

Made *in* Germany

RTSS | Videoextensometer

RTSS (*Real Time Strain Sensor*) is a contactless 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 4000 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.

| Applications

Measurement of material properties, true strain controlled tensile tests, exploration of cracks, investigation of strain behavior on dynamic tensile tests, dynamic and high speed tests, vibration analysis, etc.



| Features

- ☑ A modern, configurable and intuitive user interface using **OpenGL**
- ☑ The control from the Videoextensometer by the connected testing machine allows **the fully automatic operation**
- ☑ Using templates for different measurement tasks
- ☑ Many options for the data communication and data export
- ☑ Integrated generation of image sequences
- ☑ The **multithread-analysis-kernel** supports multi-core-processors to achieve a low processor load
- ☑ System calibration gives measures in [mm]

| Product variants

Multi-Camera-System

- ☑ Simultaneous measurement of different specimen sides (up to 360°)
- ☑ Small and large FOV for accurate E-modulus and full stress-strain curve

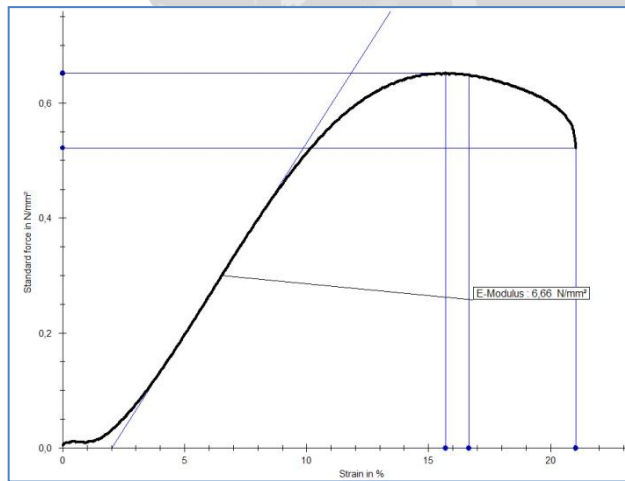
RTSS_HR

- ☑ For tensile quasi-static tensile-test with high accuracy (20µstrains)

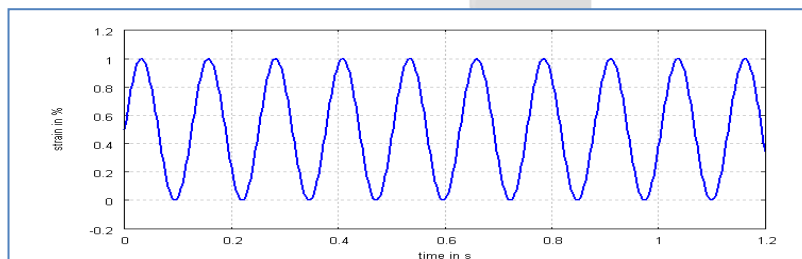
RTSS_HS

- ☑ For dynamic applications with up to 4KHz measurement rate;
e.g **Hydropulser / Shaker**

Examples



Determination of young's modulus and Poisson's ratio



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

Technical Specifications

	High Accuracy Version	Fast Version
Accuracy	0.002% strain	0.02% strain
	1µm @ 100mmFow	10µm @ 100mmFow
Sampling rate	50 Hz	4000 Hz
Analogue Output	+/- 10V; 16 bit	+/- 10V; 16 bit
Strain Range	> 500%	> 500%
Camera res.	2.0 MPixel	VGA