

GeniX^{3D}®

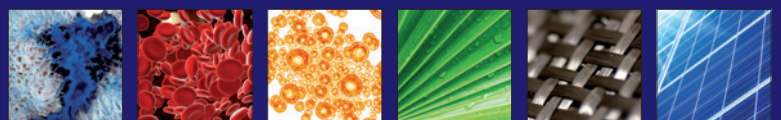
Xenocs®

Brighter solutions

x-ray beam delivery system



Brighter solutions for advanced
X-ray analysis



GeniX^{3D}® x-ray beam delivery system

Increased brightness | Further improved ease of use | Simplified equipment integration

High brightness
low power
x-ray tube

Compact, robust
optical block

Aspheric FOX 3D
multilayer optics

Fixed and referenced
output x-ray beam

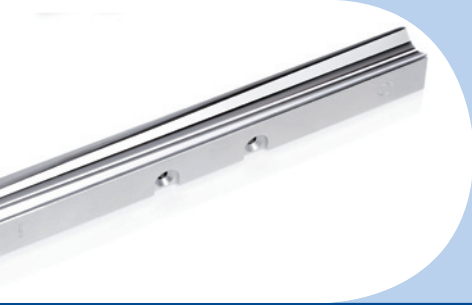
X/Y stage for
straightforward
alignment

Smart and intuitive
control unit





The high brightness low power micro focus tube of GeniX 3D is the ideal source for advanced X-ray analysis in applications ranging from a few hundred down to a few microns sample. The GeniX 3D head design benefits from proprietary closed loop water cooling technology, providing unprecedented stability and reliability. This combination makes a powerful, cost-effective, and low maintenance solution, ideal for applications that require enhanced data quality or reduced data collection time.



The aspheric FOX3D multilayer optics embedded in GeniX 3D are at the core of its performance. The use of micro focus sources requires high performance optical components. FOX 3D optics benefit from Xenocs proprietary Free Form manufacturing technology. With outstanding reflectivity and a high shape precision, it preserve source brightness and maximize the source-optic coupling efficiency to achieve the highest useful flux.



A simple X/Y stage allows for a straightforward alignment of GeniX 3D. The alignment of X-ray optics is one of the most critical operations in setting up a laboratory X-ray source. GeniX 3D benefits from the basic principle of source-optic alignment offered by the single reflection FOX 3D optics. It uses a pre-aligned optics concept together with a simple X/Y stage for fine tuning the X-ray beam performances. This stage enables to align the source with respect to the optics in a very intuitive manner adapted for any non expert users. This operation can be done within a few minutes.



The smart and easy to use control unit is part of GeniX 3D philosophy. Its friendly user touch screen interface enables the control of key parameters such as an automatic power ramp-up, monitoring of source stability and automatic shutdown. The system is designed to maintain an extended X-ray tube lifetime and to adapt to the user operation mode (local control or remote control).



A compact and robust optical block provides the GeniX 3D with high clearance for sample and diffractometer setup. The absence of alignment parts in the block provides increased compactness and stability. This design enables the attachment of downstream instruments through a vacuum compatible interface in a simplified manner.



A fixed and referenced output X-ray beam allows for a simple integration of GeniX 3D. The direction of the beam is orthogonal to the exit interface. The output X-ray beam axis is mechanically referenced for easy integration on any instrument type and it remains fixed after any source alignment or maintenance operation thus minimizing the impact on downstream instrumentation.

Shape your performance in 3D

The evolution and multiplication of advanced X-ray analysis applications brings new challenges in X-ray instrumentation.

GeniX 3D is a further step in Xenocs' tradition of high performance, ease of use and integration to serve the continuous evolving demand for advanced and reliable X-ray source systems.

+ Enhanced performance for your application

Thanks to its unique design, GeniX 3D brings unprecedented level of performance in a compact, stable and low cost of ownership package.

GeniX 3D is empowered by our proprietary single reflection multilayer optics (FOX3D) coupled to a high brightness low power microfocus sealed tube. The FOX 3D optics provide unmatched intensity with excellent control of beam parameters. This combination makes GeniX 3D the brightest microfocus sealed tube X-ray beam delivery system available on the market.

The high brightness of GeniX 3D allows our customers to extract more information from their sample, i.e.: improved I/σ , fast stress measurement, rapid mapping, and much more.

+ Trouble free operation and installation

However, pure performance is not enough. Advanced X-ray analysis requires also straightforward operation for a large community of users. GeniX 3D fulfills this demand with minimized alignment requirements. It is provided with a smart user interface, for efficient and intuitive control and monitoring of key operating parameters, ensuring long lifetime.

GeniX 3D is designed to be easily integrated as a standard sealed tube system and to be adapted to any type of diffractometer. It is available in various energy, focal length and beam geometry configurations covering most of the techniques for advanced X-ray analysis.

+ Low cost ownership

A smart design, reliable subcomponents, easy and intuitive installation, operation and maintenance procedures make GeniX 3D a low cost of ownership solution.

Please have a look at our technical datasheets and application notes for further details.

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