ROACHES

Heritage & Innovation in Textiles

TEXTILE TESTING

SAMPLE DYEING

LAB FINISHING

www.roaches.co.uk


TEXTILE
TESTING


SAMPLE
DYEING


LABORATORY
FINISHING


TEST
MATERIALS

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About Us

We are a UK based manufacturer of laboratory testing equipment, enabling you to test, dye, and finish with confidence in your results.

Our expertise at Roaches extends to Autoclaves and auto setting technology. We further provide a comprehensive range of Test Materials and accessories for the textile testing industry.

With decades of combined experience and a growing operation, the Roaches team bridge innovation and engineering expertise to deliver reliable, solution focused services.

Our Vision

To be the comprehensive solution provider within our industry, offering a seamless, one-stop experience that fulfils all our clients' needs through exceptional quality, technical expertise, and dedicated service.

sales@roaches.co.uk

Our Mission

*"Driven by **engineering excellence** and a spirit of innovation, we are committed to delivering **superior products and solutions** that consistently exceed our customers' expectations"*

Meet the Team

Sean O'Neill
Managing Director

Greg Beck
General Manager

Liam O'Neill MSc
Engineer

Rob Shelton
International BDM

James Dolan
Supply & Marketing Manager

Lauren Todhunter
Purchasing & Logistics

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Ben Seanor
Service Engineer

Neil Murphy
Development Engineer

european certification group
ec
ISO 9001
REGISTERED FIRM

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TEXTILE TESTING

SENTIRE

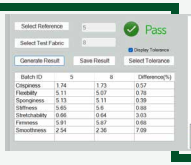
Fabric Handle Analysis

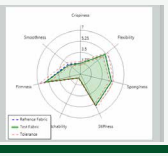
Unit Features

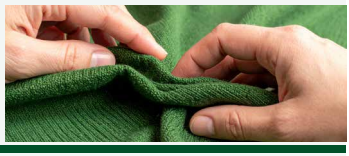
- Consistent specimen loading (using **Sentire Load Station**)
- **Digital handle analysis**, gathering precise numerical values
- **Digital comparison** of tested specimens against a reference fabric
- Comprehensive reporting based on **7 key indices**

Benefits

- Gain insights on how your stages of production influence the final **fabric handle**
- Establish your own parameters that are bespoke to your fabrics
- Achieve quick and defined **PASS/FAIL** results based on your parameters
- Reliability of repeat testing, particularly when working on unpredictable materials







Sentire performs digital analysis on a range of textile materials, gathering data at **key indices**, such as roughness and stiffness. The software within Sentire uses universally recognised textile language for reporting on the results of these indices, where you are able to distinguish an unambiguous **PASS/FAIL** result on the handle of your specimen.

Sentire Power Supply

Voltage: 90V to 250V
Frequency: 50/60Hz
Phases: One (1)

Load Station Power Supply

Voltage: 100V to 240V
Frequency: 50/60Hz
Phases: One (1)

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MARTINDALE AXYZ

Abrasion & Pilling Tester

Unit Features

- Advanced **virtual cam system** auto switches between Lissajous
- **Retractable abrading tables**, for station specific flexibility
- Automated switching between **abrasion and pilling tests**
- Compatible with all **abrasion and pilling** accessories
- Spring-loaded **accessories drawer**
- **Pre-Loaded Test Standards** and custom presets

Benefits

- Run overnight testing to increase output during **non-contact time**
- Save time and **physical contact** with an auto-switch between abrasion and pilling
- Digital Lissajous offers tighter precision for even more reliable results
- **11 testing stations**, increasing the capacity of specimens to be tested

Key Standards

Abrasion: ASTM D4966, ISO 12947, **JIS L1096 8.19.5**
M&S P19, **SATRA TM31**
Pilling: ASTM D4970, ISO 12945-2, **Next TM26**
Woolmark TWC-TM196
(Other standards for alternative abrasion and pilling tests are available)

Models 6, 9 and 11

Power Supply

Voltage: 110V to 230V
Frequency: 50/60Hz
Phases: One (1)

Air Supply

6 Bar Minimum

DURAWASH & DURAWASH PLUS

If you have a high volume of washing tests or specific **durability tests**, DURAWASH is the perfect choice. This testing machine conforms to many high street and brand test methods and procedures.

The unit includes the Roaches **touchscreen interface**. This intuitive technology ensures minimal training for technicians and highly accurate process control, allowing for simple programming of new test methods.

The DURAWASH PLUS model has an integrated spinner.

Standards

CEN TR 16792:2014 (Annex C)
M&S C15/P5/P6/P7/P69
NEXT TM7

Power Supply

Voltage: 220V to 240V
Frequency: 50 or 60Hz
Phases: One (1)
Amp: 12A
Watt: 2.75kW

WASHTEC

Compact colour fastness to washing tester. WASHTEC is available in single size pot (P) or dual size pot (PA2) options, allowing you to choose the best configuration for your testing requirements. **WASHTEC PA2** has been exclusively designed to allow the user to utilise equal numbers of 550ml (**ISO**) pots and 1200ml (**AATCC**) pots.

Standards

AATCC 61/86/132/151/190
ISO 105 C06/C08/C09/C10/C12/D01/E03/E12/X05
M&S C04/C05/C10A/C37/P21A
Next TM 2/2A/3/3A/5**, JIS L 0844, JIS L 0860**
Woolmark TM 177/193/199/240/241/250/294/300

Power Supply

Voltage: 220V / 240V / 400V
Frequency: 50 or 60Hz
Phases: One (1) / Three (3)
Amp: 13A / 22A / 27A
Watt: 3kW / 6kW / 13kW

Models

P8, 4+4, P16, 8+8, P24, 12+12

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OPTI-DRY

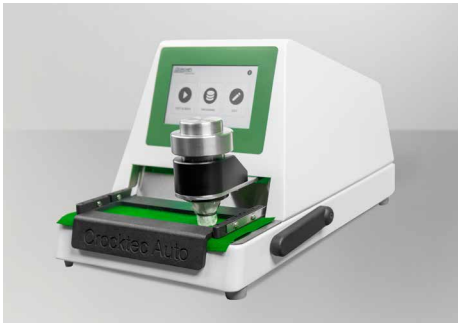
The OPTI-DRY is the **industry standard** for reference tumble drying. Its **touchscreen interface** provides at-a-glance updates on test cycle stages, simplifying operation. Operators can easily monitor the precise control of the **Exhausted Air (Max 80°C)**, thanks to advanced digital instrumentation. The display shows real-time process temperature, timing, and the active heating and cooling phases - all ensuring optimal test conditions.

Standards

AATCC LP1, ISO 3758**, ISO 3759,** ISO 5077**, ISO 6330**
ISO 7768**, ISO 7769,** ISO 7770**, ISO 15487,** ISO 16322
ISO 16732, JIS L1930**, M&S P1A**
Next TM 7/7A/7B/9/10/11/12 & 34/36A
Woolmark TM31/254

Power Supply

Voltage: 220V to 240V
Frequency: 50 or 60Hz
Phases: One (1)
Amp: 13A
Watt: 3.25kW



CROCKTEC

The CROCKTEC is for **colour fastness testing** through rubbing (crocking). The machine has undergone radical redesign for a reduction in desktop footprint and unit weight. **Two stage sample clamping system** ensuring automated pin location and allowing technician to apply fabric tension.

Featuring the Roaches **touchscreen interface** and removable load weight to allow contamination free placement of crocking cloths.

Standards

AATCC 8, AATCC 165**, BS 4655,** GB/T 3920/5712
IKEA IOS-TM-0002, ISO 105 D02/X12**, ISO 20433**
M&S C08/C08A/C25/C52
Next TM6/TM10

Power Supply

Voltage: 110V to 230V
Frequency: 50 to 60Hz
Phases: One (1)
Amp: 0.5A
Watt: 50W

OPTI-PILL

The OPTI-PILL is for the determination of surface **fuzzing**, **snagging** and **pilling** tests. Its unique design with front facing boxes allows for practical access for handling samples. Intuitive **touchscreen interface** with **pre-loaded standards**. The silent drive produces controlled and smooth operation at 60rpm and 30rpm (CW or ACW).

Standards

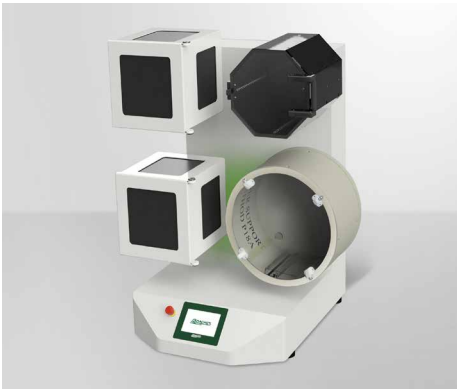
ADIDAS TM 4.08 & BS 8479 (Oct Snag Box)
ISO 12945-1 (Pilling Box)
JIS L1076 (Pilling Box), M&S P18A (M&S Pilling)
M&S P18B (Random Pilling)
M&S P21A (M&S Snagging)
Next TM19 (Pilling Box), JIS L1058 D2 (Snag Box)

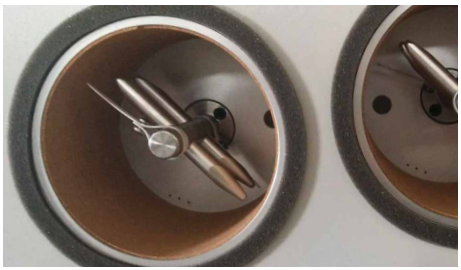
Power Supply

Voltage: 230V or 110V
Frequency: 50/60Hz
Phases: One (1)
Amp: 0.5A
Watt: 100W

Models

2 Box or 4 Box





RANDOM TUMBLE PILLING TESTER

The RANDOM TUMBLE PILLING TESTER is used to determine the **pilling** and **fuzzing** characteristics of textile fabrics. Drum doors made from transparent acrylic for **easy viewing** and safety.

Individually lit test chambers. Compressed air and agitator flaps to assist the **tumbling action**. Electronic counter automatically stops the drive when the pre-selected count has been achieved.

Standards

ADIDAS TM 4.07, ASTM D3512
DIN 5368**, ISO 12945-3**
GB/T 4802.4, JIS L1076
NF G 07-132

Power Supply

Voltage: 230V or 110V
Frequency: 50 or 60Hz
Phases: One (1)
Amp: 2A
Watt: 450W

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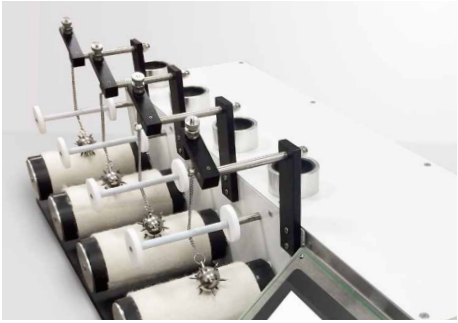
ICI MACE SNAG TESTER

The ICI SNAG MACE TESTER has been developed to determine the **snagging resistance** of heavy duty fabrics. The rotating cycle number is displayed on the touchscreen controller.

Automatically stops when **pre-set cycle** has been reached. Adjustable chain length. Rubber lined holders for safe storage of test **mace balls**. Pre-Installed **felt sleeves** manufactured to ASTM D3939 as standard.

Standards
ASTM D3939
JIS L1058

Power Supply
Voltage: 230V or 110V
Frequency: 50 or 60Hz
Phases: One (1)
Amp: 1A
Watt: 90W



BEAN BAG SNAG TESTER

The BEAN BAG SNAG TESTER is used to assess the propensity of a knitted fabric for **snagging** by a tumbling action. This assessment is performed using with a weighted **bean bag** and **pin bars** in a rotating drum.

The machine rotates at 20 rpm for 100 cycles. Each drum contains 8 pin bars and the doors made from transparent acrylic for **easy viewing and safety**. 2 Test Bean Bags supplied as standard (450 ± 10g).

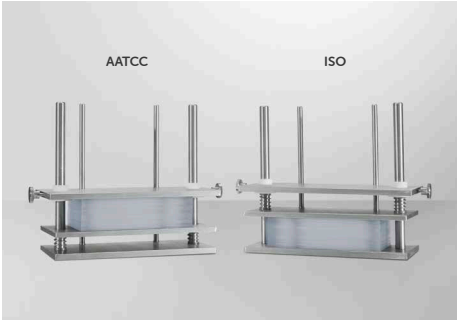
Standards
ASTM D5362
JIS L1058

Power Supply
Voltage:230V or 110V
Frequency: 50 or 60Hz
Phases: One (1)
Amp: 0.5A
Watt: 120W

PERSPIROMETER

The PERSPIROMETER is designed for use in the determination of **colourfastness of textiles to water**, seawater and **perspiration**. The apparatus consists of a stainless steel frame with 21 acrylic separator plates and a load weight.

It can be used in **two configurations**, depending on the test method being used. Each respective configuration applies the correct weight to the specimens.



Standards

AATCC 15
BS 1006
BS EN 20105
ISO 105
ISO 11643 (E)

Specification

Rack Material: Stainless Steel
Weight Material: Painted Steel

OPTI-SPRAY

The OPTI-SPRAY is specifically designed to comply with the various methods for determining the **water repellence** of a textile fabric. The apparatus is constructed from stainless steel for outstanding durability and to **eliminate the chance of contamination**.

A predetermined quantity of water is allowed to spray from the aluminium nozzle down on to the **test specimen**, which is positioned at 45° and whose centre is 150mm from the centre of the nozzle.

Standards

AATCC 22
BS EN 24920
ISO 4920
M&S P23

Specification

Spray Time: 25 to 30 Seconds
Specimen Mount Angle: 45°
Nozzle to Sample: 150mm
Funnel Diameter: 150mm

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OPTI-THERM

The OPTI-THERM unit has been developed to assess a fabric's **thermal stability** and its **colour fastness to hot pressing**. The unit allows for a wide range of tests with two flat plates which are accurately controlled for dry heat conditions.

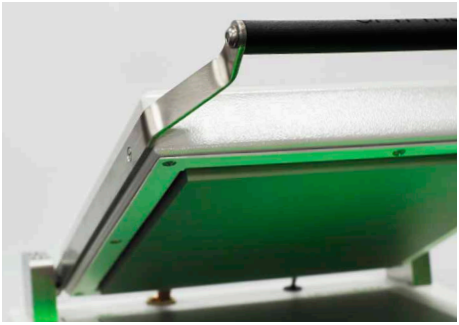
Independent control of the top and bottom plate utilizing the Roaches **touchscreen interface** ensures accurate plate temperature is achieved. Preloaded test standards are inclduded in the machine software.

Standards

ADIDAS 5.09, AATCC 117**, AATCC 133,** GB 6152
ISO 105 P01, ISO 105 X11**, JIS L0850,** JIS L0879
M&S C10, M&S P10

Power Supply

Voltage: 110V or 230V
Frequency: 50/60Hz
Phases: One (1)
Amp: 3.5A
Watt: 800W



OPTI-FADE

The OPTI-FADE is specifically designed to perform accelerated light fastness testing on textile samples in accordance to BS 1006. Selector switch to swap lamp types. **Standard Fading** and **Accelerated Fading** lamps supplied as standard.

50 x Type C Test Tubes (150 x 16mm) with Bungs
Standard Fading Lamp 400W
Accelerated Fading Lamp 500W

Standards

BS 1006

Power Supply

Voltage: 230V or 110V
Frequency: 50 to 60Hz
Phases: One (1)
Amp: 5A
Watt: 600W

GAS FUME FADING TESTER

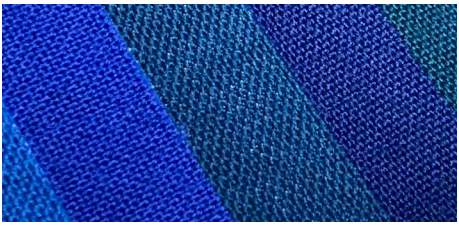
The GAS FUME FADING TESTER meets specifications required for establishing a specimen's **colour fastness** when exposed to atmospheric contaminants.

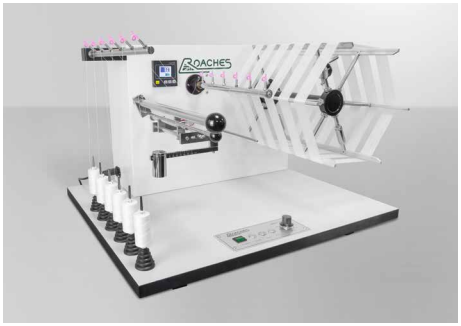
Complying with the requirements of **ISO 105 G01** and also fulfils the requirements of the standard for Colour Fastness to Atmospheric Contaminants and Colour Fastness to Nitrogen.

LFS Blue Wool Pre-Mounted (1-8 Set)
LFS Blue Wool (Numbers 1 through 8)

Standards
ISO 105 G01

Power Supply
Voltage: 230V or 110V
Frequency: 50 or 60Hz
Phases: One (1)
Amp: 0.5A
Watt: 50W





WRAP REEL

The WRAP REEL is designed to produce skeins of yarn to a predetermined length as well as the number of turns for yarn counting and/or strength testing.

Revolutions: 25 to 300 RPM (Adjustable)
Number of Wraps: 2 to 9,999 (Settable)
Travelling Reciprocating Distance: 35 ± 1mm
Optional Safety Frame Available

Standard
ISO 2060.2

Power Supply
Voltage: 230V or 110V
Frequency: 50 or 60Hz
Phases: One (1)
Amp: 0.5A
Watt: 100W

Models
Metre (1,000mm) or Yard (54")

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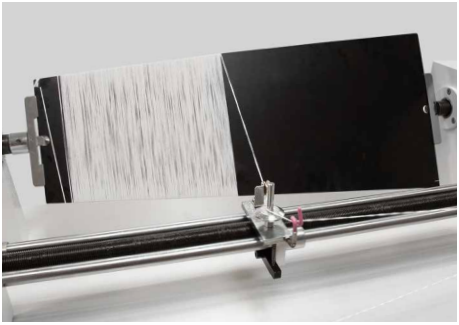
TRAPEZOIDAL YARN TESTER

The TRAPEZOIDAL YARN TESTER offers a visual and fast way to evaluate **yarn quality parameters** such as evenness, hairiness, neps, periodic faults and variations in thickness. This instrument can wind a representative sample of yarn (bobbin yarn or cone yarn) on a **trapezoidal board** with pre-determined wound density and pre-tension.

Board Size: 575mm (L) x 250mm (W) x 160mm (W)
Rotational Speed: 30-320 RPM (Adjustable)
Density of Wound Yarn: 7, 9, 11, 13, 15, 19 Wraps per cm

Standards
ASTM D2255
GB/T 9996

Power Supply
Voltage: 230V or 110V
Frequency: 50 or 60Hz
Phases: One (1)
Watt: 100W



TWIST TESTER

The TWIST TESTER determines the twist of single or plied yarns using conventional or untwist/retwist methods. It is controlled by a microcomputer with an LCD display. The machine features data storage and offers the ability of retrieval up to 300 groups of data. There is also the option to printout test reports.

Sample Length: 25, 50, 100, 250, 500mm
Range of Tested Yarn: 1-499.9 Tex
Range of Test: 1-9999.9 Twist
Rotational Speed: 300-1200 R/Min
Metallic Scale Accuracy: 1mm

Standards
ASTM D1422, ASTM D1423, **FZ/T 10001**
GB/T 2543.1/2, **GB/T 14345**
ISO 2061

Power Supply
Voltage: 230V or 110V
Frequency: 50 or 60Hz
Phases: One (1)
Amp: 0.5A
Watt: 70W

ZIP TESTER

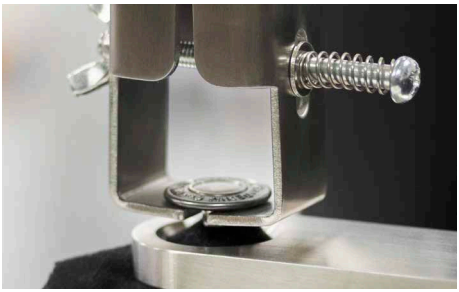
The ZIP TESTER is specifically designed to permit the mechanical testing of **slide fasteners** in accordance with British Standards 3084.

Includes a larger access door for greatly improved access to working parts that require adjustment. An integrated **control console** is situated at a convenient height for the operator.

Lateral & Longitudal Loads: 0-10kg and 0-5kg
Slider Stroke Length: 150mm to 180mm
Counter Range: 1 to 9,999

Standard
BS 3084

Power Supply
Voltage: 230V or 110V
Frequency: 50 or 60Hz
Phases: One (1)
Amp: 1A
Watt: 90W



OPTI-SNAP

The OPTI-SNAP is a pulling machine engineered for the **retail testing industry**. It provides a standardized mechanism that dramatically improves the testing of buttons and other fixings.

This not only increases the capability of a testing lab but also ensures **high levels of repeatability**, meaning that results are consistent across multiple tests. By using a **uniform** and reliable method for pulling, the machine helps manufacturers and retailers meet strict quality and safety standards for their products.

Standards
ASTM F963, ASTM D4846-96
EN71
M&S P115A (Snap)
M&S P115 (Button)

Specification
Standard Force Gauge: 30 kgf
Force Gauge Resolution: 25 gf
Machine Size: 250 x 300 x 900mm
Machine Weight: 30 kg

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ELMENDORF TEAR TESTER

The ELMENDORF TEAR TESTER is an advanced instrument designed for accurate and efficient **tear force** measurement. Equipped with a digital touch screen. Featuring **pneumatic clamping** and automatic cutting.

Tearing Force Range: 16N, 32N, 64N, 128N (± 0.5% FS)
Selectable Force Units: N, cN, kgf, gf, lbf
Tearing Length: 43mm
Cut Length: 20 ± 0.2mm
Clamp Gauge Distance: 2.8 ± 0.3mm

Standards

ASTM D1424, ASTM D5734**, ASTM D689B-96A**
BS EN ISO 13937**, BS EN ISO 21974,** BS EN ISO 4674-2
DIN 53128, FZ/T 60006
FZ/T 75001**, GB/T 3917.1**
JIS L1096, TAPPI T414

Power Supply

Voltage: 230V or 110V
Frequency: 50/60Hz
Phases: One (1)
Watt: 100W

CENTURION TENSILE TESTER

The CENTURION TENSILE TESTER line represents a family of small-footprint, **universal materials testing** machines engineered for exceptional precision and versatility. Advanced software that allows users to **fully configure test setups**, allowing them to define both simple and complex multi-stage test routines.

This flexibility is delivered across three available models: the model **X100**, which is specifically optimized for yarn and elastic tests. The **X250** and **X350** models expand their utility to cover both yarn, elastic test and zip tests.

Standards

Fabric: ISO 13934-1 & 2, ISO 13937-2 **DIN 53859-5**
Yarn: **BS 4650**
Elastic: ASTM D4964, **BS 4952**
Zip: **ASTM D2061**, BS EN 16732

(Other standards are available, please contact our sales team for more info)

Power Supply

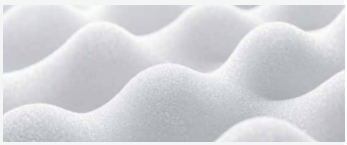
Voltage: 230V or 110V
Frequency: 50 or 60Hz
Phases: One (1)

OPTI-AIR

Air Permeability Tester

Unit Features

- Clamping bed to secure a variety of specimen sizes
- 6 test head sizes for a range of samples and air flow measurement
- Consistent vertical flow of air, with pressures between 1 - 1,000Pa
- Manometer to measure pressure drop, and meter for flow rate



Specification

Pressure Range: 0 - 1,000 Pa
Measuring Range: 0.2 - 12,000mm/s (± 2%)
Sample Thickness (Max): 12mm
Units: mm/s, L/m^2, cm^3/cm^2, dm/min, L/dm^2/min, m/min, m/h, cfm

Test Area

5cm^2
20cm^2
25cm^2
38cm^2
50cm^2
100cm^2

Clamp Surface

Ø 90mm
Ø 100mm
Ø 102mm
Ø 115mm
Ø 130mm
Ø 160mm

Key Standards

ADIDAS 6.08 (T), ASTM D3574 (F)**, ASTM D737 (T)**
DIN 53887 (T), **EDANA 140.1 (NW)**
EN ISO 7231 (F), EN ISO 9237 (T)
JIS L 1096:2010 Part 8.26 (T)

T=Textiles, F=Foam, NW=Non-Wovens

Power Supply

Voltage: 230V or 110V
Frequency: 50 or 60Hz
Phases: One (1)

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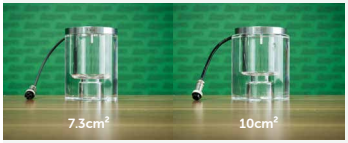
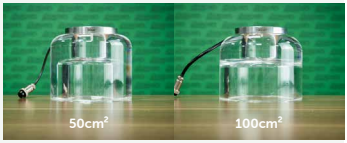
OPTI-BURST

Bursting Strength Tester

Unit Features

- Pneumatic (or hydraulic) distension of diaphragm and specimens
- 0-12 Bar or 0-20 Bar of pressure, covering all bursting tests
- Laser generated measurement of distension height
- Preset standards as well as flexibility to build your own





Specification (Hydraulic)

Measuring Range: 0 - 20 Bar
Accuracy: ± 0.2%
Units: Bar, PSI, kPa, kg/cm², lb/in²
Voltage: 230V or 110V
Frequency: 50 or 60Hz
Phases: One (1)

Specification (Pneumatic)

Measuring Range: 0 - 12 Bar
Accuracy: ± 0.2%
Units: Bar, PSI, kPa, kg/cm², lb/in²
Voltage: 230V or 110V
Frequency: 50 or 60Hz
Phases: One (1)

Key Standards (Hydraulic)

ASTM D3786 (T), EN ISO 3303-2 (T)
ERT 80-4-20 (VM)**, FZ/T 01030 (T)**
GB/T 7742.1 (HT), ISO 13938-1 (HT)
JIS L 1018 (T)

Key Standards (Pneumatic)

ADIDAS 4.09 (T), ASTM D3786 (T)
Edana 80.3 (NW), **ISO 13938-2 (PT)**
JIS L 1018 (T), **M&S P27 (T),** NEXT TM22 (T)
Woolmark TM 29 (T)

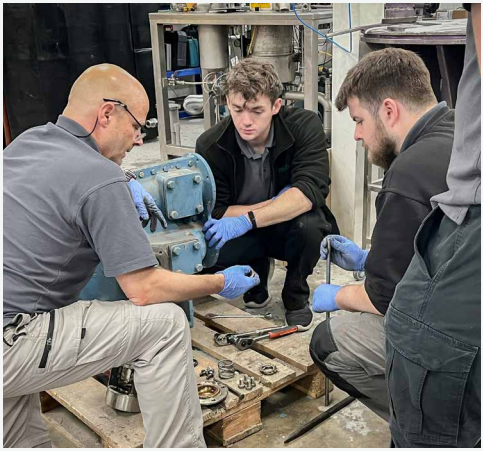
PT=Pneumatic Textiles, HT=Hydraulic Textiles, T=Textiles, NW=Non-Wovens, VM=Various Materials

What is involved in a machine service?

- Mechanical and electrical diagnostics
- Replacing worn parts and fixing hardware components
- Cleaning, fluid or lubricant replacement
- Preventative action – offering upgrades or recommended new parts

What is the benefit of a Roaches service?

Roaches engineers have extensive experience in mechanical engineering, from the initial build of equipment, to the maintenance, checks, and replacement of components. Roaches engineers are the most knowledgeable and skilled in their field, and the ideal choice for equipment servicing. Roaches equipment is serviceable worldwide.



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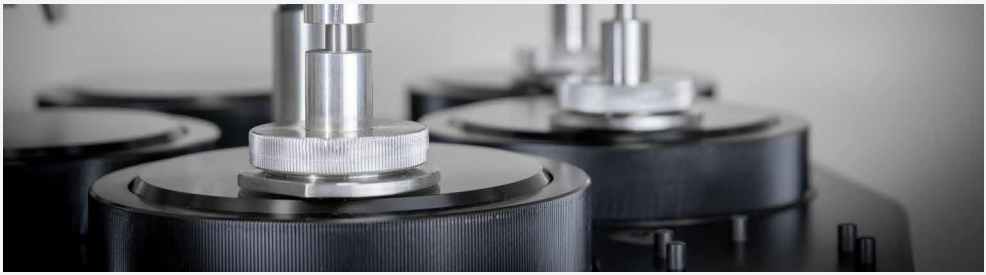
Why is calibration important to perform?

Regular calibration is crucially important to perform, to ensure that your equipment continues to provide reliable and accurate results. Many pieces of textiles testing equipment require calibration to meet the standards of many international accrediting bodies.



What is involved in a calibration?

- Diagnostic testing and analysis
- Calibrating mechanical and digital functions
- Reporting and certification for audit compliance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SAMPLE DYEING

PYROTEC[4]

Infrared Sample Dyeing Machine

Unit Features

- Touchscreen interface utilising **Roaches Dyeing Software**, save and view historical dye cylces
- **Heating Control** 40°C-135°C (±0.25°C Accuracy & 3°C/min)
- **Air Cooling** 135°C-70°C (3°C/min)
- A totally independent high efficiency **quartz heating system**
- **Robust construction** shell with stainless steel interior and tubes

Benefits

- Highly efficient **air cooling system**, removing the need for water and drain supply
- Factory set maximum temperature level with **audible alarm**
- Door **locking mechanism** to disable carrier rotation and machine heating
- Optional **Ad-Chem Dosing System** allows for controlled dyes to be introduced
- **LED lighting** indicates the machines current state

Tube Size	Tube Count	Tube Volume	Working Volume
A*	24 Tubes	100ml	82ml
A1	16 Tubes	180ml	135ml
B	16 Tubes	275ml	215ml
B1	8 Tubes	400ml	300ml
B2	8 Tubes	650ml	450ml
C	8 Tubes	1,000ml	750ml
2L*	4 Tubes	2,000ml	1,500ml
4L*	2 Tubes	4,000ml	3,000ml
8L*	1 Tube	8,000ml	7,200ml

Ad-Chem Lid

Cavity Lid

Power Supply

Voltage: 230V or 110V
Frequency: 50/60Hz
Phases: One (1)
Watt: 3.25kW

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DK - ATMOSPHERIC

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.

Available in **single bath** and **twin bath** configurations for maximum flexibility, the DK Atmospheric sample dyeing machine is the ideal choice.

Unit Features

- **Cold Water Supply & Waste Drain**
- **Variable Agitation Speed**
- **Programmable Temperature Profile Controller**
- **Heating Agitation to ensure uniform bath temperature**

Power Supply

Voltage: 230V, 400V or 110V
Frequency: 50 or 60Hz
Phases: One (1) or Three (3)
Watt: 5kW (1 Bath)
Watt: 10kW (2 Bath)

COLORTEC²

The COLORTEC² 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 in the single kier.

Holders are supplied for **fabric**, **yarn** or **loose stock**. An external vessel provides the ability for making additions and dosing to the kier even at high temperatures and pressures.

Unit Features

- **Max Temperature 135°C (275°F)**
- **High Temp pH Monitoring**
- **Programmable Liquor Flow**
- **Differential Pressure Control**
- **Up to 300g of Material**

Power Supply

Voltage: 240V or 110V
Frequency: 50 or 60Hz
Phases: One (1)
Amp: 6A
Watt: 1.25kW

ROTOHOSE

The ROTOHOSE series of **sample dyeing machines** have been designed for the processing of piece goods at under atmospheric conditions. The system utilises the **Roaches Dyeing Software** for customised profile dyeing. The rotating **perforated drum** (split or open) and the vessel are manufactured from **316 grade stainless steel**. To minimise the liquor ratio the bath profile closely follows the outer dimensions of the perforated drum.

Unit Features

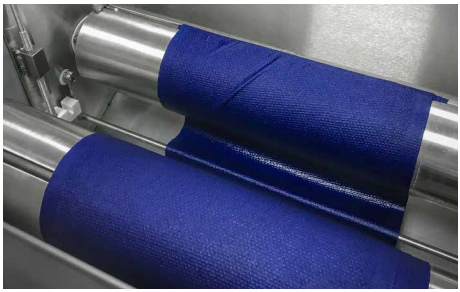
- **Liquor Ratios from 10:1 upwards can be achieved**
- **Automatic control of temperature profile**
- **Rotation direction timer forward and reverse**
- **Variable drum speed control**

Power Supply

Voltage: 230V or 400V
Frequency: 50 or 60Hz
Phases: One (1) or Three (3)
Watt: 1.5kW (Steam) 9kW (Electric)
Supply: Steam or Electric

Models

50L, 100L, 200L, 400L, 800L



LABORATORY JIGGER

The LABORATORY JIGGER is a dyeing machine which has been designed to simulate the functions of a production jig. The machine provides facilities for **automatic change of direction** of the fabric or where the sample length is too short, provision has also been made for one direction running only. The normal liquor level has a low volume, but the actual operating liquor to fabric ratio is dependent on the L/W of the sample.

Unit Features

- **Large diameter draw rollers with low heat capacity**
- **Adjustable fabric tension**
- **Fabric speed 1-10 m/min**
- **Automatic temperature control**

Power Supply

Voltage: 230V or 110V
Frequency: 50 or 60Hz
Phases: One (1)
Amp: 7A (350) or 9A (500)
Watt: 1.5kW (350) or 1.9kW (500)

Models

350 or 500

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WINCH

The WINCH is designed to simulate a production level winch machine. All parts that come into contact with dye liquor are manufactured from **316 grade stainless steel**.

The machine is fully enclosed and features a viewing window and an access door. The speed is **precisely controlled** and it includes automatic temperature control.

Unit Features

- **Speed controlled by variable AC inverter drive**
- **Automatic control of temperature profile**
- **Additions Tank (Optional Extra)**
- **Fully Automatic Doising (Optional Extra)**

Power Supply

Voltage: 230V or 400V
Frequency: 50 or 60Hz
Phases: One (1) or Three (3)
Watt: 1.4kW (Steam) 9kW (Electric)
Supply: Steam or Electric

Models

50L, 65L, 100L

DUST PARTICLE APPARATUS (DPA)

The DPA has been specifically developed in conjunction with **major chemical manufacturers** to analyse the dusting characteristics of powders and to provide a value so that this can be compared and evaluated. 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 the **physical characteristics** of the product.

Unit Features

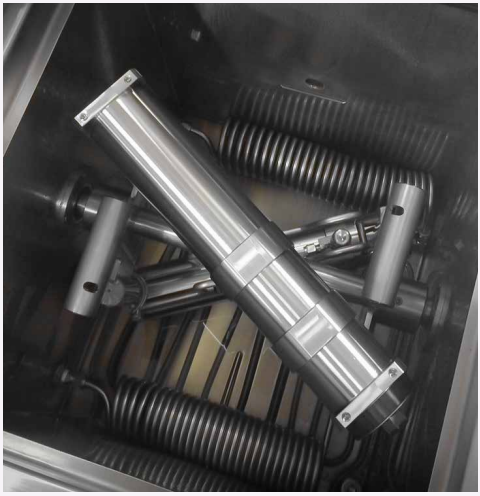
- **Timer Range: 1-999 Seconds**
- **Results can be compared against grey scales**
- **Variable and accurate control of the vacuum**
- **Easy removal of parts for cleaning**

Power Supply

Voltage: 230V or 110V
Frequency: 50/60Hz
Phases: One (1)
Amp: 2.5A
Watt: 450W

Bespoke Engineering Solutions

We provide engineering solutions for bespoke projects such as made-for-purpose dye baths and material dyeing equipment. We also specialise in adapting and modernising outdated control systems on historical production and testing machines.



What are the benefits of bespoke engineering?

Our bespoke engineering comes in many forms, but our team of specialists develop the brief with you, to ensure your project can maximise its' return on investment.

- Collaboratively build a specific brief to suit a host of different production, dyeing, finishing, and testing needs.
- Full detailed understanding and insight into the operation and optimisation of your new equipment or set-up.
- Personalised servicing and support from the experts who built and/or installed your equipment.

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Installation

Our expertise extends to a broad range of machine installation. Roaches engineers bring a unique blend of skills to their installations, backed by a rich history of consultation and high-level maintenance for UK dye houses and beyond. Today, our installation and maintenance capabilities extend further across the textile sector, encompassing stenters, large-scale wash ranges, full-scale dyeing systems and more.

Why choose us?

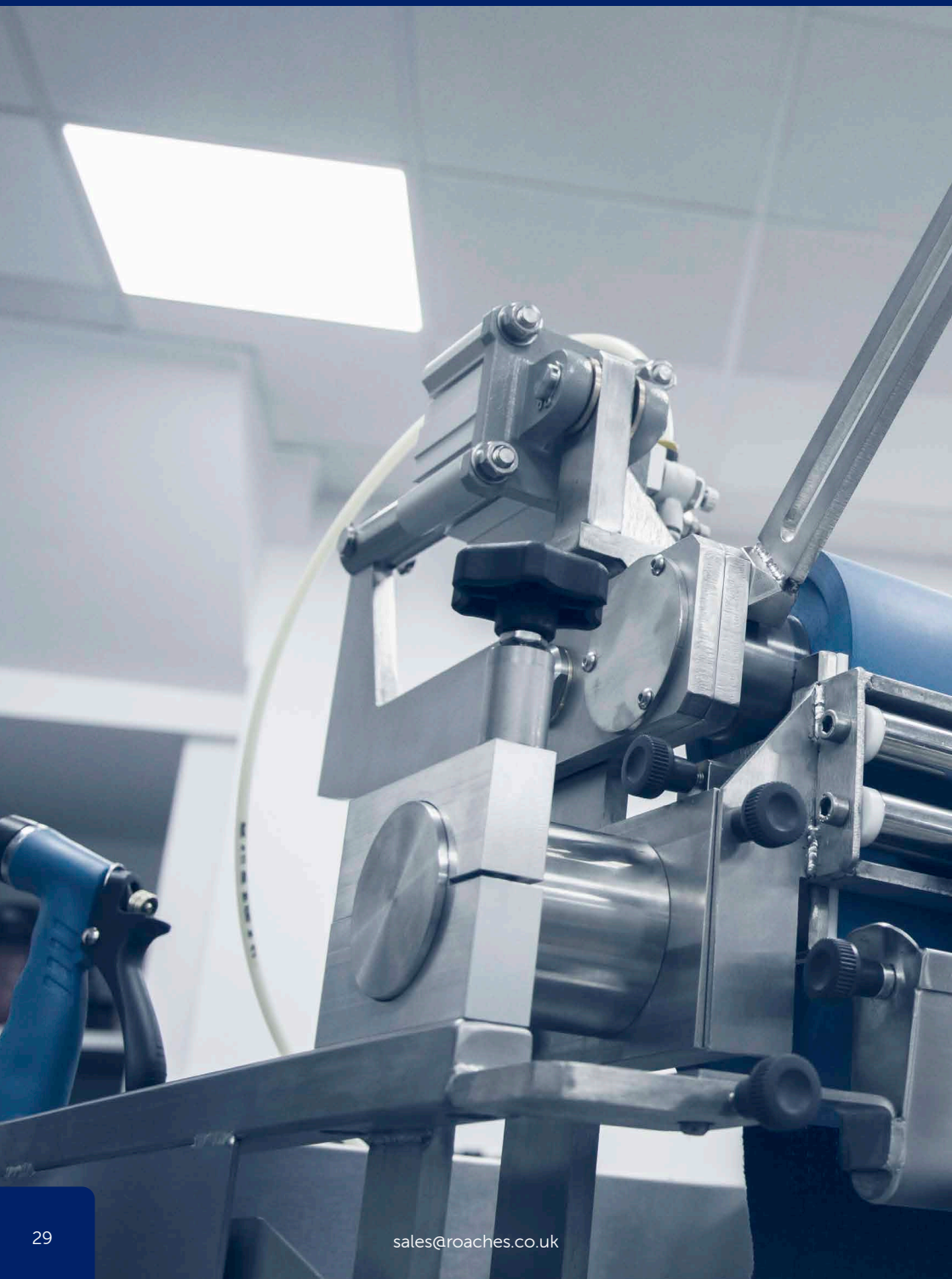
We have partnered with industry-leading companies such as Thies, Bianco, Brückner, and Erbatech GmbH on numerous large-scale installations, earning a solid reputation for high quality and reliable service. Our role goes far beyond installation alone, providing ongoing support, technical expertise, and a commitment to service.

Thies

bianco

BRÜCKNER

ERBATECH



LABORATORY **FINISHING**

FORTIS

High Speed Yarn Coating System

Unit Features

- Fully programmable tension and speed
- Adjustable IR heating elements for precise temperature control
- Touch screen control system with user defined presets
- 4 dosing applicators for bond and chemical solutions
- Up to 17 passes through the oven

Specification

- **Ends (Heads): 1 to 6**
- **Running Speed: 600 m/min Max**
- **Applicators: 1 to 4 (Independant)**
- **Cooling Zone: Passive**

Vertical Coating System

Our Vertical Coating System offers a combination of space efficiency, process control, and product quality improvements, making it a compelling alternative to traditional horizontal bonding methods

Power Supply

Voltage: 415V or 480V
Frequency: 50/60Hz
Phases: Three (3)
Wattage: 10.5kW Per Line

Vertical

- Uniform chemical application
- Compact footprint
- Improved airflow & drying

Horizontal

- Uneven chemical application
- Increased potential for waste
- Yarn damage from rollers

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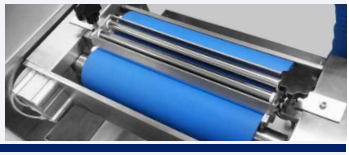
PADDER

For continuous and semi-continuous processes

Unit Features

- BVHP model can work in horizontal or vertical orientations
- EHP and BVHP models feature a liquor trough (dam)
- Constructed from high grade stainless steel for longevity
- Includes delivery and wind up rollers as standard
- Hypalon rollers give high load force and chemical resistance



Specification

- **Speed Range (Adjustable): 1-5 m/min**
- **Pressure Range: 0.25-5.5 Bar (3.5-80 psi)**
- **Compressed Air Supply: 0-5.5 bar (45 psi)**
- **Cold Water Supply: 3 Bar (45 psi)**
- **Standard Roller Hardness: 70 ± 5 Shore**

Models (350 or 500mm)

BVHP - Horizontal & Vertical
EVP - Vertical Rollers
EHP - Horizontal Rollers

Optional Extras

- Floor mounted stainless steel frame
- Castors for ease of moveability
- Gears for positive drive of both rollers/bowls
- Foot switch for inch/jog operation

Power Supply

Voltage: 230V or 110V
Frequency: 50/60Hz
Phases: One (1)
Wattage: 150W

SKY PADDER

The SKY PADDER was 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 **oxidisation** to take place. Multiple passes through the two sections can be easily arranged and in addition, the **Skying** time can be varied by selecting one of several routes through the frame. The Skying section incorporates **dancing arms** which independently regulate the tension of the loops.

Unit Features

- **Individual temperature controls for each tank (± 1°C)**
- **Low deflection of Padder bowls**
- **0.2-5.0m/min processing speed**

Power Supply

Voltage: 230V or 110V
Frequency: 50/60Hz
Phases: One (1)
Amp: 12A
Watt: 2.6kW

Models

500mm

THERMOFIXATION OVEN (TFO)

The TFO system is engineered to precisely simulate real-world production conditions found in **stenters and steamers**. You can achieve accurate results with an adjustable processing speed of **0-2 m/min**, a high temperature range of **up to 240°C** and **humidity control up to 98 rH**.

Model TFO: For drying, polymerising and thermo-fixation

Model TFO/S: As Model TFO but includes steaming

Model TFO/IM: For pin frame operation only - no provision for continuous roll to roll operation

Power Supply

Voltage: 230V, 400V or 110V
Frequency: 50 or 60Hz
Phases: One (1) or Three (3)
Amp: 13A to 25A
Watt: 8.0kW to 13.8kW

Sizes

350mm, 500mm, 1350mm

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COATING UNIT

The COATING UNIT is designed to facilitate laboratory-scale applications of pastes and similar media to textile substrates. It is the ideal apparatus for this purpose and is specifically engineered to complement the TFO and Mini-Thermo range of laboratory ovens and steamers for finishing operations. The coated fabric, mounted on a pin frame, can be directly inserted into one of the drying chambers.

Unit Features

- **Constructed from stainless steel (bowls & frame)**
- **Coating thickness set by high precision dial indicators**
- **Coating head has low friction linear bearings**
- **Blades angle of attack is fully adjustable**

Roller Configurations

- Fixed Bar
- Rotating Roller
- Blanket (Large Surface Area)

Models

350mm or 500mm

MINI-THERMO

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

Temperature range up to 240°C
Temperature accuracy of ± 1°C

Frame Configurations

- **2 Way Adjustable Pin Frame**
- **Mesh Basket**

Power Supply

Voltage: 230V or 110V
Frequency: 50/60Hz
Phases: One (1)
Amp: 11A
Watt: 2.5kW

Models

350mm or 500mm

MINI-STENTER

The MINI-STENTER is a compact and continuous **laboratory stenter**. The machine mimics the structure of a full-scale production stenter, allowing for accurate testing of **shrinkage, fixation, and colour changes**. Equipped with a comprehensive set of features, it offers exceptional **versatility** for various fabric types. Its integrated padder, expander, dancer roll, uncurler, overfeed, and width adjustment mechanisms ensure precise handling of samples.

Unit Features

- **Working Length up to 1.9m**
- **Working Speed: 0.2 to 2.2 m/min**
- **Temperature range 25°C to 220°C**

Power Supply

Voltage: 380V to 400V
Frequency: 50/60Hz
Phases: Three (3)
Watt: 70kW

Models (Working Width)

400mm, 500mm or 650mm

STEAMER (CPS)

The STEAMERS (CPS) has been developed to meet a wide variety of industrial requirements - from standard **atmospheric** units to high-temperature **flash agers** and pressurised **kiers**. This allows us to accurately simulate all conditions used in **full-scale production machines**.

Unit Features

- **Processing Speed: 0-10 m/min**
- **Temperature range up to 102°C**
- **Maximum Humidity: 98 rH**
- **Manufactured from high-grade stainless steel**
- **Glass inspection door and insulated panels**
- **Heated throat and roof**
- **Fabric content of 4 metres**

Power Supply

Voltage: 400V
Frequency: 50/60Hz
Phases: Three (3)
Amp: 9A (350) 11A (500)
Watt: 6.0kW (350) to 7.0kW (500)

Models

350mm or 500mm

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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.

Unit Features

- **Heated top bowl (external infrared emitters)**
- **Bowl options: Woollen, Paper, Cotton, Polyamide**
- **Maximum bowl temperature range: 170°C**
- **Gear drive between top and middle rollers**

Power Supply

Voltage: 230V or 110V
Frequency: 50 or 60Hz
Phases: One (1)
Amp: 13A
Watt: 3.25kW

Models

350mm or 500mm

WASH RANGE

The WASH RANGE is for continuous processing (washing) of **narrow fabrics**. The machine can be configured to suit a wide range of processing requirements. Generally incorporating a Padder, IR Dryer, Oven and Wash Boxes.

Unit Features

- **Custom layout to suit your processing requirements**
- **Manufactured from high-grade stainless steel**
- **Integrated process control system**
- **Auto fabric tension compensators between each stage**
- **Adjustable speed range using AC drives**
- **Manual/Auto temperature control for wash boxes**
- **Squeeze nips between each wash box stage**

Power Supply

Voltage: 230V or 110V
Frequency: 50/60Hz
Phases per : One (1)
Amp: 0.5A
Watt: 450W (4 Boxes)

Models

350mm, 500mm or Custom

ROACHES AUTOCLAVES

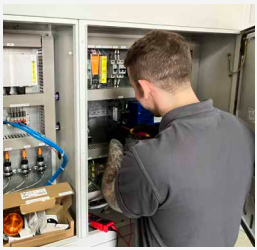
Your partner in thermosetting technologies

Servicing

Our expert care that will ensure your Autoclave performs the same through its years of service.

Calibration

Our expert calibration keep your equipment precise, delivering consistent results you can depend on.

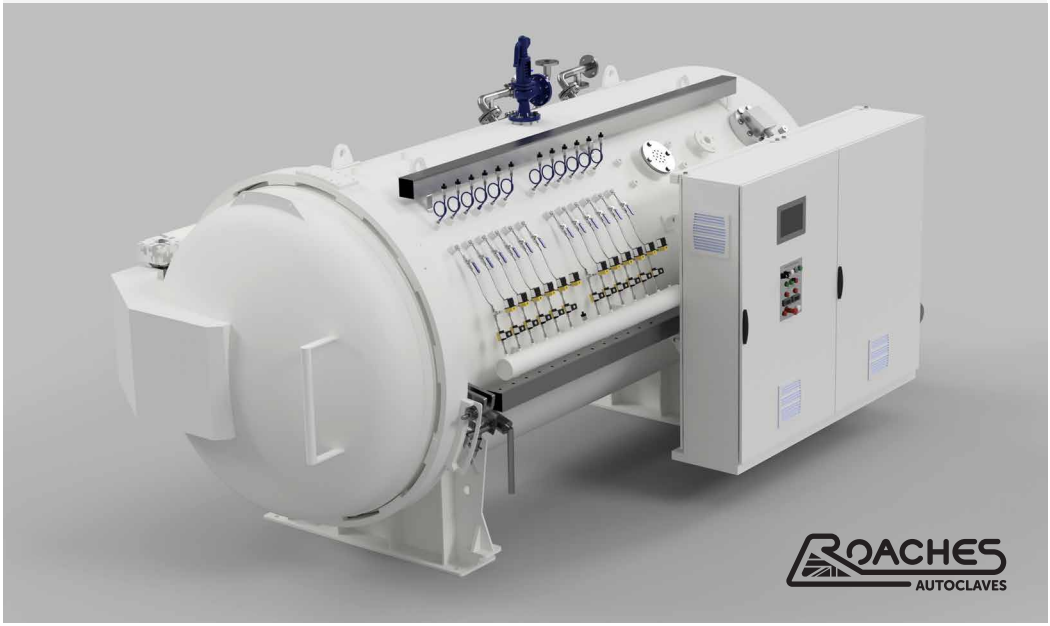


Support

Fast resolution times and knowledgeable staff to get you back on track quickly and efficiently.

Collaboration

We're invested in your success, working together to achieve our mutual goals.



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Laboratory Units

Diameter:	0.6 meters - 0.8 meters
Length :	0.8 meters - 2.0 meters
Zones:	Up to 8 Zones

Production Units

Diameter:	0.8 meters - 6.0 meters
Length:	1.0 meters - 8.0 meters
Zones:	To Suit

Benefits

- Custom built units for bespoke chamber sizes to suit your application.
- Controlled vacuum levels on individual zones, meaning that any leaks can be zoned, preventing failure in other areas.
- Larger development units can have a bespoke number of zones to suit the needs of any project.

Laboratory and production sized carbon fibre curing machines, controlled by PC based Adaptive Control System (ACS), boasting impressive capacities for the smallest and largest of carbon fibre components

Unit Features

- Programmable fan speeds for full control of air circulation.
- Modular cartridge heaters for easy access and replacement.
- Analogue control of heaters for autonomous control.
- Programmable pressure and vacuum, controlled to precise levels.

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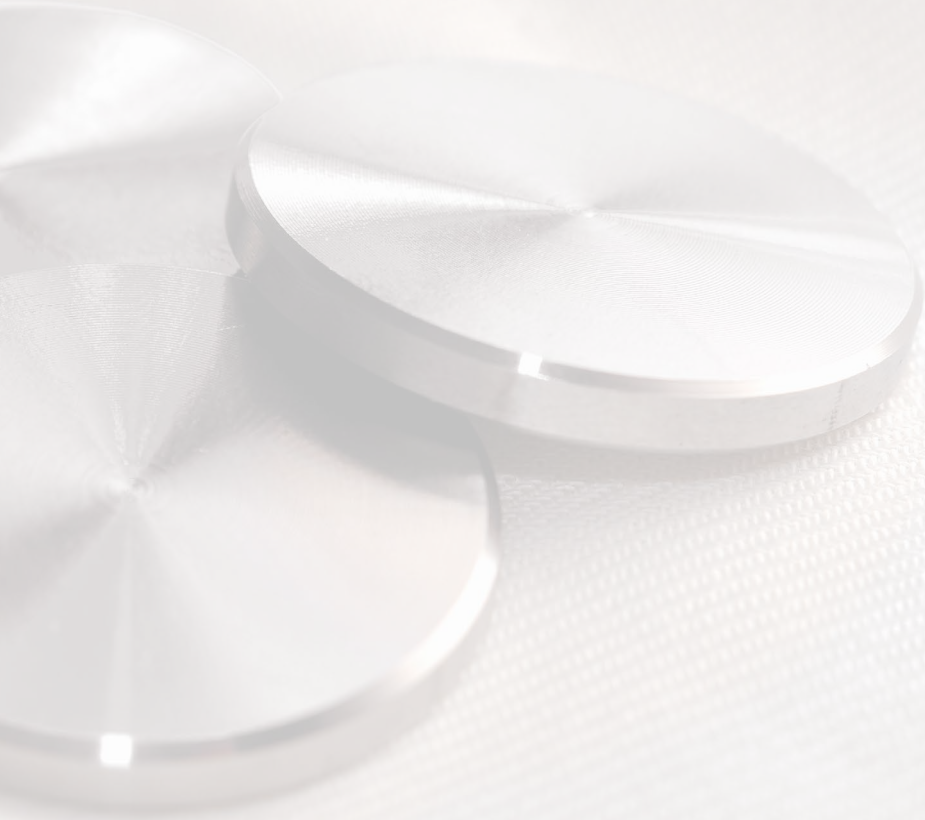
TEST MATERIALS



Martindale

Martindale Test Materials are perfect to measure the durability of your fabrics. From premium wool abradants to precision-cut felt pads and high-quality foam, we've got everything you need to comply with ASTM, BS, EN, ISO and M&S standards.

Code	Description
2000-1001	Woven Felt Discs (90mm Diameter) - Pack of 24
2000-1002	Non-Woven Felt Discs (90mm Diameter) - Pack of 24
2000-1003	Woven Felt Discs (140mm Diameter) - Pack of 24
2000-1004	Non-Woven Felt Discs (140mm Diameter) - Pack of 24
2000-1005	Wool Abradant Fabric - 5 Metre Pack
2000-1006	Wool Abradant Fabric (165mm Diameter) - Pack of 100
2000-1007	Polyurethane Foam Sheets (25cm x 20cm) - Pack of 25
2000-1008	Polyurethane Foam Discs (38mm Diameter) - Pack of 1000
2000-1009	38mm Diameter Sample Cutter - Each
2000-1010	90mm Diameter Sample Cutter - Each
2000-1011	140mm Diameter Sample Cutter - Each
2000-1012	Cutting Board (300mm x 200mm x 14mm) - Each
2000-1013	Blades for 38mm Sample Cutter - Pack of 10
2000-1014	Blades for 90mm, 113mm & 140mm Sample Cutter - Pack of 10
2000-1024	Martindale Lissajous Profile Paper - Pack of 100

Opti-Pill

Opti-Pill Test Materials are used to measure the snagging and pilling against woven and knitted fabrics. From precision specimen tubes to high-quality photos, we've got everything you need to comply with BS, ISO, Marks & Spencer and Woolmark standards.

Code	Description
2000-1015	ICI Pilling Specimen Tube (BS EN ISO 12945-1) - Each
2000-1016	M&S Pilling Specimen Tube (M&S P18, P21) - Each
2000-1017	BS Pilling Specimen Tube (BS 8479 Octagonal) - Each
2000-1018	ICI Pilling Tester Cork Liners, Adhesive Back - Pack of 6
2000-1019	ICI/M&S Test Sample Template (125mm x 125mm) - Each
2000-1020	PVC Insulating Tape 19mm Wide, White - Each
2000-1021	Double Sided Adhesive Tape (25mm Wide x 33m Roll) - Each
2000-1022	M&S Pilling Tube Locking Ring - Each
2000-1023	140mm x 140mm Template for Octagonal Box (BS 8479)
5000-0001	Single Jersey Pilling Photos (Set of 5) BS 5811:1979
5000-0002	Double Jersey Pilling Photos (Set of 5) BS 5811:1979
5000-0003	Woven Pilling Photos (Set of 5) M&S and BS 5811:1979

Crocktec

Crocktec Test Materials are used to measure the colour fastness to wet and dry rubbing. From premium grey scales to high-quality cotton lawn, we've got everything you need to comply with ISO, AATCC Marks & Spencer and Next standards.

Code	Description
2000-0001	ISO Grey Scale for Change in Colour (ISO 105 A02)
2000-0002	ISO Grey Scale for Assessing Staining (ISO 105 A02)
2000-0003	AATCC Grey Scale for Change in Color (AATCC EP1)
2000-0004	AATCC Grey Scale for Assessing Staining (AATCC EP2)
2000-2001	Cotton Lawn 5cm x 5cm (Crimped Edges) - Pack of 500
2000-2002	Cotton Lawn 5cm x 5cm (Straight Edges) - Pack of 500
2000-2003	Cotton Lawn (Wide Width) - Per Metre
2000-2004	Cotton Lawn (Wide Width) - 5 Metre Pack
2000-2005	Cotton Lawn 10cm x 20cm (Crimped Edges) - Pack of 50
2000-2006	Roaches Crockmeter 16mm Rubbing Finger
2000-2007	Roaches Crockmeter 16mm Finger Spring Clip
2000-2008	Roaches Crocking Block (ISO 105 X12 & AATCC 165)
2000-2009	Self Adhesive Emery Cloth for Crocktec - Pack of 40

Washtec

Washtec Test Materials are used to measure the colour fastness to washing and dry cleaning. From premium grey scales to high-quality adjacent fabrics, we've got everything you need to comply with ISO, AATCC Marks & Spencer and Next standards.

Code	Description
2000-0001	ISO Grey Scale for Change in Colour (ISO 105 A02)
2000-0002	ISO Grey Scale for Assessing Staining (ISO 105 A02)
2000-0003	AATCC Grey Scale for Change in Color (AATCC EP1)
2000-0004	AATCC Grey Scale for Assessing Staining (AATCC EP2)
2000-3001	Stainless Steel Balls for Washing - Pack of 100
2000-3002	Stainless Steel Discs for Dry Cleaning - Pack of 12
2000-3003	Multifibre DW Adjacent Fabric (ISO 105 F10) - 10 Metre Roll
2000-3004	Multifibre DW Adjacent Fabric (ISO 105 F10) - 50 Metre Roll
2000-3005	Multifibre DW Adjacent Fabric (ISO 105 F10) 10cm x 4cm - Pack of 250
2000-3006	Multifibre DW Adjacent Fabric (ISO 105 F10) 10cm x 5cm - Pack of 200
2000-3007	Multifibre LyoW™ Adjacent Fabric (M&S C03) - 10 Metre Roll
2000-3008	Multifibre LyoW™ Adjacent Fabric (M&S C03) - 50 Metre Roll
2000-3009	Lid Seal for 550ml ISO Washpot (Silicone)
2000-3010	Lid Seal for 1200ml AATCC Washpot (Silicone)

Durawash & Laundering

Laundering Test Materials are used to measure colour fastness, shrinkage testing and dimensional stability. From premium makeweights to high-quality detergents, we've got everything you need to comply with ISO, AATCC Marks & Spencer and Next standards.

Code	Description
2000-4001	Polyester Makeweights 20cm x 20cm (M&S) - Pack of 20
2000-4002	Polyester Makeweights 30cm x 30cm (ISO) - Pack of 25
2000-4003	SDC Standard Soap Type 1 (ISO 105 C Series) - 1.5kg Tub
2000-4004	SDC ECE (A) Non-Phosphate Detergent (ISO 6330) - 2kg Tub
2000-4005	SDC ECE (A) Non-Phosphate Detergent (ISO 6330) - 15kg Tub
2000-4006	SDC ECE (B) Phosphate Detergent (ISO 105 Series) - 2kg Tub
2000-4007	SDC ECE (B) Phosphate Detergent (ISO 105 Series) - 15kg Tub
2000-4008	SDC Reference Detergent 4 (ISO 6330) - 2kg Tub
2000-4009	SDC Reference Detergent 4 (ISO 6330) - 15kg Tub
2000-4010	SDC IEC (B) Phosphate Type 5 Detergent - 2kg Tub
2000-4011	SDC IEC (B) Phosphate Type 5 Detergent - 15kg Tub
2000-4012	SDC Detergent Type 6 OBA (ISO 15797) - 15kg Sack
2000-4013	SDC Detergent Type 7 OBA-Free (ISO 15797) - 15kg Sack
2000-4014	SDC IEC A* Detergent Type 9 (ISO 6330) - 15kg Sack

Photographic Standards

Photographic standards are used in the textile testing industry for assessing and evaluating the appearance of specimens after testing. Including Mace Snag Pilling, Random Tumble Pilling, and various types of Jersey and Woven Pilling tests based on international standards.

Code	Description
5000-0001	Single Jersey Pilling Photos (Set of 5) BS 5811 : 1979
5000-0002	Double Jersey Pilling Photos (Set of 5) BS 5811 : 1979
5000-0003	Woven Pilling Photos (Set of 5) M&S and BS 5811 : 1979
5000-0004	ASTM D3939 Pilling Photos, Grades 1 to 5 (Consists of 9 Grades)
5000-0005	SM50 Pilling, Set of 4 (5 Per Set) IWS TM-196, ASTM D4970, ISO 12947-1
5000-0006	SM54 Knitted, Set of 4 (5 Per Set) IWS TM-152, ISO 12945-1
5000-0007	ASTM D3512 Pilling Resistance Photos (Random Tumble)
5000-0015	BS8479 Snagging Photos (Set of 9 Grades)
5000-0017	ASTM D3514 Pilling Resistance Photos (Wear & Abrasion Test)
5000-0018	AATCC TM22 Spray Rating Chart

Agent Details

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