



Based on Xenocs' innovative single reflection design, the FOX2D CU 25_25P offers the best flux-divergence compromise to concentrate highest intensity on a tiny focal spot. As a perfect extension of the existing FOX2D product range, this new optics enables small samples analysis in the laboratory even with large x-ray sources.

Benefits

- enhanced useful flux due to the **SINGLE REFLECTION ADVANTAGE** compared to standard two-reflection designs
- enhanced signal to noise ratio for small samples
- small spot at focus
- enhanced lifetime and lower cost of ownership (under vacuum)
- compact mechanical design
- easy to align (10 minutes procedure)
- adaptable to all x-ray generators (rotating anode generators, sealed tubes or micro-focus sources)
- no direct beam (x-ray safety procedure)

Applications

- small samples
 - high throughput screening
 - structure determination on small samples (i.e. 150µm)
- protein crystallography
- micro diffraction
- x-ray reflectometry

Optional Accessories

- alignment camera
- collimator
- vacuum pump
- stand

Technical Data

Beam features

■ wavelength	1.54Å / 8keV (Cu Kα)
■ typical flux at the focal point	3.5x10 ⁷ photon/s for a 35x35 µm ² source at 64W 9x10 ⁸ photon/s for a 300x300 µm ² source at 5KW
■ collected angle	5.3 mrad (0.30°) for the 2 planes
■ spectral purity at Kα	> 97%
■ Kβ contamination	typically <0.3%

Optical features

■ spot size at the focal point	<80 µm with a 35 µm micro focus source 300 µm with a 300 µm source
■ divergence	5.3 mrad (0.30°) FWHM for the 2 planes
■ distance from source to optics centre	25 cm
■ distance from optics centre to focus	25 cm
■ substrate with optimized shape	ellipsoidal

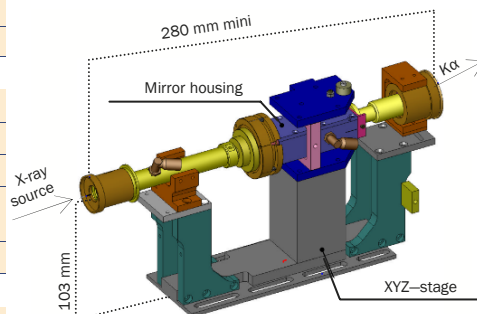
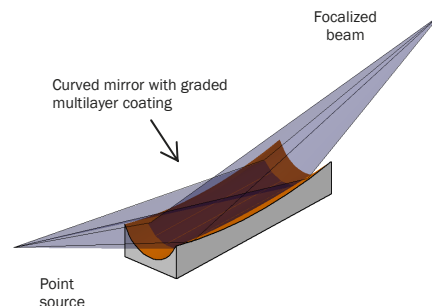
Mechanical features

■ overall FOX2D system length	from 280 to 310 mm
■ mirror length	60 mm
■ reversible mechanical housing	6° take off angle ±2 x Bragg angle
■ tilt and incidence micrometric screws for a simple and sensitive adjustment	10° total range (both axes) movement in vertical (tilt) and horizontal (Bragg) directions
■ XYZ adjustment table	14x14x5 mm ³ stroke

Vacuum features

■ primary vacuum housing	longer lifetime and lower cost of ownership
■ Kapton® windows	loss per window : 0.75%
■ dry vacuum pump	working pressure : 3 mbar pumping speed : 0.6 m ³ /h voltage : 220V or 110V

Subject to technical changes without notice



Design for MAR® detectors

DMC-041022-FOX2D CU 25-25P focusing optics-02