

Beam delivery system GeniX MO Small Spot



The GeniX Mo Small Spot system combines a high brilliance micro-focus X-ray source with a Xenocs industry-proven single reflection multilayer optic, thus achieving a very small focal spot with optimum convergence. The use of the Xenocs optic leads to significant improvements over graphite solutions.

The focussing power of the Genix Mo Small Spot eliminates the need to use pinholes, making this solution an excellent choice for

work that precludes placing any beam-conditioning pieces between the optic and the beam focus.

The proprietary cooling technique and smart power management extend the source lifetime and lower the cost of ownership. The intuitive user interface of the command and control unit provides powerful functionality for either standalone or integrated use.

Due to its unprecedented stability and reliability, the GeniX Mo Small Spot provides a significant performance increase over traditional sealed tubes, making it a reliable, cost-effective, and low maintenance alternative to high power rotating anode sources.

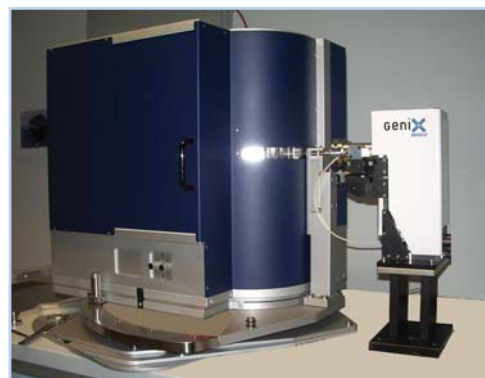


Fig. 2: Combination of a GeniX beam delivery system with a Stoe diffractometer.

The GeniX Mo Small Spot successfully replaces traditional systems and provides clear advantages for a number of applications such as small molecule or high pressure diffraction.



Fig. 1: Control unit

Applications

- single crystal diffraction
- small molecule diffraction
- high pressure diffraction

Benefits

- high brightness
- extremely stable beam
- 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)

Preliminary Technical Data

Subject to technical changes without notice

Beam features

• Wavelength	0.71 Å / 17.4 keV (Mo K α)
• Spot size at focus	100x100 μm^2 FWHM
• Max. free path from focus	> 170 mm
• Typical flux (in vacuum)	> 2x10 ⁶ phs/s (source run at 50W—50 kV—1 mA)
• Divergence	4.4 x 4.4 mrad ² \pm 0.8 mrad for the 2 dimensions FWHM
• K α spectral purity	Typically > 95%
• Flux stability	< 1% within less than 15 min 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 ³ with collimator 27 x 12 x 33 cm ³ 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 ³ /h

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