XCELL®

Free-Standing Irradiator Systems

Reliable Irradiation Across a Range of Energies for Maximum Performance.

160kV | 225kV | 320kV



- Safe
- Cost-effective
- Accurate
- Powerful
- User-friendly

KUBTEC® SCIENTIFIC

KUBTEC® XCELL® Line of Irradiator Systems

Doses that are:

- Accurate
- Reliable
- Repeatable



For a spectrum of applications with models including:

- Mice
- Rats
- Cells
- Tissue Samples
- Seeds and Grains

- **Self-contained, fully shielded cabinet systems**
- **Adjustable collimator to define exposure area**
- **Easy to operate, requiring no additional training or licenses**
- **Each system is provided with a high-resolution optical (RGB) camera**
- **An affordable way to explore many preclinical radiation study objectives**
- **Systems may optionally be supplied with integrated X-ray imaging**

X-ray irradiators are considered the direct replacement for gamma irradiators, such as Cesium or Cobalt which require licensure from nuclear regulatory agencies due to increased safety risks.

X-ray irradiators are eligible for the Cesium Irradiator Replacement Project (CIRP) program in the U.S.

System Specifications

	XCELL 160 (1.8 kW)	XCELL 160 (3.0 kW)	XCELL 225 (3.0 kW)	XCELL 225 (4.0 kW)	XCELL 320 (4.0 kW)
Tube Potential	30 - 160 kV	30 - 160 kV	30 - 225 kV	30 - 225 kV	30 - 320 kV
Tube Current	0.1 - 30 mA	0.1 - 30 mA	0.1 - 30 mA	0.1 - 30 mA	0.1 - 30 mA
Tube Focal Spot	7.5 mm	7.5 mm	7.5 mm	5.5 mm	8.0 mm
Inherent Filtration	0.8 mm Be	0.8 mm Be	0.8 mm Be	2.0 mm Be	3.0 mm Be
Beam Coverage	14” Diameter (35.5 cm)	14” Diameter (35.5 cm)	14” Diameter (35.5 cm)	14” Diameter (35.5 cm)	14” Diameter (35.5 cm)
Dose Output (Open Beam)	>2.96 Gy/min @ 160 kV, 11.25 mA, 30 cm SSD	>5.15 Gy/min @ 160 kV, 18.75 mA, 30 cm SSD	>6.30 Gy/min @ 225 kV, 13.30 mA, 30 cm SSD	>8.15 Gy/min @ 225 kV, 17.70 mA, 30 cm SSD	>8.62 Gy/min @ 320 kV, 12.30 mA, 30 cm SSD
Dose Output (Filtered)	>1.90 Gy/min @ 160 kV, 11.25 mA, 30 cm SSD 2.0 mm Al	>3.33 Gy/min @ 160 kV, 18.75 mA, 30 cm SSD 2.0 mm Al	>4.57 Gy/min @ 225 kV, 13.30 mA, 30 cm SSD 2.0 mm Al	>5.89 Gy/min @ 225 kV, 17.70 mA, 30 cm SSD 2.0 mm Al	>7.05 Gy/min @ 320 kV, 12.30 mA, 30 cm SSD 2.0 mm Al
Max Source-to-Sample Distance	37.1” (94.2 cm)	37.1” (94.2 cm)	36.1” (91.6 cm)	36.1” (91.6 cm)	36.6” (92.9 cm)
Shelf levels (Including contact level)	4	4	4	4	3
Optical (RGB) Camera	Yes	Yes	Yes	Yes	Yes
Optional X-ray Imaging	Yes	Yes	Yes	Yes	Yes
Exterior Dimensions (W x D x H)	38” x 47” x 83” (97 x 120 x 211 cm)	38” x 47” x 83” (97 x 120 x 211 cm)	38” x 47” x 83” (97 x 120 x 211 cm)	38” x 47” x 83” (97 x 120 x 211 cm)	53” x 48” x 86” (135 x 122 x 219 cm)
Chamber Dimensions (W x D x H)	24” x 24” x 42” (61 x 62 x 107 cm)	24” x 24” x 42” (61 x 62 x 107 cm)	24” x 24” x 42” (61 x 62 x 107 cm)	24” x 24” x 42” (61 x 62 x 107 cm)	32” x 32” x 42” (82 x 82 x 107 cm)
Weight	1650 lbs (748 kg)	1650 lbs (748 kg)	2150 lbs (975 kg)	2150 lbs (975 kg)	5000 lbs (2,268 kg)

Also Available

XCELL 320
3.2 kW and 4.2 kW
Versions.

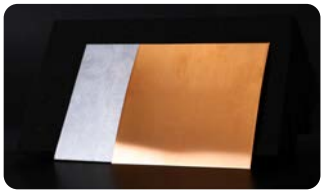
For more information on XCELL system specifications please reach out to us at Scientific@kubtec.com

*Reported values are system-specific and are subject to change without notice

Features and Accessories

Standard Features and Accessories:

- Fully shielded and self-contained X-ray cabinet
- Minimal training required; simple user interface with touch screen monitor
- Large irradiation chamber with a collimated maximum 14” x 14” irradiation field
- Automatic warm-up with intelligent tube conditioning
- Adjustable sample shelf for exposure control; contact level and shelves provide multiple source-to-sample distances for flexible dosing
- Turntable for uniform irradiation of samples
- Dosimeter for monitoring sample exposure
- Irradiation filters to remove lower energy beams for more uniform depth of penetration
- Entry port to introduce anesthesia and monitoring lines



Irradiation filters



Dosimeter

Optional Features and Accessories:

- Integrated digital X-ray imaging capability
- Mouse Irradiation Kit includes:



Partial Body Irradiation Shield (Left and Right)



Pie Cage



Partial Body Irradiation Restrainer (Left and Right)



Gas Anesthetizing Box

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BRO-4 Rev C

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