

# Titan<sup>3</sup>

UNIVERSAL STRENGTH TESTER

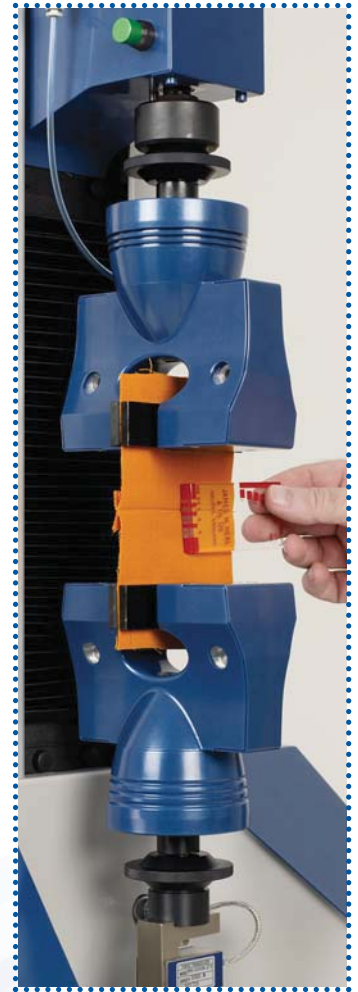


# Titan<sup>3</sup>

James H. Heal & Co. Ltd. - the world's premier manufacturer of Textile Testing Instruments - is proud to announce the launch of Titan<sup>3</sup> - a multi-purpose Tensile Tester, designed specifically for **testing textile products: yarns, fabrics, garments and security of attachments.**

Although Titan<sup>3</sup> has a specific textile focus, it is easily adapted for testing other substrates like leather, paper or plastics.

Innovative engineering and an intuitive understanding of user needs are combined to produce a cutting edge instrument with intelligent, **easy-to-use software, a comprehensive range of specimen grips and an extensive library of international standards and retailers' test methods.**



Seam Slippage Test (T7)



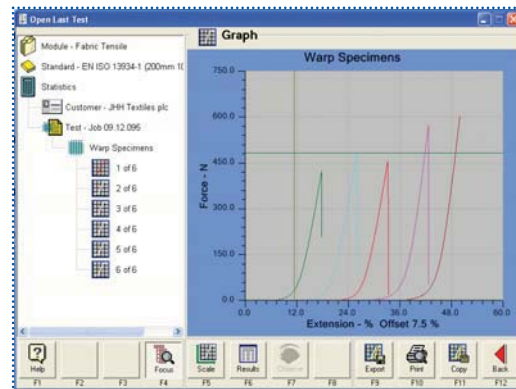
## Key Features

- > Designed, developed and *manufactured in the UK*
- > Compact, desk top, *multi-purpose, standards-compliant* tensile tester
- > Easy-to-navigate, intuitive and *dedicated textile software*
- > Ready-to-use *library of international standards and retailers' test methods*, encompassing: fabric strength, seam slippage, stretch and recovery (cyclic), tear strength, peel bond (delamination), security of attachments, ball burst, puncture and yarn strength tests
- > Extensive range of *tool-free interchangeable grips*
- > Choice of *three load cells up to 3000N (approx. 300kg)*
- > Option to purchase a machine which operates in tension only or in both *tension and compression*
- > Full *statistical analysis* of the results with facility to suppress unwanted information
- > Comprehensive *18 months warranty*
- > Optional **UKAS-accredited calibration of load cells**
- > *Free software updates and free applications support* by joining Healink's Global Maintenance and Calibration Service



### Dedicated textile software:

- Extensive library of pre-loaded textile standards & retailers' test methods with an option to define your own standards
- Software uses familiar textile terminology and the same technical terms, which appear in standards and test methods
- Intuitive, applications-specific software developed in close co-operation with textile technologists

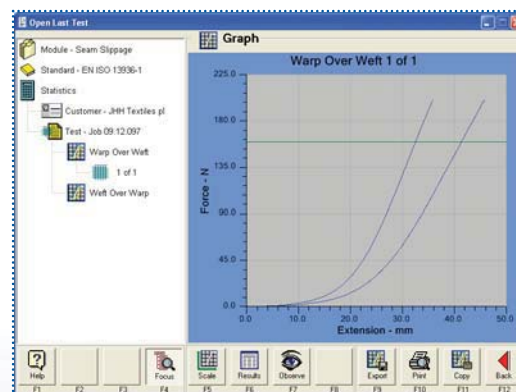


Fabric Strength Test (with offset curves)



### Software improves productivity:

- Optional auto-break detection with adjustable (user-defined) sensitivity
- Pass/fail mode - test ends once the specified load is achieved
- Facility to carry out quick tests in manual mode

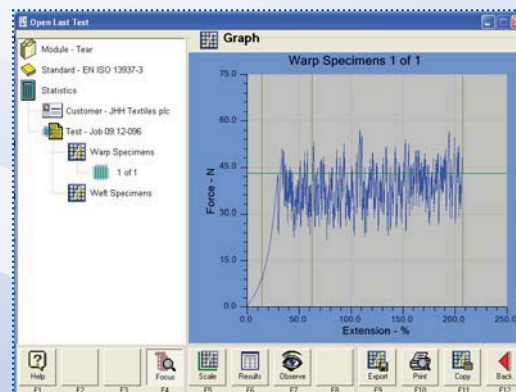


Seam Slippage Test (seamed and unseamed curves)



### Start testing in three easy steps:

- Choose a testing module from: tensile, tear, seam, cyclic, attachments or compression
- Choose a standard or method
- The required parameters (e.g. speed, gauge length, statistical and reporting requirements) are pre-programmed
- Start testing your product

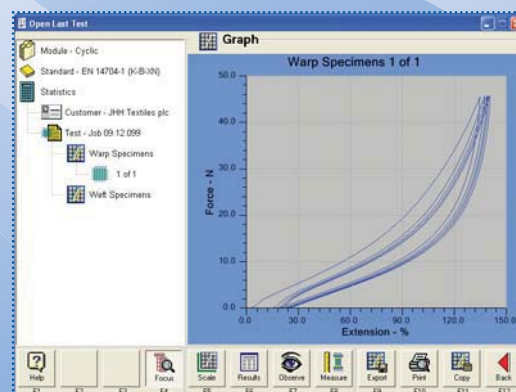


Wing Rip Tear Test



### Data acquisition and analysis:

- Real-time digital presentation of force and extension values
- Graphical presentation of force/extension curves
- Full statistical report with option to customise the content
- Option to export results to other Windows applications for analysis and/or customised reporting



Stretch and Recovery (Cyclic) Test

# Titan<sup>3</sup> toolbox

## T3 Narrow Loop Bars



- Stretch and recovery tests on looped specimens
- Suitable for specimens up to 75mm wide
- With 4mm and 8mm diameter bars
- Typical standard: EN 14704-1 (Method B)

## T3A Wide Loop Bars



- Stretch and recovery tests on looped specimens
- Suitable for specimens up to 125mm wide
- With 6.5mm, 8mm, 10mm and 13mm diameter bars
- Typical standards: EN 14704-1 (Method B) and ASTM D4964

## T4 Button Holder (used with T7)



- Testing buttons to destruction
- Testing security of attachment of buttons
- With integrated debris shield
- Typical standards: BS 4162, M&S PI22 and Next TM37

## T5 Pneumatic Yarn Grips



- Testing yarns
- Maximum force: 120N
- With aluminium jaw faces
- Standards: ISO 2062 and ASTM D2256

## T7 Universal Pneumatic Jaws



- Tensile, seam slippage and tear tests
- Maximum force: 3000N
- Range of interchangeable jaw faces
- Side entry and 'zero' jaw separation

## T8 Needle Clamp (used with T7)



- Seam slippage tests
- Apparel fabrics
- 17 x 0.5mm diameter needles
- Standard: ISO 13936-3



Grab Test (T7)



Stretch and Recovery Test (T7)



Peel Bond Test (T7)



Strip Tensile Test (T7)

# Titan<sup>3</sup> toolbox

## T9 Needle Clamp (used with T7)



- Seam slippage tests
- Upholstery fabrics
- 7 x 0.9mm diameter needles
- Standards: ISO 13936-3 and IKEA IOS-PRG-0023

## T10A Ball Burst Compression Tooling



- Ball burst tests on fabrics
- Comprises clamp and ball probe
- Requires compression facility
- Standards: ASTM D751, D3787 and D6797

## T11 C-Clamps



- Stretch and recovery tests on looped specimens
- Suitable for specimens up to 125mm wide
- With 8mm and 10mm diameter bars
- Typical standard: EN 14704-1 (Method B)

## T12 Attachments Kit (used with T7)



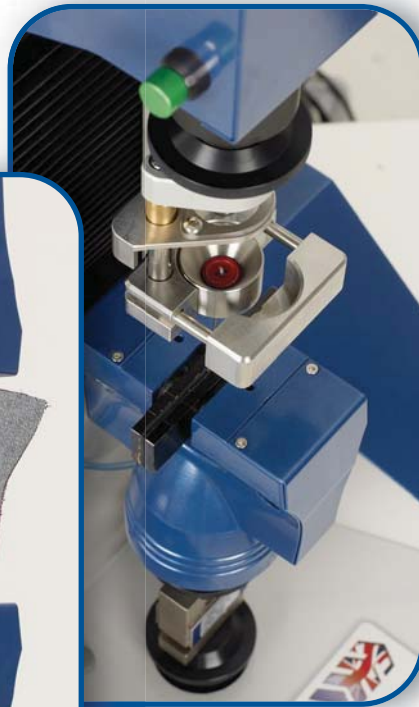
- Testing security of attachments
- Suitable for garments
- Diverse grips and pneumatic lower clamp
- Standards: EN71-1, M&S and Next

## T13 Pile Loop Extraction Kit (used with T7)



- Loop extraction from terry towels
- Universal hook attachment
- Additional small hook for terry loops
- Standard: EN 15598

## Load Cells & Check Weights



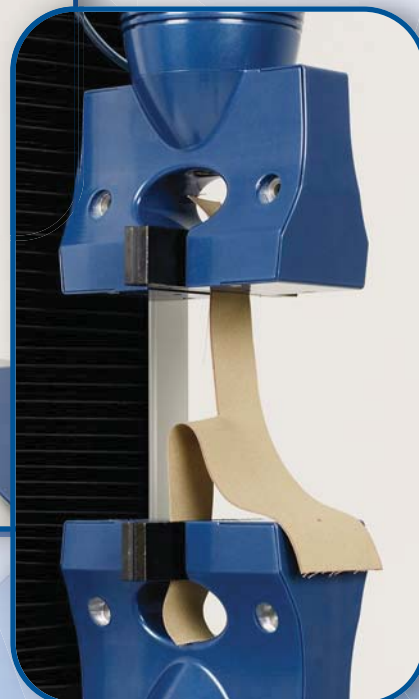
Button Test (T4)



Wing Rip Test (T7)



Stretch and Recovery Test (T3)



Trouser Tear Test (T7)



# Titan<sup>3</sup>

## - STANDARDS



This is a summary of pre-loaded Standards. Other similar Standards can be created manually as User Defined Standards.

**This list is correct at January 2010. Please enquire for further updates or if you have specific requirements.**

FABRIC STRENGTH
16 CFR 1500.53 Para (f)
AATCC-ASTM TS-010
AATCC-ASTM TS-015
ASTM D5034
ASTM D5035
BS 3424 Part 33 Method 36
BS 3424 Part 4 Method 6
DIN 53858
EN ISO 13934-1
EN ISO 13934-2
EN ISO 1421 Method 1
EN ISO 1421 Method 2
ISO 5081
ISO 5082
ISO 9073-3
M&S P11
NEXT <sup>®</sup> TM 27
NF G 35-107 Method B
RSG 1

SEAM STRENGTH AND SEAM SLIPPAGE
ASTM D1683
ASTM D4034
ASTM D434
BS 3320
DIN 53868
EN ISO 13935-1
EN ISO 13935-2
EN ISO 13936-1
EN ISO 13936-2
EN ISO 13936-3
IWS TM 117
M&S P12
M&S P12A
M&S P12B
NEXT <sup>®</sup> TM 16
NEXT <sup>®</sup> TM 16a
RSG 2
RSG 3

STRETCH & RECOVERY / CYCLIC
Adidas 4-27
ASTM D4964
ASTM D6614
BHS 15J
BS 4952
Calida Bodywear Test No. 21
Decathlon DS-275
DUPONT TTM 076
EN 14704-1
EN 14704-3 - Method A
Limited Brands LTD03
M&S P14
M&S P14A
M&S P14B
M&S P15 Part 1
M&S P15A
M&S P15B
NEXT <sup>®</sup> TM 21
NEXT <sup>®</sup> TM 21a
RSG 4
RSG 5
RSG 6
SIS 65 00 68

TEAR STRENGTH
AS 2001-2.10
ASTM D2261
ASTM D5587
ASTM D5735
BS 3424 Part 5 Method 7A
BS 3424 Part 5 Method 7B
BS 3424 Part 5 Method 7C
BS 4303
DIN 53859 Part 2
DIN 53859 Part 5
DUPONT TTM 035
EN ISO 4674-1 - Method A
EN ISO 4674-1 - Method B
EN ISO 9073-4
EN ISO 13937-2
EN ISO 13937-3
EN ISO 13937-4
M&S P35
M&S P98
NEXT <sup>®</sup> TM 25
SIS 25 12 31

ATTACHMENTS
BS 4162
M&S P115
M&S P122
M&S P124
ASTM D4846
NEXT <sup>®</sup> TM37
NEXT <sup>®</sup> TM42
EN 15598

COMPRESSION
ASTM D751
ASTM D3787
ASTM D4830
ASTM D6797
EN 388
EN 12332-1
ISO 3303-A
ISO 9073-5
WSP 110-5

PEEL BOND / DELAMINATION
ASTM D2724
BHS 16
DBA RMQT-OI-020-050 Rev 02
M&S P13

YARN STRENGTH
ASTM D2256
BS 1932 Part 2
EN ISO 2062
M&S P70

# Titan<sup>3</sup>

## - INSTALLATION REQUIREMENTS

### DIMENSIONS (TITAN<sup>3</sup> ONLY)

**Width:** 395mm  
**Depth:** 570mm  
**Height:** 1310mm  
**Weight:** 85kg

### ELECTRICAL SUPPLY

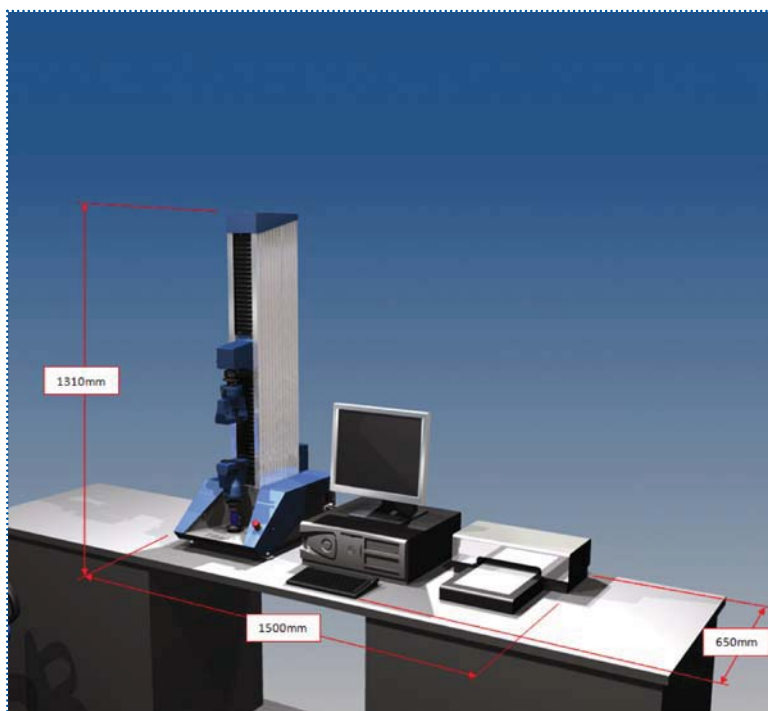
Single phase 110-230V ± 10% 50/60Hz 500W  
 Supply should be free from spikes and surges exceeding 10% of the working voltage

### AIR SUPPLY

**Working Pressure:** 7-10bar/700-1000kPa/100-145psi  
**Minimum Flow:** 17 litres per minute  
**Filtration:** 5 microns or better to remove oil and moisture  
**Pipe Outlet:** 4mm  
**Air Regulator:** not required (built into Titan<sup>3</sup>)  
 Alternatively buy Compressor 783-224 or 783-232

### COMPUTER

**Processor:** 2 GHz 32-bit processor or faster  
**RAM:** 1 GB of system memory  
**Operating System:** Windows Vista or XP  
**Graphics Card:** 512MB of graphics memory  
**Monitor:** 17" LCD or CRT with minimum 800x600 pixels  
**Hard Disk:** 80GB (2GB equates to approx. 1 year of testing)  
**Optical Drive:** CD-ROM drive compatible with CD-R media  
**Ports:** RS232 serial port  
**Printer:** Any Windows compatible printer.



# Titan<sup>3</sup>

## - CALIBRATION



### Global After Sales Services

Your Titan<sup>3</sup> Universal Strength Tester comes with a comprehensive, 18 months warranty and is also fully supported by **HEALINK - our global Maintenance and Calibration Service** - covering installation, operator training, regular service, UKAS-accredited calibration of individual load cells and separate ISO 17025 certification of the machine.

UKAS stands for the 'United Kingdom Accreditation Service'. UKAS is appointed by the UK Government to assess, accredit and continuously monitor Companies that offer calibration services. Companies, which can demonstrate compliance with the very rigorous standards set by UKAS, are entitled to use the UKAS mark.

UKAS Certificates of Calibration are recognized and accepted throughout the world. It's your and your customers' guarantee that Titan<sup>3</sup> is measuring accurately and delivering valid and repeatable results.

Users, who take out a regular Service Contract with HEALINK, become entitled to *free* email applications support as well as *free* software updates at each service/calibration visit.

For fast and efficient resolution of many applications problems, the **Healink-On-line Module**, in the standard software, allows HEALINK, with your permission, to take remote control, via the internet, of the PC running Titan<sup>3</sup> software. With this Module, we can validate or modify your test configuration files, update your software, interrogate your PC and provide presentations and on-line training.

HEALINK Services are designed to help you realise the best results and return from your investment.

Please enquire for further details and a quotation for a Healink Service Contract.

# Titan<sup>3</sup>

## - TECHNICAL DATA

<b>MEASURING PRINCIPLE</b>	Constant Rate of Extension (CRE)
<b>CAPACITY</b> (TENSION & COMPRESSION)	3000N 3kN 300kg 670lbf
<b>LOAD CELLS</b>	3000N, 600N and 120N Quick-change, auto-recognition 'S' beam cells
<b>ACCURACY OF LOAD CELLS</b>	Class 0.5 ( $\pm 0.5\%$ ) from 2-100% of load cell capacity
<b>TEST/RETURN/JOG SPEED</b>	2-4000mm/min
<b>SPEED ACCURACY</b>	$\pm 0.005\%$
<b>MAXIMUM STROKE</b>	680mm
<b>TOTAL VERTICAL SPACE</b>	825mm
<b>POSITIONAL ACCURACY</b>	$\pm 0.03\text{mm}$
<b>CALIBRATION</b>	Load Cells: ISO 7500-1 [UKAS accredited] & ASTM E4 Instrument: ISO 7500-1 & ASTM D76
<b>SAFETY</b>	CE marked (complies with Machinery, Low Voltage & EMC Directives)

We reserve the right to modify the specifications or change the appearance without notice.

**JAMES H. HEAL**   
& CO. LTD. HALIFAX ENGLAND

Richmond Works, Halifax, West Yorkshire HX3 6EP, England.

Tel: +44 (0) 1422 366355. Fax: +44 (0) 1422 352440.

E-Mail: [info@james-heal.co.uk](mailto:info@james-heal.co.uk)

Internet: <http://www.james-heal.co.uk>

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WORLDWIDE SUPPORT