

## Our services

CWM offers the software and the appropriate measuring system to upgrade your Kammrath&Weiss tension/compression module with a video extensometer:



### Software system

Image evaluation tool for automated strain measurement with interface for external image sources and for tension/compression module

The software system is designed for users who have their own image capturing technology. A software extension to external image sources enables an automated strain measurement of images from any camera systems and image sources, e.g. images from scanning electron microscopy (SEM).



### Basic system

Camera-based video extensometer without optics

The basic system is addressed to users who have suitable optical components (microscope, tripod structures with optics, illumination, etc.) themselves.



### Certified video extensometer

Camera-based video extensometer with telecentric lens 0.28x and ring light, certified with accuracy grade 0.2 according to DIN EN ISO 9513



### VEDDAC 7

Comprehensive supplementary software for local strain and failure analyses



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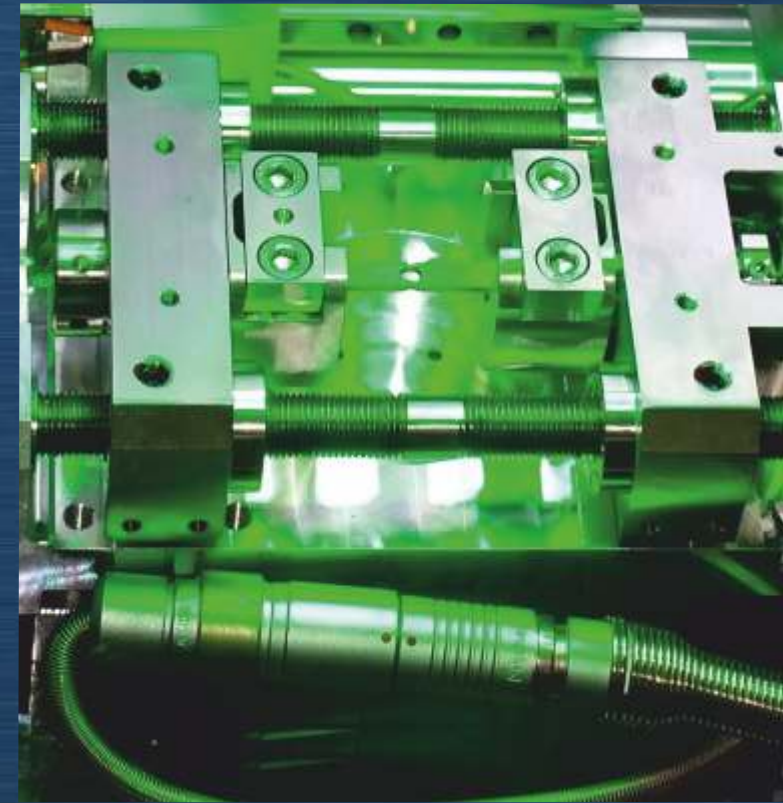
email: [microDAC@cwm-chemnitz.de](mailto:microDAC@cwm-chemnitz.de)

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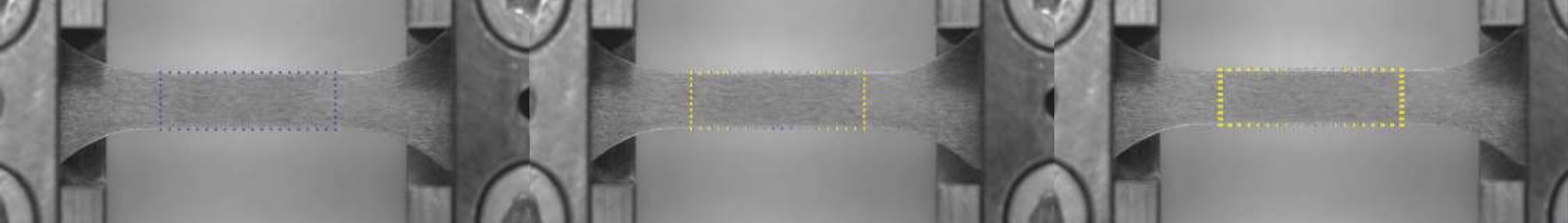
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## microDAC<sup>®</sup> strain

Video extensometer for tension/  
compression modules of Kammrath&Weiss  
length changes | strains



## microDAC<sup>®</sup> strain Video extensometer for strain measurement

In-situ - non-contact - high-precision -  
easy handling

VEDDAC strain - software in the  
microDAC<sup>®</sup> strain measuring system

### microDAC<sup>®</sup> strain - The method

With the microDAC<sup>®</sup> strain video extensometer for tensile/compression modules from Kammrath&Weiss, length changes and elongations can be measured directly on the material surface during a tensile/compression test without contact and with the highest degree of accuracy (0,2) DIN EN ISO 9513. Simultaneously with the force measurement on the Kammrath&Weiss tensile/compression module, the image of the material surface is captured using the appropriate camera technology. The core of the microDAC<sup>®</sup> strain optical measuring system is the VEDDAC strain software, which automatically determines the values for change in length ( $\mu\text{m}$ ) and elongation (%) and transfers them in-situ via a software interface to the control software of the tension/compression module (MDS).

The camera images captured during the test can be stored and are available for further deformation and failure analyses.

VEDDAC strain works without additional markings and usually uses the natural material surface as measurement information. The longitudinal and transverse strain can be determined simultaneously, from which the modulus of elasticity and the Poisson's ratio can be derived, or the uniform elongation, the elongation at fracture and anisotropies in the plastic range can be derived.

The non-contact and non-reactive measurement with microDAC<sup>®</sup> strain allows the investigation of sensitive materials as well as the combination with thermal stress technology.

### VEDDAC strain - The software:

- Image capturing and determination of length changes [ $\mu\text{m}$ ] and elongations [%] in-situ using digital image correlation
- only a few measurement settings (measurement points, correlation parameters, frames/s)
- Sharpness and contrast adjustment devices for adjusting the image area of the specimen
- Animation of images with vectors as control function
- Storage of data in a log file
- Image and video export functions are available

