James Heal

OPERATOR'S GUIDE

CrockMaster
Hand Driven Crockmeter
Model 670

Covering Serial Numbers
670/03/1001 and upwards

Extraordinary Testing Solutions

James H. Heal & Co. Ltd.
Halifax, England

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Setting the Standard

THE QUEEN'S AWARDS FOR ENTERPRISE: INTERNATIONAL TRADE 2012

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CONTENTS

INTRODUCTION

Scope

The smooth precision-engineered mechanism of the **CrockMaster** provides accurate reciprocating straight line rubbing motion, with guaranteed accuracy of loading and stroke length, to meet the exacting demands for testing colour fastness to rubbing of textile materials.

The combined effective gripping of the easy-to-use polycarbonate specimen clamp and synthetic abrasive paper, makes **CrockMaster** applicable to textiles made from all fibres, in the form of yarn or fabric, whether dyed, printed or otherwise coloured.

The operation is assisted by a built-in digital counter to record the number of rubs performed. Two alternative sizes of interchangeable rubbing fingers are available together with an interchangeable token holder to facilitate a number of test standards to be accommodated.

Standards

CrockMaster conforms to the following standards:

- AATCC 165
- AATCC 8
- ASTM F1319
- BS 2543
- BS 4655
- EN ISO 105-D02
- EN ISO 105-X12
- Marks & Spencer C8
- Next TM06

SAFETY

- Read this manual thoroughly before operating the unit.
- Keep clear of all moving parts when the instrument is in operation.
- Handle the specimen clamp carefully, the sample holding pins are very sharp !
- When loading a test specimen always rest the clamp with the pins pointing down, the clamp should remain in position on the instrument at all other times.

INSTALLATION

Unpacking

Do not dispose of any packaging material until all standard and optional accessories are accounted for. If there are any discrepancies, please contact your supplier immediately.

Accessories

Standard Accessories

670	**CrockMaster** with counter
	Standard Rubbing Finger
	9N weight piece

Optional Accessories

794-998	Interchangeable Finger (Crockblock) for testing textile floor coverings and other pile fabrics (ISO 105 X12 and AATCC 165)
794-997	Interchangeable Token Holder, 50 Tokens and Weight for scuff testing of woven and knitted upholstery fabrics (BS 2543)
789-521	Tokens (BS 2543) - per pack (250)
521-662	Yarn Specimen Holder

Test Materials for ISO/M&S Test Methods

766-201	Grey scale for staining
766-477	Assessment Mask
766-478	M & S Assessment Mask
702-540	Crocking cloths 50mm x 50mm - per pack (500)
701-217	Silicone Carbide Waterproof Paper 280 grit for M & S Method C8 - per pack (50)

Test Materials for AATCC

702-424	AATCC Style 3 Crocking Cloths 50 x 50mm – per pack (1000)
766-513	AATCC Gray Scale for Staining
766-510	AATCC Chromatic Transference Scale

Spare Parts

701-333	'Trizact' anti-slip cloth per pack (50). Grade comparable to 280 grit.
309-182	Spare Counter
102-129	Replacement battery for counter
785-765	High/low strength double sided adhesive tape for bonding Trizact/Carbide Paper to base (50m roll).
521-690	Spare Standard (U Shaped) Clamp
794-499	Spare Standard Finger (16 mm diameter) complete with Spring Clip
375-451	Spare Spring Clips for Standard Finger - per pack (10)

Calibration

201-255	ISO certificate of Calibration for CrockMaster

OPERATION

Before operating the CrockMaster please read and follow the safety instructions

Test Principle

A coloured test specimen is clamped and rubbed, under controlled conditions, against an undyed crocking cloth.

Colour transferred to the crocking cloth is assessed in comparison with a standard Grey Scale for Staining.

Preparation of the CrockMaster for testing

Adjustment of stroke length

The stroke length is factory set to 104mm and should be suitable for the majority of tests. If necessary, the stroke length can be adjusted by slackening the “pinch bolt” found on the linkage adjacent the handle. The pinch bolt should be slackened and re-tightened using a 2.5mm hexagon key and a 7mm spanner.

Fitting the rubbing finger

The rubbing finger can be removed by turning the “clamp screw” anti-clockwise until the clamping pressure is released. Replace the rubbing finger. Apply clamping pressure to secure the finger by turning the clamp screw clockwise.

When a crocking finger is replaced with a new one the finger tip must be abraded until it is parallel with the specimen support plate.

Fit a piece of fine abrasive paper on the specimen support plate ensuring it is flat and smooth. Lower the crocking arm, complete with finger, onto the abrasive paper and run the finger against it until the finger tip is perfectly parallel with the specimen support plate.

This procedure ensures the full diameter of the crocking finger is carrying the load for the test and compensates for the angle of the crocking arm.

Mounting the test specimen

Lay the material to be tested over the abrasive cloth covering the rubbing area. The specimen clamp comprises two larger locating pegs, to facilitate positioning, and two rows of pins. Position the locating pegs first, then pass the first row of pins through the specimen. Hold the fabric taut and locate the second row of pins through the fabric and into the base.

Performing the test

Cover the finger with the undyed crocking cloth and secure in position with the spring clip provided. Lower the head arrangement onto the rubbing area, reset the counter using the push button located on the face and commence the straight line motion by turning the handle in a clockwise direction, as indicated by the arrow. The digital counter will increment one digit for each completed cycle.

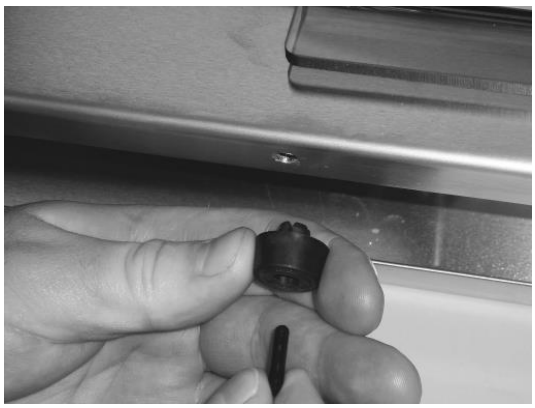
Garment Testing

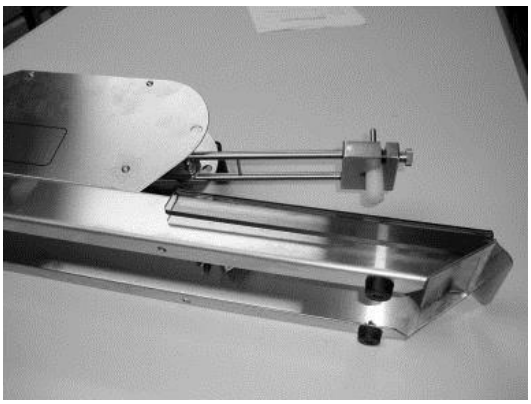
Concept

CrockMaster can be used to test parts of complete garments. To facilitate the testing of garment components, for example sleeves, it is recommended that the instrument anti-slip feet are repositioned, moving the two front feet to the midway position along the length of the instrument. Moving the feet to midway position will allow unrestricted access to specimen area.

Procedure for repositioning the feet

Carefully lay the instrument on its side to expose the rubber feet. Each foot comprises of two pieces, the `body' and the ` spreader'. Prise the centre portion (spreader) out of the body using a suitable tool e.g., flat screw driver. Once the spreader is removed, carefully pull the foot out of the instrument base.





Reposition the rubber feet in the two holes (diameter 7mm) provided, midway along the instrument. Insert each foot body followed by the spreader. Inserting the spreader will secure the feet in place.

SERVICE AND CALIBRATION

James Heal offers Service & Calibration which is a totally comprehensive, worldwide support programme. When you buy instrumentation for us, it is the beginning rather than the end of an association. Our aim is simple, to provide precisely the services you need to maintain and protect the value of your investment.

For any enquiries you may have regarding your instrument please contact the Service & Calibration Manager by email, phone or fax.

In all communications please quote the serial number of your instrument, e.g., 670/02/1001.

Between service and calibration visits no regular maintenance is required. Simply keep the instrument free from dust and debris.

Additional support is available via on our web site http://www.james-heal.co.uk

TECHNICAL DATA

Dimensions	:	665mm (width) x 175mm (depth) x 215mm (height)
Weight	:	4.1 kg (including 9N weight piece)