

X-RAD 320 Biological Irradiator

The **X-RAD 320** is a self-contained X-ray system for delivering a precise radiation dosage to specimens in a biological or small animal research laboratory.

The shielded cabinet includes an Adjustable Specimen Shelf, Sample Viewing Window and Beam Hardening Filter Holder.

The TouchRAD Control Panel is a multi-user, password protected touch screen interface with a transportable database that can track individual system usage.

Passwords, programmed exposure settings, and database management are controlled by a super-user.

The X-ray tube is used specifically for radiation therapy having a highly homogenous beam.

Options available include: Holding Fixtures, Dose Measurement & Control, Motorized Specimen Shelf, Turntable, Fixed Beam Collimators, Adjustable Collimator, and Specimen Holding Fixtures



X-RAD 320 Biological Irradiator

Technical Data

Cabinet Features

- Adjustable Sample Shelf: 20cm to 90cm SSD
- Changeable Beam Conditioning Filter Slides, (2) supplied
- User Entry Port to introduce small tubing and cables into chamber area
- Complies with Domestic and International Regulations for safety of cabinet X-ray systems

Cabinet Size and Weight

- Overall Dimensions: 78" (195cm)h x 38" (95cm)w x 42" (105cm)d
- Irradiation Chamber: 41" (102cm)h x 30" (75cm)w x 34.5" (86cm)d
- Weight: 4200 lbs (1910 kg)

Power Requirement

- 1N PE 230 VAC $\pm 5\%$, or 3N 230 VAC $\pm 10\%$, 50/60 Hz, 12.5 KVA

High Voltage Generator

- Maximum Output Voltage: 450 kV (tube limited to 320 kV)
- Maximum mA: 45

X-ray Tube

- Maximum Potential: 320 KV
- Maximum Power: 4000 W
- Type: Metal Ceramic, Fixed Anode, Oil Cooled
- Focal Spot: 8 mm² (per EN12543)

Dose Output

- 3 Gy/min at 320KV, 12.5mA, 50cm SSD, (HVL \approx 1mm Cu)
- 1 Gy/min at 320KV, 12.5mA, 50cm SSD, (HVL \approx 4mm Cu)
- >15 Gy/min at 320KV, 12.5mA, 50cm SSD, (No Beam Hardening))

Operators Control

- KV Setting & Display Accuracy: 5KV – 320 KV in 0.1 KV increments
- mA Setting & Display Accuracy: 0.5mA to 45 mA in 0.01 mA increments
- Settings Accuracy: < 1%
- Exposure Timer: 1-9999 seconds
- Programmable Settings: >1,000 locations to recall exposure parameters
- Password Protected User Accounts (> 1000 users)
- Ability to assign users access to only specific programs.
- Excel[®] Database transportable via USB Flash memory

Additional X-Ray Unit Features

- Automatic warm-up with Intelligent Tube Conditioning
- Proven long term reliability of system components

