

# Beam delivery system GeniX CU High Flux



Xenocs introduces GeniX, a new platform of intense X-Ray beam delivery systems.

GeniX is designed to address the market demand for a versatile system that delivers very high flux without compromises on stability, size, ease of use, maintenance and operation cost.

X-rays generated by a bright, low power, micro focus source are efficiently collected and reflected by a single reflection multilayer optic engineered by Xenocs. The efficient source-optics coupling exploits the micro source brilliance and delivers a bright beam without the need of a costly high-power rotating anode generator. GeniX compact design facilitates its integration into diffraction systems even with tight space requirements. The proprietary water cooling design for heat dissipation and the standby power mode ensure exceptional flux stability and long source lifetime. The controller command unit that accompanies the system provides powerful functionality through a very intuitive user interface while the manual and automatic dual power setting mode allows a flexible operation.

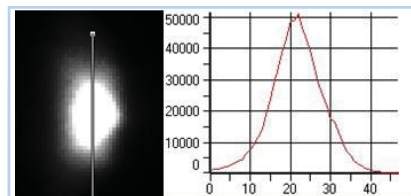


Fig. 2: Image of focal spot and corresponding intensity profile along vertical line.

GeniX Cu High Flux low cost of ownership provides a powerful solution for your diffraction application.



Fig. 1: Control unit

## Applications

- single crystal diffraction
- powder diffraction
- thin film metrology

## Benefits

- high brightness
- high flux stability
- compact system for easy integration
- low power and low maintenance source
- intuitive user interface
- smart source power management

## Options

- manual filter wheel (3 positions)
- configurable collimator system
- software utility for remote operation

## Accessories

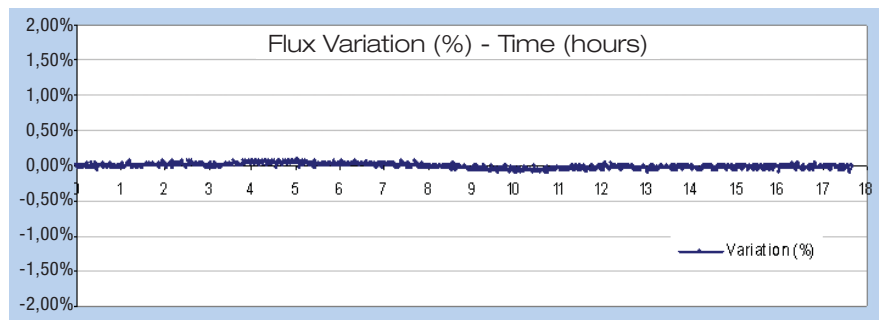
- alignment camera
- pin diode detector
- dry vacuum pump
- water to air chiller
- beam alignment system (3 points)

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## Preliminary Technical Data

Subject to technical changes without notice

### Beam features

- Wavelength 1.54 Å / 8 keV (Cu K $\alpha$ )
- Spot size at focus 230x230  $\mu\text{m}^2$  FWHM
- Typical flux (in vacuum) >200x10<sup>6</sup> phs/s (source run at 50W—50 kV—1 mA)
- Divergence 4.8 x 4.8 mrad<sup>2</sup> FWHM
- K $\alpha$  spectral purity Typically >97%
- K $\beta$  contamination Typically <0.3%
- Flux stability <10 min after start from standby mode

### Electronic

- Dimensions 3U — 19" - 600 mm in depth
- Total weight 13.6 Kg
- Power 110/220 V (AC) or 24 V (DC)

### Head

- Dimensions (L x W x H) 50 x 12 x 33 cm<sup>3</sup> with collimator  
27 x 12 x 33 cm<sup>3</sup> without collimator
- Total weight Maximum 14.5 Kg

### Integration

- System power consumption 150 Watts
- Remote control features Ethernet port & software utility
- System shutters Safety & measurement shutters
- Cooling flow rate (closed loop) >1,2 l/min (set point 25°C)
- Dry vacuum pump Working pressure : 3 mbar  
Pumping speed : 0.6 m<sup>3</sup>/h