

PRECISION

X-RAY IRRADIATION



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System Reference Handbook & Citation Guide

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This document provides an overview of all X-ray cabinet irradiation systems offered by Precision X-Ray, Inc. (Madison, CT, USA), including their official names, energy specifications, key message, and correct citation format.

Additionally, it serves as a technical reference guide for researchers, engineers, and professionals working with Precision X-Ray, Inc. systems. Each system is categorized by model and energy level, ensuring correct citation for academic and industrial applications.

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1. Precision X-Ray, Inc.

Official name: Precision X-Ray, Inc.

Address: 14 New Rd, Madison, CT 06443

Citation: Precision X-Ray, Inc. (Madison, CT, USA)



2. SmART+ Family

The SmART+ System provides advanced image-guided radiation therapy (IGRT) with integrated imaging capabilities for preclinical research.

2.1 SmART+

- **System Name:** SmART+ Small Animal Radiotherapy System
- **Energy:** Up to 225 kVp
- **Key Message:** High-precision IGRT system for small animal research with integrated imaging capabilities.
- **Citation:** SmART+ (Small Animal Radiotherapy System), Precision X-Ray, Inc. (Madison, CT, USA)

2.2 SmART+IB

- **System Name:** SmART+IB Small Animal Radiotherapy System
- **Energy:** Up to 225 kVp
- **Key Message:** IGRT system with integrated imaging capabilities and adaptable window for beamline integration from proton source.
- **Citation:** SmART+IB (Small Animal Radiotherapy System), Precision X-Ray, Inc. (Madison, CT, USA)



3. X-Rad Family

The X-Rad family provides high-energy radiation research systems for whole-body, targeted, and cell irradiation. The X-Rad family is a versatile irradiation platform for biological research applications, including 2D imaging.

- **Citation** (if power level unknown): X-Rad, Precision X-Ray, Inc. (Madison, CT, USA)

3.1 X-Rad160iR

- **System Name:** X-Rad160iR
- **Energy:** 160 kVp
- **Key Message:** Compact, high-throughput irradiation system for biological research.
- **Citation:** X-Rad160iR, Precision X-Ray, Inc. (Madison, CT, USA)

3.2 X-Rad225ir

- **System Name:** X-Rad225iR
- **Energy:** 225 kVp
- **Key Message:** Versatile irradiation platform for biological research applications.
- **Citation:** X-Rad225iR, Precision X-Ray, Inc. (Madison, CT, USA)

3.3 X-Rad160XL

- **System Name:** X-Rad160XL
- **Energy:** 160 kVp
- **Key Message:** Large-chamber irradiation system for accommodating bigger research samples.
- **Citation:** X-Rad160XL, Precision X-Ray, Inc. (Madison, CT, USA)

3.4 X-Rad225XL

- **System Name:** X-Rad225XL
- **Energy:** 225 kVp
- **Key Message:** Large-chamber irradiation system for accommodating bigger research samples.
- **Citation:** X-Rad225XL, Precision X-Ray, Inc. (Madison, CT, USA)

3.5 X-Rad320

- **System Name:** X-Rad320
- **Energy:** 320 kVp
- **Key Message:** High-energy irradiation system for biological research.
- **Citation:** X-Rad320, Precision X-Ray, Inc. (Madison, CT, USA)

3.6 X-Rad320 OptiMax

- **System Name:** X-Rad320 OptiMAX
- **Energy:** 320 kVp
- **Key Message:** 2D imaging module for bioluminescence, fluorescence
- **Citation:** X-Rad320 OptiMAX, Precision X-Ray, Inc. (Madison, CT, USA)

3.7 X-Rad302 SIT

- **System Name:** X-Rad320 SIT
- **Energy:** 320 kVp
- **Key Message:** Specialized system for mass sterilization of insects using the Sterile Insect Technique (SIT) module.
- **Citation:** X-Rad320 SIT, Precision X-Ray, Inc. (Madison, CT, USA)



4. MultiRad Family

The MultiRad family provides flexible radiation options for small animals, cells, and industrial applications.

- **Citation** (if power level unknown): MultiRad, Precision X-Ray, Inc. (Madison, CT, USA)

4.1 MultiRad160

- **System Name:** MultiRad160
- **Energy:** 160 kVp
- **Key Message:** Compact system for precise irradiation of cells and tissues.
- **Citation:** MultiRad160, Precision X-Ray, Inc. (Madison, CT, USA)

4.2 MultiRad225

- **System Name:** MultiRad225
- **Energy:** 225 kVp
- **Key Message:** Mid-range irradiation system for cell and tissue cultures and targeted irradiation of small animals.
- **Citation:** MultiRad225, Precision X-Ray, Inc. (Madison, CT, USA)

4.3 Multirad350

- **System Name:** MultiRad350
- **Energy:** 350 kVp
- **Key Message:** High-power system for biological applications requiring deep penetration
- **Citation:** MultiRad350, Precision X-Ray, Inc. (Madison, CT, USA)



5. CellRad Family

The CellRad family is designed for benchtop x-ray irradiation of cells and tissues in laboratory settings.

- **Citation** (if power level unknown): CellRad, Precision X-Ray, Inc. (Madison, CT, USA)

5.1 CellRad+

- **System Name:** CellRad+
- **Energy:** 150 kVp
- **Key Message:** Compact benchtop system for in vitro research
- **Citation:** CellRad+, Precision X-Ray, Inc. (Madison, CT, USA)

5.2 CellRadHD

- **System Name:** CellRadHD
- **Energy:** 160 kVp, 1200W power
- **Key Message:** High-dose cell irradiation system with precise dose control for research consistency.
- **Citation:** CellRadHD, Precision X-Ray, Inc. (Madison, CT, USA)



6. SteriRad Family

A high-efficiency x-ray system designed for microbial decontamination, agricultural sterilization, wafer inspection, and sterilization of other sensitive materials.

- **Citation** (if power level unknown): SteriRad, Precision X-Ray, Inc. (Madison, CT, USA)

6.1 SteriRad

- **System Name:** SteriRad
- **Energy:** 160 kVp, 4000W power
- **Key Message:** Non-thermal decontamination system preserving product integrity while eliminating harmful microbes.
- **Citation:** SteriRad, Precision X-Ray, Inc. (Madison, CT, USA)

6.2 SteriRad+

- **System Name:** SteriRad+
- **Energy:** 160 kVp, 6000W power
- **Key Message:** Non-thermal decontamination system preserving product integrity while eliminating harmful microbes.
- **Citation:** SteriRad+, Precision X-Ray, Inc. (Madison, CT, USA)

6.3 SteriRadHD

- **System Name:** SteriRadHD
- **Energy:** 160 kVp, 12,000W power
- **Key Message:** Non-thermal decontamination system preserving product integrity while eliminating harmful microbes.
- **Citation:** SteriRadHD, Precision X-Ray, Inc. (Madison, CT, USA)

 SmART

 MultiRad

 SmART+

 MultiRad160

 SmART+IB

 MultiRad225

 X-Rad

 MultiRad350

 X-Rad160IR

 CellRad

 X-Rad225IR

 CellRad+

 X-Rad160XL

 CellRadHD

 X-Rad225XL

 SteriRad

 X-Rad320

 SteriRad+

 OptiMAX

 SteriRadHD