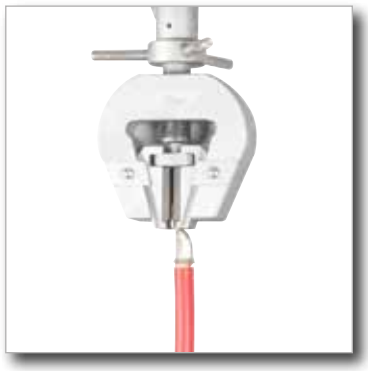
Mecmesin

testing to perfection

MultiTest-*i*

Computer-controlled Test Frames

Tension & Compression Test Solutions



MultiTest-*i* Range

The Mecmesin MultiTest-*i* range of test frames sets the standard in computer-controlled testing, operating through the power of Emperor™; easy-to-use yet powerful force testing and analysis software.

Spring testing

Key features

- **Complete range from 2 N to 50,000 N**
- **High speed data collection - 1000 readings per second**
- **Auto-loadcell recognition/configuration**
- **Extremely quiet operation**
- **IP splashproof membrane control panel with emergency stop button**
- **Auxiliary 'event' input allows the software to recognise when switch contact is made or broken**

Range of capacities

The MultiTest-*i* is available in a range of capacities to meet your exact testing requirement, from the entry-level single-column test stands, through to advanced twin-column test frames, which have been specifically designed to test large or high load samples and products. Extended height frames are also available for testing high elasticity materials.

powerful
flexible
easy-to-use

1 kN capacity

MultiTest 1-*i*

2.5 kN capacity

MultiTest 2.5-*i*

5 kN capacity

MultiTest 5-*i*

Intelligent loadcell

Flexibility

Intelligent loadcells mounted on the MultiTest-*i* test frame download test data synchronously at a rate of up to 1000 times a second, directly to a PC via the serial port. This ensures high accuracy of testing particularly where peak loads are being recorded.

Should your testing requirements change, a MultiTest-*i* can be easily and economically enhanced by using a different loadcell. All Mecmesin-*i* loadcells are quickly and easily interchangeable - just “plug-and-play”.

Mecmesin also offer a wide range of standard grips and fixtures, to hold your specimen. Alternatively, a custom-built fixture can be designed for your specific application.

Key features: Machine Control

- **Run to load, displacement, time or break detection**
- **Cyclic testing**
- **Repeat sections of a program**
- **Intelligent command functions provide limitless test flexibility**
- **Operator prompt/delay/resume test facility**
- **Auto-return of crosshead at end of test**

intelligent command functions

10 kN, 25 kN or
50 kN capacity

MultiTest 10-*i*
MultiTest 25-*i*
MultiTest 50-*i*

Key features: Data Acquisition

- **Extensive suite of calculations e.g. peak, average, minimum and area**
- **Real-time graphs with zoom and label function**
- **Comprehensive Pass/Fail analyses**
- **Variable arguments for programs and calculations**
- **Loadcell deflection compensation**
- **Automatic export to Excel and packages**

If you have a tension or compression test, which demands any of these machine control or data acquisition features, one of the easy-to-use MultiTest-*i* test frames is the cost-effective solution.


Tensile testing


Crush testing

The Power of Emperor™

Emperor™ software has been specifically designed to work with the MultiTest-*i* range of test frames for ultimate test performance. It combines ease-of-use with powerful programming tools making it ideal for simple, routine analysis on the factory floor and sophisticated test routines in the laboratory.

Tests

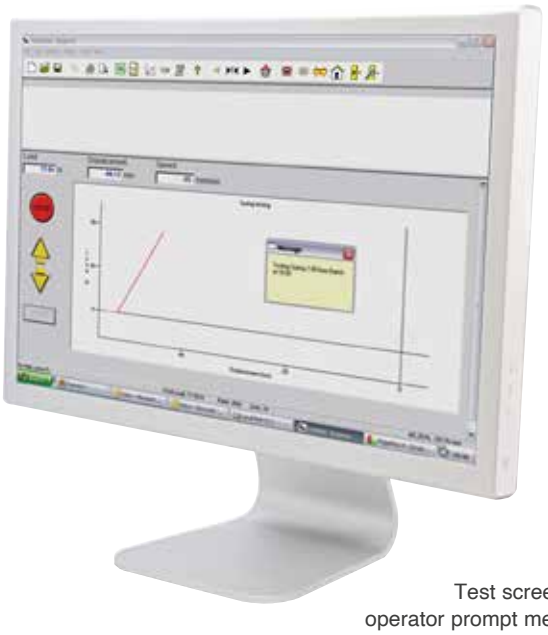
- **Tension**
- **Flexure**
- **Tear**
- **Compression**
- **Stiffness**
- **Friction**

Applications

- **Elastomers**
- **Medical devices**
- **Plastics**
- **Springs**
- **Textiles**
- **Adhesion**
- **Packaging**
- **Rubber**
- **Switches**
- **Fasteners**

Console Mode

Emperor™ has two operating modes - **Console mode** allows tests to be created very simply by selecting options from radio-buttons and drop-down boxes. A number of pre-configured calculations are available and can be included by simply clicking with the mouse. Console mode is ideal for use on the factory floor by operators who need only minimal training to load and run programs directly from one of the five “Favourite” buttons.



Test screen with operator prompt message

For more complex tests, the power of Emperor’s™ **Program Testing Mode** is available via a simple user interface.

Using the **Program Testing Mode**, the true power of Emperor™ software becomes evident. With Emperor™ software’s comprehensive programming and calculation commands, it becomes a simple task to create customised test programs to evaluate the mechanical strength of components, products and materials.

Creating a program

The mode has an intuitive interface, which makes the whole test process easy to manage:

- Setting-up test method
- Running the test
- Making test report
- Storing & exporting data

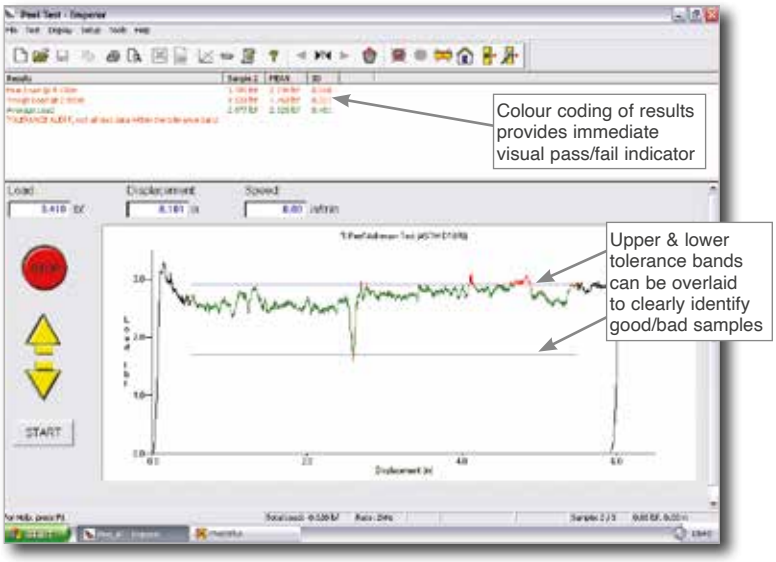
Toolbars simplify testing by helping operators navigate efficiently to key features.

‘Report‘ button

Performing a test

Emperor™ is supplied with a suite of library test programs for many typical test procedures. Within each test procedure the critical parameters, which determine whether a sample passes or fails, can be automatically detected e.g. peak load, average load, load at a certain displacement.

Test procedures can be initiated by selecting an existing library program or by choosing your own particular program from the Test menu. The library programs can be easily customised and tailored to meet specific testing needs and then saved in the testing library and recalled as needed - very useful for multiple sampling testing.

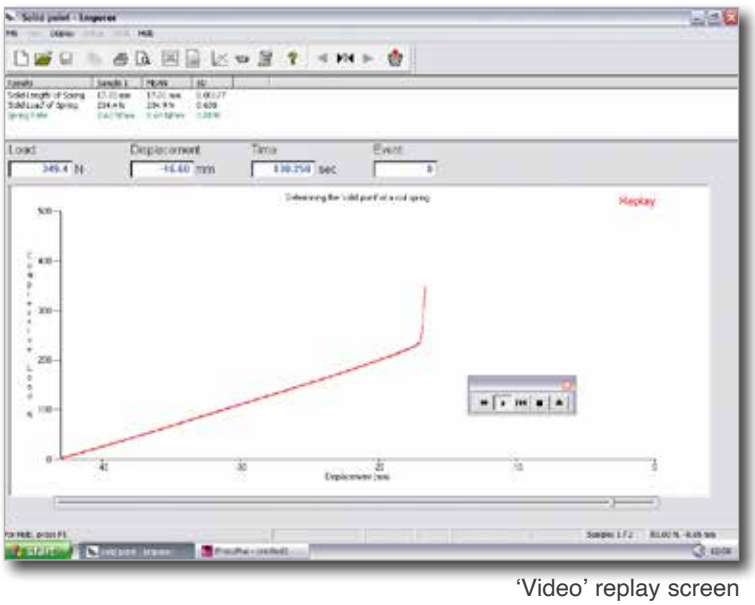


Tolerance band facility

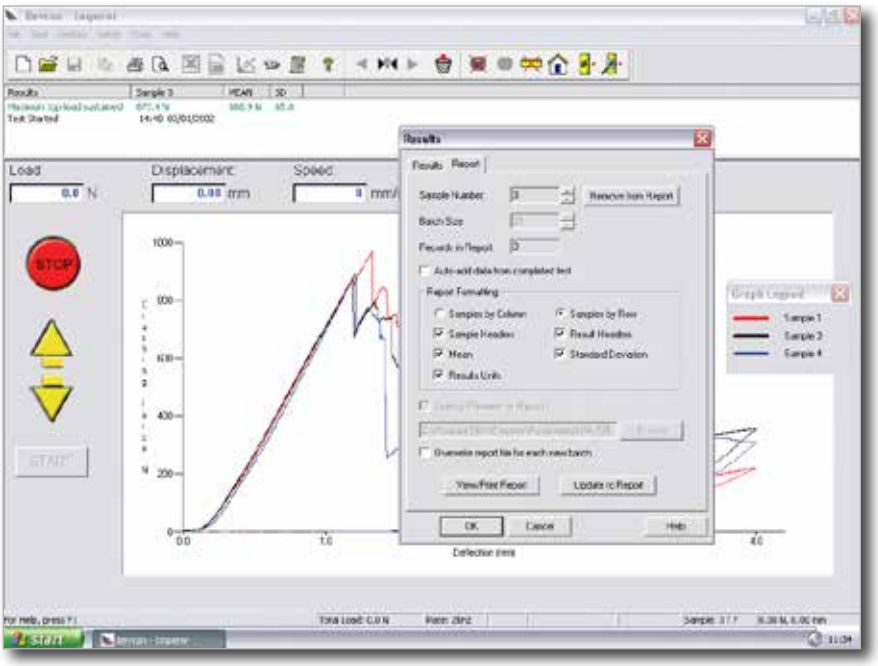
Emperor™ allows development of test procedures that are best-suited to individual testing needs. An operator can be prompted at any stage of the program to perform a specific action, so that step-by-step test routines become easy for semi-skilled users.

Another useful function is tolerance alerting. By setting up tolerance bands the option exists for detecting any data that do not fall within specification. In this case a “tolerance alert” warning will be flagged up on the results screen. There is also an additional facility for detecting when any particular result does not fall within predefined upper and lower limits.

A ‘video replay’ facility is included. A toolbar allows the accumulation of test data to be re-displayed in real time. ‘Fast-forward’ and ‘return-to-start’ buttons are provided.
A timeline slider can be dragged to a suitable point, thus allowing critical parts of a test to be replayed as many times as necessary.



‘Video’ replay screen



Reporting dialog box

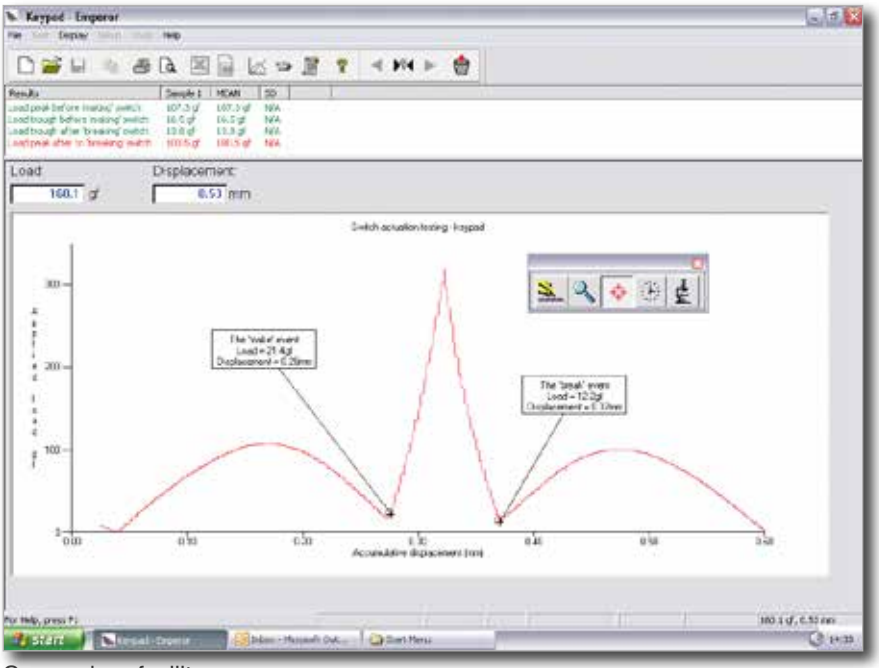
Data analysis

Emperors™ software capabilities are exceptional:

- reporting, archiving and exporting of data
- fast accurate display & analysis of tension/compression data
- option to display test results graphically
- graphical interrogation enables calculations to be reviewed and changed

Results can be easily manipulated, stored and exported to other software packages such as Microsoft® Excel for trend analysis and reporting, if required.

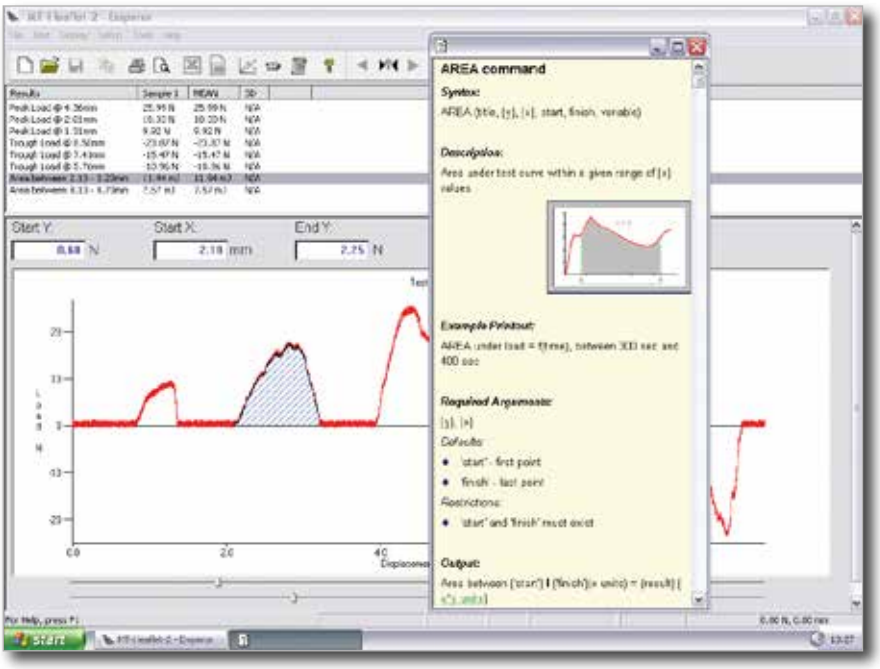
Emperor™ also benefits from a multi-level zooming facility, with timeline function allowing you to home-in on a portion of the curve which is of particular interest.



Cursor drop facility

Signals from external devices can also be incorporated into Emperor™ via an 'event' input facility.

A switch for example, can be connected to this port and the state ('open' or 'closed') of this switch can be monitored - ideal for quantifying the 'feel' of buttons, control levers and other switches.



Review and 'fine-tune' calculations screen (+ Help facility)

Ease-of-use

Emperor™ software is easy and intuitive to use. However, if required, there is a comprehensive Help system built into all aspects of the software and this is never more than a few clicks away. Once the Help system is opened, information can be found using a comprehensive index, a table of contents, text search facility and glossary of terms.

The software sets new standards for flexibility and user-friendliness. For example, a comprehensive de-bugging facility enables messages, variables and graphs to be viewed on a real-time or step-by-step basis, so that the test process can be easily refined. Emperor™ also has an electronic notes function to enable test identification, user ID, batch, date and time information to be recorded.

High-capacity load testing

The MultiTest-*i* range of test frames combined with the power of Emperor™, offers a comprehensive solution to product, component or materials testing needs.

The twin-column MultiTest 10-*i*, 25-*i* and 50-*i* enables significantly larger-sized or high-load samples and products to be tested, while still fulfilling the requirements for ease-of-use in a production or quality laboratory environment.

Specifications

MultiTest-*i*		0.5	1	2.5	5	10	25	50
TEST FRAME								
Rated capacity	N	500	1000	2500	5000	10000	25000	50000
	kgf	50	100	250	500	1000	2500	5000
	lbf	110	220	550	1100	2200	5500	11000
Number of ballscrews		1	1	1	1	2	2	2
Speed range	mm/min	1 - 1000	1 - 1000	1 - 1000*	1 - 500	1 - 1000	1 - 1000**	1 - 400***
	in/min	(0.04 - 40)	(0.04 - 40)	(0.04 - 40)	(0.04 - 20)	(0.04 - 40)	(0.04 - 40)	(0.04 - 15)
Crosshead speed accuracy		±0.2% of indicated speed or ±20 μ/min, whichever is greater****						
Distance between columns		-	-	-	-	400 mm (15.7″)	400 mm (15.7″)	420 mm (16.5″)
Throat depth†		67 mm (2.6″)	67 mm (2.6″)	67 mm (2.6″)	95 mm (3.7″)	-	-	-
Vertical daylight ††		1267 mm (49.9″)	1067 mm (42″)	588 mm (23.1″)	710 mm (28.0″)	1140 mm (44.9″)	1140 mm (44.9″)	1330 mm (52.4″)
Height		1616 mm (64″)	1416 mm (64″)	941 mm (37″)	1082 mm (42.6″)	1500 mm (59.1″)	1500 mm (59.1″)	1931 mm (76″)
Width		290 mm (11.4″)	290 mm (11.4″)	290 mm (11.4″)	328 mm (12.9″)	826 mm (32.5″)	826 mm (32.5″)	864 mm (34″)
Depth		414 mm (16.3″)	414 mm (16.3″)	414 mm (16.3″)	526 mm (20.7″)	542 mm (21.3″)	542 mm (21.3″)	572 mm (22.5″)
Weight		31 kg (68 lbs)	27.5 kg (61 lbs)	24 kg (53 lbs)	38 kg (84 lbs)	140 kg (309 lbs)	140 kg (309 lbs)	285 kg (628 lbs)
Max. power requirement		120 watts	200 watts	250 watts	150 watts	450 watts	450 watts	450 watts
Voltage		230 V AC 50 Hz or 110 V AC 60 Hz						
LOAD MEASUREMENT								
Available loadcell ranges	N	2 to 50000 (14 models)						
	kgf	0.2 to 5000 (14 models)						
	lbf	0.45 to 11000 (14 models)						
Loadcell measurement accuracy		±0.1% of full scale for loadcells from 2 N to 2.5 kN (see mecmesin.com for more information) ±0.2% of full scale for loadcells from 5 kN to 50 kN (see mecmesin.com for more information)						
Loadcell measurement resolution		1:6500						
DISPLACEMENT								
Crosshead travel††		1186 mm (46.7″)	986 mm (38.8″)	507 mm (20″)	590 mm (23.2″)	950 mm (37.4″)	950 mm (37.4″)	1100 mm (43.3″)
Positional accuracy per 300 mm (11.81″) of travel		±130 μm (±0.005″)				±100 μm (±0.004″)		
Displayed resolution		±0.01 mm (±0.0004″)						

SOFTWARE	
Digital display of load/length/speed	Yes
Communication with test stand	Via RS232 port or USB port (converter supplied)
Computer requirements	100 Mb available HD, CD-ROM plus available RS232 port/USB port
Operating system (OS)	Compatible OS installed as listed; Windows® 2000, XP, Vista, 7, 8, and 10
Sampling rate	Selectable from 1 kHz, 500 Hz, 100 Hz, 50 Hz and 10 Hz
Secondary input	Event Input (switch), Digital control I/O Ports
Data output	LPT1 (Printer port), RS232 Port (direct or via USB/Network converter in ASCII format) ASCII file (Export to spreadsheet, SPC package etc...)

* 2.5 kN - above 2 kN, the recommended maximum speed is 750 mm/min (30 in/min)
** 25 kN - above 10 kN, the recommended maximum speed is 500 mm/min (20 in/min)
*** 50 kN - above 25 kN, the recommended maximum speed is 250 mm/min (10 in/min)
**** See help.mecmesin.com for additional info
† Measured on centre line of loadcell
†† Measured without loadcell or grips

E&OE

Note: See Technical Datasheet 431-343 for dimension drawings

Common Specifications

Operating temperature	10 - 35°C (50 - 95°F)
Humidity range	Normal industry and laboratory conditions
Compensation for system movement	Yes
Loadholding	Yes
Graphical representation	Yes
Output of test results to PC/Printer/Datalogger	Yes - includes auto-export to Microsoft™ Excel and via USB/Network Ports or Wireless Network RS232 via USB/Network converter in ASCII format
Communication with PLC/Digital Control Interface	Yes - via programmable digital ports 6 Inputs + 6 Outputs

Options

Column gaiter
Safety guard

available upon request

Mecmesin Motorised Test Frames Overview

Load Rating	Potentiometer-controlled	Touch Screen Console	Computer-controlled
			
0.5 kN	Speed Range: 1 - 1000 mm/min Throat Depth: 67 mm Travel: 1186 mm	Speed Range: 1 - 1000 mm/min Throat Depth: 67 mm Travel: 1186 mm	Speed Range: 1 - 1000 mm/min Throat Depth: 67 mm Travel: 1186 mm
1 kN	Speed Range: 1 - 1000 mm/min Throat Depth: 67 mm Travel: 986 mm	Speed Range: 1 - 1000 mm/min Throat Depth: 67 mm Travel: 986 mm	Speed Range: 1 - 1000 mm/min Throat Depth: 67 mm Travel: 986 mm
2.5 kN	Speed Range: 1 - 1000 mm/min* Throat Depth: 67 mm Travel: 507 mm	Speed Range: 1 - 1000 mm/min* Throat Depth: 67 mm Travel: 507 mm	Speed Range: 1 - 1000 mm/min* Throat Depth: 67 mm Travel: 507 mm
5 kN	——	Speed Range: 1 - 500 mm/min Throat Depth: 95 mm Travel: 590 mm	Speed Range: 1 - 500 mm/min Throat Depth: 95 mm Travel: 590 mm
10 kN	——	Speed Range: 1 - 1000 mm/min Width between Columns: 400 mm Travel: 950 mm	Speed Range: 1 - 1000 mm/min Width between Columns: 400 mm Travel: 950 mm
25 kN	——	Speed Range: 1 - 1000 mm/min** Width between Columns: 400 mm Travel: 950 mm	Speed Range: 1 - 1000 mm/min** Width between Columns: 400 mm Travel: 950 mm
50 kN	——	Speed Range: 1 - 400 mm/min*** Width between Columns: 420 mm Travel: 1100 mm	Speed Range: 1 - 400 mm/min*** Width between Columns: 420 mm Travel: 1100 mm

E&OE

* 2.5 kN - recommended maximum speed when testing above 2 kN is 750 mm/min (30 in/min)
** 25 kN - recommended maximum speed when testing above 10 kN is 500 mm/min (20 in/min)
*** 50 kN - recommended maximum speed when testing above 25 kN is 250 mm/min (10 in/min)

Applications

The MultiTest-*i* range of motorised test stands can be used for a number of applications:

- Compressive testing
- Deformation testing
- Extension testing
- Materials testing
- Medical device testing
- Packaging testing
- Spring testing
- Tensile testing
- Textile testing
- Top-load testing

Packaging testing

Mecmesin's range of testing equipment has been successfully used in a number of different industry sectors including:

adhesives & coatings

construction

consumer packaging

cosmetics & personal care

education

electrical & electronic

fabric & textiles

food & agriculture

general engineering

home & office

medical & veterinary

product safety

sport & leisure

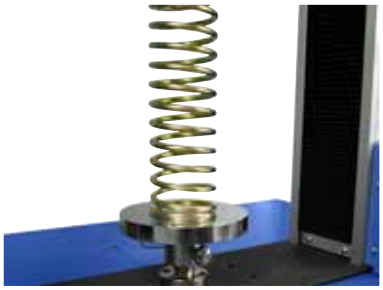
transit packaging

automotive & aerospace

For further information and case studies regarding applications or products please visit our website: **www.mecmesin.com** or call: **+44 (0) 1403 799979**

Textile testing

Materials testing



Spring testing

Extension testing

Testimonials

"In the absence of an 'industry standard' measurement for the performance of our product, it was necessary to develop our own. It was only by modifying 'off the shelf' equipment that we were able to arrive at the perfect solution. Mecmesin offered total, cost-effective support throughout this process. I have, and will continue to recommend them to others."

S. Checkley
e-Medix - Precision Medical Engineering

"We purchased the MultiTest 10-*i* to test 80% of the springs, which we have in our railcars. The system is very easy-to-use and the program is convenient to test. Also the support of A&D Korea was very positive."

S C Yoon
Seoul Metropolitan Railway Transit Corporation

Calibration, Service & Repair

Offering a prompt service, our calibration, service & repair centre is able to deal with all your force & torque testing equipment and gauges from Mecmesin and other manufacturers. All gauges and loadcells are supplied with calibration certificates traceable to UK National Standards to meet ISO requirements.

In-house calibration

Support Services

- Comprehensive international network of distributors
- 24 month warranty
- Website support
- Calibration, service & repair centre
- On-site installation and training
- Grips & accessories
- Application support

On-site calibration

Mecmesin

testing to perfection

Mecmesin - a world leader in affordable force and torque testing solutions

Since 1977, Mecmesin has assisted thousands of companies achieve enhanced quality control in design and production. The Mecmesin brand represents excellence in accuracy, build, service, and value. In production centres and research labs worldwide, designers, engineers, operators, and quality managers endorse Mecmesin force and torque testing systems for their high performance across countless applications.

www.mecmesin.com

The Mecmesin global distribution network guarantees your testing solution is rapidly delivered and efficiently serviced, wherever you are.

bsi ISO 9001 Quality Management Systems CERTIFIED

FS 58553
BS EN ISO 9001:2015

DISTRIBUTOR STAMP

Head Office - UK
Mecmesin Limited

w: www.mecmesin.com
e: sales@mecmesin.com

France
Mecmesin France

w: www.mecmesin.com/fr
e: contact@mecmesin.fr

Germany
Mecmesin GmbH

w: www.mecmesin.com/de
e: info@mecmesin.de

North America
Mecmesin Corporation

w: www.mecmesin.com/us
e: info@mecmesincorp.com

Asia
Mecmesin Asia Co. Ltd

w: www.mecmesin.com/th
e: sales@mecmesinasia.com

China
Mecmesin (Shanghai) Pte Ltd

w: www.mecmesin.com/zh
e: sales@mecmesin.cn

brochure ref: 431-237-14

Mecmesin

testing to perfection

MultiTest-*xt*

Tension & Compression Testing System

Easy-to-use Touch Screen Console

MultiTest-*xt* Overview

Quality managers needing an easy-to-use force testing system for the production area should look no further than Mecmesin's range of MultiTest-*xt* test frames.

With the MultiTest-*xt*, tension & compression tests are performed at the push of a button, making it ideal for routine quality control of a wide array of products, materials & components.

It is specifically designed for environments where throughput, productivity and minimal training are vital and where the use of a computer is not always suitable.

Key Features

Operators

- Password protected log-in - identifies operator for full traceability
- Fast access to 5 favourite tests - customised icons ensure instant test selection
- Unlimited library storage of test methods - minimises set-up time
- Easy-to-use with minimal training - 'Simplicity itself' one button launches the test
- Large, easy-to-read touch screen display - clearly shows Test Results and Graph
- Colour-coded indication of 'Pass' or 'Fail' - immediately alerts the operator
- Test Report - print a comprehensive report of results tailored to your needs

Administrators

- Easy programming - intuitive menus guide you through creation of test routines
- Customised reports - create your own tailored report

- Choice of 3 program modes:

  - **'Quick Test'** for basic force testing
  - **'Program Test'** for standard test routines
  - **'Advanced Test'** for sophisticated test routines

- Rugged construction - ideal for Production and QC Lab Environments
- Simple touch screen interface - no separate computer required
- 1000Hz data sampling rate - ensures accurate capture of peak loads
- USB output - save test routines and results to a memory stick or network
- Flexible - 'plug & play' for easy interchange of loadcells
- Wide range of test stands - capacities from 500 N to 50 kN

Easy-to-use Touch Screen Console

Quick Test
Elementary test without program

Program Test
Standard programs with load & position control

Advanced Test
Upgrade to full programming capability to create & run sophisticated test routines

Ergonomic Design
Adjustable console, pivots & tilts for maximum comfortable use & easy viewing

USB Ports
Connection to networks, memory stick, printers & other USB devices

'5 Favourites'
Customised icons aid selection of your '5 favourite' tests

Secure Access

The MultiTest-*xt* features multiple levels of password-protected access. 'Master' users have full access to all the test set-up and reporting functions. Pre-defined 'read-only' tests can be used by 'operators' preventing inadvertent changes to the test parameters. Operators can be granted additional access rights (e.g. sample deletion) according to their privileges.

As an extra level of security each test sample and set of results can be tagged with the name of the operator and the date and time of the test. This traceability is designed to assist manufacturers wishing to comply with regulatory requirements for the storage of test results.

easy-to-use
touch screen operation
robust, stand-alone system

Flexible - Choice of 3 Program Modes

Quick Test

- Save time no need to create a full program
- Run a basic tensile or compression test on one screen
- Ideal for occasional one-off testing

Couldn't be simpler...

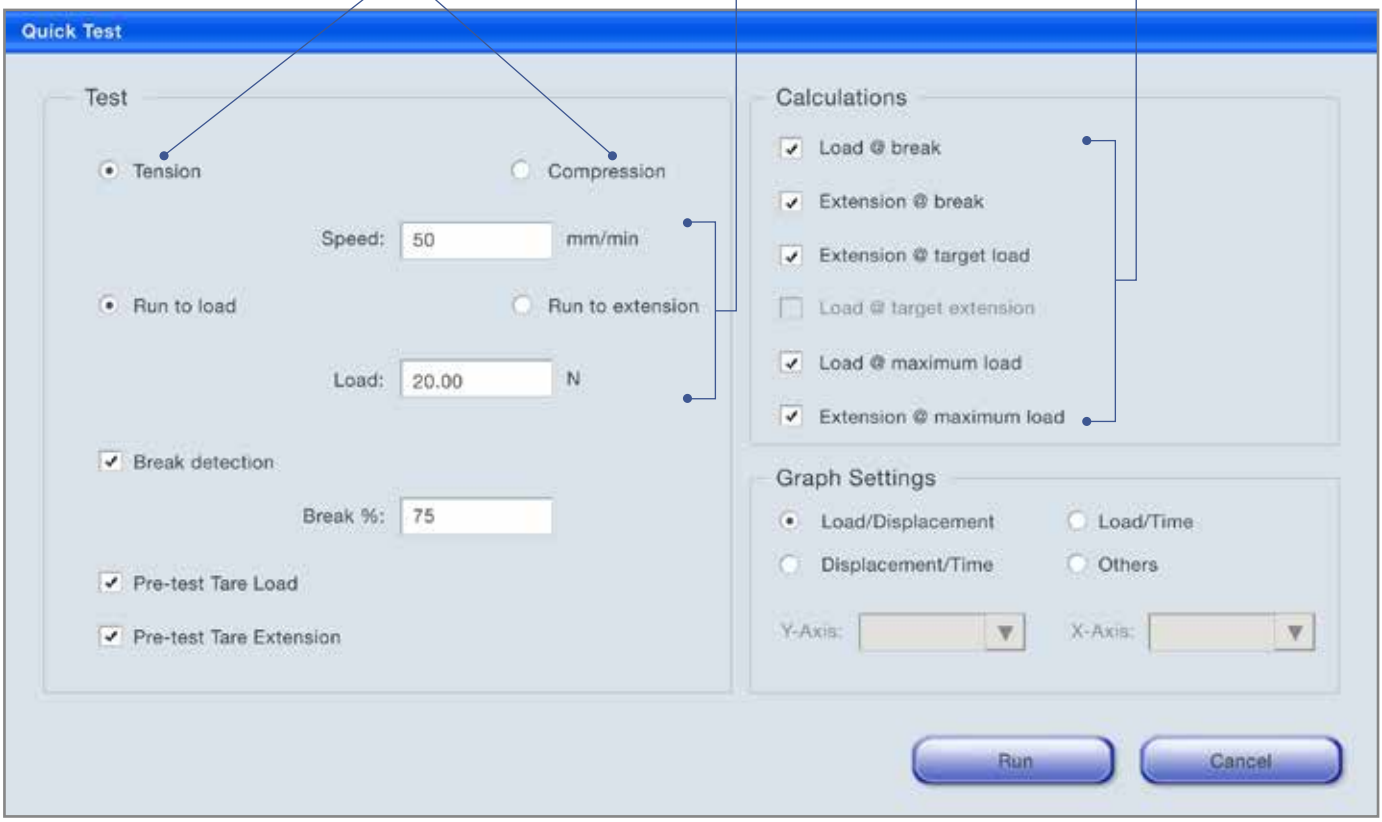
1. Select Quick Test

2.

Test Type
Select test type

Speed & Load
Define parameters such as speed, load & extension

Calculations
Choose which pre-defined calculations are required by simply ticking a check box



3. Press 

Program Test

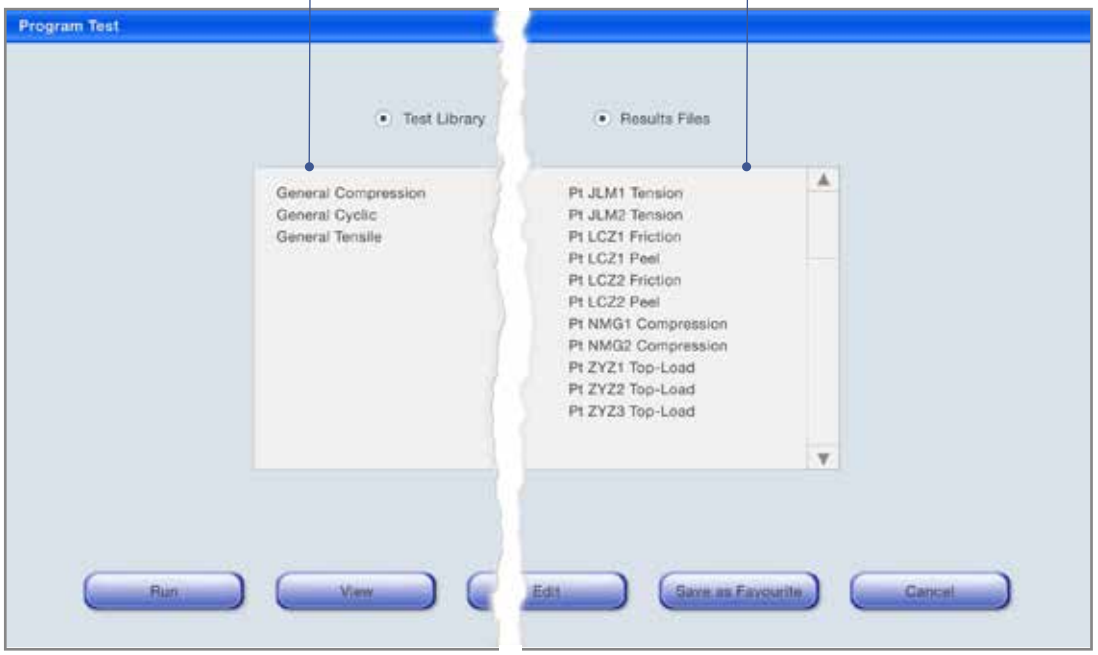
- Ideal for hosting established tests
- Create multi-stage test routines to run to load, displacement or break
- Frequently used tests can be assigned to '5 Favourite' buttons
- Save unlimited number of tests in a library for easy storage and access

Test Select

Tests Library
Choose from a library of pre-loaded templates to get you started

Or...

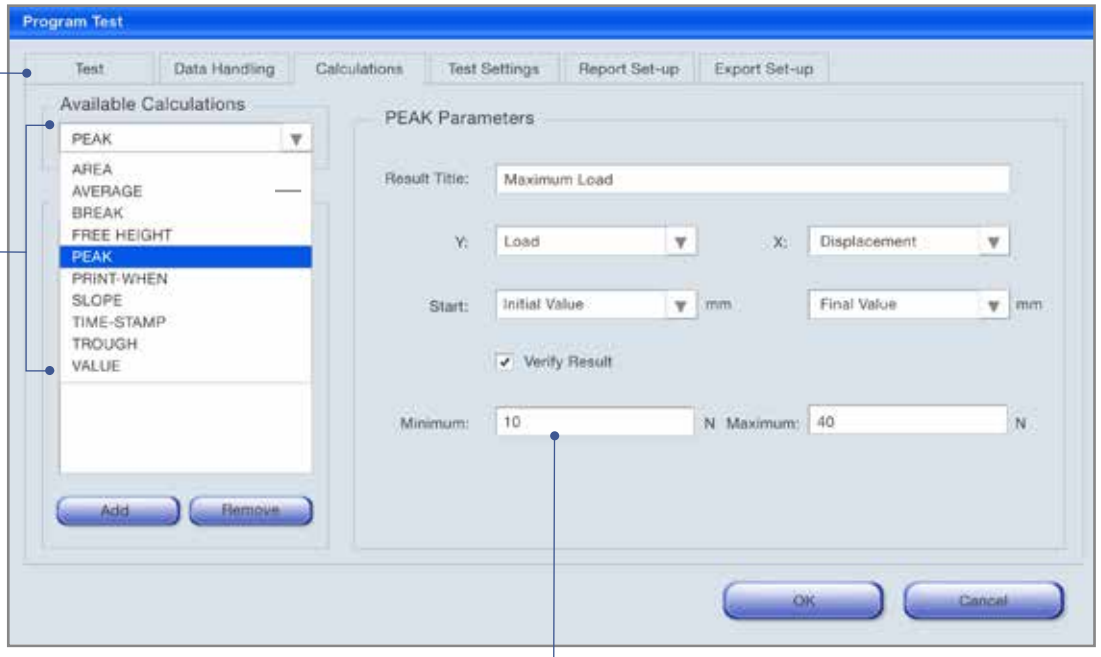
Established Tests Library
Choose from an unlimited library of your own established tests



Test Set-up

Tabs
Tab format allows intuitive creation of test routines

Calculations
Use the drop-down box to select & add as many calculations as you need for your test



Parameters
Define the parameters for the calculation & set your Pass/Fail criteria

Flexible - Choice of 3 Program Modes

Advanced Test

If your application requires more sophisticated control of the test machine the MultiTest-*xt* can be upgraded by purchasing the optional Advanced Program Builder Software to enable the Advanced Test functionality.

QC Lab

Use a separate PC to create multi-stage programs using the Advanced Program Builder Software

transfer

USB 2.0

or

Production Floor

Load and run a program on the MultiTest-*xt* via the Advanced Test button

With this option you have dedicated access to Emperor™, Mecmesin's powerful premium force testing software. Emperor™ has an open-architecture structure allowing access to a comprehensive library of calculations, which can be tailored to suit your requirements plus a suite of machine-control commands allowing you to create more complex multi-stage programs.

Once created these programs can then be uploaded via a network or memory stick onto the MultiTest-*xt* and run by simply pressing the Advanced Test button and choosing the program from the list of available tests.

Live Test Screen

When a test routine has been selected and the test performed, the operator can view the results in 2 selectable formats:

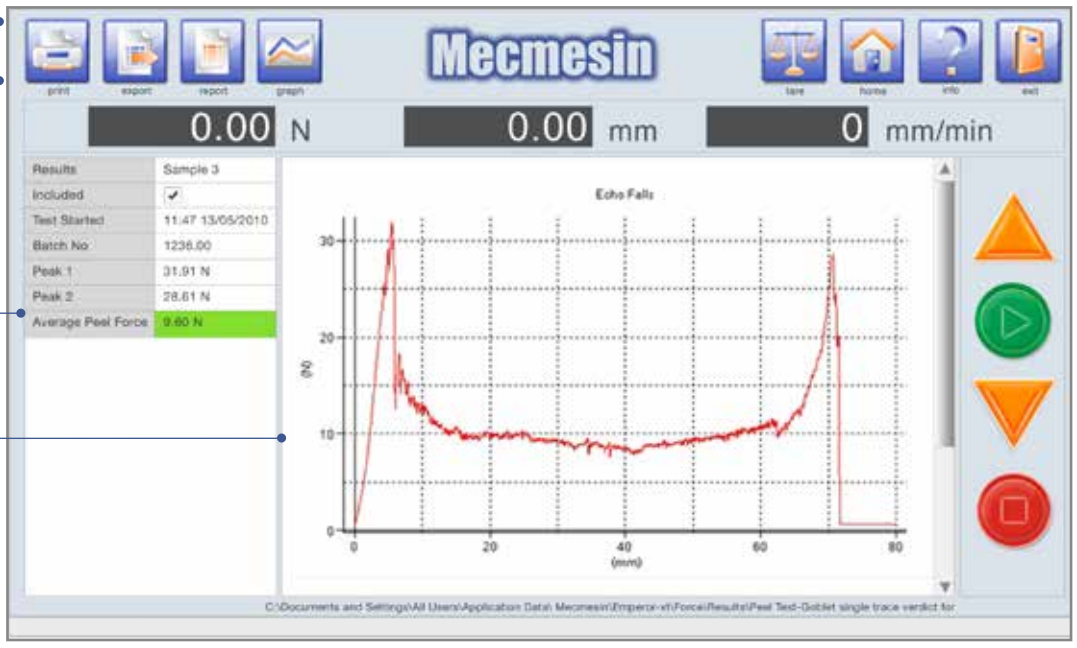
Either...

Results & Graph

Icons
'Touch icons' for quick navigation to printing, reporting & exporting functions

Results for the last sample tested are displayed

Test is displayed graphically as a 'live event'



Live Test Screen

Or...

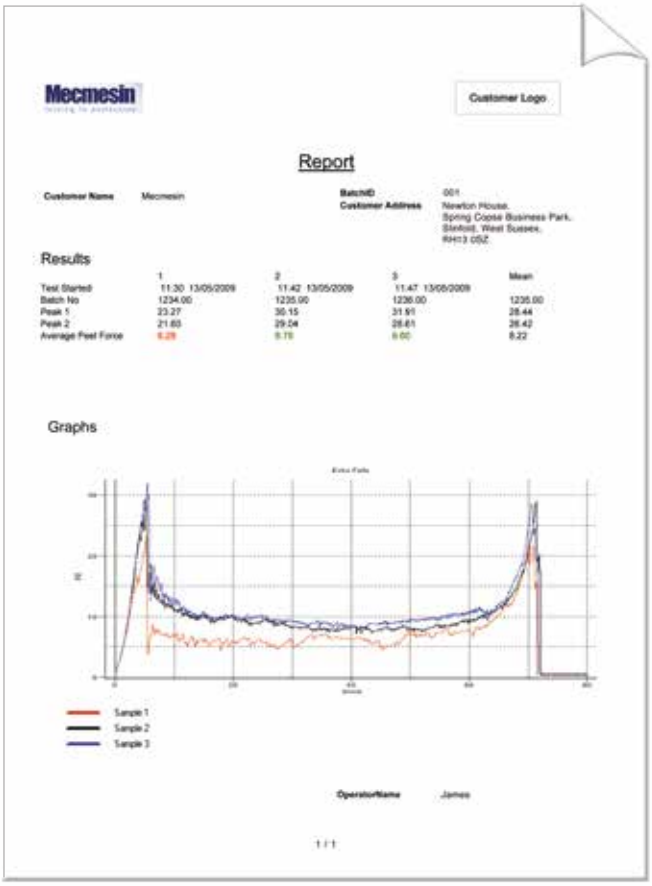
Results Only

- Easy-to-read, comprehensive display of test results
- Results for each sample are clearly tabulated
- Colour-coded ‘Pass’ or ‘Fail’ notifications for quick & easy interpretation of results

Results
Results for all samples tested are displayed

Reports & Exporting

- Select standard reports or customise your own using built-in templates
- Save test set-up and results via memory stick or network
- Automatic export of data to Microsoft Excel® and SPC packages
- Collect data at 1000 times per second for detailed recording of results from every sample and accurate capture of peak loads



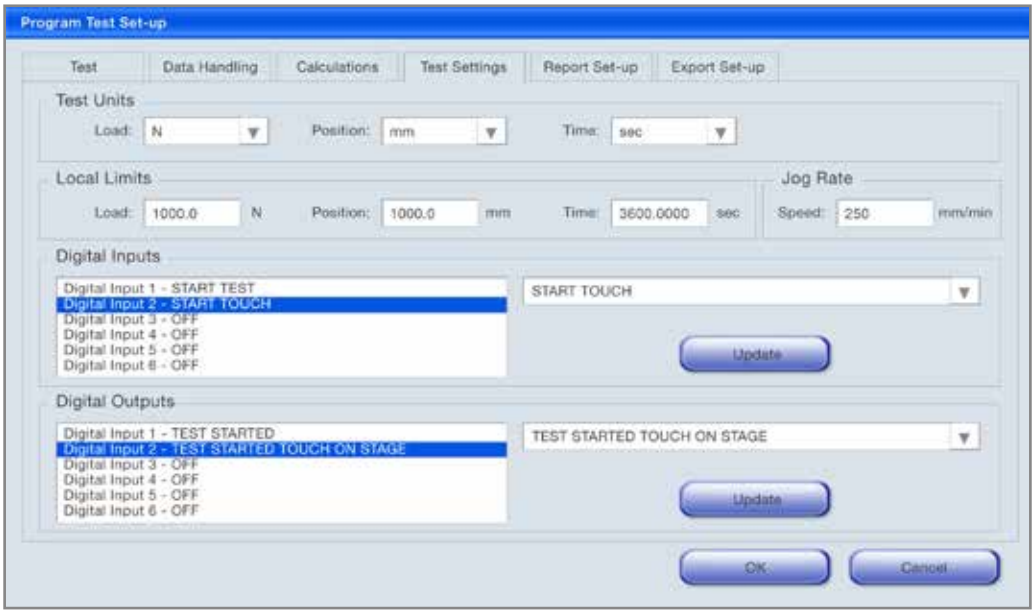
Expandable to your Changing Needs

PLC/Digital Control Interface

The MultiTest-*xt* is fitted with a Digital Control Interface to facilitate communication with external devices such as a PLC (Programmable Logic Controller) or simply a remote footswitch to start the test. The use of a PLC allows you to automate your test routine through loading multiple specimens onto a feeder-carousel thereby increasing productivity and reducing the time spent by an operator on testing.

Tennis ball carousel used with a Mecmesin tester

Configure the MultiTest-*xt* to communicate with a PLC



Wide Range of Capacities from 500N to 50kN

The MultiTest-*xt* is available in a range of capacities to meet your exact testing requirement. Select from single column machines through to advanced twin-column test frames, which have been specifically designed to test large or high-load samples and products.

MultiTest 2.5-*xt*

MultiTest 5-*xt*

MultiTest 10-*xt*
MultiTest 25-*xt*
MultiTest 50-*xt*

‘Plug & Play’ Loadcells

All Mecmesin loadcells are quickly and easily interchangeable with instant recognition of capacity and calibration data - just ‘plug & play’.

A complete range of fixing adaptors are available to connect any loadcell to Mecmesin’s grips and fixtures.

A MultiTest-*xt* can be easily and economically enhanced by using a different loadcell. You can select an Intelligent Loadcell (ILC) to cover the working range best suited to your tests.

Grips & Fixtures

Grips and fixtures are key elements of our force testing systems, designed for holding a vast range of materials and products such as adhesives, composites, glass, plastics, rubber, textiles and wood. Dedicated grips are specially designed to suit components such as crimped terminals, keypads, PCBs, springs and switches.

If you have a specimen, which cannot be held with a standard grip, Mecmesin engineers have many years experience in designing and manufacturing custom-built fixtures and can provide you with a bespoke solution.

Twin-column test frame fitted with safety guard

Safety

Mecmesin’s MultiTest-*xt* has intrinsic overload protection provided by the software during normal operation.

Furthermore, each MultiTest-*xt* is fitted with mechanical limit switches that prevent damage to accessories and loadcells plus an emergency stop button on the front panel to halt the movement of the crosshead at any time.

Machine guards are available on request if your application requires additional protection for the operator.

Mecmesin also offer column gaiters, which shield the test frame against ingress from small components, dust etc.

Specifications

MultiTest-*xt*		0.5	1	2.5	5	10	25	50
TEST FRAME								
Rated capacity	N	500	1000	2500	5000	10000	25000	50000
	kgf	50	100	250	500	1000	2500	5000
	lbf	110	220	550	1100	2200	5500	11000
Number of ballscrews		1	1	1	1	2	2	2
Speed range	mm/min	1 - 1000	1 - 1000	1 - 1000*	1 - 500	1 - 1000	1 - 1000**	1 - 400***
	(in/mm)	(0.04 - 40)	(0.04 - 40)	(0.04 - 40)	(0.04 - 20)	(0.04 - 40)	(0.04 - 40)	(0.04 - 15)
Crosshead speed accuracy		±0.2% of indicated speed or ±20 μ/min, whichever is greater*****						
Distance between columns		-	-	-	-	400 mm (15.7″)	400 mm (15.7″)	420 mm (16.5″)
Throat depth†		67 mm (2.6″)	67 mm (2.6″)	67 mm (2.6″)	95 mm (3.7″)	-	-	-
Vertical daylight ††		1267 mm (49.9″)	1067 mm (42″)	588 mm (23.1″)	710 mm (28.0″)	1140 mm (44.9″)	1140 mm (44.9″)	1330 mm (52.4″)
Height		1616 mm (64″)	1416 mm (64″)	941 mm (37″)	1082 mm (42.6″)	1500 mm (59.1″)	1500 mm (59.1″)	1931 mm (76″)
Width (test frame only)		290 mm (11.4″)	290 mm (11.4″)	290 mm (11.4″)	328 mm (12.9″)	826 mm (32.5″)	826 mm (32.5″)	864 mm (34″)
Max width (with console fitted)		546 mm (21.5″)	546 mm (21.5″)	546 mm (21.5″)	615 mm (24.2″)	1073 mm (42.2″)	1073 mm (42.2″)	1099 mm (43.3″)
Depth		414 mm (16.3″)	414 mm (16.3″)	414 mm (16.3″)	526 mm (20.7″)	542 mm (21.3″)	542 mm (21.3″)	572 mm (22.5″)
Weight		36 kg (79 lbs)	32.5 kg (72 lbs)	29 kg (64 lbs)	43 kg (95 lbs)	145 kg (320 lbs)	145 kg (320 lbs)	290 kg (639 lbs)
Max. power requirement		120 watts	200 watts	250 watts	150 watts	450 watts	450 watts	450 watts
Voltage		230 V AC 50 Hz or 110 V AC 60 Hz						
LOAD MEASUREMENT								
Available loadcell ranges	N	2 to 50,000 (14 models)						
	kgf	0.2 to 5,000 (14 models)						
	lbf	0.45 to 11,000 (14 models)						
Loadcell measurement accuracy		±0.1% of full scale for loadcells from 2 N to 2.5 kN (see mecmesin.com for more information) ±0.2% of full scale for loadcells from 5 kN to 50 kN (see mecmesin.com for more information)						
Loadcell measurement resolution		1:6500						
DISPLACEMENT								
Crosshead travel††		1186 mm (46.7″)	986 mm (38.8″)	507 mm (20″)	590 mm (23.2″)	950 mm (37.4″)	950 mm (37.4″)	1100 mm (43.3″)
Positional accuracy per 300 mm (11.81″) of travel		±130 μm (±0.005″)				±100 μm (±0.004″)		
Displayed resolution		±0.01 mm (±0.0004″)						

* 2.5 kN - recommended maximum speed = 750 mm/min (30in/min) above 2 kN
** 25 kN - recommended maximum speed = 500 mm/min (20in/min) above 10 kN
*** 50 kN - recommended maximum speed = 250 mm/min (10in/min) above 25 kN
**** See help.mecmesin.com for additional info
† measured on centre line of loadcell † † measured without loadcell or grips

Note: See Technical Datasheet 431-390 for dimension drawings

Common Specifications

Operating temperature	10C - 35C (50F - 95F)
Humidity range	Normal industry and laboratory conditions
Sampling rate (Hz)	Selectable from 1000, 500, 100, 50, 10
Compensation for system movement	Yes
Loadholding	Yes
Digital display of Load/Position/Speed	Yes
Output of test results to PC/Printer/Datalogger	Yes, via USB/Network Ports or Wireless Network RS232 via USB/Network converter in ASCII Format
Communication with PLC/Digital Control Interface	Yes, via programmable digital ports , 6 Inputs + 6 Outputs

Options

Column gaiter
Safety guard

available upon request

Support and Services

- Comprehensive international network of distributors
- 24 month warranty
- Application support
- Grips & accessories
- On-site installation & training
- Calibration & service centre
- Website support

Mecmesin reserves the right to alter equipment specifications without prior notice. E&OE

Applications

The flexibility and ease-of-use of the MultiTest-*xt* make it ideal for applications ranging from testing common springs right through to sophisticated medical devices.

It is ideal for routine testing where a number of different tests are made by different operators. For example, a Quality Manager might set up a simple 'Accept' or 'Reject' test for use by Goods-in staff. This would be performed with merely a few touches on the console screen and require minimal operator training.

Alternatively, with the Advanced Program Builder, sophisticated multi-stage programs can be created and imported to run on the MultiTest-*xt* - but the operator still only needs to push a few buttons to perform the test.

Medical device test

Top-load test

Peel test

Tennis ball compression test

Crimp terminal tensile test

Keypad compression test

Industry sectors

adhesives & coatings

construction

consumer packaging

cosmetics & personal care

education

electrical & electronic

fabric & textiles

food & agriculture

general engineering

home & office

medical & veterinary

product safety

sport & leisure

transit packaging

automotive & aerospace

Mecmesin

testing to perfection

Mecmesin - a world leader in affordable force and torque testing solutions

Since 1977, Mecmesin has assisted thousands of companies achieve enhanced quality control in design and production. The Mecmesin brand represents excellence in accuracy, build, service, and value. In production centres and research labs worldwide, designers, engineers, operators, and quality managers endorse Mecmesin force and torque testing systems for their high performance across countless applications.

www.mecmesin.com

The Mecmesin global distribution network guarantees your testing solution is rapidly delivered and efficiently serviced, wherever you are.

bsi ISO 9001 Quality Management Systems CERTIFIED

FS 58553
BS EN ISO 9001:2015

DISTRIBUTOR STAMP

Head Office - UK
Mecmesin Limited

w: www.mecmesin.com
e: sales@mecmesin.com

France
Mecmesin France

w: www.mecmesin.com/fr
e: contact@mecmesin.fr

Germany
Mecmesin GmbH

w: www.mecmesin.com/de
e: info@mecmesin.de

North America
Mecmesin Corporation

w: www.mecmesin.com/us
e: info@mecmesincorp.com

Asia
Mecmesin Asia Co. Ltd

w: www.mecmesin.com/th
e: sales@mecmesinasia.com

China
Mecmesin (Shanghai) Pte Ltd

w: www.mecmesin.com/zh
e: sales@mecmesin.cn

brochure ref: 431-387-09