

# Your Partner for Beamline Instrumentation

Accelerator and X-Ray Instrumentation for  
Laboratories, National Facilities and Industry



**A**ILON

# Products

AXILON designs and builds innovative state-of-the-art instrumentation tailored to your requirements. We push the limits to provide you with the best instruments for your application.

## Beamlines

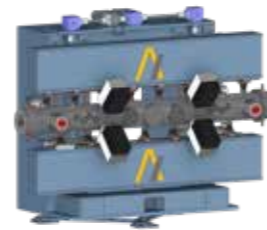
From conception to production to final commissioning, AXILON supports you with innovative ideas for your beam-line project at every step of the way. We deliver standard or customised stand-alone components as well as complete beamline solutions designed and optimised for your specific field of research.

- Optical components
- High heat load & high resolution slits
- Beam position monitors
- Radiation masks & collimators
- Filter systems and shutters
- Control systems



## Insertion Devices

Our expertise in beamlines extends even further upstream to include the insertion device. We deliver a wide-range of insertion devices including in-vacuum and cryo-cooled systems.



## Experimental Stations



Whether your application is crystallography or imaging, spectroscopy or metrology, we can provide you with a state-of-the-art end-station instrument developed specifically for your needs. With our sub-20nm resolution scanning and full-field X-ray microscopes samples can be imaged in many modes including spectromicroscopy, ptychography and cryotomography.

- X-ray microscopy (scanning STXM and full-field TXM)
- Crystallography end stations
- XUV/EUV metrology (reflectometry, diffraction)
- Custom multi-purpose end stations

## Monochromator & Mirror Systems

Low emittance synchrotron and FEL facilities are constantly demanding higher performance of the monochromator and mirror systems in optical performance, heat-load management, mechanical precision and stability.

AXILON is constantly pushing the limits to develop innovative solutions to deliver ultimate performance required for your component e.g. <math><20\text{nrad}</math> DCM stability.

- In situ interferometer feedback
- Water & cryogenic cooling
- Horizontal & vertical bounce
- Single bounce, double crystal & multilayer monochromators
- Large offset monochromators
- Deflecting, collimating & focusing mirrors with Axilon-developed mechanical benders



## ChillAX

AXILON's liquid nitrogen chiller sets new standards for the performance of high heat load components providing superior stability (<math><1\text{ mbar rms}</math>), cooling capacity and automation.



## Transfocators

Compound refractive lenses (CRLs) focus the beam to sub- $\mu\text{m}$  spot sizes. AXILON provides complete solutions for transfocator systems using 1D and 2D CRLs of different materials (Be/Al/Diamond). Cooled systems allow white and pink beam focusing.



## Stand-Alone Systems

With bright plasma sources and optimised optical concepts, we can bring many synchrotron techniques into your lab. Selecting the optimal source for the spectral distribution and brilliance requirements, we are offering full-field laboratory x-ray microscopes (LTXM) with cryo tomography or other XUV applications to characterize optics, nanostructures, thin films, filters, etc.







## Experience

Our team's professional expertise and competencies are based on experience accumulated over more than 25 years in delivering the best instrumentation solutions to our international customers in science and industry.

Axilon is proud of the high level of satisfaction expressed by our customers.

## Mission

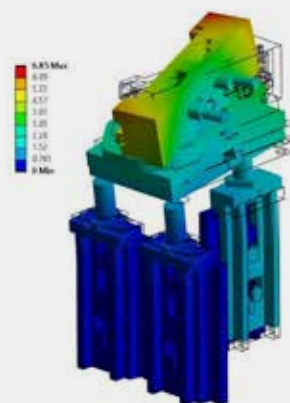
AXILON serves the worldwide synchrotron, accelerator and photon community with excellent and efficient solutions. Leading specialists in this innovative private company strive to provide

- State-of-the-art instrumentation and engineering services
- High-end scientific and industrial solutions
- Reliable and long-term partnerships based on customer satisfaction
- Highest quality standards

Let us work with you to design and develop the ideal instrument for your research.

## Services

- Engineering and design support
- Conceptual design incl. ray-tracing, full optical and mechanical layout
- FEA - mechanical, thermal, stress, and vibration analysis
- Dynamic simulations
- Project management
- World-wide installation, commissioning, and service support



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