

Collimators for X-Ray Techniques

- SAXS
- Single Crystal Diffraction
- XRD

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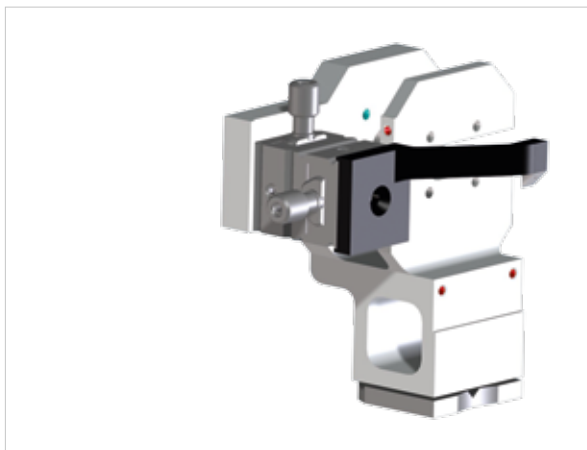
Solutions for X-Ray Collimation

Align – Collimate – Image

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Challenges and Solutions

Current techniques in x-ray microscopy, crystallography and small angle x-ray scattering require extremely well-collimated beams. In order to achieve the best signal to noise ratio in an x-ray system, the aperture size should be as closely matched as possible to the sample size. Most x-ray systems use a pinhole aperture that has been drilled or laser ablated from a tungsten or tantalum disk of material. In practice this means that for every new sample size, the pinhole should be removed and a new size needs to be inserted. With the PureEdge system you can achieve virtually scatter-free collimation combined with a variable aperture and visual alignment tool.



Compatibility and Flexibility

Ease of integration is essential to any laboratory upgrade. The compact size of the piezosystem jena system makes it a convenient drop-in solution to your current beamline, or other x-ray source.

The PureEdge Advantage



PureEdge Collimators from piezosystem jena offer a number of features and benefits over current technology available today. Most notably:

- **Speed** – The PureEdge system can continuously operate at over 10 Hz in closed loop acting as a fast shutter if needed.
- **Precision** – With a resolution of < 8 nm the PureEdge system is the most accurate variable aperture system commercially available.
- **Purity** – PureEdge Collimators offer virtually scatter-free performance. Contaminant scatter is minimized with our Scatterguard Viewport accessory.
- **Adaptability** – The open architecture of the PureEdge design allows for easy integration into a variety of x-ray systems. A side mount holder allows the customer to add his own or our accessories. The entire system can be made vacuum compatible.
- **Compactness** – The small size (85 mm × 85 mm) of the mechanical assembly allows easy integration into existing systems where space is an issue.

Complete Collimation Piezo Systems

PureEdge 240 Basic

- Two closed loop piezoelectric stages with symmetrical slit pair actuation
- Four PureEdge tungsten edges with holders pre-aligned to be completely closed on power-off
- Mounting bracket with accessory holder for custom or piezosystem jena supplied add-ons
- NV40/3 CLE controller with PID closed loop control, USB interface and 16 bit resolution

PureEdge 240 Scatterguard

- PureEdge Basic system plus:
- XY manual adjustment of Scatterguard
- 90 degree reflective prism Viewport
- 500 µm clear aperture for direct x-ray pass-through

PureEdge 240 Align

- PureEdge Scatterguard system plus:
- Vertically oriented long working distance microscope objective
- Imaging and camera system