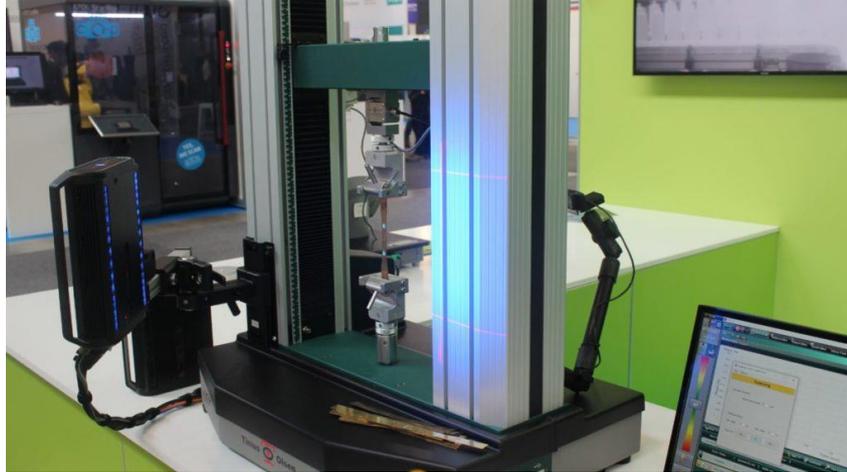# Introducing Vector – the Future of Extensometry

Tinius Olsens' new VectorExtensometer is real a step change in extensometer technology, capable of replacing multiple contacting and non-contacting sensors with a single, industry specific instrument.


Integrating adaptive AI capabilities with optical hardware, Vector reduces test throughput times and complexity, automating the process of capturing strain, improving measurement accuracy, data consistency and operator safety.

This groundbreaking technology efficiently addresses practical problems by eliminating the challenges of traditional contacting and non-contacting extensometers by utilising intelligent non-contact, high-accuracy measurement techniques to:

- Increase testing efficiency by reducing the need for operator intervention
- Measure strain through failure, however violent
- Measure simultaneously longitudinally and transverse
- Test in harsh environments or challenging light conditions
- Test highly fragile specimens
- Avoid introducing stress concentrations, such as damage from knife-edge contact
- Improve test success rate by eliminating contact-point slippage
- Eliminate the cost of consumable parts
- On larger test frames, locate below the moving member used to apply the test force viewing the test specimen across the test zone

Simple, Reliable Operation
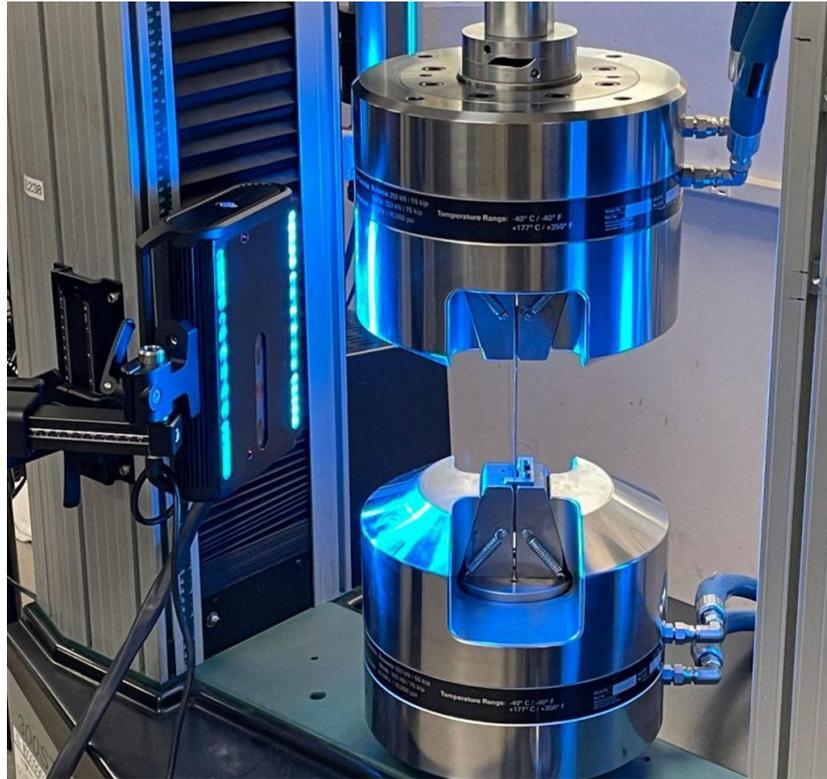
Vector is delivered pre-configured, simply plug in, power up and go!

Both instrument setup and changes to accommodate varying gauge lengths, sizes and profile test specimens are eliminated, whilst a range of automation features such as specimen and gauge length detection simplify the operator interaction and improve test reliability.

It's stereoscopic sensing detects machine or specimen misalignment and negates out-of-plane errors, with the on-board processing delivering seamless and simple integration and, eliminating all external control platforms.

Clear and simple visual status feedback and laser alignment guides, reduce operator training requirements and significantly improve test throughput.

Advanced Functionality

By automating specimen detection, Vector speeds up and simplifies test throughput and, by supporting multiple gauge lengths, removes the need for multiple, traditional sensors.

A large working optical volume also provides a forgiving operating envelope, making Vector suitable for use on almost any test frame.

Onboard AI enables truly zero touch operation, with dynamic response to different specimen appearance and behaviour as well as switching seamlessly between test and validation mode.

Vector's smart design means there is no need to alter the setup for specimens of different sizes, shapes and thicknesses.

Full integration into UTM control software removes the need for an external interface and simplifies the user experience.

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