



# ThermaPlate

## COLOUR FASTNESS & THERMAL STABILITY TESTER (SCORCH TESTER)

For textile laboratories, dyehouses and finishers the James Heal ThermaPlate offers full flexibility, allowing users to test colour fastness, sublimation fastness and thermal stability for all known retailers and international methods on the same instrument.

MODEL NUMBER: 1720  
 STOCK CODE: 906-604 230V  
 906-605 110V



### KEY BENEFITS

#### RANGE OF TESTS IN ONE INSTRUMENT

ThermaPlate offers full flexibility, allowing users to test colour fastness, sublimation fastness and thermal stability for all known retailers and international methods on the same instrument.

#### TOUCHSCREEN USER INTERFACE

The totally intuitive Touchscreen User Interface ensures the ThermaPlate is quick and easy to operate.

#### USER SAFETY

Features including cool exteriors and a temperature warning light optimise the ThermaPlate for user safety.

#### EFFICIENT TEMPERATURE CONTROL

Each plate can be set independently with  $\pm 1^\circ\text{C}$  accuracy.

#### TEMPERATURE MEASUREMENT KIT

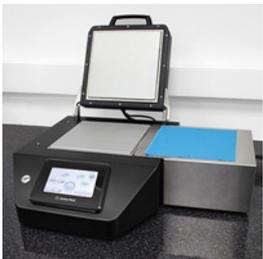
A kit is available which allows the user to perform verification checks, both to comply to retailer standards and for confidence in between calibrations.

#### PRECISE TIMINGS

A timer, which can be set in increments of one second up to one minute, then 5 seconds up to 5 minutes, is activated by the user when the top plate is closed.

#### FULL RANGE OF TEST MATERIALS

Pre-cut test materials, sized to achieve the correct operating pressures, to enable reduced preparation time.



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## MARKET POSITION

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The large size of the hotplate on ThermaPlate offers greater versatility, compared with small and more basic instruments, as it can be used to test sublimation fastness AND stability testing. The instrument is used within laboratories and also inline in the production areas of fabric printers and dyers and finishers.

The test process is very fast, only taking a few seconds and meets the standards of all known retailers and international methods, which obviously includes ISO and AATCC markets.

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## APPLICATIONS

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**TEXTILES THAT ARE IRONED**



**SUBLIMATION PRINTED CLOTHING**

**Sublimation printing** is a process whereby full colour images, text and other graphics can be transferred into a receptive item. The process relies on a specialised 'dye sublimation' ink, which when heated changes from being a solid dye to being a gas, without passing through a liquid stage.<sup>1</sup>

1. [www.novachrome.co.uk](http://www.novachrome.co.uk)

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## THE TESTS

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### Colour Fastness to Dry Heat

A coloured or printed specimen is placed with adjacent fabric between two heated plates for a set length of time.

Staining and change in colour are both assessed with the grey scales.

This method is for determining the colour fastness of textiles to the action of dry heat.

### Colour Fastness to Hot Pressing

A coloured test specimen is placed with wet or dry adjacent fabric (where applicable - not required for M&S method), between two plates at individually controlled temperatures for a set length of time.

After the allotted time, staining and change in colour are assessed with the grey scales.

This method is used for determining the colour fastness of textiles to ironing and hot cylinder processes.

### Thermal Stability

A test specimen of pre-determined dimensions is placed between the two heated plates.

After the allotted time the specimen is carefully removed and allowed to relax in the standard testing atmosphere.

The specimen is remeasured and the changes in dimensions are calculated (%).

# THERMAPLATE AT A GLANCE



### RANGE OF STANDARDS IN ONE INSTRUMENT

Scorch testers produced by other companies are often small strip testers which can only be used for sublimation fastness, consequently the customer has to purchase a second machine for stability testing. The ThermaPlate offers full flexibility, allowing users to test for all known retailer and international test methods on the same instrument.

The size of the hotplate (210mm x 210mm) allows testing for standards which require a larger sample, for example M&S P010.

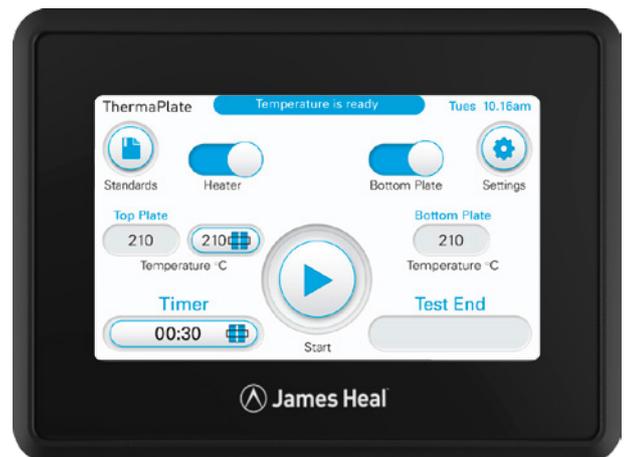
The top and bottom plates are independently controlled and can be heated separately, suitable for standards like ISO 105-X11 and AATCC 133.



### TOUCHSCREEN USER INTERFACE

ThermaPlate is fitted with the James Heal Touchscreen User Interface, an intuitive way to control temperature and timing settings.

The Touchscreen enhances the functionality of ThermaPlate; the simple controls minimises training time and makes the instrument very easy to use.



### USER SAFETY

A range of features ensures that the ThermaPlate is optimised for user safety, these include:

- Positive park position for lid
- Cool exterior surfaces
- A warning light when temperatures exceed 60°C



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### EFFICIENT TEMPERATURE CONTROL

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The temperature for each plate can be set independently using the Touchscreen, with +/- 1°C accuracy. Setting and monitoring temperature, to meet standards and retailer test methods, can be done with clarity and ease.

Once test parameters have been set, the ThermaPlate will not allow use until it has reached the correct temperature, minimising user error.

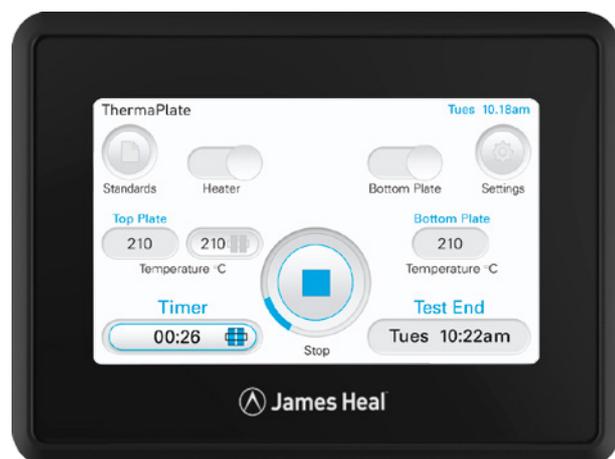


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### PRECISE TIMINGS

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A timer is activated by pressing the Start button on the Touchscreen once the lid is closed and the plates are at temperature or automated when the lid is closed.



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### TEMPERATURE MEASUREMENT KIT

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A thermocouple is available with the ThermaPlate which allows the operator to perform verification checks for temperature on the hot plates.

Marks & Spencer standards require these checks to be completed. They can also be carried out in between calibration visits to give the user confidence that the instrument is working correctly.



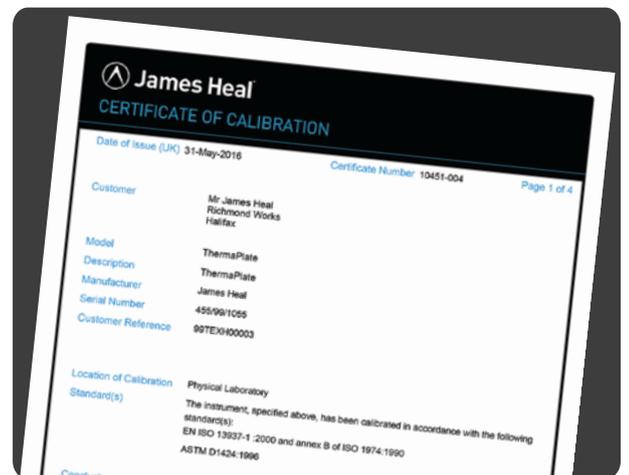
### FULL RANGE OF TEST MATERIALS

A full range of test materials can be supplied with the instrument, including multifibres, grey scales and felt and cotton limbric, which are sized to achieve the correct operating pressures. This reduces preparation time enabling the user to start testing in with minimum delay.



### EASY TO CALIBRATE

The instrument is supplied with an ISO Certificate of Calibration, confirming accurate and reliable operation. James Heal also offer annual service and calibration on the premises of our customers.

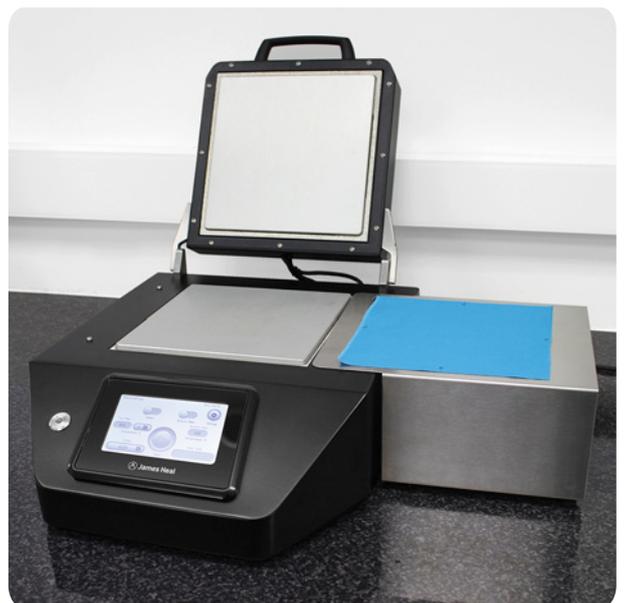


### SPECIMEN PLATFORM

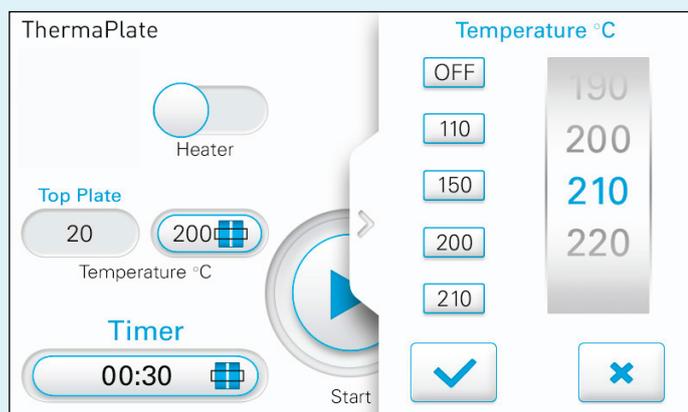
Included in the standard accessories with this instrument is a specimen platform which can be attached to either side.

The specimen platform is useful for assembling composite specimens and for the speedy removal of hot specimens with minimal distortion.

They can then be handled with ease from the specimen platform into the standard testing atmosphere before assessment.



# THERMAPLATE TOUCHSCREEN



## Simple to set a test

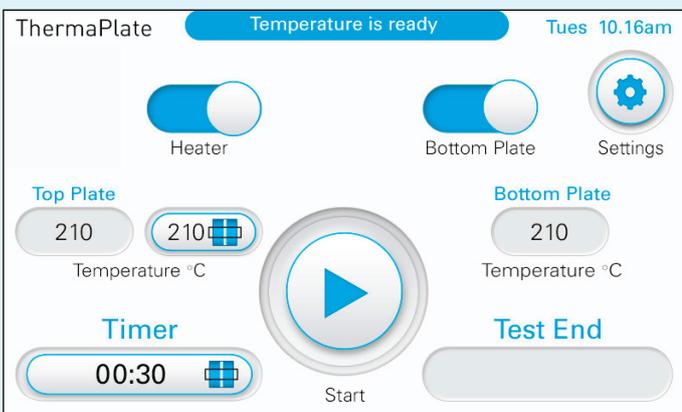
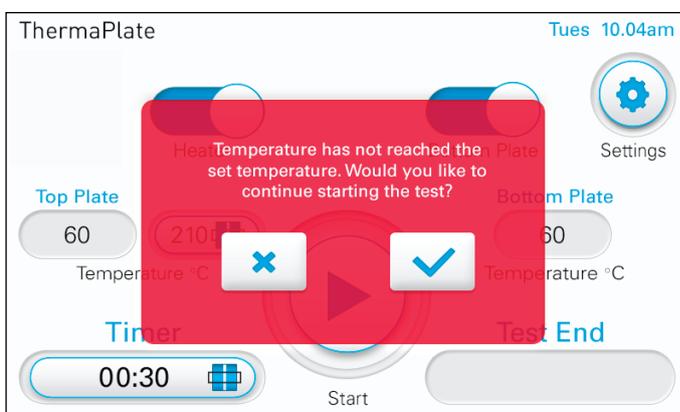
Simple and intuitive control enables any test to be set up easily.

The temperature of the plates and the time can each be set-up at a touch, ensuring training time is minimised.

## Warning Messages

If the user presses the button to start the test before the plate temperatures have reached the set temperature, a warning message is displayed.

At the end of a test a message is displayed to inform user plates are still hot



## Ready for test

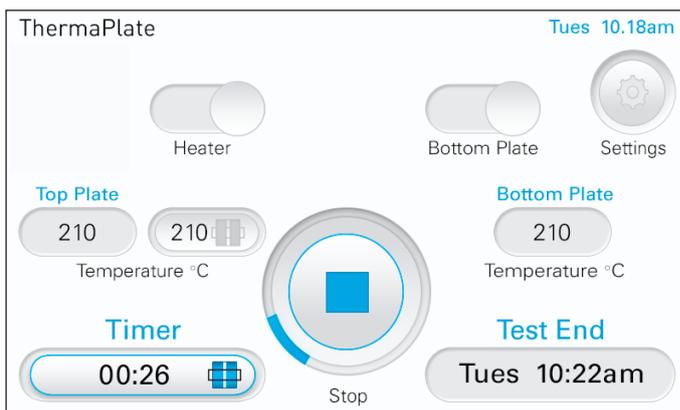
A display will show once the required temperature has been reached and the instrument is ready for the fabric specimen.

The test can be started by pressing the Start button.

## End of test visibility

While the test is running the Test end will be displayed and the timer will count down.

This allows the user to leave the instrument, until the test is completed, to work on other tasks offering an efficient use of their time.



# THERMAPLATE STANDARDS



ISO	AATCC	M&S
ISO 105-PO1 Colour fastness to dry heat (excluding pressing) *	AATCC 117 Colorfastness to heat: Dry (excluding pressing)	M&S P010 Thermal stability
ISO 105-X11 Colour fastness to hot pressing ^	AATCC 133 Colorfastness to heat: Hot pressing	M&S C13 Colour fastness to hot pressing



Adidas	JIS	GB
Adidas 5.09 Colour migration of fabrics	JIS L 0879 Test methods for colour fastness to dry heat JIS L 0850 Test methods for colour fastness to hot pressing	GB 5718 Colour fastness to dry heat (excluding pressing) GB 6152 Colour fastness to hot pressing

LOCATION	105-PO1*	105-X11 ^
	PREFIX	
AUSTRIA	ONORM EN ISO	ONORM EN ISO
BELGIUM	NBN EN ISO	NBN EN ISO
BRITAIN	BS EN ISO	BS EN ISO
DENMARK	DS EN ISO	DS EN ISO
EUROPE	EN ISO	EN ISO
FRANCE	NF EN ISO	NF EN ISO
GERMANY	DIN EN ISO	DIN EN ISO
INTERNATIONAL	ISO	ISO
IRELAND	n/a	I.S. EN ISO
ITALY	UNI EN ISO	UNI EN ISO
KOREA	n/a	KS K ISO
NETHERLANDS	NEN EN ISO	NEN EN ISO
NORWAY	NS EN ISO	NS EN ISO
POLAND	PN EN ISO	PN EN ISO
RUSSIA	GOST R ISO	n/a
SOUTH AFRICA	n/a	SANS
SPAIN	UNE EN ISO	UNE EN ISO
SWEDEN	SS EN ISO	SS EN ISO
SWITZERLAND	SN EN ISO	SN EN ISO

# THERMAPLATE INSTRUMENT & SPARES

Instrument Only			
906-604	ThermaPlate 230V 50/60Hz Temperature range: Ambient to 220° C Dimensions of heated plates: 210 x 210mm  Standard Accessories 1 x Specimen Platform (794-847) 1 x Insulating Board (794-826)	906-605	ThermaPlate 110V 50/60Hz Temperature range: Ambient to 220° C Dimensions of heated plates: 210 x 210mm  Standard Accessories 1 x Specimen Platform (794-847) 1 x Insulating Board (794-826)

Starter Kit for ISO and M&S Test Methods		Starter Kit for AATCC Test Methods	
Stock Code	Item	Stock Code	Item
906-604 or 906-605	ThermaPlate 230V 50/60Hz or ThermaPlate 110V 50/60Hz	906-604 or 906-605	ThermaPlate 230V 50/60Hz or ThermaPlate 110V 50/60Hz
794-903	1 x Temperature Measurement Kit	794-903	1 x Temperature Measurement Kit
702-500	1 x Roll (10m) Multifibre	702-403	1 x Pack (1m) Multifiber
766-200	1 x Grey Scale for assessing Change in Colour	766-512	1 x Gray Scale
766-201	1 x Grey Scale for assessing Staining	766-513	1 x Gray Scale
702-447	1 x Pack (10) Woven Felt	702-447	1 x Pack (10) Woven Felt
702-446	1 x Pack (20) Cotton Limbric	702-446	1 x Pack (20) Cotton Limbric
772-133	1 x Ruler	201-620	1 x ISO Certificate of Calibration
201-620	1 x ISO Certificate of Calibration		

1620-spares - 2 year Spares Kit	
133-124	Heaters (2)
195-215	Temperature Probe
160-493	Red Dot Illumination Indicator
130-815	10A Antisurge Fuse
130-820	Fuse 5A (2)

**For test materials and accessories relevant to each standard please refer to the selector table on the next page.**

Spare Parts			
133-124	Heater	195-507	Fan
195-215	Temperature Probe	160-490	Overtemperature Thermostat
160-493	Red Dot Illumination Indicator	152-599	Dual Solid State Relay
130-815	10A Antisurge Fuse	794-827	Specimen Platform
130-820	Fuse 5A (2)	794-826	Insulating Board

Calibration	
201-620	ISO Certificate of Calibration for Contact Heat Tester

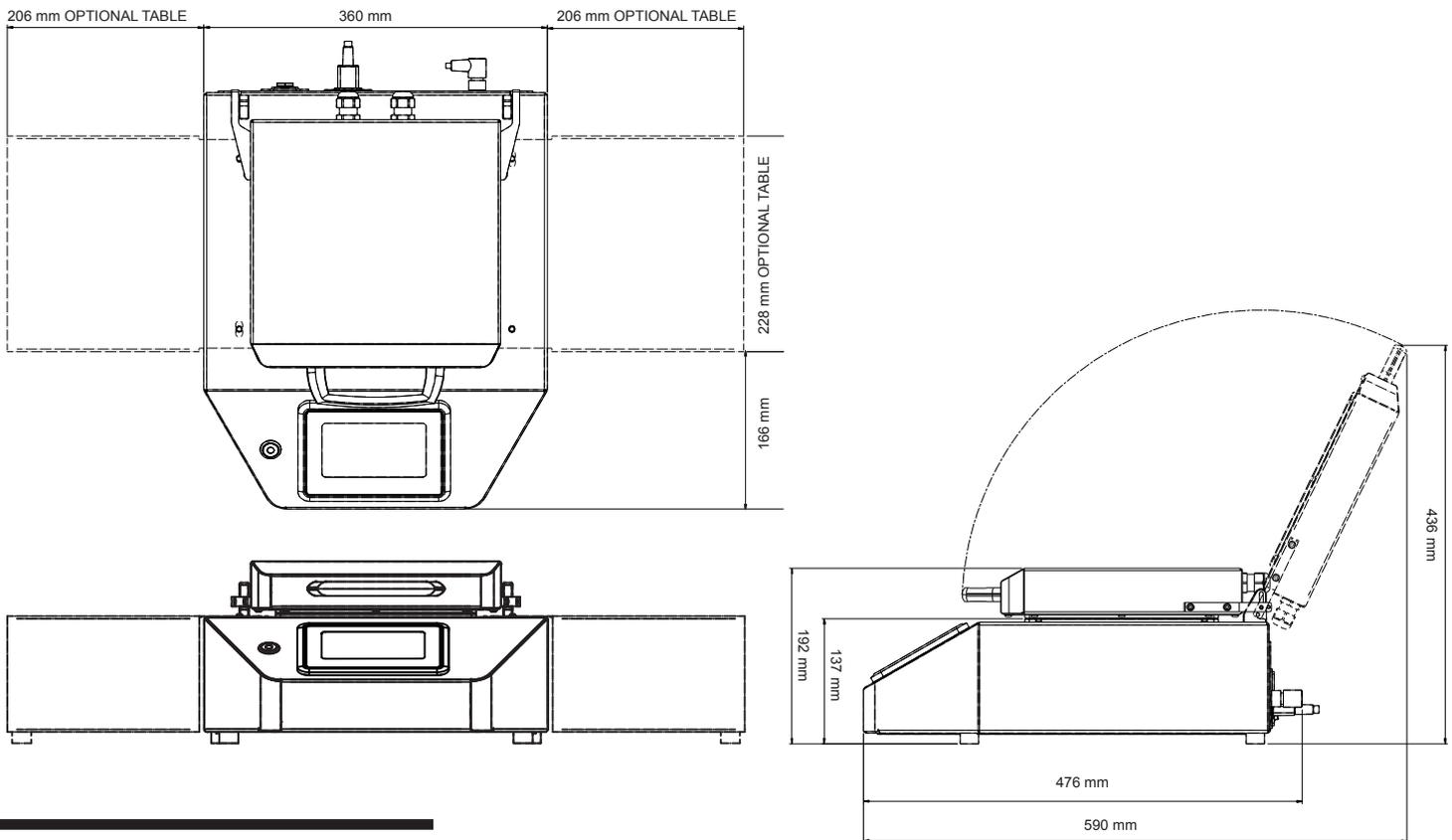
# TEST MATERIALS & ACCESSORIES

● Required ○ Recommended

	Stock Code	ISO 105 P01	ISO 105 X11	M&S P010	M&S C13	AATCC 117	AATCC 133	JIS L 0879	JIS 0850	adidas 5.09	GB 6152	GB 5718
Grey Scale for assessing Change in Colour ISO 105 A02	766-200	●	●		●			●	●	●	●	●
Grey Scale for assessing Staining ISO 105 A03	766-201	●	●					●	●	●	●	●
Ruler 300 mm/12 in	772-133			●								
AATCC Chromatic Transference Scale	766-510					○	○					
AATCC Gray Scale for Color Change	766-512					●	●					
AATCC Gray Scale for Staining	766-513					●	●					
CAC with D65		●	●		●	○	○	●	●	●	●	●
CAC with CWF						○	○					
ISO Certificate of Calibration	201-620	○	○	○	○	○	○	○	○	○	○	○
Temperature Measuring Kit (with UKAS Certificate of Calibration)	794-903	○	○	●	●	○	○	○	○	○	○	○
Multifibre Adjacent Fabric DW - per roll (10m)	702-500	●						●				●
Multifibre Adjacent Fabric DW - per roll (50m)	705-502	●						●				●
Multifibre Adjacent Fabric DW - per roll (100m)	702-503	●						●				●
Woven Felt 125 x 90 mm - per pack (10)	702-447		●				●	●			●	
Multifibre Adjacent Fabric Style 10 A - per pack (10m)	702-403					●						
Nominally comply with ISO 105 F Series	Cotton Limbric 125 X 90mm per pack (20) - ISO 105-F02	○	●			○	●	○	●	○	●	○
	Cotton Limbric Adjacent Fabric - per pack (1m) approx 102cm wide - ISO 105-F02	○	●			○	●	○	●	○	●	○
	Polyester Adjacent Fabric - per pack (1m) approx. 102 cm wide - ISO 105-F04	○				○		○		○		○
	Polyester Adjacent Fabric - per roll (10m) approx. 102 cm wide - ISO 105-F04	○				○		○				○
	Polyamide Adjacent Fabric - per pack (1m) approx. 98cm wide - ISO 105-F03	○				○		○		○		○
	Polyamide Adjacent Fabric - per pack (1m) approx. 98cm wide - ISO 105-F03	○				○		○				○
	Silk Adjacent Fabric - per roll (10m) approx 750 mm wide - ISO 105-F06	○				○		○		○		○
	Wool Adjacent Fabric - per pack (1m) approx 123 cm wide - ISO 105-F01					○		○		○		○

# DIMENSIONS & WEIGHT

	Height (mm)	Width (mm)	Depth (mm)	Approx Weight (kg)
With the lid open	436	360	590	15.9*
With the lid open + 1 specimen table	436	566	590	



# INSTALLATION GUIDE

Item	Comment
Electricity	230V      50/60Hz      Phase: Single      Watts: 890      Amps: 5A 110V      50/60Hz      Phase: Single      Watts: 890      Amps: 10A
Air	Not required
Bench or Floor Standing	The ThermoPlate is designed to be placed on a bench. <b>Important:</b> Position the instrument so that the cooling fan at the rear of the instrument is not obstructed. Ensure the air intake duct underneath the instrument is not restricted.
Water Supply	Not required
Drainage	Not required
Air Extraction	Not required

CE Conformity: ThermoPlate is CE marked and is therefore compliant with the following directives:

- Machinery Directive 2006/42/EC
- Low Voltage Directive 2006/95/EC
- EMC Directive 2004/108/EC
- WEEE Directive 2002/96/EC
- RoHS Directive 2002/95/EC