

Product information

## Non-contact extensometer Video-Track RT-050



### Application

The non-contact extensometer Video-Track RT-050 is applicable for tensile, compression and torsion tests.

An additional option is the simultaneous measurement of the linear and lateral strain.

Due to the high measuring rate the extensometer is also suited for the strain control of the testing machine.

When two camera systems are used it is possible to concurrently determine very low (Young's moduli) and very high strains on-line.

Another feature of the device is the determination of partial strains and strain distributions at specimens (s. Fig. 1).

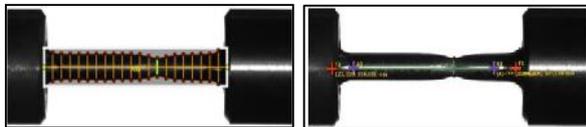


Fig. 1: Determination of the strain distribution (left) and the reduction of area (right)

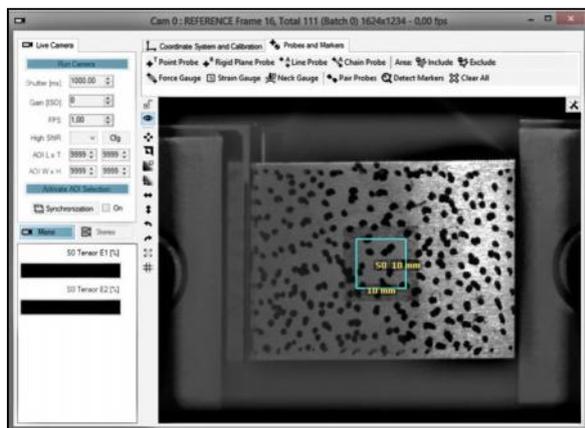


Fig. 2: Determination of the planar strain

### Handling

The adjustments of the video image are carried out in a parametrization window within the software LabMaster and can be backed up in parameter files so that the data can be retrieved later on.

The video extensometer doesn't require a separate computer.

After the calibration of the system it automatically detects the distance between the markers for the initial length. For specimens without differences in texture measuring marks are affixed to the specimen. If the surface of the specimen is structured a marking is not necessary.

Your contact person:

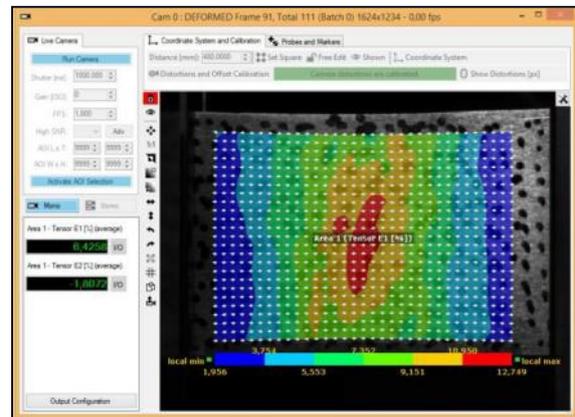


Fig. 3: Configuration screen with camera image

### Measurement accuracy

Depending on the used combination with a camera lens measuring accuracies up to class 0.5 according to ISO 9513 respectively B-1 according to ASTM E83 are achievable.

### Operating distance

Due to very different specimen geometries the ideal lens and adequate fixing are chosen depending on the application. Thus an optimal resolution for the individual testing task is warranted. Important parameters thereby are: Initial measuring length ( $L_0$ ), maximum specimen strain ( $\epsilon$ ).

### Technical data

The following table describes a feasible area depending on the particular configuration.

<b>Classification according to ISO 9513</b>	class 0.5; 1; 2
<b>Classification according to ASTM E83</b>	class B-1;B-2
<b>Field of view (mm)</b>	2-2000
<b>Resolution (<math>\mu\text{m}</math>)</b>	0.1-50
<b>Analog output</b>	10-16 bit
<b>Digital output</b>	RS232/422/485; TCP/IP
<b>Resolution of camera</b>	0.3-16MPx
<b>Measuring rate</b>	0.1-4000Hz