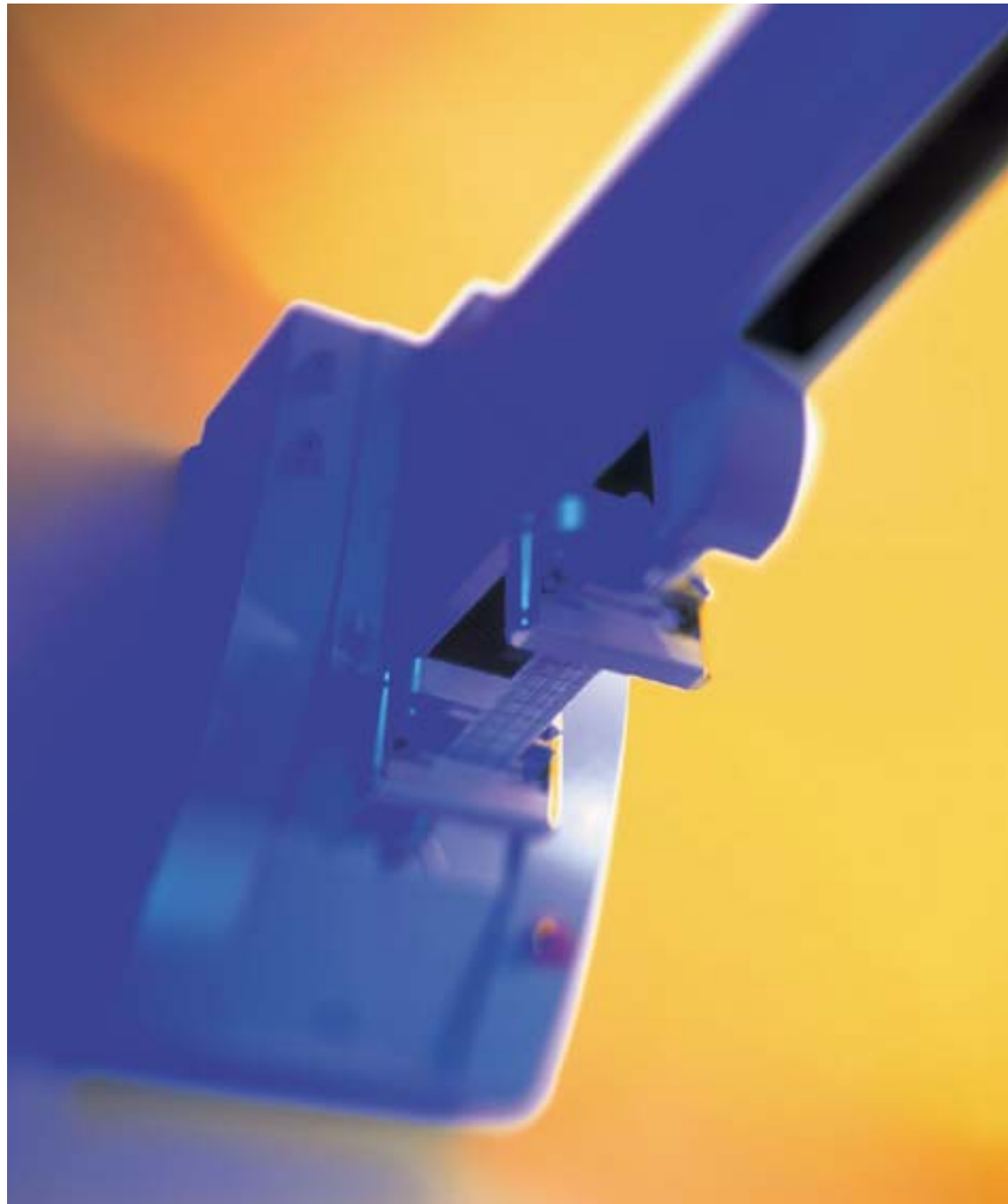


# Titan

UNIVERSAL STRENGTH TESTER



# »»» Titan

## INNOVATION GUARANTEED

The new Titan Universal Strength Tester comes from a family of innovative equipment, designed and manufactured by James H. Heal – the World's Premier Textile Testing Equipment Company.

Drawing on the experience and resources of a company that has achieved ISO 9001 accreditation, Titan sets radically new standards in versatility, productivity and simplicity.

Titan complies with the latest international textile standards and the software's inherent versatility enables revised or new standards to be easily incorporated as they evolve.



### > RESEARCH & DEVELOPMENT:

Multi-disciplined teams have combined talent and vision to produce this world class instrument which offers a full range of textile tests including Tensile, Grab, Seam Slippage, Tear, Cyclic and Security of Attachments.

### > STANDARDS DRIVEN DESIGN:

International textile standards have driven every aspect of Titan's engineering and software design. When a test standard is selected all the parameters are set automatically right down to the statistical analysis and reporting formats.

### > MANUFACTURING EXPERTISE:

James H. Heal's highly skilled engineers use the finest components and raw materials to produce an exceptionally robust and reliable instrument.

### > UNRIVALLED EXPERIENCE:

James H. Heal has utilised its wealth of experience and understanding of the textile industry to develop Titan, and, in doing so, has made no compromises.

### > EASE OF USE:

Taking full advantage of the latest digital technology, Titan could not be simpler to use. Using a standard personal computer as its single user interface, the dedicated software allows two levels of user experience to be selected – operator or administrator. This simplifies the menu for the inexperienced operator and also restricts access to sensitive areas such as configuration parameters.

### > COMPETITIVE & COST-EFFECTIVE:

This expertly tailored instrument competes directly with general-purpose tensile testers, which lack Titan's versatility, productivity and simplicity.



# THE LEADING EDGE OF TEXTILE TESTING TECHNOLOGY

The Titan Universal Strength Tester is packed with features which ensure its success in the textile industry. The outstanding software provides the instrument's innovative edge. Written in conjunction with Test House Laboratory Managers, Technicians and Operators, it is clear that Titan's software was designed primarily for the textile market.

**FIGURE 1:**  
Titan's navigator shows all the necessary steps needed to complete the current task and, as Titan's software is driven by international testing standards, the instrument's parameters are set automatically.



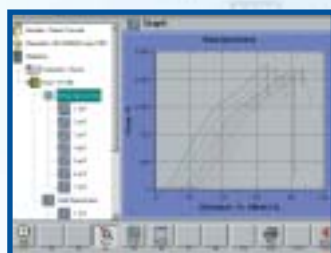
**FIGURE 2:**  
Load and extension panels display live values during testing, whilst a third panel guides the operator through the test. A real time graph, with user definable axes, shows the force/extension curve of the specimen under test.



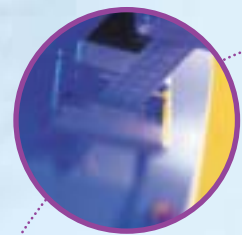
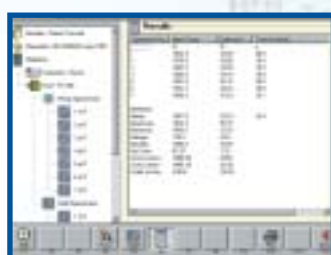
**FIGURE 3:**  
Retrieving archived test results is easy with Titan's file explorer; they are stored under module, date and reference. Results can be exported to any networked PC and then imported into a wordprocessor or spreadsheet.



**FIGURE 4:**  
All graphical and statistical data is available. The graph can be rescaled automatically or manually, and to aid comparison an offset for multiple specimens can be added.



**FIGURE 5:**  
All the statistics specified in the chosen standard are calculated automatically, further calculations can be performed, simply by selecting the appropriate options.





#### SIMPLE COMMANDS:

Large intelligent buttons duplicate the computer's twelve function keys and change command options in response to the user's actions. Either the keyboard or the mouse can control all these functions. A graphical icon on each button clearly illustrates its current function. This greatly simplifies the screen by only showing commands relevant to the current task.



#### HARD TO FAULT, EASY TO OPERATE:

The operator simply selects the required test module and test standard. The laboratory administrator, however, has access to additional functions, enabling full exploitation of the system's exceptional versatility.

#### STYLISH BENCH-TOP ARCHITECTURE:

The stylish design and ergonomic layout enable consistently high levels of productivity to be achieved with minimal operator fatigue.

#### SAFE & SPEEDY SPECIMEN LOADING:

During loading only sufficient pressure to hold the specimen is applied. Full jaw pressure is applied when the operator starts the test. This safety feature boosts operator confidence and productivity.



#### WIDE-RANGING CAPABILITIES:

Most users will operate within the range of a single load cell, saving considerable time in day-to-day operation. Titan requires only two load cells to cover its entire range.

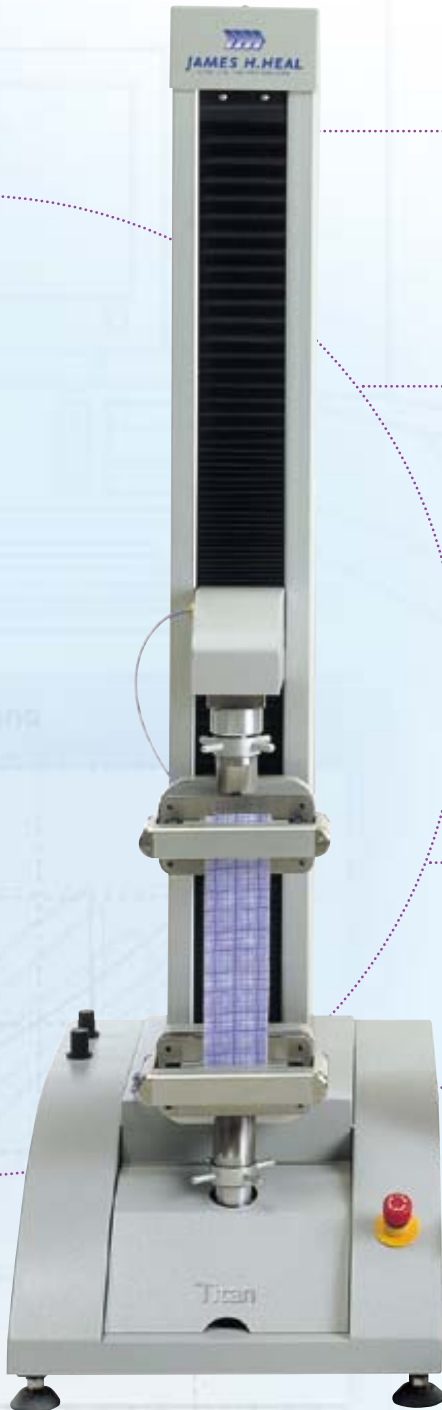
#### EFFECTIVE CLAMPING IN ALL CONDITIONS:

The unique design and exceptionally robust construction of Titan's jaws permit clamping pressures of up to 3000N. The high clamping pressure eliminates the need for slow and cumbersome manual jaws. For specimens which are difficult to grip, a range of alternative jaw facing materials are available. Jaw faces can be interchanged quickly without tools.



#### HIGH SPEED RETURN:

After each test the jaw automatically returns to the correct separation at any desired speed up to an incredible 4000 mm/min. Comprehensive safety devices arrest the carriage instantly should anything obstruct its high speed return.



on = mm Offset 2 min



# TITAN THE VERSATILE TEXTILE TESTER...

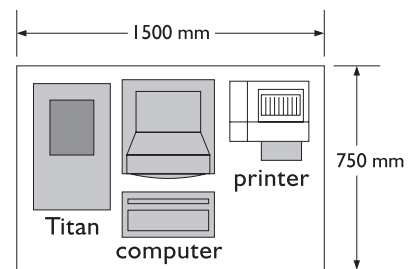
## How to Order

|   | Application            |                       |              |               |                         |         |      |          |             |           |        |              |                    |   |
|---|------------------------|-----------------------|--------------|---------------|-------------------------|---------|------|----------|-------------|-----------|--------|--------------|--------------------|---|
|   | FABRIC TENSILE (STRIP) | FABRIC TENSILE (GRAB) | YARN TENSILE | SEAM SLIPPAGE | SECURITY OF ATTACHMENTS | BUTTONS | TEAR | WING RIP | TONGUE TEAR | PEEL BOND | CYCLIC | ELASTOMERICS | STRETCH & RECOVERY |   |
| <b>TITAN 904 – 501</b>                        | ●                      | ●                     | ●            | ●             | ●                       | ●       | ●    | ●        | ●           | ●         | ●      | ●            | ●                  |   |
| <b>S1 TENSILE MODULE</b> Supplied as Standard | ●                      | ●                     | ●            | ●             | ●                       | ●       |      |          |             |           |        |              |                    |   |
| <b>S2 TEAR MODULE</b> 794 – 714               |                        |                       |              |               |                         |         | ●    | ●        | ●           | ●         |        |              |                    |   |
| <b>S3 CYCLIC MODULE</b> 794 – 715             |                        |                       |              |               |                         |         |      |          |             |           | ●      | ●            | ●                  |   |
| <b>L1 LOADCELL 3000N</b> 794 – 578            | ■                      | ■                     |              |               | ■                       | ■       |      |          |             |           |        |              |                    |   |
| <b>L2 LOADCELL 600N</b> 794 – 579             | ■                      | ■                     | ■            | ■             | ■                       | ■       | ■    | ■        | ■           | ■         | ■      | ■            | ■                  |   |
| <b>L3 LOADCELL 60N</b> 794 – 580              |                        |                       | ■            |               |                         |         | ■    | ■        | ■           | ■         | ■      | ■            | ■                  |   |
| <b>T1 PNEUMATIC JAWS</b> 794 – 801            | ●                      | ●                     |              | ■             | ■                       | ■       | ■    | ■        | ■           |           | ■      | ■            | ■                  |   |
| <b>T1 JAW FACE KIT</b> 794 – 810              |                        | ●                     |              | ■             |                         |         | ■    | ■        | ■           |           |        |              |                    |   |
| <b>T1 LINE CONTACT JAW FACES</b> 794 – 811    |                        |                       |              |               |                         |         |      |          |             |           | ■      | ■            | ■                  |   |
| <b>T1 SERRATED JAW FACE KIT</b> 794 – 816     | ▲                      | ▲                     |              | ▲             | ▲                       | ▲       | ▲    | ▲        | ▲           | ▲         | ▲      | ▲            | ▲                  |   |
| <b>T2 PNEUMATIC JAWS</b> 794 – 802            |                        |                       | ■            | ■             | ■                       | ■       | ■    | ■        | ■           | ●         | ■      | ■            | ■                  |   |
| <b>T2 JAW FACE KIT</b> 794 – 812              |                        |                       |              | ■             |                         |         | ■    | ■        | ■           | ●         |        |              |                    |   |
| <b>T2 LINE CONTACT JAW FACES</b> 794 – 813    |                        |                       |              |               |                         |         |      |          |             |           | ■      | ■            | ■                  |   |
| <b>T3 LOOPED BARS</b> 794 – 814               |                        |                       |              |               |                         |         |      |          |             |           |        | ▲            | ▲                  | ▲ |
| <b>T4 BUTTON HOLDER</b> 794 – 815             |                        |                       |              |               |                         | ●       |      |          |             |           |        |              |                    |   |
| <b>CALIBRATION CHECK WEIGHT SET</b> 794 – 817 | ▲                      | ▲                     | ▲            | ▲             | ▲                       | ▲       | ▲    | ▲        | ▲           | ▲         | ▲      | ▲            | ▲                  |   |
| <b>AIR COMPRESSOR</b> 783 – 224               | ▲                      | ▲                     | ▲            | ▲             | ▲                       | ▲       | ▲    | ▲        | ▲           | ▲         | ▲      | ▲            | ▲                  |   |
| <b>COMPUTER</b> 195 – 300                     | ▲                      | ▲                     | ▲            | ▲             | ▲                       | ▲       | ▲    | ▲        | ▲           | ▲         | ▲      | ▲            | ▲                  |   |
| <b>PRINTER</b> 195 – 299                      | ▲                      | ▲                     | ▲            | ▲             | ▲                       | ▲       | ▲    | ▲        | ▲           | ▲         | ▲      | ▲            | ▲                  |   |

- Essential
- ▲ Optional
- Alternatives at least one of which is required

Titan requires a standard personal computer. If you order the computer and the printer from us, the software is pre-loaded and tested and we take responsibility for the **complete** installation. Details of the **current** computer and printer, as well as the minimum computer specification (should you prefer to buy your own), appear on our web site.

The Titan focuses primarily on the textile market. If your application is not addressed by Titan, we would welcome the opportunity to consider alternative tooling and software.



Healink offers a totally comprehensive, worldwide support programme; providing a full range of support services designed to maximise the potential of your testing resources.

# technical data

|                                     |                            |  |                      |                         |                         |
|-------------------------------------|----------------------------|--|----------------------|-------------------------|-------------------------|
| <b>LOAD</b>                         | Maximum Capacity of Titan: | 3000 N   |                      |                         |                         |
|                                     | Loadcells:                 | Accurate to BS EN ISO 7500-I   |                      |                         |                         |
|                                     | <b>L1 3000 N (300 kgf)</b> | <b>0.5% Accuracy</b>   | <b>1.0%</b>          | <b>2.0%</b>             |                         |
|                                     |                            | <b>3000 N (300 kgf)</b>  | <b>30 N (3 kgf)</b>  | <b>15 N (1.5 kgf)</b>   | <b>7.5 N (0.75 kgf)</b> |
| <b>L2 600 N (60 kgf)</b>            | <b>0.5% Accuracy</b>       | <b>1.0%</b>  | <b>2.0%</b>          |                         |                         |
|                                     | <b>600 N (60 kgf)</b>      | <b>6 N (0.6 kgf)</b>   | <b>3 N (0.3 kgf)</b> | <b>1.5 N (0.15 kgf)</b> |                         |
| <b>L3 60 N (6 kgf)</b>              | <b>0.5% Accuracy</b>       | <b>1.0%</b>  | <b>2.0%</b>          |                         |                         |
|                                     | <b>60 N (6 kgf)</b>        | <b>0.6 N (60 gf)</b>   | <b>0.3 N (30 gf)</b> | <b>0.15 N (15 gf)</b>   |                         |
| <b>EXTENSION</b>                    | Maximum Speed:             | 4000 mm/min  |                      |                         |                         |
|                                     | Maximum stroke:            | 680 mm   |                      |                         |                         |
|                                     | Total vertical test space: | 840 mm (without tooling)   |                      |                         |                         |
| <b>INTEGRATED PNEUMATICS MODULE</b> | Input pressure:            | 7 bar – 10 bar   |                      |                         |                         |
|                                     | Testing pressure:          | Adjustable 2 bar – 7 bar   |                      |                         |                         |
|                                     | Air Preparation:           | Integrated filter and regulator  |                      |                         |                         |
| <b>PNEUMATIC JAWS</b>               | T1                         | 50 mm to 640 mm Jaw separation.<br>Enables most specimens to be gripped up to a load of 3000 N |                      |                         |                         |
|                                     | T2                         | 0 mm to 600 mm Jaw separation.<br>Enables most specimens to be gripped up to a load of 600 N   |                      |                         |                         |
| <b>CONTROL SYSTEM</b>               | Method:                    | CRE (Constant Rate of Extension)   |                      |                         |                         |
|                                     | Operator control:          | Standard desktop PC using Titan software running under "Windows 95" or later                   |                      |                         |                         |
|                                     | Drive control:             | Digital precision closed loop A.C. servo system through the PC RS232 serial port               |                      |                         |                         |
|                                     | Power:                     | 100 – 264V   | 47 – 63Hz            |                         |                         |
| <b>SAFETY</b>                       | Gripping:                  | Low pressure used during specimen loading  |                      |                         |                         |
|                                     | Load:                      | Impact protection. Force overload  |                      |                         |                         |
|                                     | Conformity:                | Complies with CE Directives  |                      |                         |                         |
| <b>PHYSICAL DATA</b>                | Width:                     | 395 mm   |                      |                         |                         |
|                                     | Depth:                     | 570 mm   |                      |                         |                         |
|                                     | Height:                    | 1295 mm  |                      |                         |                         |
|                                     | Weight:                    | 73 kg (excluding PC and printer)   |                      |                         |                         |

Titan complies with BS, EN, ISO, ASTM, DIN and other national standards. A comprehensive list can be found on our web site.

## AGENT

We reserve the right to alter the specification or modify 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>