

PRECLINICAL FLASH IS HERE ACCESSIBLE. ACCURATE. FLEXIBLE.

FLASH radiation delivery techniques have the potential to revolutionize the clinical radiation treatment paradigm. To fully investigate the physics, biology, and efficacy of FLASH treatments, preclinical research is paramount.

Now Xstrahl, working closely with a leading academic research institution, has delivered the **first X-ray based FLASH irradiator suite** for radiation research.

- **Accessible for everyone:** Delivers an entirely lab-based solution, eliminating the need for large accelerators or proton systems.
- **Accurate targeting:** Generates sharper beams compared to electrons due to negligible lateral scatter.
- **Flexible configurations:** Available in both cabinet and image-guided configurations to best support your particular research needs.

Product Configurations

CIX FLASH

- Easy-to-use, simple cabinet system for small animal FLASH experiments
- Plug-and-play to ensure quick experimental set-up including simple collimation and optimal ease of use
- Matches what is currently done on electron systems with a much smaller footprint, better beam profile

SARRP FLASH

- First image-guided FLASH system, leveraging Xstrahl's deep preclinical expertise in IGRT delivery
- Highly accurate targeting under CBCT image guidance
- Clinically relevant workflow, but with FLASH dose rate



SPECIFICATIONS

CIX FLASH

Two opposing X-ray tubes with mirrored anodes to offset heel effect

Tube power 100 kW

Tube voltage 150 kVp

FLASH dose rate up to 190 Gy/s surface dose or >100Gy/s throughout a 20 mm thick sample

Dimensions 28" W x 23" D x 40" H
71 cm x 58 cm x 101 cm

- ▶ Variable tube separation for FLASH or conventional dose rate delivery
- ▶ Moveable animal bed to adjust specimen placement
- ▶ Lasers for coarse alignment
- ▶ On board anesthesia lines
- ▶ Standard collimator set
- ▶ Fully self-shield

SARRP FLASH

Two opposing X-ray tubes with mirrored anodes to offset heel effect

Tube power 100 kW

Tube voltage 150 kVp

FLASH dose rate up to 190 Gy/s surface dose or >100Gy/s throughout a 20 mm thick sample

Dimensions 66" W x 40" D x 79" H
167 cm x 101 cm x 200 cm

Computer controlled robotic motion:

- Independent motion of tubes in radial/ θ directions of gantries
- XYZ motion of animal bed to adjust specimen placement
- Rotation of animal bed

- ▶ On board μ CT capability
- ▶ IGRT targeting based on on-board CT
- ▶ Lasers for coarse alignment
- ▶ On board anesthesia lines
- ▶ Standard collimator set
- ▶ Optical monitoring cameras
- ▶ Fully self-shield

Interested in being an Early Adopter?

To facilitate the accelerated development of the FLASH system, Xstrahl is offering select sites the opportunity to be early adopters of this technology and join the first preclinical FLASH consortium. If you are interested in more information about this program, please email us at support@xstrahl.com.