

Medical Specimen Cabinet Irradiation Systems

The IC series Specimen Irradiation Systems are intended for use in the precise, repeatable irradiation of biological specimens in a research environment. They are a safe, cost effective replacement for Cesium irradiators that employ an electrically generated irradiation source completely contained in a shielded cabinet to safely irradiate biologicals in a laboratory environment - no licensing is required. The source of radiation consists of; a precision, state of the art high frequency x-ray generator, a liquid cooled, metal-ceramic x-ray tube with closed loop heat exchanger, and a contemporary, computer-based, user friendly control console.



Polaris® High Voltage Generator

- State of the art high frequency, low ripple dc output
- Automatic tube warm-up
- Touch panel controls, to select kV, mA, and time.
- Compact and light weight

Polaris® SC 500/m Controller

- Remote diagnostics.
- Robust, Industrial-grade graphical user interface.
- Touch panel controls, to select kV, mA, and time.
- Long life LED lamps; no light bulbs to "burn out".
- Tube-Safe™

Varian Metal Ceramic X-Ray Tube

- Stationary Anode
- Water cooled via closed loop, self-contained system
- Rated for continuous operation

Benefits

- Environmentally responsible design
- No hazardous nuclear waste or disposal issues
- Highly efficient power conversion devices (>90%)
- **Self contained closed loop cooling system**
- No oil to leak or spill



Specimen Irradiation System Performance			
Model #	X-ray Tube	Hv Generator	Controller
GNT/IC-160	3000 Watt	Polaris® 160kV	Polaris® SC 500/m
GNT/IC-225	3000 Watt	Polaris® 225kV	Polaris® SC 500/m
GNT/IC-320	3200 Watt	Polaris® 320kV	Polaris® SC 500/m
GNT/IC-450	4500 Watt	Polaris® 450kV	Polaris® SC 500/m

Delivery: 14 - 16 weeks ARO (approx.)

System requirements:

- Electrical:** 208 to 240 VAC @ 40A, single phase
- Water:** N/A
- Air:** N/A

IC Series Options



Specimen Platter - Automatic Position Adjustment;

- Precision linear and rotary adjustment of specimen
- Automatic dose control (affixed to tube window)
- Standard applicator set (1cm – 5cm)

The automatic, precision linear adjustment device is a precision mechanical drive which resides in the lower portion of the cabinet and provides vertical, linear motion of a specimen platter. The platter is easily raised or lowered remotely by the operator, to increase or decrease the FSD, simply by keying in the desired distance via the SC-500 control panel / display - FSD data is read out to the operator in real-time.



Standard beam filter kit options;

- 1.65mm AL
- 2.40mm AL
- 3.10mm AL
- 0.1mm Cu & 2.5mm AL
- 0.35mmCu & 1.5mm AL
- 0.9mm Cu & 1.0mm AL
- 0.3mm SN & 0.5mm Cu & 1.5mm AL
- 0.8mm SN & 0.25mm Cu & 1.5mm AL

* Customer may request substitute filter materials



Variable Light Field Collimator (VLFC)

Our patent pending VLFC performs a unique function whereas, when the operator initiates “x-rays on”, the optics used to generate the white light beam pattern vectors out of the energy beam ensuring that no beam attenuation or “hot spots” occur – as can be the case with competitive VLFC’s.

IC Series Standard features include:

- Shielding, primary and secondary barriers – no warm-up filter needed
- HV Generators stowed neatly under skirted portion of cabinet. *
- “X-rays on” lighted sign when in use
- Industrial grade, double pole HV interlock for added operator safety **
- Multi-position baker’s rack shelving system with 10cm spacing
- Ventilated via forced positive air, 50+ CFM air turnover – controlled via SC-500/M
- Internally lighted – controlled via SC-500/M
- Leaded-glass viewing window rated at 320kV, secondary barrier

* *Only Kimtron Medical systems employ this packaging technique, our unit will take up the least amount of floor space.*

** *“We believe there is no threshold for any amount of ionizing radiation that can be considered safe for the operator”.*

Polaris® system advantages:

Polaris HV generators are built in the US to strict specifications, generators use no oil, are smaller, lighter, more efficient and have less output ripple (equates to a harder beam) than all competing generators on the market. We stocks complete units in-house as well as all parts and components necessary for rapid repairs

- Polaris x-ray system is > 90% efficient – 30% more efficient than our closest competitor

Standard features of the SC-500/M include:

The Polaris SC-500/M is the most technically advanced, user-friendly x-ray system controller on the market. The unit was designed by Kimtron with open-architecture as a main design criterion and as such, is easy to use and maintain by all end-users.

- All components based are highly reliable and widely available
- Rockwell & Siemens Electronics
- All error coding displayed in text format, no codes to decipher
- Exclusive x-ray tube temperature monitoring protects from over-heat conditions
- Remote diagnosis / updates
- Event log – unit tracks & records system events
- One-touch warm-up control
- Ability to store over 2500 recipes / techniques / treatments
- False or inadvertent operator inputs unable to harm equipment
- Low cost of ownership

The Kimtron Medical advantage:

- All equipment is manufactured in the US.
- Kimtron Inc. operates a fully equipped repair center servicing all equipment sold.
- Kimtron operates an on-site x-ray tube repair facility which is authorized by Varian Medical
- Design and Built In America by KIMTRON MEDICAL LLC.

Kimtron Medical field service is performed by the service staff of Kimtron Inc. and is considered by the industry to be the premier service organization in terms of rapid response, quick turn around and availability of parts. Fully stocked service department and 24 hours a day, 7 days a week factory support.