## Kammrath & Weiss

Kammrath & Weiss GmbH

Kammrath and Weiss Technologies, Inc.

https://www.kammrath-weiss.com/en/

Based in Germany, with worldwide representation, Kammrath and Weiss is the market leader of tensile-compression-heating modules for SEM and FIB. We have been providing high-precision, electro-mechanical accessories and devices for microscopy for over 25 years. Our expertise in fabricating custom-built solutions for various applications has led to a number of standard products in several categories.

Our product line includes systems and devices in 5 major categories:

Materials testing: Tensile-Compression and Fiber tensile testing modules

• Heating and cooling: Heating up to 1500°C, Peltier, LN<sub>2</sub> and Liquid Helium Cryo-modules

IC testing: Precision probing, EBIC modules and ultra-high-speed beam blankers

• Sample stages: Custom stages and sample holders for unusual specimens and chambers

Special developments: Application-specific accessories built to order

Kammrath and Weiss supports microscopists across the world, covering a wide spectrum of uses. Our products can be found on all types of microscopes, in all types of labs. We support universities, government labs, commercial research, semiconductor failure analysis and product development. New markets for our systems continue to reveal themselves as our products evolve to cover more and more applications. A good example is our new Bi-axial tensile module and our new tensile-compression-torsion testing device for X-ray computer tomography, used for materials science.

We can be found on the web at https://www.kammrath-weiss.com/en/ here you will find our detailed contact information for all our representatives and our company headquarters in Germany. Please contact George Lanzarotta at (516) 313-9742 for all inquiries in North America (George.lanzarotta@kammrathandweiss.com).

## Products:

• In-Situ Tensile testing module

Compact and vacuum compatible, this module allows tensile / compression test in the vacuum chamber of your microscope giving you the ability to see your samples at extremely high magnification, while under test. Benchtop operation is also provided along with a large variety of accessories to choose from.

· Heating and cooling modules

A wide range of modules to allow In-Situ heating from room temperatures to 1500 degrees C with high accuracy and stability. Water cooling, heat shielding, and chamber feedthrough included. Cryo modules provide sample cooling by Peltier device or Liquid Nitrogen or Liquid Helium.

Microscope stages

Samples requiring special handling beyond the ability of the standard stage provided with the microscope may sometimes benefit from a custom built stage. This can be a complete replacement stage or an attachment to extend or replace some of the axes. We will design and build the stage to fit your needs.

• In-Situ Bending modules

As part of our "standard" product line, we have bending modules for mechanical engineering and material science applications. These modules are compact and vacuum compatible for use on the benchtop or in the vacuum chamber of an SEM or FIB.

• CT module

For tensile testing in an X-ray microscope, this module also allows rotating the sample without interfering with the light source. Designed specifically for computer tomography applications, it is the perfect accessory for most X-ray microscopes.

· Custom accessories for Microscopy

Some applications require instrumentation that is not readily available as a standard product. Our team of design engineers will design and build and test the device, instrument or system, required to meet your needs.



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