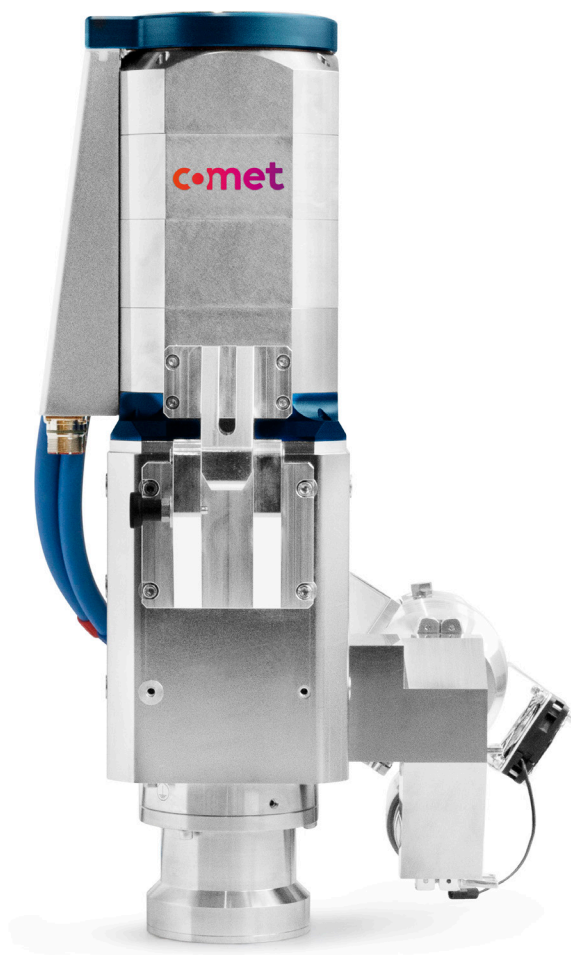




Transmission nanofocus X-ray module

FXE 190 nano CT



Uncompromised stability

With its internal cooling, focal spot drift is minimal in the 190 kV nanofocus tube; thus, the time from startup to stable operation is significantly reduced. Combined with the advanced beam stabilization TXI (True X-ray Intensity), the FXE module delivers constant picture contrast, resulting in a flicker-free acquisition.

Great resolution

The FXE 190 features a 30 W high-power transmission target, making the module a highly resolving X-ray source that enables quick image acquisition at high magnification. The high resolution target achieves an impressive JIMA resolution of 0.45 μm .

Clearer images

Our Clear™-technology reduces extra focal radiation from scattered electrons, providing more reliable images and clearer 3D reconstructions.

Unlimited lifetime

Our modular design facilitates the quick replacement of critical parts, making the FXE's total cost of ownership among the lowest in its class. You'll never have to worry about running the tube at its limit, as you can always replace the wear-parts; the tube is designed to last well beyond the expected life cycle of any systems it's integrated into.

The FXE module package

Nanofocus X-ray tube

High power transmission target, internally cooled active focusing optics, a turbopump, vacuum sensor, and a serviceable beam chamber.

High voltage power supply

Power supply including a flexible, springloaded HV cable with configurable length.

FXE control unit

Choose between a stand-alone control cabinet or a streamlined control panel that simplifies integration. Both contain PLC, safety circuitry, roughing pump, integrated cooler, power supply, and focusing optics control.

Integration tools

GUI for quick operation, including software libraries, and documentation for integration.

Spare parts

All parts of the FXE module can be replaced. Typical wear parts are filaments, emitter-units, X-ray targets, and O-rings.

Typical applications

The FXE's high penetration power at 190 kV and instant stability make it ideal for micro-CT applications in electronics, NDT, and pre-clinical applications.

- Electronics inspection
- Soldering joints on circuit boards - PCBA
- Ball grid arrays - BGA
- Integrated circuits - IC
- Bonding wires
- Semiconductor packaging and interconnects
- Wafer-level chip-scale packages - WLCSP
- Microelectromechanical systems - MEMS
- Optical components
- Battery cell inspection
- Cables, conduits, and plastics
- Small animal imaging
- Soft tissue imaging and scaffolding
- Medical implants and devices

Specifications

FXE-190.61

HV range	20 to 190 kV
Max. tube current	1000 μ A
Max. tube power	80 W
Max. target power	30 W
Target options	High power target (HPT) High resolution target (HRP)
Permanent filtration	Carbon
Beam angle	170°
Min. focus object distance	< 300 μ m
Focus modes	Target option / Resolution
Nano2, max resolution*	HRP / 0.45 μ m
Nano, max. resolution*	HPT / 0.6 μ m at 1.7 W
Micro, max. resolution*	HPT / 0.9 μ m at 10 W
High power, max. resolution*	HPT / 2 μ m at 15 W
Microfocus tube W, H, L **	331, 217, 552 mm
Weight	43 kg
HVPS W, H, L**	204, 476, 612 mm
Weight	53 kg
High voltage cable	R24 Connectors
Diameter	36 mm
Bending radius, static / dynamic	75 / 150 mm
Control Cabinet W, H, L**	800, 1300, 550 mm

* JIMA
** STEP files available on request.

Spot size / focus mode with high power target

