



GLOBAL LEADER IN TEXTILES  
TESTING TECHNOLOGIES

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Roaches International - 2013 Catalogue

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# Welcome

## Introduction

Since 1974, Roaches International has been a professional research, designing and manufacturing company, providing cost effective laboratory solutions for textiles, particularly in the dyeing industry and the yarn, fabric and garment testing industries. Roaches International is now firmly established as one of the world's leading manufacturers and exporters of high quality laboratory dyeing and textile testing equipment. We have exported to more than 100 countries over the last 35 years. The credit for this success must be shared with our well established set up of Sales Agencies.

Many of the Roaches International machines are used as standards in the textile industry performing to BS, ISO, AATCC, ASTM, DIN and JIS standards. Not content on sitting back on our past successes we are constantly working with the textile manufacturers and retailers to develop even more reliable and quicker testing procedures.

## The Future

In addition to manufacturing our well established range of equipment we are open to working on new and custom-made products.

Recently we have developed a new range of PC-based, touch-screen controllers for our Pyrotec, Colortec and Phoenix laboratory dyeing machines. These controllers are capable of recording all the programme parameters of every batch produced and storing them for future reference. This system also has internet capabilities as well as being able to connect to a standard 10/100 Ethernet Network.

All of us here at Roaches International are committed to ensuring that the future of the Roaches brand will be even more successful than the last 35 years.



# Laboratory Dyeing Equipment

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## Pyrotec 2000 Series

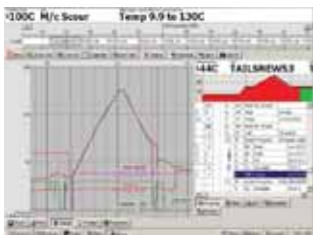


A state of the art laboratory dyeing machine using infra red heating. With a choice of 1, 2 or 3 bath machines offering capacity and flexibility. The Pyrotec '2000' has totally independent Infra-Red heating and Forced Air cooling systems for each process chamber and is controlled by a touch screen computer.

The well proven Roaches 'Adchem' system of dye and chemical addition is fully compatible with the Pyrotec '2000' and is available as an option.

### Key Features

- Infra Red Heating system - pollution free and efficient
- Removable pt100 Temperature sensor - durable, repeatable and accurate
- Air Cooling system - efficient and simple
- Temperature control and calibration accuracy of  $\pm 1^{\circ}\text{C}$ .
- Variable Speed Rotation 5 to 45 rpm ac motor (dual direction)
- Data Logging of all batches.
- Wide range of beaker capacities
- Complies with CE Directives
- A touch screen PC controller linked to a PLC is used for the control of the machine. This gives us the utmost flexibility and allows the machine to be linked into the factories standard Ethernet 10/100 Network. As standard the controller will store up to 5000 batches of historical data which includes all of the Inputs and Outputs of the PLC as well as time, temperature and any other information that you could wish to be available.



#### Options

Adchem System beaker caps and injector

#### Operational Limitations

- Heating Gradient -  $3^{\circ}\text{C}/\text{min}$  Average Rate From Ambient to  $135^{\circ}\text{C}$
- Cooling Gradient -  $3^{\circ}\text{C}/\text{min}$  from  $135^{\circ}\text{C}$  to  $70^{\circ}\text{C}$  @  $18^{\circ}\text{C}$  Ambient Air
- Temperature range  $40^{\circ}\text{C}$  to  $140^{\circ}\text{C}$

## Laboratory Dyeing Equipment



### Pyrotec Eco Series

The Pyrotec 'Eco' is designed as a bench top machine that can give flexibility where different processes are used and dyeings are required at irregular intervals.

#### Key Features

- Infra Red Heating system - pollution free and efficient
- Air Cooling system - efficient and simple
- Temperature control and calibration accuracy of  $\pm 1^{\circ}\text{C}$ .
- Variable Speed Rotation 5 to 45 rpm ac motor (dual direction)
- Programmable Profile Controller (time/temperature)
- 16 Position Beaker Carrier system as Standard

#### Beaker Options

Pyrotec can accommodate the following beaker sizes per chamber:

Size		Size	
A	16 x 100ml	B1	8 x 400ml
A1	16 x 180ml	B2	8 x 650ml
B	16 x 275ml	C	8 x 1000ml



### DK Atmospheric Sample Dyeing Machines

The DK Atmospheric Sample Dyeing Machine encompasses one of the most widely used principles of agitation for the purpose of dyeing laboratory samples at temperatures up to and including the boil.

#### incorporates the following standard features:

- Infinitely Variable Agitation Speed
- Cooling Coil
- Programmable Temperature Profile Controller
- Choice of Fabric, Yarn and Loose Fibre Sample Holders

Dimensions:	Single Bath	Two Bath
Length	880	1450
Depth	640	640
Height	900	900

## Rotohose Sample Dyeing Machines



The Rotohose series of sample dyeing machines have been designed for the processing of piece goods at temperatures up to 100°C (212°F) under atmospheric conditions. Five capacities are available from 50 litre capacity up to 800 litre capacity.

The rotating perforated drum and the vessel are manufactured from 316 grade stainless steel as standard.

Dimensions:	50LE/LS	100LS	200LS	400LS	800LS
Length	1170	1370	1700	1650	2030
Width	560	910	920	1500	1730
Height	930	930	1430	1515	1515
Weight	105	200	290	430	680

## Laboratory Sample Jigs Models 350/500



The laboratory jig has been designed to approximate as nearly as possible the mechanism of a production jig. It provides facilities for automatic alternating direction passage of the fabric and additionally where the sample length is too short for the normal reversal process, provision has also been made for one direction running only.

Model:	350	500
Length	800 mm	950 mm
Depth	580 mm	580 mm
Height	490 mm	490 mm
Electrical Load	1700 w	2100 w

## Laboratory Dyeing Equipment



### Pilot Winches

A range of atmospheric sample winches suitable for all production width fabrics is available. Dependent on capacity these are either bench or floor standing though the latter option is available for all models. Standard features include a variable speed drive with optional circular or oval winch creel.

Open or closed coil steam heating systems are available for all model sizes with an option of electric heating on the smaller Model 50L.

Machines are generally identified by the approximate upper limit liquor capacity expressed in litres though all can be operated with significantly smaller volumes.

Model 50L (50 litres)

Model 65L (65 litres)

Model 100L (100 litres)



MP Processor  
Winch Version

### Bench Top Winches

To meet the needs of the modern textile laboratory, Roaches International have developed the Mini Winch. The compact size and simple operation make the Mini Winch a versatile and user-friendly system to perform dyeing and washing trials under controlled conditions. The Mini Winch uses a simple microprocessor control unit so simple temperature profiles can be created.

#### Features:

- Variable Speed Creel Rotation
- Programmable Temperature Controller
- Rapid Drain

#### Power Requirements:

220V 50/60Hz Single Phase 4kW

All models are electrically heated unless specified otherwise



## miniMaster

The miniMaster, the latest addition to the Roaches fabric range, is designed to handle small production and sampling quantities. With a reduced liquor ratio of 1:5 the results are readily comparable with State of the Art low liquor ratio dyeing machines. Designed for the wet treatment of Woven and Knit goods at temperatures of up to 140°C. The miniMaster with a maximum capacity of 3kg bridges the gap between Laboratory bench and Production process. By optimising procedures in the miniMaster the level of "right first time" dyeing and plant productivity can be significantly improved. As a highly flexible unit, it is ideal for the development of new dyeing processes, the bench testing of more complex treatments, and the production of swatches for customer presentations.

### Features:

- Short setup times
- Optimized reproducibility
- User friendly
- Liquor ratio 1:5
- Operating temperature up to 140°C
- Adjustable winch speed
- Addition tank
- Modular construction
- Fully pre-assembled
- Minimal space requirement
- Width/Height/Depth approx. 1300/1800/1300 mm



## M1 Softflow Jet Dyeing Machine

The M1 Softflow is a 1kg laboratory fabric dyeing machine providing the reliable basis for right first time dyeing at reduced bulk costs.

The machine is designed for research and development, quality assurance and laboratory trials. A high level of reproducibility and similar liquor ratio allowing transfer of results from lab to bulk.

The M1 Softflow is ideal for the wet processing of narrow woven and knit fabric samples made from natural and manmade fibres and blends.

Operating at temperatures up to 140°C at a min. liquor ratio of 1:5 depending on the type of fabric and fibre.

# Laboratory Dyeing Equipment



## Phoenix 2 Sample Dyeing Machine

Specially designed to process most types of material at liquor ratios as low as 6:1. The Phoenix 2 can process either 1 or 2 Yarn Packages as well as Loose Stock or Fabric. The machine is suitable for installation in both laboratory and dyehouse environments.

Dyeings up to 3Kg can be processed under conditions similar to most production machines. It is a useful sales and production aid for sampling to retail organisations, or to improve production efficiencies by ensuring formulations are correct prior to bulk processing.

The Phoenix Package Dyeing Machine is ideal for research and development of yarns, dyes and chemicals.

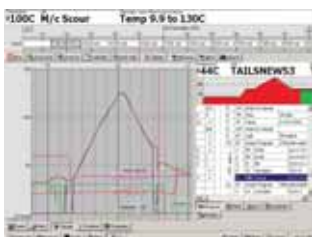
It is also an invaluable aid for educational establishments, where students can have first hand experience of high temperature dyeing.

### Features include:

- Suitable for temperatures upto 140 °C with full safety interlocks
- Construction from AISI 316 high quality stainless steel
- Compact Design
- Liquor sampling /additions tank
- Programmable Flow Rates up to 30Ltr / Kg / Min
- A touch screen PC controller linked to a PLC is used for the control of the machine. This gives us the utmost flexibility and allows the machine to be linked into the factories standard Ethernet 10/100 Network. As standard the controller will store up to 5000 batches of historical data which includes all of the Inputs and Outputs of the PLC as well as time, temperature, pressure, flow rate and any other information that you could wish to be available

### Other design features include:

- Liquor ratio can be varied down to 6:1
- Fully Programmable process variables
- Capable of handling full size packages
- Level protection to disable heating
- Easy access for servicing





## Phoenix 1-6 Package Sample Dyeing Machine

Specially designed to process most types of material at liquor ratios as low as 6:1. The Phoenix 6 can process 1 to 6 Yarn Packages as well as Loose Stock or Fabric. The machine is suitable for installation in both laboratory and dyehouse environments.

Dyeings up to 8Kg can be processed under conditions similar to most production machines. It is a useful sales and production aid for sampling to retail organisations, or to improve production efficiencies by ensuring formulations are correct prior to bulk processing.

The Phoenix Package Dyeing Machine is ideal for research and development of yarns, dyes and chemicals.

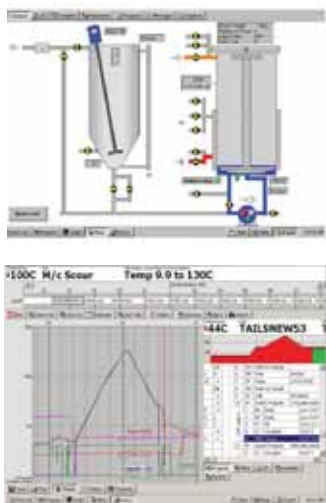
It is also an invaluable aid for educational establishments, where students can have first hand experience of high temperature dyeing.

### Features include:

- Suitable for temperatures upto 140 °C with full safety interlocks
- Construction from AISI 316 high quality stainless steel
- Compact Design
- Liquor sampling /additions tank
- Programmable Flow Rates up to 30Ltr / Kg / Min
- A touch screen PC controller linked to a PLC is used for the control of the machine. This gives us the utmost flexibility and allows the machine to be linked into the factories standard Ethernet 10/100 Network. As standard the controller will store up to 5000 batches of historical data which includes all of the Inputs and Outputs of the PLC as well as time, temperature, pressure, flow rate and any other information that you could wish to be available

### Other design features include:

- Liquor ratio can be varied down to 6:1
- Fully Programmable process variables
- Capable of handling full size packages
- Level protection to disable heating
- Easy access for servicing



## Laboratory Dyeing Equipment



### Colortec Sample Dyeing Machine

The Colortec is an ideal instrument for research and development, as well as recipe formulation. It is suitable for use at temperatures up to 135°C (275°F) and can process most types of material, at long as well as short liquor ratios in the single kier. Holders are supplied for fabric, yarn or loose stock. An external vessel provides the ability for both making additions and sampling from the kier at high temperatures and pressures.

Liquor circulation is achieved using a heavy-duty stainless steel gear pump, which is reversible. The gear pump speed is controlled electronically. Liquor can be circulated externally through other equipment such as a spectrophotometer for on line analysis of the dye liquor, providing maximum potential for both research and production.

A touch screen PC controller linked to a PLC is used for the control of the machine. This gives utmost flexibility and allows the machine to be linked to the factories standard Ethernet 10/100 Network.

#### Key Features:

- Advanced process control technology
- Automated process operations
- High capacity stainless steel circulation pump
- Addition/Sampling vessel
- Flow Rate control priority
- Differential Pressure control
- Network Integration

#### Optional Features:

- Continuous High Temperature pH Monitoring System
- Programmed Dosing Control
- Continuous Spectrophotometer Monitoring



**Dimensions:**  
600 x 750 x 840 (D x W x H)



## Dust Particle Apparatus

In all work with solid dyestuffs and powders in general the production of dust is to be expected. The amount of dust produced will depend on both handling such as metering, transferring, sprinkling etc., and the physical characteristics of the product. When dust is produced in the same way the amount released is a characteristic quality feature of the product itself.

The D.P.A. has been developed in conjunction with major European chemical manufacturers to facilitate the easy and accurate evaluation of dusting characteristics. The results of the tests can be evaluated.

- Qualitatively by comparison against a grey scale
- Quantitatively either gravimetrically or photometrically

The procedure used, known as the "fall method" depends simply on an accurately weighed quantity of product being made to fall through a given distance into a receiver and after a specified period the dust created is removed under controlled vacuum conditions and collected on a filter.

The vacuum condition, height of fall and extraction time are all accurately and automatically controlled, thus ensuring both consistency and reproducibility. The design of the apparatus is such that these control parameters can be varied for research purposes.

# Laboratory Finishing Equipment

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# Laboratory Finishing Equipment

## Padders Model EVP and EHP

The Model EVP and EHP Padders are bench standing, high performance 2 Bowl Padding Units.

### Key Features:

- Choice of two basic models – EVP (vertical bowl configuration) and EHP (horizontal bowl configuration)
- Choice of two face widths - 350mm or 500mm
- Pneumatically Operated squeeze rollers with liquor seal plates on EHP
- Variable Speed Drive
- 'Hypalon' covered rollers designed to give high loading force per linear cm

Compressed Air:  
0-5.5bar (80psi)

Cold water:  
3 bar (45psi)

Dimensions:  
L: 820 W: 580 H: 480 (EVP) 350 (EHP)

## Padders Model BVHP

The BVHP padder is a bench standing model which can work in either the vertical or horizontal position thus allowing a conventional liquor trough to be used or the use of dams in the horizontal position. All models are available with a face width of 350mm or 500mm with Hypalon rubber with a shore hardness of  $70 \pm 5$ . Other hardness available on request. In addition the Padders can be incorporated into other machinery such as drying and thermosetting ranges or steamers.

### Standard Features:

- Pneumatic pressure with digital pressure indication
- Spray wash.
- Variable speed drive up to 5 m/min.
- Full safety protection
- Delivery and wind up rollers.
- Floor mounted models are on a Stainless steel clad base
- Two liquor troughs on vertical models plus a dam facility with horizontal models.



## Sky Padder

The Sky Padder has been developed specifically to process yarn and fabric, which has been dyed with indigo, and sulphur dyes. The padding section is followed by a 'Skying' section to allow oxidation to take place.

### Key Features:

- Process speed indication. Display resolution 0.1m/min.
- Dye Tank Temperature indication and control. Display resolution 1°C
- Temperature control and calibration accuracy of  $\pm 1^\circ\text{C}$
- Low deflection of padder bowls
- Vertical 'rubber on stainless steel' bowl configuration

### Dimensions:

OL: 820 W: 1055 H: 1350



## Coating Unit

To facilitate laboratory scale applications of pastes and similar media to textile substrates, the Coating Unit is the ideal apparatus and it is specifically designed to complement the 'TFO' range of laboratory ovens and steamers for finishing operations.

Three coating elements are supplied as standard and these can be positioned in different configurations to reproduce various coating techniques:

- Fixed Bar – a stainless steel roller
- Rotating Roller – a parallel stainless steel free rotating roller on low friction bushes
- Blanket – a chemical resistant blanket is supported between two rollers to provide a large surface area between the coating head and the sample

# Laboratory Finishing Equipment



## Mini Thermo

A small tabletop thermofixation oven suitable for heat setting textile samples on a pin frame or mesh frame. The MINI THERMO is manufactured from stainless steel and is fully insulated. The air inside the chamber is re-circulated by a high performance fan to optimise heat distribution.

### Key Features:

- Adjustable Pin Frame
- Temperature range up to 240°C (464°F). Display resolution 1°C/F
- Temperature control and calibration accuracy of  $\pm 1^\circ\text{C}$  (1.8°F)
- Single Circulation fan

### Dimensions:

D: 530 W: 575 H: 520 Mass: 51kg



## Opti-Therm / Opti-Duo-Therm

To further enhance the wide range of laboratory high temperature oven (thermofixation) units available from Roaches International Ltd, the OPTI-THERM provides a high quality and cost-effective means of processing small textile samples on a 'continuous' drive system, which enables small samples to be dried or fixed.

### Operational Limitations:

- Processing speed / dwell time 0.4 to 3.0m/min / 3 minutes 45 seconds to 30 seconds per chamber
- Temperature range 50°C to 240°C (122°F to 464°F)
- Temperature control and calibration accuracy of  $\pm 1^\circ\text{C}$  (1.8°F)
- Fabric width range up to 300mm (nominal)
- Zone length 1.5m per chamber (nominal)



## Laboratory Oven & Steamers (TFO and TFO/S)

Models TFO and TFO/S. 350 or 500mm

These are highly versatile machines designed to simulate production conditions in stenters and/or steamers .

### Model TFO

For drying polymerising and thermofixation

- The oven can be used either with a pin frame or operate on a continuous basis roll to roll
- Process chamber constructed of stainless steel grade 31 6 (V4A)
- Temperature range up to 240°C
- 2 speed fan and adjustable air flow
- Variable speed drive 0 - 2 m/min
- Auto timer for variable dwell times in either seconds , minutes or hours
- Auto ejection of pin frame

### Model TFO/S

As Model TFO but additionally employs facilities for steaming.

- Steaming with saturated steam at 102°C - 106°C
- High temperature 120°C - 240°C
- Adjustable humidity control up to 98% absolute
- Heated entry and exit throats

### Model (--- /IM)

The oven can be used with pin frame only and there is no provision for continuous roll to roll operation. In all other respects the machine meets the same standards as Model TFO and TFO/S.

### Options

- Selection of compatible 2 and 3 Bowl Padders
- Infra Red Pre-Dry Unit for Padder mounting
- Coating Table
- Electric Steam Generator (Model TFO/S)

# Laboratory Finishing Equipment



## Steamers

Our range of steamers has been developed to cover the various industrial requirements from standard atmospheric to high temperature Flash Ager or pressurized kiers, thereby simulating all conditions used by production machines. Absence of air is essential for many steaming operations. An air detecting instrument is available for use both in the laboratory and on production machinery.

**The 'PAD STEAM' Model CPS2, incorporates the following design features:**

- Stainless steel with glass inspection door and insulating panels
- Heated throat and roof
- Steam generated automatically in wet bottom
- Dry saturated 100°C to 105°C
- Driven top and bottom rollers
- Wet leg exit for cold water feed and overflow
- Air purge valve
- Fabric content nominal 4 metres



## Mini-Stenter

The MINI-STENTER is designed to reproduce the thermal processing techniques employed on production drying and thermosolling machines.

The MINI-STENTER process controls allow easy adjustment of all the vital elements for each process zone.

- Process speed indication. Display resolution 0.1m/min
- Temperature indication and control with an accuracy  $\pm 0.25\%$  of controller range. Display resolution 1°C
- Temperature control and calibration accuracy of  $\pm 1^\circ\text{C}$
- Two speed circulation fans
- Motorised pin chain track width adjustment
- Automatic fabric tension compensator between the batch drive and the pin chain drive



## Cont. Drying & Thermofixation Ovens (Monomat & Duomat)

### Monomat

The Monomat is a single zone oven, floor standing and fitted with it's own independent variable speed dry. When used in tandem with a padder a speed regulating compensator is positioned between the oven and pad mangle.

The Monomat is normally in conjunction with a pre-dry Infra-Red accessory and provision is made for this facility.

### Duomat

As an alternative to the Monomat single chamber oven the Duomat has two, thus increasing the capacity from 4 to 8 metres, or alternatively providing a facility for both complete pre-drying and thermofixation. Such a facility thus ensures the fabric is always dry at the point of entry to the Thermofixation zone and can therefore provide a constant and true reaction time.

As with the Monomat there is merit, and indeed a requirement for use in conjunction with an Infra- Red pre dryer to minimise effects of migration, which might otherwise occur.

Dimensions (mm)	Face (mm)	Width (mm)	Height (mm)
Monomat 350	1410	1200	1900
Monomat 500	1410	1350	1900
Duomat 350	1410	1200	2050
Duomat 500	1410	1350	2050

# Laboratory Finishing Equipment



## Flashage

Ageing is a term used to describe the development of colorants by exposure to a warm, humid atmosphere. The term "Flash" implies a relatively short fixation period at atmospheric pressure in steam at 100°C or above. The process of Flash Ageing is used extensively in the development of Vat and reactive dyes used by printers of cellulosic fabrics. The FLASHAGE is a Pilot scale Flash Ager specially designed for use in Research and Development laboratories facilitating the preselection of optimum dye- and print paste recipes in production formulation and control.

**Dimensions:**  
Width 900mm x Depth 900mm x Height 2680mm



## Wash Ranges

A series of WASH RANGE are available for continuous processing (washing) of narrow fabrics.

The particular design of the WASH RANGE can be configured to suit a wide range of processing requirements. For example, the number and dimensions of the wash boxes, the processing speed etc, may be specified to meet your requirements.

<b>Steam:</b>	<b>Compressed Air:</b>
5.5bar (80psi) with condense return connection	5.5bar (80psi) Clean Dry Air

## Universal Calender

The Universal Calender has been designed to reproduce many of the effects which are produced on larger calenders. The versatile design, which includes three bowls (two filled and one chrome plated steel) allows the user to easily and quickly adapt the drive arrangement for friction finishing techniques. Other bowl materials can also be specified.

The Universal Calender is Constructed in such a way that it is extremely rigid and, as a result, bowl deflection is negligible even at the maximum loading from the pneumatic cylinders.



Dimensions:	Model 350	Model 500
Length	970mm	970mm
Width	940mm	1090mm
Height	1500mm	1540mm
Weight	528Kg	600Kg

## Rotair

The Rotair is a versatile, laboratory scale drying and tumbling unit designed to simulate conditions in production aerodynamic systems, such as:

- Batchwise rope tumblers and dryers
- Continuous open width machines for relaxed drying and handle modification



Dimensions:
L: 340 W: 340 H: 340 Weight - 10.5kg

# Textile Testing Equipment

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### Durawash Plus

The Durawash Plus, now incorporating a 4kg spin dryer. The physical performance of the DURAWASH is compatible with that of the 'Hoovermatic' Twin Tub. The agitator speed is 560rpm +/-5%..

#### Applicable Standards:

- M&S C15 Fabric Durability
- P5 Print Durability

#### Dimensions:

1090 x 590 x990 mm (Width x Depth x Height)



### Durawash

The physical performance of the DURAWASH is compatible with that of the 'Hoovermatic' Twin Tub. The agitator speed is 560rpm +/-5%.

#### Applicable Standards:

- M&S C15 Fabric Durability
- P5 Print Durability

#### Dimensions:

670 x 590 x990 mm (Width x Depth x Height)



### Wascator - Washer Extractor

The latest Wascator FOM71CLS features the Clarus Control System and is suitable for IEC and ISO international standards as well as Marks & Spencer and H+M programmes.

#### Applicable Standards:

- ISO 5077/6330
- M&S P1, P1A, P3A, P12, P91, P99, P99A, P134
- BS EN 25077/26330

# Textile Testing Equipment



## Washtec

The WASHTEC - P & P A2 have been introduced to comply with the latest amendment to the BS 1006 standard (UK TO) and leading chain store test standards to determine oxidative bleach response and its effect on the colour fastness of a textile sample.

The 'A2' variant of the WASHTEC - P provides maximum versatility and flexibility in use – the machine can accommodate both the 550ml ISO specification and the larger 1150ml vessels. Equal quantities of the vessels can be accommodated in the machine without having to change the carrier system.

The WASHTEC - P & PA2 incorporates an integral panel providing user friendly controls:

- Microprocessor based profile controller with gradient, temperature set point and automatic dwell time initiation as standard (optional 8 segment controller available on request)
- Audible alarm
- Rotation/Inch Control

Other design features include:

- Ultra-compact design
- Process bath constructed in high-grade stainless steel
- Bath lid safety latch and drive motor safety interlock
- Drain point for rapid emptying of the process bath
- Fill point for fast and convenient refilling prior to restarting the test cycle
- Overflow connection to prevent over filling
- A wide range of machines are available in single and multi-bath configurations
- Industry standard temperature sensor for high accuracy and reliability

### Dimensions:

450 x 535 x 520 – single bath 4+4 / 555 x 535 x 520 – single bath 8+8  
660 x 535 x 520 – single bath 12+12



## Washtec

### Applicable Standards:

- **BS 1006 UK-TO 1998** Colour fastness to domestic laundering: Oxidative Bleach Response
- **BS 1006 UK-LE** Colour fastness of leather to washing
- **BS EN ISO 11643 1998** Colour fastness of small samples of leather to dry cleaning solutions
- **BS EN 20105 C01-C05** Colour fastness to washing
- **BS EN ISO 20105 C06** Colour fastness to domestic and commercial laundering
- **BS EN ISO 20105 D01** Colour fastness to dry cleaning
- **BS EN ISO 20105 E03** Colour fastness to chlorinated water
- **BS EN ISO 20105 X05** Colour fastness to organic solvents

### Marks & Spencer PLC

- **C4A** Colour fastness to washing-using detergent
- **C5** Colour fastness to dry cleaning
- **C10A** Colour fastness to oxidative bleach damage
- **C22** Colour fastness to toiletries-residual staining
- **C23** Colour fastness to solutions of toiletries
- **C37** Colour fastness to chlorinated water, swimwear
- **P3B** Stability wash 'MST'

### AATCC

- **2** Colour Fastness to Fulling
- **3** Color Fastness to Bleaching with Chlorine
- **28** Insect Pest Deterrents on Textiles
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# Textile Testing Equipment



## Miele PW 6055 Vario

Meets the Nike Standard.

### Design:

- Straight fascia
- Extra large door opening (30 cm)
- Large 6 kg Honeycomb drum
- Easily accessible filter, direct enamel casing



## AATCC Top Loading Washing Machine

### Whirlpool Washers:

- Extra large capacity tub (8.2kg)
- Large lid for easy loading
- Short Wash Cycle
- Reverse action agitator
- Roll Over Wash Action

### Applicable Standards:

Used in AATCC test methods 88B, 88C, 124, 130, 135, 142, 143, 150, 159, and 179.



## AATCC Front Loading Drying Machine

### Whirlpool Dryers:

- Massive 10kg capacity
- 5 Automatic drying cycles
- 3 temperature settings
- Tumble Press cycle replaces ironing for wrinkled clothes
- Cool Down Period at end of cycle

### Applicable Standards:

Used in AATCC test methods 88B, 88C, 124, 130, 135, 142, 143, 150, 159, and 179.



## Optidry

To meet the needs of the modern textile laboratory, Roaches International developed OPTIDRY as a standard reference drying unit for textile samples.

### Applicable Standards:

- BS EN ISO 6330:2001
- AATCC 135
- Marks & Spencer plc
- Next plc

**Dimensions:**  
600 x 600 x 850

**Mass:**  
35kg

**Max Load:**  
5kg (dry weight)



## Tumble Dryer

5Kg Dry Load  
Reversing Action  
Two Heat Settings  
90 Minute Timer  
10 Minute Cool Down Programme

# Textile Testing Equipment



## Perspirometer

The apparatus consists of a stainless steel frame with 21 acrylic separator plates and a loading weight of 5kg. The PERSPIROMETER can be used in two configurations, depending on the test method being used (BS 1006, BS EN 20105, ISO 105 or AATCC 15). Each respective configuration applies the correct weight to the specimens. A complete Perspirometer Testing Kit can be supplied, which includes:

- Chemicals (makes up to 200 litres)
- Glassware
- MIncubator Unit 30 litre capacity with two shelves and 6 shelf positions
- Multi-fibre adjacent strip Type 2 DW

### Applicable Standards:

- BS1006
- BS EN 20105
- ISO 105
- AATCC 15



## Crockmeter - Manual & Motorised

The CROCKMETER is used to determine colourfastness to 'crocking'. Crocking is the resistance of the colour of a textile sample and other materials to rubbing off and staining.

### Standard Features:

- 9N load arm with 16mm diameter rubbing finger with easy to use Crocking Cloth Clips
- Pinned polycarbonate specimen clamp and adapter for yarn specimens
- Full garment handling capability



### Applicable Standards:

- BS EN ISO 105 - D 02: 1996 (Colour fastness to rubbing: organic solvents), X 12: 1995 (Colour fastness to rubbing)
- BS 4655 (1993) - Method of determining of pile loss of cut pile and non-loop pile upholstery fabrics.



### Opti-Fade R-F

The Roaches International OPTI FADE + R-F is specifically designed to perform accelerated light fastness testing on textile samples and complies exactly with the requirements of 'Standard Methods for the Determination of the Colour Fastness of textiles and leather'.

As standard, the OPTI\_FADE + RF is supplied with both 500W ML (MBTL) and 400W MB/U Lamps and 50 C types cell and rubber bungs.

#### Applicable Standards:

- BS1006 UK-TN



### Gas Fume Fading Tester

This simple Gas Fume Fading Tester meets the specification required for establishing a specimens colour fastness when exposed to atmospheric contaminants. The equipment complies with the requirements of EN ISO 105-G02:1997 and also fulfils the requirements of the standard for Colour Fastness to Atmospheric Contaminants and Colour Fastness to Nitrogen Oxides.



### Opti-Spray - Spray Rating Tester

The OPTI-SPRAY Spray Rating Tester is specifically designed to comply with the various methods of determining the water repellence of a textile fabric. OPTI-SPRAY has been approved by a leading textile testing laboratory to the standards listed.

#### Applicable Standards:

- ISO 4920, M&S P23, BSEN 24920

# Textile Testing Equipment



## Contact Heat Test Units

The Contact Heat Test Unit has been developed to allow a wide range of tests to be carried out, where accurately controlled dry heat conditions are required on the surfaces of two flat heater plates.

The M1 version will accommodate both the Marks and Spencer Thermal Stability (P10) and Colour Fastness to Hot Pressing EN ISO 105-X11 test methods. Models M2 onwards are designed to accommodate the sample size required in the test method for Colour Fastness to Hot Pressing EN ISO 105-X11 only.

### Key Features:

- Temperature range up to 240°C (464°F). Display resolution 1°C/F.
- Temperature control and calibration accuracy of  $\pm 2^{\circ}\text{C}$  (3.6°F).
- Digital count down timer with alarm, activated when top plate is closed
- Individual Temperature Controllers for each plate



## Zip Tester

The ZIP TESTER is specifically designed to permit the mechanical testing of slide fasteners in accordance with BS 3084 2006 - Test 5.

The latest development of the ZIP TESTER incorporates a larger access door for greatly improved access to the working parts that require adjustment. An integral control console is situated at a convenient height for the operator.

The test described in BS 3084 2006 - Test 5 have been devised to permit their direct application to finished fasteners with a view to giving the consumer reasonable assurance that a fastener complying with the British Standard will satisfactorily fulfil its purpose.



### Martindale Abrasion Pilling Straight Line

The MARTINDALE Abrasion & Pilling Tester is internationally recognised and accepted as the standard method of determining the wear resistance of textiles and leather and the resistance to pilling. Roaches are now able to offer a technically advanced machine that is easy to use and inexpensive to own.

Three models are available, 'M4', 'M6' & 'M8' with 4, 6 & 8 Abrading Tables respectively. All models boast an advanced control system utilising 'Touch Screen' technology and a powerful programmable control system that has been developed to provide maximum flexibility and 'user friendliness'.

The machine conforms to BS EN, ISO, ASTM, Marks and Spencer, NEXT and DIN standards as well as other standards.



### Random Tumble Pilling Tester

The machine consists of individually lit aluminium chambers containing stainless steel impellers continuously rotating the test samples against cork liners for a pre-determined time. Compressed air is injected into the test chambers to assist the tumbling action. Available in both 2 and 4 test chamber versions. Supplied with cork liners (pack of 50), cotton sliver and set of 5 photographic standards.

The machine conforms to ASTM D3512 and DIN 53867 as well as other standards.

**RTPT-2 2 Test Chamber version**

**RTPT-4 4 Test Chamber version**

## Textile Testing Equipment



### Marks & Spencer Opti - Pill (random pilling & snagging)

The OPTI-PILL Random Pilling Tester is designed to fulfil the requirements of Marks & Spencer Test Method P18A P18B & P18C - evaluation of the potential of knitwear to 'pilling'.

The electronic (a.c. Inverter) controlled drive system can be set to accurately control the rotational speed at 60rpm, 30rpm or 30rpm with reversing action at pre-determined count intervals using the panel selector (60 - 30 - 30R).

- Can be adapted easily for ISO Test Methods
- 60 rpm, 30 rpm with reversing at pre-determined rotation intervals
- Silent operation from dc motor
- 85-264V 50/60Hz Power supply compatible
- Robust Construction
- Cost effective pricing

#### Applicable Standards:

- M&S Test Method P18A
- P18B and P18C



### Random Tumble Pilling Tester

The ICI Pilling Tester fulfils the requirements of BS EN ISO 12945 PART 1 : 2001 - Determination of Fabric Propensity to Surface Fuzzing & Pilling. Available in two or four box versions.

Standard Accessories supplied with each ICI Pilling Tester:

- 8 Polyurethane Pilling Tubes (four per box)
- Cutting Template
- Pilling Tube mounting jig
- Photographic Standards
- PVC Adhesive Tape



## Testometric M350-5 CT

### Machine Features:

- Fully digital testing system with high precision control and accuracy, includes automated computer control of test methods giving simplicity of operation
- High resolution auto ranging load cells with accuracies better than  $\pm 0.5\%$  down to 1/1000th of the load cell capacity
- Automatic recognition and calibration of load cells and extensometers, with instant calibration check facility
- 800% overload capability of load cells without damage.
- Small footprint design, giving economy of bench and floor space
- High efficiency pre-loaded self cleaning ball screws for fast, quiet testing. Fitted with sealed for life lubricated end bearings
- Crosshead guidance system providing precise alignment and smooth running
- Precision crosshead control via digital AC servo drive and brushless servo motor giving maintenance free operation and 4,000,000 steps per revolution positional control
- High speed data collection systems for up to 4 synchronous channels



## Software

Comprehensive winTest™ Analysis universal windows software covering tensile, compression, peel, shear, tear, cyclic, creep and multi stage testing. It includes a wide range of industry standard test methods and facility to create and store an unlimited number of further test methods. There is automated storage of all test data and ease of export to other software packages such as word, excel, access and SPC systems for enhanced report generation. winTest™ Reports is an enhancement to winTest Analysis to add flexibility to data analysis and statistical reporting. The package provides a report generation capability that can include long-term statistics and control charts for all specified calculations. winTest Reports™ can also be configured to display headings, titles, company logos, graphs, charts, pop-up menus and specific technical information.

# Textile Testing Equipment



## Testometric - Test Standards

### Fibre

- ASTM D 1294 Breaking tenacity of wool fibre bundles
- ASTM D 5079 Tensile tests on spun fibres
- ASTM D 2524 Tensile tests on wool fibre bundles/
- ASTM D 3106 Residual deformation of elastomeric fibres
- ASTM D 3217 Loop tensile test of spun fibres
- ASTM D 1445 Bundle strength of cotton fibres
- BS 3411 Tensile properties of individual textiles fibres
- BS 4029 Tensile elastic recovery of single fibres and filaments
- BS 5116 Breaking tenacity of flat bundles of cotton fibres
- BS EN 12751 Sampling of fibres for testing
- DIN 53843-2 Loop tensile tests of spun fibre
- EN ISO 5079 Tensile tests on spun fibres
- EN 13895 Tensile tests on monofilament
- ISO 3060 Bundle strength of cotton fibres

### Yarn & Thread

- ASTM D 204 Test methods for sewing thread
- ASTM D 434 Resistance to slippage of yarns
- ASTM D 1578 Breaking strength of yarn in skein form
- ASTM D 2256 Tensile properties of yarn, single strand method
- ASTM D 2653 Tensile properties of elastomeric yarn
- ASTM D 3106 Permanent deformation of elastic yarns
- ASTM D 2731 Elastic properties of elastomeric yarn
- ASTM D 4034 Determination of yarn slippage for upholstery
- ASTM D 5344 Extension force of partially orientated yarn
- ASTM D 6720 Recoverability of stretch yarns
- BS 1932-1 Knot strength of yarn
- BS 1932-2 Loop strength of yarn
- BS 4650 Tensile strength of yarns
- BS 4674 Tensile strength of yarns
- BS 6372 Breaking strength of yarn, skein method
- BS EN ISO 2062 Single-end breaking force and elongation
- DIN 53834-2 Tensile tests of yarn in oven dried state
- DIN 53835-2 Tensile loading of elastomeric yarns at constant strain limits
- DIN 53835-3 Tensile loading of yarn between constant strain limits
- DIN 53835-4 Tensile loading of yarns between constant force limits
- DIN 53842-1 Yarn knot tensile test
- DIN 53843-1 Tensile test of yarn loops
- EN ISO 2062 Tensile strength of yarns
- ISO 2060 Tensile strength of yarns
- ISO 2062 Breaking strength of yarns
- ISO 3341 Breaking force of textile glass yarns
- ISO 6939 Tensile test of yarn from packages, skein method
- ISO 9073-3 Tensile strength and elongation of yarn
- P70 Tensile strength of sewing thread

## Testometric - Test Standards

### Fabric

- ASTM D 413 Adhesion tests of bonded fabrics
- ASTM D 434 Seam slippage strength of fabrics
- ASTM D 751 Standard test method for coated fabrics
- ASTM D 885 Test methods for tyre cord fabrics
- ASTM D 1117 Standard test methods for nonwoven fabrics
- ASTM D 1682 Tension and elongation of fabrics, strip method
- ASTM D 1683 Fabric failure of seams
- ASTM D 1775 Tension and elongation of wide elastic fabric
- ASTM D 2261 Tearing strength of fabric, tongue procedure
- ASTM D 2724 Test procedures for laminated apparel materials
- ASTM D 2970 Test methods for tyre cord fabric
- ASTM D 3107 Stretch properties of woven fabrics
- ASTM D 3787 Burst strength of knitted fabric
- ASTM D 4034 Yarn slippage in upholstery fabrics
- ASTM D 4851 Test methods for laminated fabrics used in roofing materials
- ASTM D 4964 Tension and elongation of elastic fabric
- ASTM D 5034 Breaking strength and elongation of fabric, grab method
- ASTM D 5035 Breaking force and elongation of fabric, strip method
- ASTM D 5278 Narrow elastic static load tests
- ASTM D 5446 Properties of fabrics used in inflatable restraints
- ASTM D 5587 Tearing strength of fabric, trapezoid procedure
- ASTM D 5733 Tearing strength of nonwoven fabrics, trapezoid procedure
- ASTM D 5735 Tearing strength of nonwoven fabrics, tongue procedure
- ASTM D 5822 Seam strength of inflatable restraints
- ASTM D 6614 Fabric stretch properties
- ASTM D 6479 Edge-comb resistance of woven fabrics in inflatable restraints
- ASTM D 6775 Breaking strength and elongation of webbing, tape and braid
- ASTM D 6797 Bursting strength of fabric, ball burst method
- BS 2543 Seam slippage of upholstery fabrics
- BS 2576 Breaking strength and elongation of fabrics, strip method
- BS 3320 Slippage resistance of yarns in woven fabric
- BS 3424-4 Coated fabric breaking strength and elongation
- BS 3424-5 Coated fabric tear strength
- BS 3424-6 Coated fabric burst strength, ball method
- BS 3424-7 Coated fabrics coating adhesion
- BS 3424-10 Coated fabrics, determination of surface drag
- BS 4304 Resistance to tear, wing rip method
- BS 4952 Methods of test for elastic fabrics
- BS 5131 Seam Strength
- BS EN ISO 9073-4 Tear resistance of nonwovens
- BS EN ISO 13934-1 Tensile properties of fabrics
- BS EN ISO 13934-2 Tensile properties of fabrics, grab method
- BS EN ISO 13935-1 Seam strength, strip method
- BS EN ISO 13935-2 Seam strength, grab method
- BS EN ISO 13937-2 Tear properties of fabrics, trouser method
- BS EN ISO 13937-3 Tear properties of fabrics, wing rip method
- BS EN ISO 13937-4 Tear properties of fabrics, tongue method

# Textile Testing Equipment



STA-0041 Upper Universal Grip



STA-0002 Upper Stud Grip



STA-0005 Upper Grasp Utton Grip

## Opti-Snap

### Standard Package for Universal Mechanical Safety Tester

This tester is the unique safety test instrument that provides a means to accurately measure how safe accessories are attached in a product. It is also used to compare a variety of accessories from different vendors in the process from product design to production so that we can safeguard our consumers.

It is a simple but effective design mainly consisting of a high precision gauge, a sturdy stand, and special grips/clamps. It requires very little training. A sample required by standards & regulations is to fix horizontally (constant force is applied to secure the sample) so that snap or other accessories attached in fabric can be clamped into. Moreover, a standard weight is also offered so that it can be regularly checked if it meets the safety requirements.

### Special Features:

- Ergonomically Constructed force meter holder can be retained upwards during sampling
- User-friendly side-wheel operation
- Economically exchangeable with a plenty of different of grips/clamps
- Longer Stand Spacious for more applications
- Constant Clamping Force in Lower Fabric Clamp (STA-0042) to minimize operation error
- Minimum Clamping Failure & Slippage chiefly because our Universal Grip (STA-0041) can accurately secure snap and does not damage the fabric

### Applicable Standards:

- BV, JAPAN Product Liability Law, ASTM F963, EN 71, M&S P115A (for snap) P115 (for button), ASTM D4846-96 And many others.



### Digital Elmendorf Tear Tester

Digital Elmendorf Tearing Tester is designed the ballistic tearing strength of military uniforms, canopy sails, tends, umbrella, hammock and other woven fabric, and sometimes is used to access the durability (or brittle) of fabric after resign finishing, additive or coating etc.

#### Applicable Standards:

- BS EN ISO 13937, 4674-2, 21974
- ASTM D1424, D689B-96A, D5734
- DIN 53128



### Elmendorf Tear Tester

For determining the internal tearing resistance of textiles using the Elmendorf Principal. Factory Calibrated and supplied with traceable check weights.

#### Applicable Standards:

- BS 4253, 4468, 3424
- ASTM D1424
- BS EN ISO 13937
- M&S P29



### Wrinkle Recovery Tester

To determine a fabrics ability to recover after wrinkling under a pre-determined load for a set period of time. Equipped with a standard comparative photos kit, two 2 Kg weights, one 0.5Kg weight and two fixing clamps.

#### Applicable Standards:

- ISO 9867
- AATCC 128



### Crease Recovery Tester

To determine the recovery characteristics of fabrics when creased in a loading device for a predetermined period of time and using an appropriate test weight.

#### Applicable Standards:

- ISO 2313
- AATCC 66
- BS EN 22313
- M&S P22

# Textile Testing Equipment



## WIRA Steaming Cylinder

The Steaming Cylinder subjects four cloth specimens at a time to dry saturated steam at atmospheric pressure. The specimens are given no mechanical restraint and there is no subsequent vacuum cooling.

### Applicable Standards:

- ISO 3005:1978
- BS 4323:1979 (1995)
- IWTO-29-76 (LE)
- M&S P8



## Yarn Tension Meter

Gives stable readings of average tension in running yarn

Light and easy to handle. Ideal for measuring yarn tension in winding, twisting, warping, knitting etc.

The Yarn Tension Meter is the ideal hand-held device for spot checking the tension of moving yarn. Optional measuring for tapes and films.

Indicates average warp tension in 2 minutes.



## Hand Held Moisture Tester

Hand-held moisture tester suitable for natural fibres such as wool and cotton. Also suitable for viscose.

The unit has an on-board microprocessor for greater accuracy and reliability as well as a set-point and buzzer to indicate when a pre-selected moisture content has been reached.

Battery powered. Includes carry case.



## TPR Board Winders

Single -traverse board winder for yarn inspection and sample viewing. Takes either tapered or rectangular boards. Dual electronic speed control ensures total flexibility of wrap and lay. Comes complete with three tapered or rectangular board.

### Multi Wind Board Winder:

Multi traverse board winder allows five separate yarns to be wound on the same board.



## Electronic Yarn Reels

Bench top yarn reels used in conjunction with a suitable balance for yarn count determination. Push button reset counter enables yarn length to be accurately deliver. Integral, electronic discs brake for position accuracy and enhanced safety.

- Crafted in Stainless Steel
- Available in Variety of reel sizes
- Heavy-duty reel
- Tension Release function for easy removal of yarn
- Traverse cam for even yarn distribution

# Textile Testing Equipment



CAC120



CAC60

## Verivide Colour Assessment Cabinets

Range of equipment for the assessment of colour in accordance with B. S. and ISO directives. Suitable for all industries and applications where there is a need to maintain colour consistency and quality.

The CAC range incorporates membrane switching with electronic ballast control of illuminants. These features ensure optimum consistency of viewing conditions and permit the combined use of 26mm and 38mm lamps.

	Width	Height	Depth
<b>CAC150</b>			
Overall	1560	780	620
Viewing Cavity	1520	570	590
<b>CAC120</b>			
Overall	1300	780	620
Viewing Cavity	1260	570	590
<b>CAC60</b>			
Overall	710	570	420
Viewing Cavity	680	360	380

### Lamp Options:

**D65** Thorn Artificial Daylight fluorescent lamps conforming to the international standard illuminant

**D652** Additional Level of artificial daylight for colours of low reflectance factor

**TL83 / TL84** Philips Triphosphor fluorescent lamps often chosen, often known as "Point of Sale"

**F** Filament lighting required by BS590 as a test for matamerism

**UVB** Ultra Violet Blacklight to reveal the presence of fluorescent dyes and bleaches

### Applicable Standards:

- BS 950
- BS EN ISO 105

# General Laboratory Equipment

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## General Laboratory Equipment



### Sample Cutters

#### Manual Circular Cutter

To accurately prepare a wide range of circular fabric samples the robust and durable sample cutter is the ideal instrument.



#### Motorised Circular Cutter

As an alternative to the traditional manually operated sample cutter, we are now able to offer Motorised Circular Cutter, which provides a quick and convenient way of preparing circular fabric samples.



#### Linear Swatch Cutter

This advanced Linear Swatch Cutter utilises laser technology to indicate the precise point at which the blade will cut the fabric.

### pH Meters

The Portable Meter PT-10 is easy to operate anywhere in the field where you need accurate measurements on the spot .

#### It offers:

- Automatic buffer recognition during calibration
- Automatic temperature compensation
- Display with stability icon
- Simultaneous display of measured value and temperature
- Automatic electrode check and electrode slope display during calibration
- Waterproof
- Weighs only 270 g





## Balances

### Standard features:

- High-grade stainless steel weighing pan
- Large, high-contrast LCD
- High level of operating convenience thanks to keys with positive click action and 2 tare keys
- Built-in application programs: counting, weighing in %, net-total formulation; averaging; toggling between 2 units
- Battery-operable (eight 1.5-V Mignon AA batteries) or runs on line current (AC adapter included as part of the equipment supplied)
- Bidirectional RS-232C data interface port
- ISO/GLP-compliant logging capability for calibration, adjustment and weighing data in conjunction with the optional data printer
- Four digital filter levels for adaptation of the balance to the conditions at the place of use
- Mechanical protection of the weighing system against side impact and overloading.
- Rugged construction; compact size; reliable weighing technology

### Technical Specification:

Readability	0.1 g
Weighing capacity	6,100 g
Pan size	174x143 mm
Response time (avg.)	2 s
Housing (WxDxH)	200x270x70 mm
Reproducibility	$\leq \pm 0.1$ g
Linearity	$\leq \pm 0.2$ g

## General Laboratory Equipment



### Laboratory Hydro Extractor

Ideal for rapid extraction of water from textile samples etc, the simple and robust floor standing unit is also efficient, safe and easy to use.

External drain point and compact dimensions are standard features of the Hydro Extractor.



### Water Purifier

Our Select range of water purification systems, which includes the Descale, Analyst, HP and Bio models, is designed for higher volume applications, providing a choice of water qualities and outputs from 6 to 80 litres per hour.



### Water De-ioniser

Our Labwater deionisers offer a simple, cost effective method of producing purified water for low volume (1-10 litres per day) or infrequent laboratory use.

Labwater deionisers effectively remove ionic contaminants and are capable of producing water purity better than  $1.0\mu\text{S}/\text{cm}$  or better than  $10.0\mu\text{S}/\text{cm}$ .



### Water Hardness Kits

Water hardness is caused almost entirely by calcium and magnesium ions. Other di- and trivalent metals have a similar effect, but usually are not present in high enough concentration to cause problems.



### Silent Compressor

Silent Laboratory Air Compressor, suitable for the provision of Instrument Quality compressed air with silent operation. Maximum Pressure 8 Bar (120Psi) tank size 24.5 L. maximum displacement 70 litres / minute. Noise Level 45db at 1 Metre. Supplied with air intake filter, air outlet filter/regulator/lubricator and fittings.



### Mixing / Shakers

Compact, flat shaker with ideal swivel motion, for a maximum shaking weight of 7.5 kg.

#### KS 260 basic:

- Electronic adjustment of speed and timer
- LED display for speed and time adjustment
- Wide range of attachment combinations makes it possible to use almost all shapes and sizes of vessels
- Attachments are not included, please order separately

#### Accessories:

AS 260.2 Fixing clip attachment, AS 260.1 Universal attachment, AS 260.3 Dish attachment, AS 2.5 Fixing clips, AS 2.4 Fixing clips, AS 2.3 Fixing clips, AS 2.2 Fixing clips, AS 2.1 Fixing clips



### Viscometer

Water hardness is caused almost entirely by calcium and magnesium ions. Other di- and trivalent metals have a similar effect, but usually are not present in high enough concentration to cause problems.

# General Laboratory Equipment

## Ovens



Available in two bench mounted sizes, this is a high specification precision oven, which can be used for the most demanding test work, as well as providing hot air sterilisation.

### Temperature Control

- Digital PID Temperature Control using a PT100 sensor provides accurate thermal stability;
- Fan powered circulation provides rapid heating and ensures excellent thermal uniformity fast heat up rate and rapid recovery from reloading operations.

### Easy and safe to use

- Efficient insulation design reduces power requirements and ensures safe outer casing temperature which conform to BSEN61010;
- Stainless steel interior with two nickel-chrome plated wire shelves for resistance to chemical attack;
- Exhaust duct with adjustable vent for control of airflow;
- Lever latch door handle, provides air tight seal without slamming and has the option of a key lock.

### Control panel options

- Digital count down timer to automatically switch off;
- Adjustable hydraulic over temperature protection with reset

The above products are built to comply with the essential protection requirements of the Low Voltage Directive 73/23/EEC (and amendments to that directive) by the application of the European Standard BS EN 61010-2-010:1995 (Safety Requirements of Electrical Equipment. Particular Requirements for Laboratory Equipment for the Heating of Materials).

## Consumables



### SDC Standard Adjacent Fabrics

- SDC1105 SDC Acrylic ISO 105 F05
- SDC1120 SDC Acrylic 5M PACK
- SDC1205 SDC Cotton Drill ISO 105 D01
- SDC1220 SDC Cotton Drill - 5M PACK
- SDC1305 SDC Cotton Lawn (Wide Width) ISO 105 F09
- SDC1320 SDC Cotton Lawn - 5M PACK
- SDC1323 SDC Cotton Lawn 5X5 CM (Gimped) - Rubbing
- SDC1324 SDC Cotton Lawn 5X5 CM (Straight Cut Edges) - Rubbing
- SDC1351 SDC Cotton Lawn 20X10 CM (Gimped) - Shower Resistance
- SDC1505 SDC Cotton Limbric ISO 105 F02
- SDC1520 SDC Cotton Limbric - 5M Pack
- SDC1531 SDC Cotton Limbric 10X4 CM (Gimped) - Staining/Washing
- SDC1605 SDC Polyamide 6.6 ISO 105 F03
- SDC1620 SDC Polyamide 6.6 - 5M Pack
- SDC1705 SDC Polyester ISO 105 F04
- SDC1720 SDC Polyester - 5M Pack
- SDC1805 SDC Viscose Rayon ISO 105 F02
- SDC1820 SDC Viscose Rayon - 5M Pack
- SDC1955 SDC White Pigmented PVC FILM 10X4 CM BS EN ISO 105X10:1996
- SDC1930 SDC Wool ISO 105 F01
- SDC1920 SDC Wool - 5M Pack
- SDC1931 SDC Wool 10X4 CM (Gimped)
- SDC2115 SDC Multifibre DW 10 Metre Roll ISO 105 F10
- SDC2120 SDC Multifibre DW 50 Metre Roll ISO 105 F10
- SDC2133 SDC Multifibre DW 10X4 CM ISO 105 F10
- SDC2143 SDC Multifibre DW 10 X 5 CM ISO 105 F10
- SDC2108 Multifibre DW ID Strips

### SDC Martindale Consumables BS EN ISO 12947-1:1999

- SDC2016 SDC Wool Abradant Fabric - 5M Pack BS EN ISO 12947-1:1999
- SDC2010 SDC Woven Wool Felt Pads (Discs 90mm) ISO12945-2:2000
- SDC2011 SDC Woven Wool Felt Pads (Discs 140mm) ISO 12947-1:1999
- SDC2017 SDC Non Woven Wool Felt Pads (Discs 90mm)
- SDC2018 SDC Non Woven Wool Felt Pads (Discs 140mm) BS5690:1991
- SDC2020 SDC Polyetherurethane Foam Discs (38mm Diameter)
- SDC2021 SDC Polyetherurethane Foam Sheets 25X20CM ISO12947-1:1999
- SDC2024 SDC Wool Abradant (Discs 175 mm)

## Consumables



### SDC Assessment Aids

- SDC2821 SDC Blue Wool No. 1 BW1-8: ISO B01-B05
- SDC2822 SDC Blue Wool No. 2
- SDC2823 SDC Blue Wool No. 3
- SDC2824 SDC Blue Wool No. 4
- SDC2825 SDC Blue Wool No. 5
- SDC2826 SDC Blue Wool No. 6
- SDC2827 SDC Blue Wool No. 7
- SDC2828 SDC Blue Wool No. 8
- SDC2839 SDC Pre Mounted LFS 1-8
- SDC2836 LFS Mounting Card OBA Free (13 X 4.5CM)
- SDC2837 LFS Mounting Card OBA Free (14CM X 7 CM)
- SDC3605 Humidity Control Fabric ISO 105 B02
- SDC2910 Taed High Sensitivity (T1) 10 X 5 CM
- SDC2915 Taed Medium Sensitivity (T2) 10 X 5 CM
- SDC2920 Taed Low Sensitivity (T3) 10 X 5 CM
- SDC3020 Perborate Sensitive Fabric P1
- SDC3025 Perborate Sensitive Fabric P1 5 X 5 CM
- SDC3030 Perborate Sensitive Fabric P1 10 X 4 CM
- SDC3120 Perborate Sensitive Fabric P2
- SDC3125 Perborate Insensitive Fabric P2 5 X 5 CM
- SDC3130 Perborate Insensitive Fabric P2 10 X 4 CM
- SDC3305 SDC Grey Scales for assessing change in colour ISO 105 A02 (includes free assessment mask)
- SDC3355 SDC Grey Scales for assessing staining ISO 105 A03 (includes free assessment mask)
- SDC3716 SDC Assessment Mask Type C
- SDC3405 SDC Standard Depths BS1006 A01:1990
- SDC3810 Fluorescent Suppressor (Laminate Plate)

### SDC Detergents

- SDC2304 SDC Soap Powder FBA Free ISO 105 C Series
- SDC2408 SDC ECE Non Phosphate Detergent (A) 2 KG
- SDC2420 SDC ECE Non Phosphate Detergent (1) 15 KG FBA Free; BS EN ISO 6330:2000; ISO 105 C08, C09
- SDC2458 SDC ECE Phosphate Detergent (B) 2 KG
- SDC2470 SDC ECE Phosphate Detergent (B) 15 KG FBA Free; ISO 105 C06
- SDC2508 SDC IEC Non Phosphate Detergent (A) 2 KG
- SDC2520 SDC IEC Non Phosphate Detergent (A) 15 KG Contains FBA; BS EN ISO 6330: 2000



## SDC Detergents Cont.

- SDC2558 SDC IEC Phosphate Detergent (B) 2 KG
- SDC2570 SDC IEC Phosphate Detergent (B) 15 KG  
Contains FBA; BS EN ISO 10528; 1995; BS5651: 1989
- SDC2575 SDC Reference Detergent Type (6) 15 KG  
ISO 15797 Ref Detergent 6.1.1 (OBA)
- SDC2580 SDC Reference Detergent Type (7) 15 KG  
ISO 15797 Ref Detergent 6.1.2 (OBA Free)
- SDC2705 Sodium Perborate Tetrahydrate ISO 105 C06 – C09
- SDC2605 Taed 92% Tetraaactylethylenediamine ISO 105 C07 – C09
- SDC2615 SDC Fabric Conditioner – Type 1 5 KG
- SDC2710 Ariel Colour Powder
- SDC2715 Persil Handwash and Twin Tub Powder
- SDC2720 Persil Biological
- SDC2725 Persil Non-Biological

## Chemical for use in E-Series

- SDC4144 Citric Acid
- SDC4145 Lauric Monoisopropanolamide
- SDC4146 Dodecyl Sodium Sulphate
- SDC4147 Sodium Thiosulphate Anhydrous
- SDC4148 Potassium Iodide
- SDC4149 Potassium Dihydrogen Phosphate
- SDC4151 L-Histidine Monohydrochloride Monohydrate
- SDC4152 Sodium Chloride
- SDC4153 Sodium Dihydrogen Orthophosphate Dihydrate
- SDC4154 Disodium Hydrogen Orthophosphate Dihydrate

# Consumables

## Test Equipment

- SDC3905 Glass Plates
- SDC3955 Plastic Dishes
- SDC4005 Stainless Steel Washing Balls ISO 105 C Series
- SDC4055 Stainless Steel Dry Cleaning Discs ISO 105 D01
- SDC4065 Polypropylene Net
- SDC4110 SDC Polyester Ballast 30 X 30 CM BS EN 26330:1994, SM37
- SDC4105 SDC Polyester Ballast 20 X 20 CM BS EN ISO 6330:2000
- SDC4115 SDC Cotton Ballast 90 X 92 CM BS EN ISO 6330:2000
- SDC4120 SDC 80/20 Wool/Cotton Ballasts 30 X 30 CM
- SDC4161 A4 Self Seal Cutting Mat
- SDC4162 A3 Self Seal Cutting Mat
- SDC4163 Rotary Cutting Knife + 2 Spare Blades
- SDC4075 15CM Steel Ruler BS 4372 - 1968
- SDC4077 30CM Steel Ruler BS 4273 - 1968
- SDC4079 60CM Steel Ruler BS4372 - 1968
- SDC4131 Texpen (Black)
- SDC4135 Texpen (Orange)
- SDC4139 Texpen (Yellow)
- SDC4155 Black Metal Linen Tester/Pick Glass 25mm 6X
- SDC4180 100% Polyester Core Spun Thread 45+/- 5 EN ISO 113936 2:2004 (determination of slippage resistance of yarn - fixed load method)
- SDC4181 Poly/Cotton Corespun 60 Tex for AS2001:2.21
- SDC4190 Filter Paper for BS EN 1103:1996 (burning behaviour - fabrics for apparel)

## AATCC Products

- SDC2205 Multifibre TV 50 Metre Roll
- SDC6110 AATCC 9-Step Chromatic Transfer Scale
- SDC6120 AATCC Gray Scale for Change in Colour
- SDC6130 AATCC Gray Scale for Staining
- SDC6140 Conditioning Tracks, Drawings
- SDC6150 Shrinkage Scales
- SDC6160 Microscopy Cross Section Kits
- SDC6170 Cross Section Slides (50)
- SDC6180 Crease Appearance Replicas
- SDC6190 Stain Release Replicas
- SDC6200 Wrinkle recovery Plastic Replicas
- SDC6210 Photographs for Seams
- SDC6220 Smoothness Appearance Replicas

# Notes

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**GLOBAL LEADER IN TEXTILES  
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