

Mecmesin

testing to perfection

MultiTest-x

console-controlled
test frames

Tension and Compression
Test Solutions



MultiTest-x Range

Quality managers needing an easy-to-use semi-automated quality testing system for the production floor should look no further than Mecmesin's range of MultiTest-x test frames.

The MultiTest-x is an affordable stand-alone system, ideal for product testing and quality control applications in a production environment. Specifically designed for ease-of-use, the additional power of a new integrated controller/console enables quality managers and supervisors to set up separate test programs, via an alpha-numeric keypad, using basic machine-control parameters.



Spring testing

easy-to-use
single button operation
robust, stand-alone system

KEY FEATURES: Machine Control

- Run to load or displacement or time
- Cycle between load limits or displacement limits
- Hold a load for a period of time
- Zero the value of load or displacement
- Define test speed



1kN capacity

MultiTest 1-x



2.5kN capacity

MultiTest 2.5-x



5kN capacity

MultiTest 5-x

The MultiTest-x is available in a range of capacities to meet your exact testing requirement... 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.



cost-effective.
semi-automatic
programmable

KEY FEATURES: **Data Acquisition**

- Peak load
- Load at pre-defined displacement or time
- Displacement data at pre-defined load or time
- Average load over a displacement range or time range
- User I.D., batch, date and time
- System compensation (N/mm)

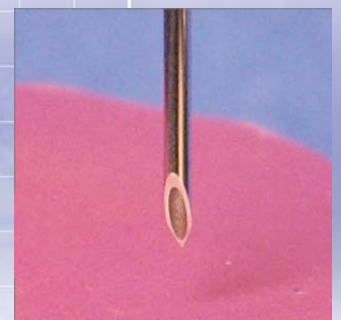


MultiTest 10-x
MultiTest 25-x

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-x test frames is the ideal cost-effective solution.

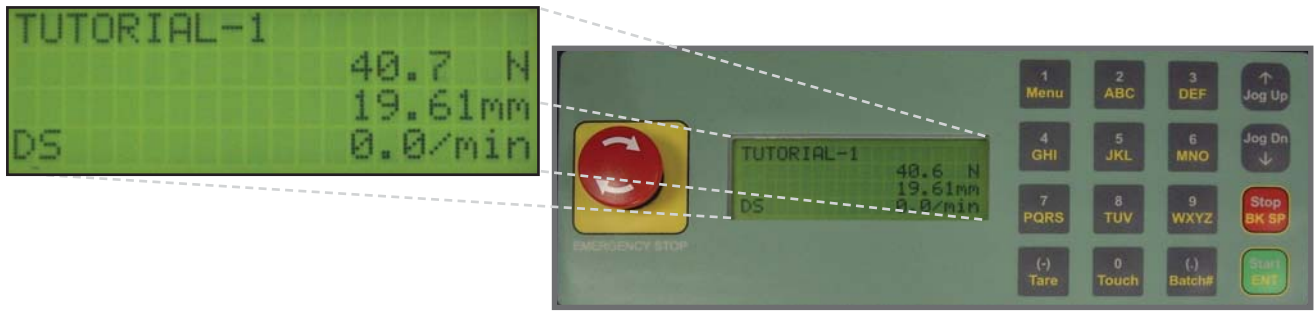


Tensile testing



Cannula penetration testing

Integrated Controller/Console



The flexible, powerful, yet easy-to-use MultiTest-x carries out precise test procedures 'at the push of a button', then automatically displays test results with a pass/fail indicator. The MultiTest-x integrated controller/ console displays a series of menus and prompts, which guide the supervisor easily through the creation of test procedures.

KEY FEATURES: Console unit

- Easy-to-use
- Displays force, displacement and speed
- Single button operation
- Intuitive operator interface
- Membrane multi-function keypad
- Easy-to-read backlit LCD display



Actuation testing

Calculations include peak load, minimum load, average load, load at break, load setpoints and displacement setpoints. Up to thirty test procedures can be stored, so that all an operator needs to do is select the relevant program and push the [Start] button. The test is performed automatically and a Pass/Fail indicator is displayed once finished.

For further detailed analyses, test results can be downloaded via serial output to a datalogger, printer or computer.

PLC/Digital Control Interface

The PLC (Programmable Logic Controller) or Digital Control Interface facilitates additional automation whilst testing, enabling external devices to be controlled in order to perform operations normally undertaken manually.

For example, an operator would routinely place a sample on the test area and position the accessory, such as a grip, to secure the sample ready to begin testing. They would then initiate the test and upon completion release the sample from the grip in order to repeat the process as often as necessary. Using the PLC, all these tasks can be automated, which enables businesses to keep operator costs low and mistakes, often caused through human error, to an absolute minimum.

Specifications

MultiTest		1-x	2.5-x	5-x	10-x	25-x
TEST FRAME						
Rated capacity	N	1000	2500	5000	10,000	25,000
	kgf	100	250	500	1000	2500
	lbf	225	550	1100	2200	5500
Number of ballscrews		One	One	One	Two	Two
Columns spacing		-	-	-	400mm (15.7")	400mm (15.7")
Speed range	mm/min	0.1 - 500	0.1 - 500	0.1 - 500	0.1 - 500	0.1 - 500
	in/min	(0.004 - 20)	(0.004 - 20)	(0.004 - 20)	(0.004 - 20)	(0.004 - 20)
Throat depth**		67mm (2.6")	67mm (2.6")	95mm (3.7")	-	-
Vertical daylight*		590mm (23.2")	410mm (16.1")	675mm (26.6")	1180mm (46.5")	1140mm (44.9")
Height		940mm (37")	750mm (29.5")	1082mm (42.6")	1500mm (59.1")	1500mm (59.1")
Width		290mm (11.4")	290mm (11.4")	328mm (12.9")	826mm (32.5")	826mm (32.5")
Depth		414mm (16.3")	414mm (16.3")	526mm (20.7")	512mm (20.2")	542mm (21.3")
Weight		19kg (42lbs)	18kg (40lbs)	38kg (84lbs)	110kg (243lbs)	140kg (309lbs)
Maximum power requirement		60 Watts	125 Watts	150 Watts	400 Watts	450 Watts
Voltage		230V AC 50Hz	230V AC 50Hz	230V AC 50Hz	230V AC 50Hz	230V AC 50Hz
		110V AC 60Hz	110V AC 60Hz	110V AC 60Hz	110V AC 60Hz	110V AC 60Hz
Digital display of load/length/speed		Yes	Yes	Yes	Yes	Yes
LOAD MEASUREMENT						
Available loadcell ranges	N	2 - 1000 (9 models)	2 - 2500 (10 models)	2 - 5000 (11 models)	50 - 10,000 (8 models)	50 - 25,000 (9 models)
	kgf	0.2 - 100 "	0.2 - 250 "	0.2 - 500 "	0.5 - 1000 "	0.5 - 2500 "
	lbf	0.45 - 225 "	0.45 - 563 "	0.45 - 1125 "	11.25 - 2250 "	11.25 - 5625 "
Load measurement accuracy $\pm\%$ fsd		0.2%	0.2%	0.2%	0.2%	0.2%
DISPLACEMENT						
Crosshead travel*		500mm (19.7")	330mm (13")	675mm (26.6")	960mm (37.8")	950mm (37.4")
Positional accuracy		$\pm 0.105/500\text{mm}$ ($\pm 0.0041/20"$)	$\pm 0.070/300\text{mm}$ ($\pm 0.0028/11.8"$)	$\pm 0.120/600\text{mm}$ ($0.0047/23.6"$)	$\pm 0.050/800\text{mm}$ ($\pm 0.0020/31.2"$)	$\pm 0.050/800\text{mm}$ ($\pm 0.0020/31.2"$)

* measured without loadcell or grips

** measured to centre line of loadcell

(See technical datasheet 431-344 for dimension drawings)

Common Specifications

Crosshead speed accuracy	$\pm 1\%$ of indicated speed
Load measurement resolution	1:5000 or better
Operating temperature	10-35 degrees Centigrade
Position control resolution	$\pm 0.01\text{mm}$ ($\pm 0.0004"$)
Humidity range	Normal industry and laboratory conditions
Compensation for system movement	Yes
Loadholding	Yes
Graphical representation	External software
Output of test results to PC/Printer/Datalogger	Yes, via RS232 serial port
Communication with PLC/Digital Control Interface	Yes, via programmable digital ports 4 Inputs + 6 Outputs

Options

Alternative speed ranges
Column gaiter
Extended columns
Extended throat depth

available upon request

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

E&OE

	Potentiometer-	Console-	Computer-
Load Rating			
1kN	Speed Range: 2.5-1000mm/min Throat Depth: 70.5mm Travel: 500mm	Speed Range: 0.1-500mm/min Throat Depth: 67mm Travel: 500mm	Speed Range: 1-500mm/min Throat Depth: 67mm Travel: 500mm
2.5kN	Speed Range: 2.5-750mm/min Throat Depth: 70.5mm Travel: 330mm	Speed Range: 0.1-500mm/min Throat Depth: 67mm Travel: 330mm	Speed Range: 1-500mm/min Throat Depth: 67mm Travel: 330mm
5kN	—	Speed Range: 0.1-500mm/min Throat Depth: 95mm Travel: 675mm	Speed Range: 1-500mm/min Throat Depth: 95mm Travel: 675mm
10kN	—	Speed Range: 0.1-500mm/min Columns Spacing: 400mm Travel: 960mm	Speed Range: 1-1000mm/min Columns Spacing: 400mm Travel: 960mm
25kN	—	Speed Range: 0.1-500mm/min Columns Spacing: 400mm Travel: 950mm	Speed Range: 1-1000mm/min (10kN) 1- 500mm/min (25kN) Columns Spacing: 400mm Travel: 950mm

E&OE

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