Tinius Olsen

VEM 100 Series

HIGH STRAIN

Video Extensometer Range

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VEM extensometer with integrated lighting on stabilised mounting

"All the measurements and outputs are time stamped and can be archived for future reference."

Tinius Olsen's VEM 100 series of video extensometer modules are designed to measure higher levels of strain (>10%) in tensile, compression, shear and flexural modes. The units are fully integrated with the testing machine and results-reporting software, supporting multiple gauge length click and drag placements, strain rate control and real time results during and throughout the test.

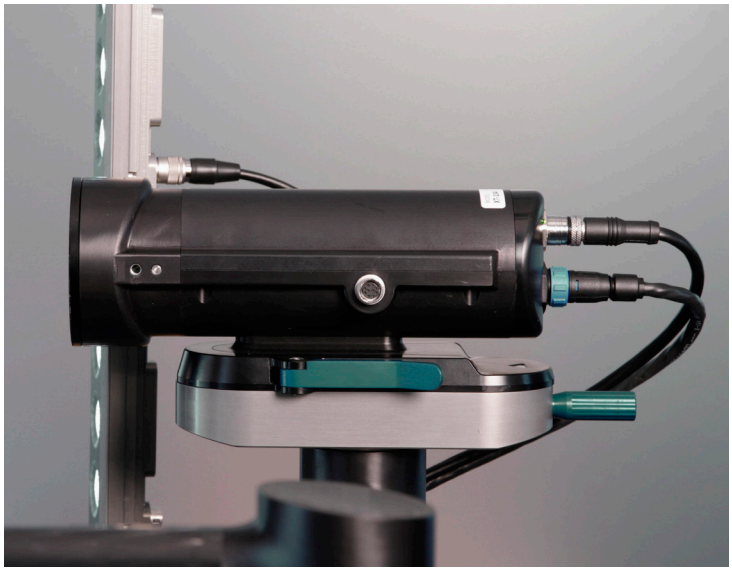
The VEM 100 series is directly compatible with all Tinius Olsen testing machine frames. It is mounted using a stabilised carbon fibre arm with built-in X, Y and Z fine positioning adjustment for optimum measuring performance.

The unit can be mounted at the front or rear of a testing machine, left or right in support of operator comfort and efficiency of use. The extensometer on its mounting arm can be quickly moved away from the test area, ensuring full operator access for specimen loading and grip or accessory changes, then equally quickly swung back into position, locating precisely using the magnetic homing position – simple, precise and quick.

The built-in lighting strip ensures repeatability in tests irrespective of lab conditions yet requires no special light sources or red colours, being easily controlled by the user adjusting intensity as required to ensure a stable light environment.

These versatile extensometer modules are available in a number of different performance configurations each compatible with Tinius Olsen's Horizon and VSS materials testing software, whether the Basic, Standard or Advanced option.

The precise camera, lens and data acquisition technology delivers zero gauge length error every time and quick application of gauge marks, including for the measurement of rotation (to track specimen alignment) during testing. Calibration is digitally embedded but, for reassurance, can be checked at any time using the standard traceable gauge block supplied.



Key Features

- Non contacting video extensometer solution
- One extensometer measures in tension, compression, flexural, shear modes
- No risk of damage due to violent specimen breaks
- Capable of measuring up to 1000% strain
- Supports quick gauge length change 10mm, 25mm, 50mm, 100mm, 200mm
- Provides a permanent record for recall of the test in video format with full resolution embedded strain data
- Meets the requirements of ISO 9513 class 0.5, ASTM E83 class B1 and GB/T 12160 class 0.5

For most applications a single VEM extensometer module meets the need, but up to four extensometer modules can be synchronised to work together capturing four simultaneous events.

The VEM Video Extensometer is the future of extensometery simply because it improves productivity through speed of use, improves repeatability and aids traceability via the embedded strain data video stored as part of the results data set. In addition, there are no mechanical parts under strain when subjected to the release force at the specimen break point.

VEM model	Maximum axial tensile strain range (%) at specified gauge length (mm)[1]					Maximum axial compressive strain range (%) at specified gauge length (mm)[1]					Maximum transverse gauge length (mm)[2]	Typical extension resolution (µm)[3]	Maximum test speed (mm/min)[2]	Minimum specimen width for measurements (mm)		Field of view (mm)
	10	25	50	100	200	10	25	50	100	200				Axial	Transverse	
VEM-101	280	70	-	-	-	40	40	-	-	-	10	0.3	1350	1.5	4.0	57 x 16
VEM-102	530	170	50	-	-	40	40	40	-	-	19	0.4	2100	2.4	7.0	98 x 27
VEM-103	840	300	120	25	-	-	40	40	40	-	29	0.6	3200	3.4	10	150 x 42
VEM-104	1000	460	200	65	-	-	40	40	40	-	43	0.9	4600	5.0	14	220 x 62
VEM-105	-	800	360	150	40	-	-	40	40	40	70	1.4	7200	8.0	23	350 x 100
VEM-106	-	1000	500	220	70	-	-	40	40	40	65	1.8	9400	11	30	460 x 100
VEM-107	-	-	800	360	150	-	-	-	40	40	-	2.8	14000	16	-	700 x 100

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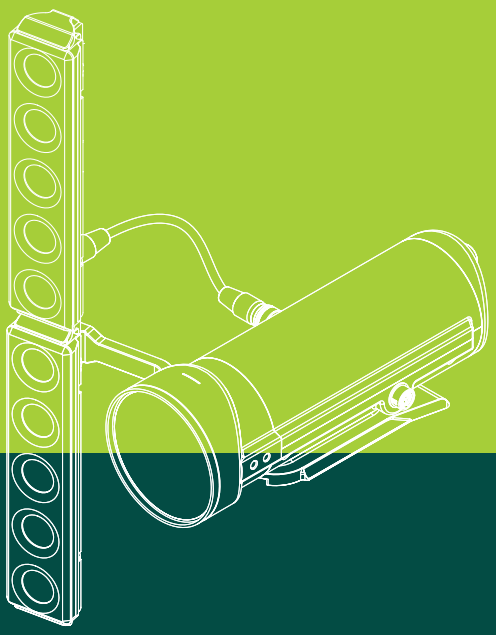
The first name in materials testing



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