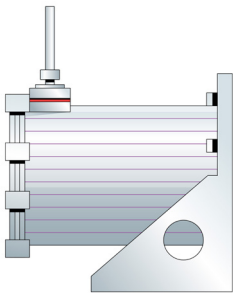
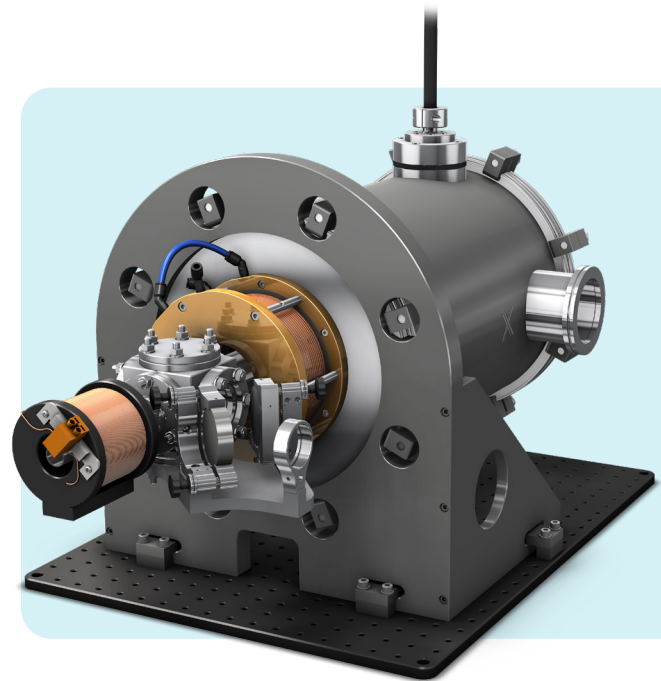




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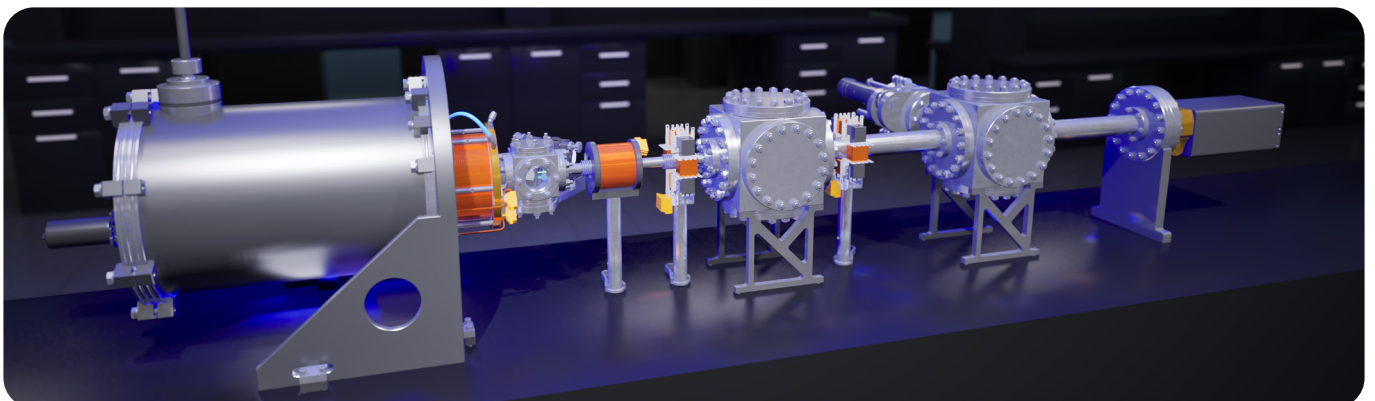
Photogun Module

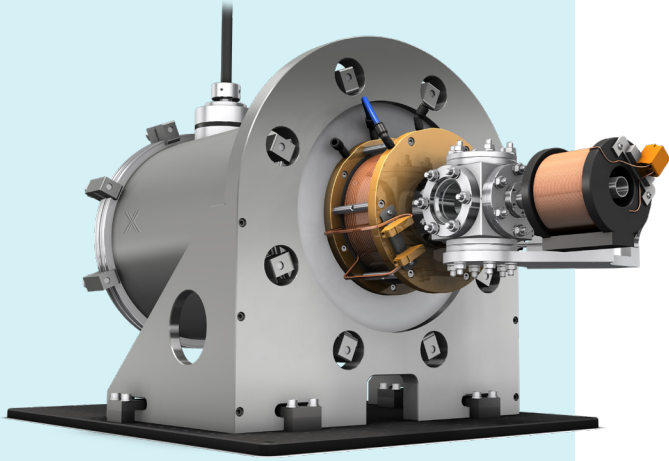
Ultrafast electron techniques
for crystallography



The Photogun Module generates ultrafast electron bunches at 100 keV through photoemission from a copper cathode, enabling single-shot diffraction patterns. A femtosecond UV laser pulse hits the cathode surface; electrons are extracted and accelerated across a 12 MV/m field gradient in a one centimeter gap. A magnetic lens stack - collimation, focusing, steering - shapes the beam immediately after acceleration.

The result: ultrashort electron pulses with 30 nm rad emittance, which can be compressed down to sub 100 fs pulse duration in a footprint and that fits a standard research lab.





Photogun Module

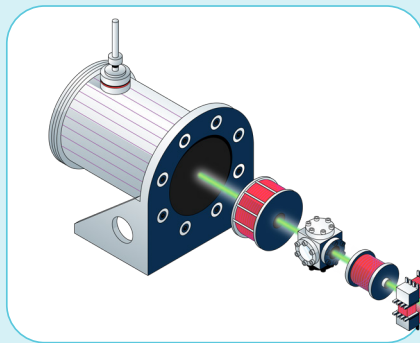
The module ships complete: DC acceleration chamber with 100 kV power supply is included, together with a copper photocathode with laser incoupler, full magnetic lens stack, and vacuum housing. It connects directly to Compression and Deflection Modules or integrates into existing beamlines. External femtosecond laser required.

Specifications

- Single-shot high-quality diffraction images
- Beam energy: up to 100 keV
- Gradient: 12 MV/m
- Pulse duration: sub-100 fs (after compression)

Doctor X makes research instruments that give scientists state-of-the-art time resolution which was previously not commercially available.

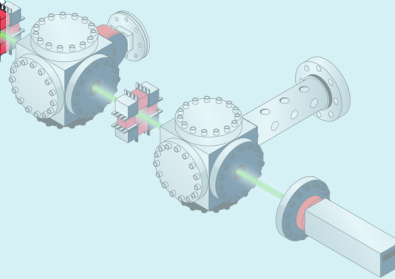
Dr. Ir. Jim Franssen - Senior Manager Research & Development



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Structural Dynamics Probe

- ▶ Photogun Module
(available as a separate Doctor X Module)



Doctor X

Doctor X BV

De Lismortel 31
5612 AR Eindhoven
The Netherlands

T +31(0)40 23 90 909
E info@doctor-x.nl
W doctor-x.nl



doctor-x.nl