



comet

Reflection microfocus X-ray module

FXE 225 Range



Stability equals precision

With its 320 W of tube power, the Comet FXE 225 Range is a sufficiently bright source for quick acquisition in 2D and 3D applications. Proven Comet technology enable stable operation at 225 kV allowing for the penetration of even dense parts. True X-ray Intensity - TXI, helps to deliver constant picture contrast, adding to the integrity of your inspection results.

Faster inspection with more dose

The directly cooled HDP reflection target provides almost double the power density between 30 and 220 W compared to previous versions, meaning more X-ray dose and faster inspection times. You can realize higher resolution at a given power or higher power at a given resolution, enabling 3D-CT scans even faster than before.

Flexibility for a broader range of operation

With the Comet FXE 225 Range, you can detect, identify, and measure features from millimeters to 4 μm . Combined with a high-performing detector, this tube delivers superior analysis capability when it counts.

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.

Easy to use for a faster workflow

Our user-friendly interface gives quick access to all primary functions, including kV, tube current or target power, start-up routines, and focus adjustment.

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x-ray

The FXE module package

Microfocus X-ray tube

Active focus optics, a turbopump, vacuum sensor, and a serviceable beam chamber.

High density power target (HDP)

Increase your imaging speed with the optimized HDP target design.

High voltage power supply

Power supply including a flexible HV cable with configurable length.

Control cabinet

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

Aerospace and automotive

- Rotor- and turbine blades
- Titanium and aluminum cast parts
- Battery inspection
- Lightweight metal
- Sensors, relays, fuses, coils

Materials testing: plastic, ceramics, steel

Weld joints in conduits

Additive manufacturing

Computed tomography

Microsystems and encapsulated components

Medical implants and devices

Pharmaceutical, medical, biomedical

Comet X-ray

Herrengasse 10, 3175 Flamatt, Switzerland
T +41 31 744 90 00
Web: xray.comet.tech
Mail: mail.xray@comet.tech



Specifications

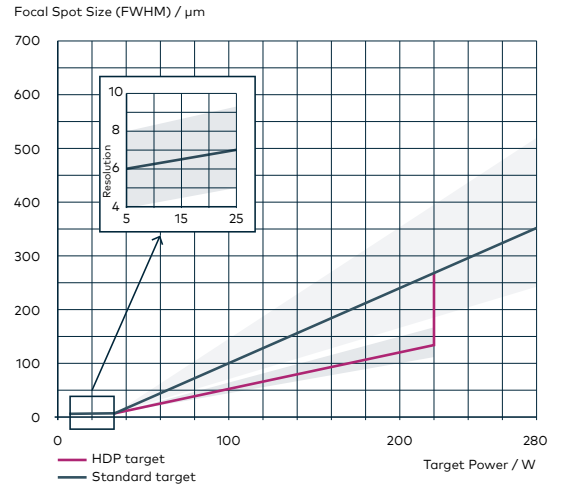
FXE-225.48

HV range	20 to 225 kV
Max. tube current	3000 µA
Max. tube power	320 W
Max. target power	280 W
Target	Tungsten
Permanent filtration	Aluminum 1 mm
Beam angle	30°
Min. focus object distance	< 6.75 mm
Typical focal spot size (HDP)	25 µm at 50 W 50 µm at 100 W 90 µm at 150 W 120 µm at 200 W
Max. resolution*	4 µm
Microfocus tube W, H, L **	209, 348, 673 mm
Weight	41 kg
High voltage power supply W, H, L	415, 546, 715 mm
Weight	170 kg
High voltage cable - R30 connectors	
Diameter	36 mm
Bending radius, static / dynamic	75 / 150 mm
Control cabinet W, H, L	800 * 1300 * 550 mm
Bending radius, static / dynamic	75 / 150 mm
Control cabinet W, H, L	800 * 1300 * 550 mm

* JIMA RT RC-02B
** STEP files available on request

Dynamic spot size

The dynamic control of the spot size will help you achieve the best resolution at all power levels. *



* Typical focal spot sizes along the short axis (full width half maximum) as estimated based on best practices - no standards apply. With the new high density power target (HDP), smaller focal spot can be obtained in the power range of 30 to 220 W (purpleline). Obtainable resolutions depend highly on system settings and cannot be warranted.