Mecmesin

MultiTest-dV

Motorised test stand

Sales brochure

PHYSICAL PROPERTIES TESTERS GROUP

mecmesin.com

Configure your MultiTest-dV

Option 1 | Digital Force Gauge

AFG and VFG Digital Force Gauges interact with the MultiTest-dV to enable controlled testing to a load limit or break.

Configuration A: An AFG/VFG digital force gauge for stand-alone peak load tests

Configuration B: An AFG/VFG + VectorPro Lite software to plot data graphically, perform calculations and issue test reports

Touchscreen Force Gauge (VFG)

Option 2 | Enhanced Load Sensor

The ELS communicates with the MultiTest-dV for precision testing of materials when combined with VectorPro MT software*.

*Order separately

Enhanced Load Sensor (ELS)

MultiTest-dV controls

The MultiTest-dV has been designed specifically for ease-of-use and precision when selecting test parameters. Based on the tried and tested MultiTest frame, it has completely new control electronics to deliver superior performance at an affordable price.

▲ Colour display of speed, displacement and load

▲ Four multifunction buttons for all settings and operation. Multi-language display

▲ Lights indicate stand status

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MultiTest-dV

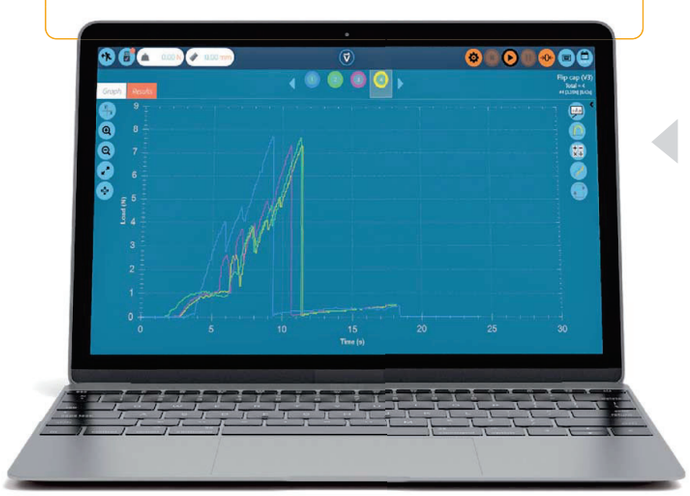
Option 1 | Digital Force Gauge

The MultiTest-dV range integrates perfectly with Mecmesin's leading range of digital force gauges - the Touchscreen VFG & the AFG. Both gauges are available in 10 load capacities from 2.5 N to 2.5 kN with an outstanding accuracy of ±0.1% of full scale. Tests can run to a pre-defined load or crosshead displacement limit or until a sample break is detected. In its most popular configuration, the combination of MultiTest-dV and VFG are ideal for stand-alone applications requiring the capture on a display of a peak load value. The VFG provides the added benefit of displaying test data both as numbers and in graphical format.

VectorPro® Lite software

Data can be streamed from the VFG and AFG via the MultiTest-dV to VectorPro Lite - Mecmesin's data-acquisition software for collecting and plotting the values of load, displacement and time.

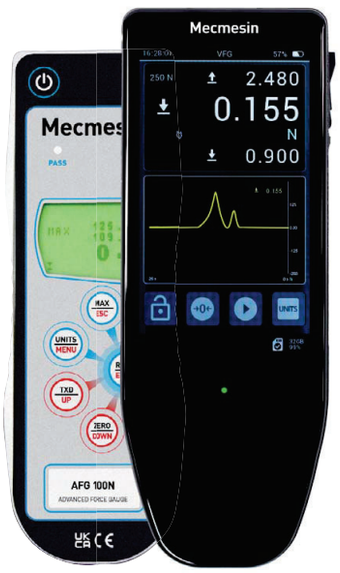
It is ideal for applications where the true physical characteristics of the specimen cannot be detected by peak-load only and require a graphical presentation to highlight specific events during the test.



Powered by Vector

Configuration A
Touchscreen Force Gauge (VFG) with MultiTest-dV

Configuration B
Touchscreen Force Gauge (VFG) with VectorPro® Lite software



Digital Force Gauges

Measure the tensile and compressive strength of components and assemblies with the Mecmesin range of digital force gauges. The VFG is a versatile touchscreen instrument built for tough environments that delivers accuracy and reliability. The Advanced Force Gauge (AFG) is operated by a membrane keypad. Both models can be used hand-held or fixed to a motorised test stand to allow testing under controlled speed conditions.

Configure your MultiTest-dV online: visit mecmesin.com

Top load

Push in

Tensile strength

Pull off

Peel

▲ Testing compressive resistance of cosmetic container

▲ Testing glide force of syringe plunger

Mecmesin

MultiTest-dV

Option 2 | Enhanced Load Sensor

By selecting an Enhanced Load Sensor (ELS) coupled with VectorPro® MT software and optional extensometer, the MultiTest-dV range is transformed into a basic Materials Tester. The ELS is available in 10 load capacities from 2.5 N to 2.5 kN. Featuring exceptional accuracy of ±0.5% of displayed reading it gives an extra level of precision for the more demanding materials testing applications.

VectorPro® MT software

The full power of VectorPro software comes to the fore in the MT (Materials Testing) version. Its additional ability to connect extensometers for elongation measurement directly on the specimen allows true measurement of strain.

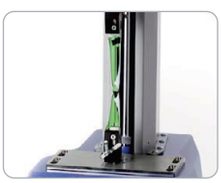
It is the ideal choice for quality assurance checks in the QC lab or, for more in-depth analysis of material properties, in the R&D laboratory.

Powered by Vector

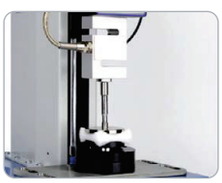
ELS (Enhanced Load Sensors)

A precision loadcell which connects directly to the MultiTest-dV stand and communicates with VectorPro MT software to allow sophisticated test routines for materials testing applications. Fully interchangeable - simply select the appropriate loadcell capacity to use your MultiTest-dV as an entry-level materials tester.

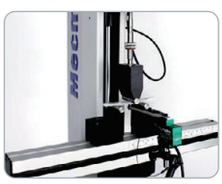
Configure your MultiTest-dV online: visit mecmesin.com



Elongation at break



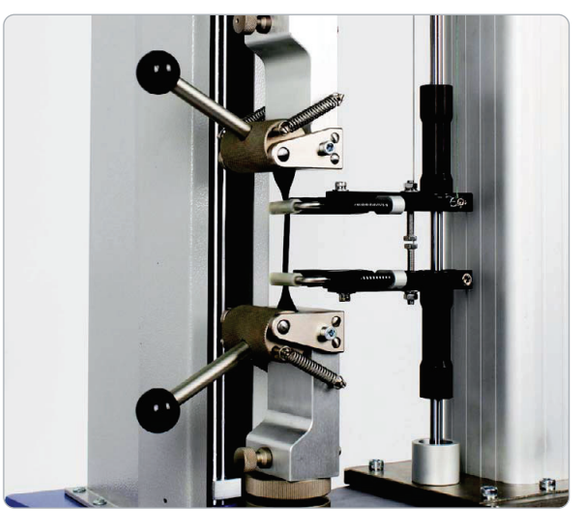
Compression



Bend / flexure

Stress

Lap shear



▲ Stress/strain measurement on rubber dumbell specimen

▲ Tensile strength measurement of plastic tubing

Specifications

MultiTest-dV		0.5	1	2.5
Rated capacities	kN	0.5	1	2.5
	kgf	50	100	250
	lbf	110	220	550
Displacement				
Crosshead travel*		1186 mm (46.7")	986 mm (38.8")	507 mm (20")
Maximum headroom*		1205 mm (47.4")	1005 mm (39.6")	526 mm (20.7")
Displacement resolution	mm	0.001	0.001	0.001
	in	0.000025	0.000025	0.000025
Positional accuracy		±0.130/300 mm (±0.005/11.81")	±0.130/300 mm (±0.005/11.81")	±0.130/300 mm (±0.005/11.81")
Speed				
Speed range†	mm/min	0.1 to 1200	0.1 to 1200	0.1 to 1200 ††
	in/min	0.004 to 47.2	0.004 to 47.2	0.004 to 47.2
Speed accuracy		±2% of indicated speed or ±20 µ/min, whichever is greater****		
Speed resolution	mm/min	0.1	0.1	0.1
	in/min	0.004	0.004	0.004
Maximum no. of cycles per test		9999		
Dimensions				
Height		1616 mm (64")	1416 mm (56")	941 mm (37")
Width		290 mm (11.4")	290 mm (11.4")	290 mm (11.4")
Depth		414 mm (16.3")	414 mm (16.3")	414 mm (16.3")
Vertical daylight		1267 mm (49.9")	1067 mm (42")	588 mm (23.1")
Throat depth**		70.5 mm (2.8")	70.5 mm (2.8")	70.5 mm (2.8")
Weight		31 kg (68 lbs)	27.5 kg (61 lbs)	24 kg (53 lbs)
Electrical supply				
Voltage		230 V AC 50 Hz / 110 V AC 60 Hz	230 V AC 50 Hz / 110 V AC 60 Hz	230 V AC 50 Hz / 110 V AC 60 Hz
Maximum power requirements		120 W	200 W	250 W
Touchscreen Force Gauge (VFG) and Advanced Force Gauge (AFG), 10 models from 2.5 N to 2500 N				
Accuracy***		±0.1% of full-scale		
Enhanced Load Sensors (ELS), 13 models from 2.5 N to 2500 N				
Accuracy***		±0.5% of displayed reading		

* Measured with force gauge and short extension rod fitted. ** Measured on centreline of gauge/sensor.
*** As the device is used in varying environmental conditions, the uncertainty of measurement could be as much as 0.1% of full scale.
**** See help.mecmesin.com for additional info
† Where mains voltage is reliable. †† 2.5 kN: recommended maximum speed = 750 mm/min (30 in/min) above 2 kN.

Common Specifications	
Operating temperature	10°C - 35°C (50°F - 95°F)
Digital display of Load/Position/Speed	Yes
Output of test results to PC/Printer	Yes, via USB

Interface Cables	
Part no.	**Description**
351-092	Interface cable – 2 m long. AFG Force Gauge (15-way socket), to MultiTest-dV stands (RJ11) made between 2015-2020
351-103	Interface cable – 2 m long. AFG Force Gauge (15-way socket), to MultiTest-dV stands (15-way plug) made from May 2020
351-110	Interface cable – 2 m long. VFG Force Gauge (10-way Hirose socket), to MultiTest-dV stands (RJ11) made between 2015-2020
351-112	Interface cable – 2 m long. VFG Force Gauge (10-way Hirose socket), to MultiTest-dV stands (15-way plug) made from May 2020
352-275-V01	Interface cable – 1.2 m long. ELS (Hirose 6-way plug) to MultiTest 0.5-dV and MultiTest 1-dV stand (Hirose 12-way plug)
352-275	Interface cable – 0.6m long. ELS (Hirose 6-way plug) to MultiTest 2.5-dV stand (Hirose 12-way plug)
351-093	Interface cable – 2 m long. MultiTest-dV test stands (USB B) to PC (USB A)

Software and communications	
PC requirements (recommended)	Intel Core i5 processor, 8 GB RAM, one USB 2.0 or 3.0 port, SSD hard drive with 10 GB free space, screen resolution 1920x1080 full HD
PC requirements (minimum)	Intel/AMD dual core processor with 2 GHz or faster clock speed, 4 GB RAM, one USB 2.0 or 3.0 port, hard drive with 10 GB free space, screen resolution 1080x720