Assessment Viewer

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.

WEIGHT	6 kg	13 lb	
DIMENSIONS	Width	Depth	Height
	200 mm	380 mm	430 mm
	8 inch	15 inch	17 inch
STANDARDS	BS 5811	IWSTM 152	M & S P17, P21A
	M & S P18A	(Holoscope Only)	

ORDERING INFORMATION	M227C	Pillscope Assessment Viewer
	200955	Knitted Fabric Drum
	200954	Woven Fabric Drum
	201000	Snagging Drum – M & S Only



200999 Holoscope Assessment Viewer – M & S Only
200953 Knitted Fabric Holoscope – M & S Only
200952 Woven Fabric Holoscope – M & S Only

M227R/S

Random Tumble Pilling Tester

To determine the pilling and fuzzing characteristics of textile fabrics. Stainless steel impellers rotate within individually lit aluminum chambers constantly tumbling test fabrics against cork liners for a predetermined time controlled by a timer and audible alarm. Compressed air is also injected into the chamber to assist in the tumbling action. With 2 or 4 test chambers. Laboratory standard compressed air supply required.

WEIGHT	61 kg	134 lb	
DIMENSIONS	Width	Depth	Height
	470 mm	402 mm	680 mm
	18.5 inch	16 inch	27 inch
STANDARDS	ASTM D3512	GB/T 4802.4	
	ISO DIS 12945-3	JIS L 1076-D	
ORDERING Info.	M227R	Random Tumble Pilling Tester (2 chamber)	
	M227S	Random Tumble Pilling Tester (4 chamber)	
	200771	Cork Liner (Pack of 50)	
	202324	Cotton Sliver (9m)	
	200895	Set of 5 Photographic Standards	



M227PAV

Universal Pilling Assessment Viewer

Suitable for all standards where the assessment of pilling on fabrics is necessary, whether against control fabrics or photographs.

Suitable for: Martindale Pilling
ICI Pilling
ICI Snagging
Random Tumble Pilling
Brush/Sponge Pilling

WEIGHT	10 kg	22 lb	
DIMENSIONS	Width	Depth	Height
	340 mm	240 mm	280 mm
	14 inch	10 inch	11 inch
STANDARDS	BS 5811	BS EN ISO 12945/1/2	ASTM D 3512
	ASTM D 4970	ASTM D 5362	IWSTM 152
	Next TM19/26		
ORDERING INFORMATION	M227PAV	Universal Pillscope Assessment Viewer	



M228

Rotawash Color Fastness Testers

To determine color fastness to washing or dry cleaning to ISO, BS, AATCC and SDC standards. Fitted with programmer allowing automatic selection of all AATCC, ISO and other test methods with individual parameters displayed, select one of last 3 tests, select user defined program, COM port for updates. Includes drain pump, inching facility and lid interlock. It is updated to equip with the latest touch panel to replace the traditional LCD panel. User friendly touch panel with clear graphic interface provides the quick and convenient operation. User interface available in multiple languages including English, Chinese, Spanish and Turkish.

Washpots or accessories not included.

- M228B Capacity 8 washpots x 550ml or 8 x 1200ml
- M228C Capacity 12 washpots x 550ml or 12 x 1200ml
- 103829 550ml Washpot with lid and seal
- 103855 1200ml Washpot with lid and seal

WEIGHT (M228B)	75 kg	165 lb	
DIMENSIONS (M228B)	Width	Depth	Height
	660 mm	600 mm	950 mm
	26 inch	24 inch	37 inch
STANDARDS	BS 1006 C01-C05	AATCC 28/61(1A-5A)/132/151(Option 1-3)/190/86	
ISO 105 C01-C06/C08/D02	M&S C4A(Option 1-3)/C5/C10A/P3B		
NEXT 2 (A25, B52, C25)/3/5	Woolmark TM 193/240/241	GB/T 3921/12490	GB/T 5711
ORDERING Info.	M228B/C	Rotawash Color Fastness Testers (Specify as above)	
	103829	550ml Washpot	
	103855	1200ml Washpot	
	103852	Stainless Steel Balls (Pack of 100) - For washing test on Rotawash	
	103822	Stainless Steel Discs (Pack of 25) - For dry cleaning test on Rotawash	
	103856	Test Cylinder Seals (Pack of 8) - For washing/drycleaning test on Rotawash	
	201205	Soap Powder 2.0kg FBA Free	
	Note:	For other detergents and chemicals for color fastness testing see M223B/H, accessories and consumables for washing and stability testing. For greyscales and adjacent fabrics, see 201195 and G246F	



Programmer interface



Washpot

M228AA SDL Atlas Launder-Ometer®

For conducting washfastness testing, dyeing, dry cleaning, colorfastness to fulling, detergency and other tests at temperatures up to 95 °C. Stainless steel rotor holds five specimen containers on each of four sides and rotates at a constant 40 rpm (± 2 rpm). Containers are preheated in appropriate test solution. Stainless steel balls provide agitation during rotation. Containers are sealed with either a Neoprene rubber gasket or optional Teflon gasket.

Digital cycle timer with automatic shutdown and audible warning. Constant temperature bath heated by stainless steel heater that provides a temperature maximum rise rate of 2 °C/minute. Bath temperature is maintained by an indicating controlling thermostat. A temperature safety switch is located inside the control cabinet to shut down the unit in case of overheating. A door safety switch automatically stops the rotor when the door is opened. Controlled and higher rate of rise abilities for tests such as ISO 105-C06 D2S and E2S are available on request.

The Launder-Ometer was originally designed by and was previously designated Official instrument of the American Association of Textile Chemists and Colorists (AATCC).

Start-up supplies included.

WEIGHT	135 kg	297 lb		
DIMENSIONS	Width	Depth	Height	
	1172 mm	645 mm	1175 mm	
	46.8 inch	25.8 inch	47 inch	
STANDARDS	AATCC 28/61/132/151/190/86		BS 1006 C01-C05	
	ISO 105 Part C01-C06/C08/D01		M&S C4/C5/C10A/P38	
FTMS 191-5610	GB/T 5711/3921/12490		Next TM2, 3, 5	
ORDERING Info.	M228AA	SDL Atlas Launder-Ometer®		
	103814	Specimen Container Type 1 7.62cm (3") Dia. x 12.7cm (5") length 550ml		
	103830	Specimen Container Type 2 8.89cm (3.5") Dia. x 20.32cm (8") length 1200ml		

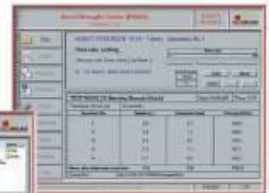


M229

Auto Burst

To determine the bursting strength and distension at burst of woven, knitted and non woven fabrics, papers and boards by the application of hydraulic load under a rubber diaphragm. Windows based software gives accurate control of the unit, user friendly interface and presentation of test reports together with data storage and retrieval. Processor with LCD monitor, keyboard and mouse included. Features automatic diaphragm correction and automatic adjustment of flow rate to achieve burst within specified time. Quick change bells and diaphragms mean increased testing time. Four different specimen sizes can be accommodated allowing testing to most relevant standards.

Test areas up to 50cm² (80mm dia) can be accommodated. Maximum capacity: Pressure: 6000kPa (871p.s.i.). Distension: 70mm. Laboratory standard compressed air supply required.



WEIGHT	140kg	309 lb	
DIMENSIONS	Width	Depth	Height
	780 mm	480 mm	910 mm
	31 inch	19 inch	36 inch
STANDARDS	ASTM D 3786-6	ERT 80-4-20	GB/T 7742.1
	BS 3424-6-B	BS EN ISO 13938-1	ISO 3303-B
ORDERING Info.	M229	Auto Burst	
	101264	30mm Test Kit	
	101267	30.5mm Test Kit	
	101265	31.5mm Test Kit	
	101263	80mm Test Kit	
	101262	10cm ² Test Kit	
	101266	Diaphragms (pack of 10)	
	101268	31mm ASTM Test Kit	
G265	Silent Laboratory Compressor (Optional)	Larger capacities available on request	

M229P

PnuBurst Pneumatic Bursting Strength Tester

For determining the bursting strength of woven or knitted fabrics, nonwovens, paper and board by application of a pneumatic load under a rubber diaphragm of a specific area. Provided with built-in testing software, touch screen and diaphragm calibration facility, renewable rubber diaphragms, distension height measurement, pneumatic clamping with clear acrylic bell and footswitch control, maximum capacity 1500Kpa/200PSI. Interchangeable test bells and clamping ring sets 30mm, 30.5mm, 31mm, 35.7mm, 79.8mm or 113mm diameter (not included; please specify). Software, footswitch, power cord, flexible pneumatic hose included. User interface available in multiple languages including English, Chinese, Spanish and Turkish.



WEIGHT	80 kg	177 lb	
DIMENSIONS	Width	Depth	Height
	480 mm	560 mm	805 mm
	19 inch	22 inch	32 inch
STANDARDS	ASTM D 3786-6 (pneumatic)	EDANA 80.4-20 (pneumatic)	Next 22
	Woolmark TM 29	ISO13938-2	
ORDERING Info.	101443	Bell and clamping ring set - 30mm dia (7.1cm ²) (for NEXT 22)	
	101444	Bell and clamping ring set - 30.5mm dia (7.3cm ²)	
	101445	Bell and clamping ring set - 31mm dia (7.55cm ²)	
	101446	Bell and clamping ring set - 35.7mm dia (10cm ²)	
	101447	Bell and clamping ring set - 79.8mm dia (50cm ²)	
	101463	Bell and clamping ring set - 113mm dia (100 cm ²)	
	101441	Diaphragms - For M229P Burst Tester, pack of 10	
104646	Booster/Regulator and Air Storage Tank - To boost incoming air supply to allow M229P to utilise maximum test pressure at burst of 1500 kPa (200 psi) (15 bar)		

To determine the resistance to the passage of simulated rain by fabrics being rubbed and rotated. Water which penetrates the fabric is measured and the test specimen weighed to determine the amount of water absorbed. The tester consists of 4 specimen holders of 100mm diameter placed over cups with a rotating member rubbing the underside. Rain is produced using filtered water under pressure and is allowed to fall from a height of 150cm through 304 Stainless Steel Drop Formers.

Optional centrifuge to remove excess surface water from tested samples for evaluation.

WEIGHT	177 kg	390 lb	
DIMENSIONS	Width	Depth	Height
	760 mm	760 mm	2100 mm
	30 inch	30 inch	83 inch
STANDARDS	ISO 9865	BS EN 29865	DIN EN 29865
	GB/T 14577		
ORDERING Info.	M230	Bundesmann Water Repellency Tester	
	103895	Bundesmann Centrifuge	



4 Specimen Holder Cups



304 Stainless Steel Drop Formers



Bundesmann Centrifuge

M230D15/24 Rain Tester

To determine the penetration resistance of fabrics or composites at different intensities of water impact. Simulated rain horizontally impacts fabric samples mounted vertically in a stainless steel bath. Samples are backed with a standardized blotting paper which is weighed before and after each test. The rain is formed by a column of water which can be adjusted from 600mm (24in) to 1500mm (60in) or 2400mm (94in) depending on mode in 10mm (3/8in) increments, applied via a standardized nozzle. Available in versions with 1500mm(60in) or 2400mm (94in) columns. Provided with color touchscreen controller with preset AATCC or ISO test conditions, automatically controlling water pressure, temperature and test time, built-in calibration functions, automatic water level.



WEIGHT	29 kg	64 lb	
DIMENSIONS	Width	Depth	Height
	457 mm	457 mm	3300 mm
	18 inch	18 inch	130 inch
STANDARDS	AATCC 35	BS EN ISO 22958	GB/T 23221
ORDERING Info.	M230D15	Rain Tester with 1500mm column	
	M230D24	Rain Tester with 2400mm column	
	100798	2400mm water column (to convert M230D15 to M230D24)	
	202141	AATCC Blotting Paper 500 x 1000mm (20 x 40in) 125 Sheets, Also Suitable For AATCC Methods 8, 42 and 70	

M231 Perspirometer Kit

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

Equipment for other perspiration and water tests available but not included:-

Glass Plates 60 x 60 x 6mm	(Pack of 20).
Petri Dishes with lids.	90-95 mm diameter (Pack of 5).
Plastic Dishes SDC	(Pack of 10).
Glass Plates 110 x 50 x 6mm	(Pack of 20).
Set of Chemicals.	For use with Perspirometer and other water and perspiration tests available.



WEIGHT	15 kg	33 lb	
DIMENSIONS (Each Unit)	Width	Depth	Height
	200 mm	100 mm	160 mm
	8 inch	4 inch	6.5 inch
STANDARDS	DIN 54005	BS 1006	AATCC 15,106,107
	DIN EN ISO105 E01/E02/E04	IWSTM 6,174,175	Next TM4
	ISO105 E01/E02/E04	GB/T 3922/5713/5714/18886	M&S C6, C7
ORDERING Info.	M231	Perspirometer Kit	202683
	105215	Acrylic Plates (Pack of 42) for Perspirometer	
	202538	Glass Plates & Petri Dishes M&S (Set as Above)	
	300924	Plastic Dishes & Glass Plates SDC (Set as Above)	
	G209A	Oven/Incubator 33 Litres	
G209B	Oven/Incubator 120 Litres		

Set of chemicals for and ISO perspiration tests, consisting of:
 500g Sodium Chloride
 500g Sodium Dihydrogen Orthophosphate 2H₂O
 500g Di-Sodium Hydrogen Orthophosphate 2H₂O
 200g L-Histidine Monohydrochloride
 Lactic Acid (USP 85) and Sodium Hydroxide Solution are also required but are not supplied due to hazardous shipping restrictions. Please source locally.

105212 Single Perspiration Test Unit to determine color fastness 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. An electric incubator is required.

105214 Weight 3.63 kg (8 lb) for AATCC Tests
 105214 Additional weight 0.47 kg (1 lb) for ISO Tests



105212 Single Perspiration Test Unit



105214 weight set for AATCC and ISO tests

STANDARDS	DIN 54005	BS 1006	AATCC 15,106,107
	ISO105 E01/E02/E04	DIN EN ISO105 E01/E02/E04	
	M&S C6, C7	Next TM4	

ORDERING Info.	105212	Perspiration Tester (Single Unit)
	105214	Weight set for AATCC and ISO tests
	105215	Acrylic Plates (Pack of 42)
	202683	Set of chemicals for AATCC and ISO perspiration tests, consisting of : 500g Sodium Chloride 500g Sodium Dihydrogen Orthophosphate 2H ² O 500g Di-Sodium Hydrogen Orthophosphate 2H ² O 200g L-Histidine Monohydrochloride Lactic Acid (USP 85) and Sodium Hydroxide Solution are also required but are not supplied due to hazardous shipping restrictions. Please source locally.
	G209A	Oven/Incubator 33 liters
	G209B	Oven/Incubator 120 liters

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 150mm below the nozzle. The appearance of the specimen is compared against an optional photographic scale.

Optional Photographic Rating Chart. (AATCC).

WEIGHT	5 kg	11 lb	
DIMENSIONS	Width	Depth	Height
	230 mm	250 mm	500 mm
	9 inch	10 inch	20 inch
STANDARDS	ISO 4920	BS EN 24920	BS 3702
AATCC 22	GB/T 4745	M & S P23	NEXT 23

ORDERING Info.	105346	Spray Rating Tester
	202150	Photographic Rating Chart (AATCC)
	102528	Spare nozzle and rubber sleeve



M233B

AutoFlamm

To determine the flammability resistance of vertically oriented fabrics and soft fabric toys. Automatic model with motor operated gas burner and micro switch operated trip threads. Provided with remote touchscreen controller and software. Data analysis, preparation, storage and reports. Different accessories, burners and configurations are required for different standards. Please specify standard(s) required.

M233B: Items included are:

- Flammability tester including main frame, remote touchscreen controller and software.
- 6 pin frames with accompanying templates for all applicable standards
- Filter paper holder
- 2 burners
- 1 pack of marker thread

100466 : Items included are:

- Radiator assembly
- 1 pack of filter papers for use with BS EN 13772

100475 Filter papers for EN ISO 13772, BS EN 15025, BS EN

1102 - 560mm x 560mm x 68 g/m² x 0.16mm thick, quantity 100

100476 Filter papers for BS EN 1103 460mm x 570mm x 96 g/m² x 0.205mm thick, quantity 100

100477 47 Tex white mercerized cotton marker thread quantity 5000m

M233A/12 White plain weave bleached cotton ignition fabric 170 g/m² .1 metre x 1 metre for EN 13772

M233A/13 Calibration kit for EN 13772

100467 pin frame and template for BS EN 1101, BS EN ISO 6940: 1995

100468 pin frame and template for BS EN 6941: 1995, BS EN 6941: 2003, BS EN 1102, BS EN 1103.

100469 pin frame and template for BS EN ISO 6940: 1995, BS EN ISO 6940: 2004, BS EN 1101: 1995

100470 pin frame and template for BS EN 532, BS EN ISO 15025: 2002, BS 5438: 1989

100471 pin frame and template for BS 5438: 1976 test 1 and 2

100472 pin frame and template for BS 5438: 1976 Test 3

100474 Burner for BS EN 13772, BS EN 5438: 1989, BS EN 532, BS EN 15025, BS EN ISO 6940:1984,

BS EN ISO 6940: 1995, BS EN ISO 6941: 1995, BS EN ISO 6941: 2003, BS EN 1101, BS EN 1102, BS EN 1103

100473 Burner for BS 5438: 1976



Standard	Test Frame	Filter paper	Marker thread	Radiator Assembly	Burner	Gas Used
BS EN 13772: 2003	100467	100475	100477	100466	100474	Propane
BS 5438: 1976 test 1 and 2	100471				100473	Butane
BS 5438:1976 Test 3	100472		100477		100473	Butane
BS 5438: 1989 test 2	100470				100474	Butane
BS EN 532: 1994	100470					Propane
BS EN 15025: 2002	100470	100475			100474	Propane or Butane or mixture of both
BS EN ISO 6940: 1995	100469				100474	Propane or Butane
BS EN ISO 6940:2004	100469				100474	Propane or Butane or mixture of both
BS EN ISO 6941: 1995	100468		100477		100474	Propane or Butane
BS EN ISO 6941: 2003	100468		100477		100474	Propane or Butane or mixture of both
BS EN 1101: 1995	100467				100474	Propane
	100469					
BS EN 1102: 1995	100468	100475	100477		100474	Propane
BS EN 1103: 1995	100468	100476	100477			Propane

WEIGHT	100 kg	221 lb	
DIMENSIONS	Width	Depth	Height
	560 mm	650 mm	1250 mm
	22 inch	26 inch	49 inch
STANDARDS	BS 5438(Test 2A,2B(1989));5438(Test 1,2,3(1976));5722/5867-2/6341		
	BS EN 532(1101/1102/1103/13772)	BS EN ISO 6940/6941/15025	GB/T 5456/8746
ORDERING Info.	M233B	Flammability Tester (AutoFlamm)	
	100466	Optional radiator assembly to BS EN 13772: 2003	

M233F

Atlas HMV Horizontal Flammability Tester

To determine the comparative burn rates and burn resistance of textiles, particularly those for automotive interior use. Comprises 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.



WEIGHT	11 kg	23 lb		
DIMENSIONS	Width	Depth	Height	
	390 mm	200 mm	390 mm	
	15 inch	8 inch	15 inch	
STANDARDS	BS AU 1690	FMVSS 302	JIS D 1201	
	SAE J369	ASTM D5132		
ORDERING Info.	M233F	Horizontal Flammability Tester		
	M233F1	Automatic Gas Control System		
	200242	Manual Gas Control System		



M233G

AFC 45° Automatic Flammability Tester

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.

WEIGHT	27 kg	60 lb	
DIMENSIONS	Width	Depth	Height
	420 mm	260 mm	526 mm
	17 inch	11 inch	21 inch
STANDARDS	ASTM D1230	FTMS 191-5908	CFR 16-1610
	CALIF TB 117	NFPA 702	GB/T 14644
ORDERING Info.	M233G	45° Automatic Flammability Tester	
	103805	Brushing Device and Brush	
	103800	Burner (Pack of 5)	
	103806	Sample Holder (Pack of 5)	



M233HVU

Atlas HVUL2 Horizontal Vertical Flame Chamber

For the flammability testing of plastic materials used in consumer electric 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 (>0.75m³), 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

WEIGHT	163 kg	360 lb		
DIMENSIONS	Width	Depth	Height	
	Exterior	1220 mm	610 mm	1400 mm
		48 inch	24 inch	55 inch
Interior	1220 mm	600 mm	1120 mm	
	48 inch	23.5 inch	44 inch	
STANDARDS	IEC 60707/60695 PART 11-10 & PART 11-20		ISO 9772.3/9773	
	UL 94	ASTM D 635/3801/4804/4986/5048		



ORDERING INFORMATION

M233HVU HVUL2 Horizontal Vertical Flame Chamber

M233M

Vertical Flammability Chamber

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 observation 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.



WEIGHT	38 kg	85 lb	
DIMENSIONS	Width	Depth	Height
	330 mm	360 mm	836 mm
	13 inch	13.5 inch	33 inch
STANDARDS	ASTM D6413	16 CFR Parts 1615 & 1616	
	CALIF TB-117	FTMS 191-5903	GB/T 5455
	ORDERING Info.	M233M	Vertical Flammability Chamber
	M233F1	Automatic Gas Control System	
	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)	

M233P1

Flammability Test Rig (Upholstery) to EU Standards

For determining the ignitability of material combinations for upholstered seating. The test rigs are covered with the standard foam and the 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.



WEIGHT	18 kg	40 lb	
DIMENSIONS	Width	Depth	Height
	450 mm	300 mm	450 mm
	18 inch	12 inch	18 inch
STANDARDS	BS 5852 PARTS 1 AND 2		
	ISO 8191 PARTS 1 AND 2		
	EN 1021 PARTS 1 and 2		
ORDERING Info.	104025	Flammability Test Rig (Upholstery) EU Standards	
	104021	Number 4 wooden crib (pack of 10)	
	104022	Number 5 wooden crib (pack of 10)	
	104023	Number 6 wooden crib (pack of 10)	
	104024	Number 7 wooden crib (pack of 10)	
	104020	Burner Tube	
	104019	Cutting Templates	
	201012	450 x 450 x 75mm low density foam ref VP45 (pack of 50)	
	201011	450 x 300 x 75mm low density foam ref VP45 (pack of 50)	
	300954	450 x 150 x 75mm low density foam ref VP45 (pack of 50)	
	300955	450 x 305 x 75mm medium density foam VP60 (pack of 50)	
	300956	450 x 150 x 75mm medium density foam VP60 (pack of 50)	
	300957	432 x 445 x 75mm medium density foam VP60 (pack of 50)	
	201010	450 x 300 x 75mm high density foam CM25H (pack of 50)	
	202640	450 x 150 x 75mm high density foam CM25H (pack of 50)	
201009	450 x 450 x 75mm high density foam CM25H (pack of 50)		

M235

Martindale Abrasion and Pilling Testers

To determine the abrasion and pilling resistance of all kinds of textile structures. Samples are rubbed against known abrasives at low pressures and in continuously changing directions and the amount of abrasion or pilling is compared against standard parameters. The unique design allows removal of individual sample holders for examination without lifting the top motion plate. Provided with unique programmer which includes preprogrammable batch and totaliser counters, individual station counters, 4 position parking function, 4 selectable test speeds with liquid crystal display. User interface available in multiple languages including English, Chinese, Spanish and Turkish. Standard sample holders, 9,12kpa weights are included. For other configurations and supplies, see below.

Available with 4, 6, 8 or 9 test positions and enhancement kits to convert 6 position tester to 7, 8 or 9 positions, 8 position tester to 9 positions.

Pilling Test Accessories. (To ISO 12945-2)

Test Specimen Cutter. (38mm diameter/12cm²) with cutting mat and 12 spare blades.

Abradent Fabric & Backing Felt Cutter. (140mm diameter/154cm²) with cutting mat and 12 spare blades.

Linear adaptor. To convert to straight-line motion.

Standard Abradent Fabric SM25. 1.6M wide x 5M length

Upholstery Abradent Fabric SM25 BUP. 1.6M wide x 5M length

Standard Backing Foam. Width 1.5M, Length 0.5M. Pack of 4)

Standard Backing Felt Discs (woven) - 140mm diameter. (Pack of 20),

BS 5690/1991 + PR, EN, ISO 12947 - 1,750 ± 50gm/m² x approx. 2.5mm thick.

Standard Backing Felt Piece (woven) - 1m x 1.5m.

Standard Backing Felt Discs, 90mm diameter for Pilling Test (Pack of 20)

Sample Retaining Rings for pilling test (Pack of 20)

EMPA Photographic Standards for Pilling Test (3 x 4 knitted)

EMPA Photographic Standards for Pilling Test (3 x 4 woven)

SM 50 Photographs for Pilling Test IWS + ASTM.

4 Sets 1-5 (Plain, Twill A, Twill B, Blanket)

Standard Abrasing Sheets Type F2 (230 x 280mm) for abrasion test on protective gloves (Pack of 50)

Silicon Carbide Cloth Sheets (P180G) 230 x 280mm for abrasion test on coated fabrics (Pack of 25)

Sock Abrasion Attachment Complete (per position)

Trizact synthetic abrasion discs - 35microns (pack of 25)

Trizact synthetic abrasion discs - 5microns (pack of 25)

WEIGHT (For 6 position)	120 kg	264 lb	
DIMENSIONS	Width 740 mm 29 inch	Depth 600 mm 25inch	Height 350 mm 14 inch
STANDARDS	BS 3424-24/5690	BS EN ISO 12945-2/12947-1/12947-2	
M&S P17/P19/P19C	NEXT 18/18a/18b	ISO 5470-2	IWTO-40
JIS L 1096		Woolmark TM 112/196	
GB/T 21196/4802.2		BS EN 388/530/13770	
ASTM D4966 / D4970		ISO 20344	Adidas TM 4.30



M235/9A 9 Position Martindale(Touch Screen)



M235-4 position entry level model

ORDERING INFORMATION

M235	4 Position Martindale
M235/3	6 Position Martindale
M235/8	8 Position Martindale
M235/9A	9 Position Martindale (Touch Screen)
105150	12 KPA Weight (each)
105148	ISO Pilling test Accessories (single position)
105154	ISO Pilling Test Accessories (4 position)
105155	ISO Pilling Test Accessories (6 position)
105156	ISO Pilling Test Accessories (8 position)
105157	ISO Pilling Test Accessories (9 position)
105149	Enhancement kit (Adds one extra abrasion test position for 6 or 8 position testers)
103911	38mm Dia-Cutter
103916	140mm Dia-Cutter
202342	SM25 UP Selected Abradent Fabric
201017	SM25 Abradent Fabric
200910	Felt Discs 90mm Diameter
105136	Sample Retaining Rings
201016	EMPA Photographs Knitted
201015	EMPA Photographs Woven
201013	SM 50 Photographs 4 Sets
200972	Backing Foam
200971	Felt Discs (woven)140mm Diameter
200947	Felt Piece (woven) 1m x 1.42m
200944	Standard Abrasion Sheets F2
200943	Silicon Carbide Sheets P180G
105151	Sock Abrasion Attachment (per position)
201077	Trizact Synthetic Abrasion Discs - 5inch (125mm diameter) 35 Microns Self-adhesive. For controlled abrasion on Martindale Tester for synthetic fabrics - (pack of 25 green)
203289	Trizact Synthetic Abrasion Discs - 5inch (125mm diameter) 5 Microns Self-adhesive. For controlled abrasion on Martindale Tester for synthetic fabrics - (pack of 25 orange)

The Circular Locus Tester M235P swiftly tests surface deterioration and quality of fabrics (wool, chemical fiber, mixed, knitted 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+/-1 r/min. The grip offers pressure to the specimen which is adjustable with a tolerance of +/-1%. For added control and safety, the machine is equipped with a self-stop switch. The Circular Locus Tester can perform standards JIG 040-1990 and GB/T 4802.1-1997.



WEIGHT (M236A)	30kg	66lb
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DIMENSIONS (M236A)	Width	Depth	Height
	500 mm 20 inch	330 mm 13 inch	370 mm 15 inch

ORDERING Info.	105200	The Circular Locus Tester
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STANDARDS	JIG 040-1990	GB/T 4802.1-1997
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M236

Fabric Sample Cutters

Manual sample cutting set consists of a graduated cutting mat 60x45 cm, the yellow rotary sample cutter with one spare blade and a straight knife with snap-off blade and one spare blade.

- 103901 The base model cutter 100cm² x 5mm depth, also used with Yield system M236/1, Uses spare blades 103915
- 103913 10cm² x 5mm, Uses blades M236I (thinner blade to wrap around smaller diameter)
- 103914 50cm² x 5mm, Uses blades M236I
- 103908 100cm² x 10mm depth to cut through thicker structures like carpets and felts, Uses blades M236G which are longer for the extra depth.
- 103911 38mm dia x 5mm depth for martindale test sample and backing foam cutting, Uses blades M236I
- 103916 140mm dia x 5mm depth for martindale abradent fabric and backing felt cutting, also under M235, Uses blades 103915

Each cutter is supplied with 12 spare blades and 1 cutting pad.
All spare blades are supplied in packs of 100, no exceptions.
103899 Spare cutting pads are always supplied in packs of 10 and work for all circular cutters
M236/SB Spare circular blades



WEIGHT (M236A)	2 kg	4.4 lb	
DIMENSIONS (M236A)	Width	Depth	Height
	160 mm 6.5 inch	160 mm 6.5 inch	110 mm 4.5 inch
ORDERING Info.	As above		

M236/1-2

Fabric Yield Package

M236/1 Combines a circular sample cutter M236A 100cm² x 5mm depth of cut, cutting pad + 12 spare blades, with a programmed battery-operated electronic balance to provide an accurate, portable system for determining fabric yield in g/m² and oz/yd². A sample of 100cm² is cut and placed on the scale which is switchable from g/m² to oz/yd².

M236/2 Combines a universal manual lever sample press with 68.53mm (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/m² and oz/yd². 8 samples are cut across the fabric width and placed on the scale which is switchable from g/m² to oz/yd².



M236/1



M236/2

WEIGHT	8 kg	18 lb	
DIMENSIONS	Width	Depth	Height
	200 mm 8 inch	200 mm 8 inch	200 mm 8 inch
STANDARDS	ASTM D3776/2646	ISO 3801	BS 3424/2471
	BS EN 12127	M&S P65/65A (for M236/1)	NEXT 20 (for M236/1)
ORDERING Info.	M236/1	Fabric Yield Package (1 Sample)	
	M236/2	Fabric Yield Package (8 Samples)	
	103915	Spare Blades For M236/1 (Pack of 100)	
	103899	Spare cutting pads are always supplied in packs of 10 and work for all circular cutters	
	201110	Replacement Die for M236/2	
	201140	Cutting Pads for M236/2 (Pack of 100)	

M236/5

Pneumatic Sample Press

Heavy duty table top press with 125mm (5in) bore air cylinder, 50mm (2 in) cutting depth and 125 x 125mm (5 x 5 in) cutting table. Pneumatic activation at 100 PSI (7 Bars) produces 887 kg (1950 lb) of cutting force. Provided with automatic sample ejection and safety 2 button operation. Dies not included, 100 cutting pads included, special shape dies available on application. Laboratory standard compressed air supply required.



WEIGHT	41 kg	90 lb	
DIMENSIONS	Width	Depth	Height
	450 mm	480 mm	450 mm
	18 inch	19 inch	18 inch
STANDARDS	ASTM D3776/2646	ISO 3801	BS 3424/2471
	BS EN 12127	M&S P65/65A	
ORDERING Info.	300993	Pneumatic Sample Press	
	300994	Circular Die 100cm ² (113mm/4.44 in dia) for European Fabric Yield System	
	201110	Circular Die 68.53mm (2.698 in) dia for U.S. Fabric Yield System	
	300995	Cutting Pads for M236/5	
	G265	Silent Laboratory Compressor (Optional) Larger capacities available on request	

M237

Light Fastness Testers (Mercury-Tungsten Lamp)

To determine the color fastness 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 or E 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 or E sample holders.



WEIGHT	23 kg	51 lb	
DIMENSIONS	Width	Depth	Height
	410 mm	480 mm	480 mm
	18 inch	19 inch	19 inch
STANDARDS	BS 1006 UK/TN		
ORDERING Info.	M237	Light Fastness Tester (Standard)	
	M237A	Light Fastness Tester (Rapid Fade)	
	104611	Cylindrical Cell (50 per pack)	
	104612	Water-Cooled Cell	
	104936	Spare Lamp (Standard)	
	105664	Spare Lamp (Rapid Fade)	
300267	Light Fastness Standards		

For accelerated lightfastness and photostability testing.

CPS (Basic) Tabletop Xenon Arc system. Equipped with operating hour meter, 1500 Watt air-cooled xenon lamp, controlled power system to measure and control irradiance between 300 and 800 nm, and adjustable irradiance via manual control knob. Exposure area 560 cm². Special optical filters simulate various spectral test conditions.

CPS+ (Enhanced) Tabletop Xenon Arc system features microprocessor control for programming cycles and end point, LCD display, 1500 Watt air-cooled xenon lamp, control and display of irradiance value between 250 and 765 W/m² measured at 300-800nm, control and display of Black Standard temperature, Stores 6 pre-programmed 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 cm². Special optical filters simulate various spectral test conditions.



ORDERING INFORMATION

- M237H Suntest CPS Xenon Arc Tester
- M237HE Suntest CPS+ Xenon Arc Tester
- M237J Spare Xenon Arc Lamp 1500W
- M237K Spare Air Filters (Pack of 10)
- M237P Black panel temperature sensor
- M237Q Flooding system for testing the weather resistance of materials by cyclic sample immersion throughout test program (For CPS+ Model Only)

- M237S UV filter 290nm
- M237W Windows Glass Filter, 310nm

WEIGHT	29 kg	64 lb		
DIMENSIONS	Width	Depth	Height	
	780 mm	350 mm	350 mm	
	31 inch	14 inch	14 inch	

For accelerated lightfastness and photostability testing with larger exposure area.

XLS (Basic) Tabletop Xenon Arc system. Equipped with operating hour meter, 2200 Watt air-cooled xenon lamp, controlled power system and infinitely variable irradiance between 300 and 800 nm via manual control knob. Exposure area 980 cm². Special optical filters simulate various spectral test conditions.

XLS+ (Enhanced) Tabletop Xenon Arc system. Features microprocessor control for programming cycles and end point, LCD display, 2200 Watt air-cooled xenon lamp, control and display of irradiance value between 250 and 765 W/m² measured at 300-800nm, display of Black Standard temperature, Stores 6 pre-programmed 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 980 cm². Special optical filters simulate various spectral test conditions.



WEIGHT	80 kg	176 lb	
DIMENSIONS	Width	Depth	Height
	930 mm	500 mm	485 mm
	36.5 inch	19.5 inch	19 inch
ORDERING Info.	M237XLS	Suntest XLS (Basic) Xenon Arc Tester	
	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 290nm	
M237WX	Windows Glass Filter, 310nm		

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 user-defined tests
- Direct setting and control of irradiance, black 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 cm² (339 in²)

Requires water source, both Deionized and Tap, and compressed air source – 0.11 m³/min (4 ft³/min) @ 550 kPa (80 psi).

Options include six channel chart recorder, dual ASTM BPT black panel and DIN B5T black standard temperature control, monitoring of second wavelength, LiquiAir™ xenon lamp cooling system and CE compliance package.



ORDERING INFORMATION

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

WEIGHT	404 kg	890 lb	
DIMENSIONS	Width	Depth	Height
	950 mm	840 mm	1830 mm
	37.5 inch	33 inch	72 inch
STANDARDS FADEOMETER	AATCC 16E	ISO 105 B02/B06	JASO M346
	PSA D 47 1431	ASTM G 155-CYCLE 4	
STANDARDS WEATHEROMETER	AATCC 16E	ISO 105 B02/B06	JASO M346
	PSA D 47 1431	ASTM G 155-CYCLE 4	ISO 105 B04

Within the Atlas Xenotest series, the 220 model is regarded as the textile testing specialist, meeting all common textile standards. The Xenotest 440 model'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+

- 2310cm² exposure area; 1x2200W air-cooled xenon lamp
- LCD display and key pad control (220)
- Full color multiple language touch screen user interface with online networking features (220+)
- Pre-programmed textile standards
- Rotating specimen rack with 38 test positions 13.5cm x 4.5cm
- Radio-controlled on-rack light and BST monitor XENOSENSIV®
- Automatic control of irradiance, Black Standard Temperature (BST), Chamber Temperature (CHT), and relative humidity (rH)
- Ultrasonic humidifier with 60 litre integrated water reservoir
- Specimen spray option

Xenotest® 440

- 2310cm² exposure area; 2x2200W air-cooled xenon lamps
- Full color multiple language touch screen user interface with online networking features
- Pre-programmed lightfastness and weathering standards
- Rotating specimen rack with 38 positions (13.5 cm x 4.5 cm) 33 (10.0 cm x 6.8 cm), 22 (13.5 cm x 5.5 cm), 11 (29.5 cm x 7.0 cm)
- Radio-controlled on-rack light and BST monitor XENOSENSIV®
- Automatic control of irradiance, Black Standard Temperature (BST), Chamber Temperature (CHT), and relative humidity (rH)
- Ultrasonic humidifier with 60 litre integrated water reservoir
- Specimen spray
- XenoLogic™ lamp operating technology
- High irradiance up to 120W/m² (300-400nm)



Xenotest 220/220+

WEIGHT	280 kg	619 lb	
DIMENSIONS	Width	Depth	Height
	900 mm	780 mm	1800 mm
	36 inch	31 inch	72 inch
STANDARDS	ISO 105-B02, -B04	GB/T 8427	M&S C8, C9A
	AATCC TM 16.1-2012(option 3), TM 169(option 2&3)		

Xenotest 440

WEIGHT	290 kg	641 lb	
DIMENSIONS	Width	Depth	Height
	900 mm	780 mm	1800 mm
	36 inch	31 inch	72 inch
STANDARDS	ISO 105-B02, -B04, -B06, -B10, 4892-2, 11341, 16474-2		
	GB/T 8427	VDA 75202	ASTM G151, G155, D2565
	AATCC TM 16.1-2012(option 1,2,3), TM 169(option 2&3)		

ORDERING Info.

- 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

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/m²) 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-ageing XENOCHROME filter system
- 11 specimen holders
- Selectable turning and non-turning mode
- Max. sample capacity: approx. 1320 cm² (205 in²)
- Serial RS232 interface (RS485 by request)

Requires lab airconditioning (max. 200 m³/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.



WEIGHT	280 kg	616 lb	
DIMENSIONS	Width	Depth	Height
	900 mm	780 mm	1800 mm
	36 inch	31 inch	72 inch
STANDARDS	AATCC Method 16, Option H		M&S C9/C9A
	ISO 105 B02/B04/B06		
ORDERING Info.	M237X	Xenotest® Alpha	
	M237X-A	XenoCal BB (300-400 nm) 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	

M238AA

Crockmeter/Rubbing Fastness Tester

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



WEIGHT	6 kg	13 lb	
DIMENSIONS	Width	Depth	Height
	160 mm 6.5 inch	600 mm 24 inch	215 mm 8.5 inch
STANDARDS	AATCC 8/165	ASTM F1319	GB/T 3920
	ISO 105 D02/X12	JIS L0849	M&S C8/C8A
ORDERING Info.	M238AA	Crockmeter/Rubbing Fastness Tester	
	301058	Pre-Cut Crocking Cloths, 50 x 50mm (Pack of 500) AATCC/ISO Standards	
	201185	Pre-Cut Crocking Cloths, 50 x 50mm (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 OR	
202161	Grey Scale (Staining) AATCC Standards		

M238BB

Electronic Crockmeter

To determine the color fastness of textiles to dry or wet rubbing. Motorised for frequent use and long run tests, fitted with digital electronic pre-settable counter for strokes up to 1000.

WEIGHT	9.5 kg	21lb		
DIMENSIONS	Width	Depth	Height	
	225 mm	600 mm	270 mm	
	9 inch	24 inch	11 inch	
STANDARDS	AATCC 8/165	ASTM F1319	GB/T 3920	
	ISO 105 D02/X12	JIS L0849	M&S C8/C8A	
	ORDERING Info.	M238BB	Electronic Crockmeter	
		301058	Pre-Cut Crocking Cloths, 50 x 50mm (Pack of 500) AATCC/ISO Standards	
	201185	Pre-Cut Crocking Cloths, 50 x 50mm (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 <i>OR</i>		
	202161	Grey Scale (Staining) AATCC Standards		



M238E

Rotary Crockmeter

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

WEIGHT	5.5 kg	12 lb	
DIMENSIONS	Width	Depth	Height
	250 mm	150 mm	250 mm
	10 inch	6 inch	10 inch
STANDARDS	AATCC 116	ISO 105 X16	
	ORDERING Info.	M238E	Rotary Crockmeter
	301058	Pre-Cut Crocking Cloths, 50 x 50mm (Pack of 500) AATCC/ISO Standards	
	201185	Pre-Cut Crocking Cloths, 50mm x 50mm SDC	
	103871	Crockmeter Calibration Fabric (Pack of 25)	
	103872	Emery Paper for Crockmeter (Pack of 25 Sheets)	
	201194	Grey Scale (Staining) ISO/BS Standards <i>OR</i>	
	202161	Grey Scale (Staining) AATCC Standards	



M238G

Colorfastness/Rubbing (Gakushin) Tester

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



WEIGHT	68 kg	150 lb		
DIMENSIONS	Width	Depth	Height	
	225 mm	600 mm	270 mm	
	9 inch	24 inch	11 inch	
STANDARDS	JIS 10801, 0849, 0862, 1084			
	TR 369 B	NES M 0155		
ORDERING Info.	M238G	Colorfastness/Rubbing (Gakushin) Tester		

M240C-M

Magnifying Piece Glasses/Pick Counters

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

- 201045 4" / 100mm - Dual scale with traversing lens and pointer
- 200904 1" x 1" Square aperture, folding metal construction
- 202756 25 x 25mm square aperture, folding metal construction
- 202773 10 x 10mm square aperture, folding metal construction
- 200921 25 x 25mm 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)



STANDARDS	ISO 7211	BS EN 1049	ASTM D3775
	IWTO 39-87		
ORDERING Info.	As above		

M240N-R

Calibrated Steel Rulers

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"/300mm, 24"/600mm and 39"/1000mm lengths with metric and imperial markings. Flexible Steel tape measure 117"/3000mm with ISO 17025 Calibration Certificate.



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

M240X

Automatic Pick Counter

For fast, convenient and accurate determination of the thread density of woven fabrics and loop density of knitted fabrics.

Suitable for laboratory and mobile applications in the production environment. Instrument 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. Accuracy range, 8-300/cm, is $\pm 1\%$ of displayed value, under 8cm is determined by range multiplication. Operates through reflection of the test specimen onto a linear CCD array controlled by a microprocessor with LCD display. Test length is 29 mm (1.1 in). Two AA batteries last for approximately 2000 tests. Includes calibration check plate and RS 232 data port.

May be mounted on optional Stand.



ORDERING INFORMATION

201075	Automatic Handheld Pick Counter
200987	Stand
200986	Alignment Aid
200985	Power Adapter

WEIGHT	200 g	2.2 lb	
DIMENSIONS	Width	Depth	Height
	66 mm	32 mm	128 mm
	2.6 inch	1.25 inch	5 inch

M242

Fabric Streak Analyzer

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 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.



WEIGHT	27 kg	59 lb	
DIMENSIONS	Width	Depth	Height
	380mm	460mm	200mm
	15 inch	18 inch	8 inch
ORDERING Info.	M242	Fabric Streak Analyzer	
	202350	Clear Polystyrene Film (Pack of 100)	

M247

Scorch/Sublimation Testers

To determine color fastness and shrinkage to hot pressing and dry heat and to conduct sublimation tests. Providing controlled conditions of dry heat and pressure with top and bottom heated surfaces, electronic temperature controller and carefully controlled top plate weight. Temperature range 120 - 230°C.

Tester with 1 pair of plates 4" x 1.13" (102 x 29mm)

Tester with 1 pair of plates 5" x 5" (125 x 125mm)

Temperature of top and bottom plates individually controlled.



WEIGHT	M247A	9 kg	20 lb	
	M247B	17 kg	37 lb	
DIMENSIONS	M247A	Width	Depth	Height
		200 mm	275 mm	250 mm
	M247B	8 inch	11 inch	10 inch
STANDARDS	ISO 105	BS 1006	AATCC/ISO (Only for M247A)	
			DIN	
	ORDERING Info.	M247A	Scorch/Sublimation Tester (Pair Plates 4" x 1.13")	
	M247B	Scorch/Sublimation Tester (Pair Plates 5" x 5")		

M249

AATCC Accelerator

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 abrasion 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 + Spencer Tests (Accredited Suppliers only).



WEIGHT	15 kg	34 lb	
DIMENSIONS	Width	Depth	Height
	200 mm	450 mm	250 mm
	8 inch	18 inch	10 inch
STANDARDS	AATCC 93	M&S P26	
ORDERING Info.	M249	AATCC Accelerator	
	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	
	200948	Impeller, ASTM & AATCC	
	201019	Impeller, M+S	

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 250mm and to read shrinkage directly in percentage after testing.



WEIGHT	45 kg	98 lb	
DIMENSIONS	Width	Depth	Height
	400 mm	600 mm	300 mm
	16 inch	24 inch	12 inch
STANDARDS	ISO 3005	BS 4323	M&S P8
	NEXT TM 15		
ORDERING Info.	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)	

M258A-D

Portable Thickness Gauges

Model J50, 10mm x 0.01mm measuring range, 50mm throat depth, 30mm diameter flat anvils

Model J100, 10mm x 0.01mm measuring range x 100mm throat depth, 30mm diameter flat anvils

Model J200, 10mm x 0.01mm measuring range x 200mm throat depth, 30mm diameter flat anvils

Model J200/30, 30mm x 0.01mm measuring range x 200mm throat depth x 30mm diameter flat anvils



ORDERING Info.	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

M259B

Sweating Guarded Hotplate (Skin Model)

Simulates the heat and mass transfer processes which occur next to human skin.

Measurement of thermal resistance and water vapour resistance under steady state conditions of a range of products including fabrics, films, coatings, foams and leather including multi-layer assemblies.

PRINCIPLES

The specimen to be tested is placed on an electronically heated porous plate with conditioned air ducted to flow across and parallel to its upper surface.

INSTALLATION

The instrument includes the test enclosure into which is constructed the measuring unit and thermal guard, and in which the ambient air temperature, air speed and relative humidity are controlled. However the entire system must be operated in conditions conforming to ISO 139:2005 Textiles-Standard Atmospheres for Conditioning and Testing.

Utilities Required

Requires 20 amp single phase electrical supply

Supply of triple distilled water (not plumbed)

·Thermal resistance (Rct) test range: 0.002-2.0 m².K/W

·Vapour resistance (Ret) test range: 5-1000 m².Pa/W

·Max. Test specimen sizes: 520mm x 520mm for specimen thickness <5mm
420 mm x 420 mm for specimen thickness from 5-70mm

·Hotplate: 3mm porous bronze plate 250mm x 250mm

·Hotplate temperature control at 35°C ±0.1°C

·Thermal Guard temperature control at 35°C ±0.1°C

Enclosure:

- Conditioned air flows parallel to Hotplate and Thermal Guard

- Air duct height: 55mm ±3mm above the working platform

- Air temperature range 18°C-40°C ±0.1°C

- Relative Humidity 30-70% ±3%

- Air Temperature accuracy during test ±0.5°C for thermal resistance and vapour resistance < 0.5m².K/W and 100m².Pa/W

- Air flow speed: 1±0.05m/s, measured 15mm above the working platform at 20°C air temperature

- Supplied with laptop computer, USB connection cable and M259B software disc

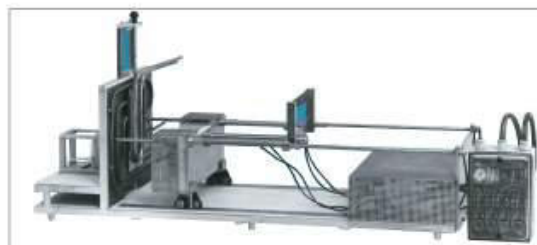


WEIGHT	500 kg	1090 lb	
DIMENSIONS	Width	Depth	Height
	1260 mm	950 mm	1800 mm
	49.6 inch	37.4inch	70.8 inch
STANDARDS	ISO 11092	ASTM F1868	
	GB/T 11048		
ORDERING Info.	M259B	Sweating Guarded Hotplate	
	M259B1	540mmX540mm Cellophane Sheets(250)	
	105279	Set of Calibration Foams	
	301101	Installation, Set-up, Operator Training	
	S259B08	Calibration Standard	

Protective Clothing

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.

X637B. Protective clothing equipment to evaluate the behaviour 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.



X637B

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.



X1176

M261

Water Vapor Permeability Tester

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

WEIGHT	20 kg	44 lb	
DIMENSIONS	Width	Depth	Height
	1000 mm	450 mm	300 mm
	40 inch	18 inch	12 inch
STANDARDS	BS 7209	BS 3424-34	
ORDERING Info.	M261	Water Vapor Permeability Tester	
	200951	Standard Fabric 1000x1000mm	



M261P

PermaVape

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.



WEIGHT	20 kg	44 lb	
DIMENSIONS	Width	Depth	Height
	572 mm	450 mm	460 mm
	23 inch	18 inch	19 inch
STANDARDS	ISO 15496		
ORDERING Info.	M261P	PermaVape	
	107269	Membranes (pack of 50)	
	107078	Measuring Cup	
	107272	O-Ring (pack of 6)	

M262

Crumpleflex Tester

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 87° stretching alternately compressing the tube at the same time. After completion of the test the fabric is tested for resistance to penetration by water. Fitted with electronic predetermined counter with automatic stop at a predetermined number of cycles. Fitted with acrylic plastic interlock safety cover.



WEIGHT	50 kg	110 lb	
DIMENSIONS	Width	Depth	Height
	520 mm	270 mm	400 mm
	21 inch	11 inch	16 inch
STANDARDS	ISO 7854-1995	BS 3424.9	
ORDERING Info.	203010	Crumpleflex Tester	

M270

Taber Wear and Abrasion Testers

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 a pair of abrasive wheels. Supplied with a full range of auxiliary weights, specimen holders, abrasive wheels and vacuum unit, 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.



WEIGHT (Single Head)	20 kg	45 lb	
DIMENSIONS (Single Head)	Width	Depth	Height
	270 mm	400 mm	250 mm
	11 inch	16 inch	10 inch
STANDARDS	ISO 5470	ASTM 3884	
ORDERING Info.	200398	Taber Wear and Abrasion Tester	
	200399	Taber Dual Wear and Abrasion Tester	
	200854	Calibrase Wheels CS10	
	200853	Calibrade Wheels H18	
	200847	Refacing Discs S-11 (Pack of 100)	
	M270E	Specimen Plates S-16 (Pack of 50)	
	200846	Specimen Cards S-36 (Pack of 50)	
200397	Wheel Refacer		
301127	Sample Cutter		



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.

WEIGHT	9.5 kg	21 lb	
DIMENSIONS	Width	Depth	Height
	150 mm	150 mm	330 mm
	6 inch	6 inch	13 inch
STANDARDS	AATCC 128	ISO 9867	
ORDERING Info.	200979	AATCC Wrinkle Recovery Tester	
	202149	AATCC Wrinkle Recovery Tester Plastic Replicas (Set of 5)	

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

To determine the color fastness 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 temperature and in three ways:

Temperature is set according to the kind of fiber composing the specimen;
 1. Dry ironing 2. Humid ironing 3. Wet ironing

WEIGHT	10 kg	22 lb	
DIMENSIONS	Width	Depth	Height
	650 mm	510 mm	200 mm
	26 inch	20.5 inch	8 inch
STANDARDS	UNI EN ISO 105-X11		
ORDERING Info.	201092	Flat Bed Press	

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

The model B990 can be conveniently used to assess ironability of various fabrics. With certain modifications the Rotary Ironer is suitable for specific Marks & Spencer Plc test methods but in this form is restricted to accredited M & S suppliers.

WEIGHT	50 kg	110 lb	
DIMENSIONS	Width	Depth	Height
	1000 mm	420 mm	940 mm
	40 inch	17 inch	37.5 inch
STANDARDS	NEXT 24		
ORDERING Info.	200988	Miele Rotary Ironer	
	203921	Miele Rotary Ironer, M&S	



M278

Wyzenbeek Abrasion Tester

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 industry 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

WEIGHT	75 kg	165 lb		
DIMENSIONS	Width	Depth	Height	
	500 mm	500 mm	600 mm	
	20 inch	20 inch	24 inch	
STANDARDS	ASTM D4157			
ORDERING Info.	M278	Wyzenbeek Abrasion Tester		
	201128	Rubber pads (pack of 8)		
	201154	Wire mesh screens (pack of 4)		
	201098	Abradant Fabric #10 cotton duck 60" x 5yds		



M279AA-DD

Needle Detectors

201886 Conveyer Type Needle Detector. Free standing conveyorised 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 1.0mm ferrous sphere. The unit has a belt speed of approximately 25 to 30 metres per minute and an aperture size of 24" (700mm) width x 7" (175mm) height. In case of reject belt stop with audible alarm and signal light is activated. Full digital technology and control.

201922 Flat Bed Needle Detector. Detects broken needles in sewn items placed on the flat detecting surface.

201921 Portable Needle Detector. Finds exact position of needle contamination in rejected garments to allow recycling. LED/Audible warning.



201886 Conveyer Type Needle Detector



201922 Flat Bed Needle Detector

WEIGHT	300 kg	660lb		
DIMENSIONS	Width	Depth	Height	
	1500 mm	920 mm	950 mm	
	60 inch	36 inch	37 inch	
ORDERING Info.	201886	Conveyer Type Needle Detector		
	201922	Flat Bed Needle Detector		
	201921	Portable Needle Detector		
	201701	Calibration Kit - 1.0mm and 1.2mm diameter calibration cards and holder		



201921 Portable Needle Detector

M282

UWT Universal Wear Tester

Determines the wear and abrasion resistance of fabrics used in clothing, footwear and industrials.

Redesigned UWT features digital controls for accurate cycle counting and timing, improved air injection system for more uniform inflation of the diaphragm used in surface abrasion testing, and a superior clamping mechanism for repeatable specimen tensioning.

Tests are run in automatic mode to obtain definite results of high reproducibility and to lessen the need for operator evaluation of test results. The digital counter either counts the number of cycles to specimen rupture or can be preset for automatic shutoff without specimen failure. The user can select the timer mode for accurate countdown of test time while simultaneously counting the number of abrasion cycles.

Supplied with surface abrasion head (inflated diaphragm method and flex abrasion head), tension and head weights and initial supply of abrasives. Fitted with built-in timer and mechanical cycle counter. Repeatable and reproducible testing is ensured by consistent motor speed providing 120 double strokes per minute of 25 mm(1in) stroke length. Accessories are available for conducting frosting, pilling and edge abrasion tests.

Pilling tests utilize a special elastomeric pad attached to the specimen holder of the optional Frosting Attachment. The specimen is rubbed with a second elastomeric pad mounted on the upper head as the abradant.

Edge and fold abrasion tests expose the seam edge or fold of the specimen to the abradant by mounting the specimen in the optional Edge and Fold Abrasion Clamp.



ORDERING INFORMATION

M282	Universal Wear Tester
105692	Frosting Attachment
105693	Edge and Fold Abrasion Clamp
200257	Abradent "0" 50 yd roll
200255	Abradent "600A" 50 yd roll
200253	Abradent "320J" 50 yd roll
200241	Elastomeric Friction Pad, Base Pad
202135	3 sets of 5 Photographic Standards for ASTM D 3514

WEIGHT	102 kg	225 lb	
DIMENSIONS	Width	Depth	Height
	330 mm	500 mm	460 mm
	13 inch	19.5 inch	18 inch
STANDARDS	FTMS 191,5300,5302	AATCC 119,120	
FORD EFB 15J2/BN 112-01	ASTM D3514,D3885,D3886		

M287B

Ozone Exposure Chamber

Determine the resistance of the color of textiles to the presence of ozone in the atmosphere at room temperature with relative humidities not exceeding 67 percent. The instrument offers a high output ozone generator, touch screen controller, closed-loop ozone concentration control and a rotating sample rack that can hold up to 24 specimen. Easy set-up features allow both set and current test parameters to display on the screen, providing increased control and accuracy in test results. User interface available in multiple languages including English, Chinese, Spanish and Turkish.



WEIGHT	50 kg	110 lb	
DIMENSIONS	Width	Depth	Height
	780 mm	480 mm	500 mm
	31.2 inch	19.2 inch	20 inch
STANDARDS	AATCC 109	ISO 105-G03	
ORDERING Info.	M287B	Ozone Exposure Chamber plus	

M288

Fogging Test Chamber — Automotive

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. The 4-position chamber contains 4 x 400ml pyrex beakers, ground top and bottom, situated within individual heating blocks and subject to thermoelectric cooling. Trim samples are placed in the beakers under a retaining ring and the beakers are sealed with silicone seals and standardised glass plates clamped by a cover plate. The samples are subjected to accurate cycles of heating and cooling after which the fogging on the glass plates is assessed by use of a standard glossmeter. (Not included but available.)



WEIGHT	32 kg	70 lb	
DIMENSIONS	Width	Depth	Height
	480 mm	360 mm	250 mm
	19 inch	14 inch	10 inch

STANDARDS SAE J1756

ORDERING Info.	M288	Fogging Test Chamber - Automotive
	M288A	Standardised Glass Cover Plates 3mm Thick - (Pack of 144) Disposable (1 per Test)
	M288B	DIDP Reference Material - For Calibration (Pack of 12 x 11.4 gram vials) Disposable (1 per Calibration Weekly)
	D410B	'Minigloss' Portable Glossmeter with Battery Charger

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 inch) or other heights as required. Cracking, chipping or breakage constitute failure.



WEIGHT	4.1 kg	9 lb	
DIMENSIONS	Width	Depth	Height
	100 mm	155 mm	350 mm
	4 inch	6 inch	14 inch

STANDARDS ASTM D 5171

ORDERING Info.	201085	Button Impact Tester
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Fabric liquid moisture transport properties in multi-dimensions, called moisture management properties, influence the human perception of moisture sensations. To improve the comfort of today's clothing, especially in sportswear, it is important to know the liquid moisture management properties. Although some test methods exist for evaluating absorbency, wicking and strike-through time, existing standards are unable to measure the behavior of liquid transfer in clothing materials dynamically.

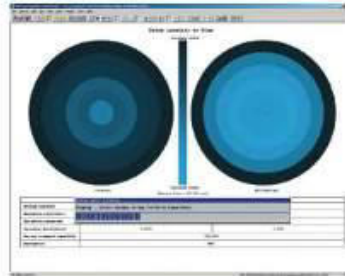
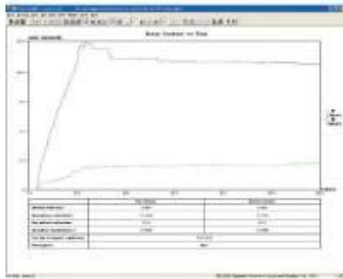
The Moisture Management Tester (MMT) was developed to measure dynamic liquid transport properties of knit and woven fabrics in three dimensions...

1. Absorption Rate - Moisture absorbing time of the fabric's inner and outer surfaces.
2. One-way Transportation Capability - One-way transfer from fabric's inner surface to outer surface.
3. Spreading/Drying Rate - Speed of liquid moisture spreading on fabric's inner and outer surfaces.

MMT consists of upper and lower concentric moisture sensors. The specimen is held flat under fixed pressure between the sensors while standard test solution is introduced on to the top surface of the fabric. Electrical resistance changes between the upper and lower sensors are then recorded dynamically on computer.

MMT permits the measurement of the following indexes:

- Wetting Time Top/Bottom (WTT/WTB)
- Absorption Rate Top/Bottom (TAR/BAR)
- Maximum Wetted Radius Top/Bottom (MWRT/MWRB)
- Spreading Speed Top/Bottom (TSS/BSS)
- Accumulative One-Way Transport Capacity (R)
- Overall Moisture Management Capacity (OMMC)



Sample No.	Time (min)	Water Uptake (g)	Wetted Radius (mm)	Spreading Speed (mm/min)	Accumulative One-Way Transport Capacity (R)	Overall Moisture Management Capacity (OMMC)
1.1	1.00	0.05	10.00	10.00	0.05	0.05
1.2	2.00	0.10	14.14	14.14	0.10	0.10
1.3	3.00	0.15	17.32	17.32	0.15	0.15
1.4	4.00	0.20	20.00	20.00	0.20	0.20
1.5	5.00	0.25	22.36	22.36	0.25	0.25
1.6	6.00	0.30	24.49	24.49	0.30	0.30
1.7	7.00	0.35	26.30	26.30	0.35	0.35
1.8	8.00	0.40	27.74	27.74	0.40	0.40
1.9	9.00	0.45	28.94	28.94	0.45	0.45
2.0	10.00	0.50	30.00	30.00	0.50	0.50

WEIGHT	4.7 kg	10.3 lb	
DIMENSIONS	Width	Depth	Height
	210 mm	320 mm	250 mm
	8 inch	13 inch	10 inch
STANDARDS	SN 1689.1	AATCC 195	
ORDERING Info.	M290	Moisture Management Tester	

M290DR

Drying Rate Tester

Determination of Drying Rate for Textile Fabrics. Drying rate of fabrics is an important measurement for many garment applications and especially for performance fabrics. The SDL Atlas Drying Rate Tester now gives retailers, fabric manufacturers, and textile additive producers a consistent method of measuring the drying rate of a fabric. This device can be used independently to find a drying rate or in conjunction with the SDL Atlas Moisture Management Tester (MMT) in order to obtain a more complete understanding of the moisture management properties of a performance fabric.

Principle

A 150mm x 150mm sample is placed in a sample holder. The sample holder can be positioned on the balance either vertically or horizontally as the user chooses. A backing plate is also supplied with the sample holder to allow one-sided drying.

Features

1. Digital balance with max capacity:210g and resolution: 0.0001g
2. Real time plot of "Dry Percentage vs Time" and "Sample weight vs Time"
3. Result calculation of "Dry Percentage" and "Dry Rate"
4. Communication protocol: TCP/IP, able to connect through local area network
5. Provision of 150 x 150mm sample rack, able to position upward or horizontally

Fabric developers now have available a reliable means of obtaining a drying rate of textiles. This important measurement supplements data that can be gathered from many of our other instruments designed to measure fabric comfort, such as the MMT, Air Permeability Tester, Hydrostatic Head Tester, and Sweating Guarded Hotplate. For more information on all SDL Atlas products, visit www.sdlatlas.com or contact a SDL Atlas solutions expert.



WEIGHT	0.21 kg	0.46 lb	
DIMENSIONS	Width	Depth	Height
	250mm	180mm	450mm
	10 inch	7.2 inch	18 inch
ORDERING Info.	M290DR	Drying Rate Tester	

M291

Gas Fume Chamber

To determine the colorfastness of textiles when exposed to atmospheric oxides of nitrogen derived from the combustion of gases. Includes testing cabinet, burning chamber, control chamber, viewing window, control panel, timer, temperature controller, main gas switch, fan and exhaust device.

WEIGHT	140 kg	309 lb	
DIMENSIONS	Width	Depth	Height
	780 mm	670 mm	1100mm
	31 inch	27 inch	44 inch
STANDARDS	AATCC 23	GB/T11039	
	BS EN ISO 105-G02		
ORDERING Info.	M291	Gas Fume Chamber	



M292

Dry Cleaning and Washing Cylinder

To determine color fastness to dry cleaning and chlorinated pool water, to prepare samples for flammability testing. Comprises stainless steel rotating test chamber of 7650ml capacity, variable speed drive with digital timer and displays.



WEIGHT	80 kg	176 lb	
DIMENSIONS	Width	Depth	Height
	720 mm	490 mm	620 mm
	28 inch	19 inch	24 inch

STANDARDS AATCC 162 16 CFR Part 1610

ORDERING Info. M292 Dry Cleaning Cylinder

M293

Fabric Touch Tester

The FTT is an innovative instrument capable of measuring the physical parameters associated with hand in a simple three minute test. These physical fabric properties include flexibility, compressibility, elasticity, resilience, density, surface contour (roughness, smoothness), surface friction and thermal character. In a single test, the FTT measures fabric thickness, compression, bending, shearing, surface friction and roughness, and thermal properties. The software takes all of this data and converts it into objective measurements and graphs. This information can be used to communicate hand requirements through the supply chain in a faster and objective method. Prior to the FTT, the only instrumented means of achieving these results was the Kawabata system which is expensive, very technical, and time consuming. The FTT now makes hand measurement available to all levels of the textile industry.



WEIGHT	85 kg	188 lb	
DIMENSIONS	Width	Depth	Height
	510 mm	598 mm	840 mm
	10 inch	12 inch	17 inch

ORDERING Info. M293 Fabric Touch Tester