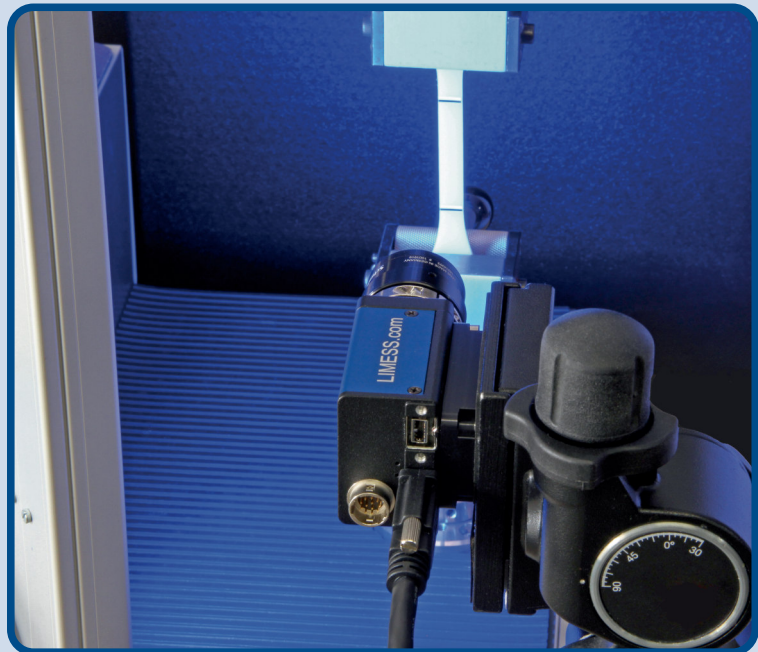
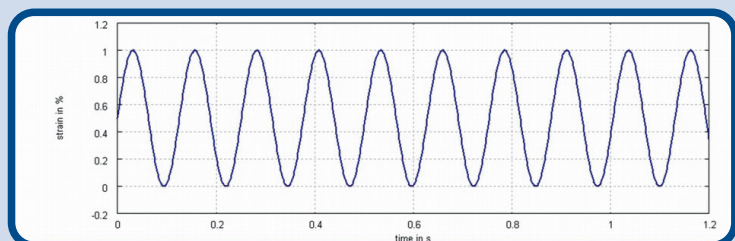
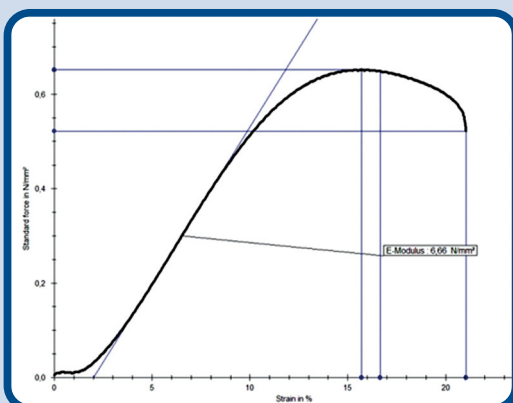


RTSS-Videoextensometer for material testing

RTSS (Real Time Strain Sensor) is a optical measurement system based on a digital camera and real time image processing. It measures the longitudinal and transverse strain between two applied lines with a rate of up to 1000 Hz. The strain data is transferred e.g. via an analogue signal or digital interface to the tensile test machines for further processing or controlling.



Tensile Test: Determination of Young's modulus



Dynamic strain measurement between two indicated lines or markers.
Application: Hydropulser

- Area of application: Tensile and compressive tests, measurement of material properties, true strain controlled tensile tests, investigation of strain behavior on dynamic tensile tests, cyclical/periodical tests, and dynamic high speed tests, vibration analysis, Young's modulus, resonance pulsators
- Flexibel field of view from few mm to some m

Strains from 0,0001% (=1 μ m/m) to 1000%

RTSS-Videoextensometer for material testing

Advantages

- Contact less and camera based
- Can be used on all materials
- Small and large field of view with one system
- Strains from 0,0001% (1µm/m) up to more than 1000%
- Suitable for all testing machines
- No influence of the specimen
- Capture of the breaking strain
- Optional image recording
- Expandable to digital image correlation - DIC



Product Variants

RTSS

- For tensile quasi-static tensile test with high accuracy (20 µm/m)

RTSS_HS

- For dynamic applications with up to 1KHz measurement rate; e.g hydropulser / shaker

Multi-Camera-System

- Simultaneous measurement of different specimen sides
- Small and large FOV for accurate Young's modulus and full stress-strain curve

Technical Specifications	Standard Version	HS Version
Strain Resolution	0.002% strain	0.004% strain
Distance Resolution	1µm @ 100mm FOW	2µm @ 100mm FOW
Precision Class (ISO9513)	class 1*	class 1
Measurement Rate	70 Hz	1000 Hz
Analogue Output	+/- 10V; 16 bit	+/- 10V; 16 bit
Strain Range	0,002% - 500%	0,004% - 500%
Camera Resolution	2.8 MPixel	2.0 MPixel

*Camera resolutions for accuracy class up to 0,2 (ISO 9513) available