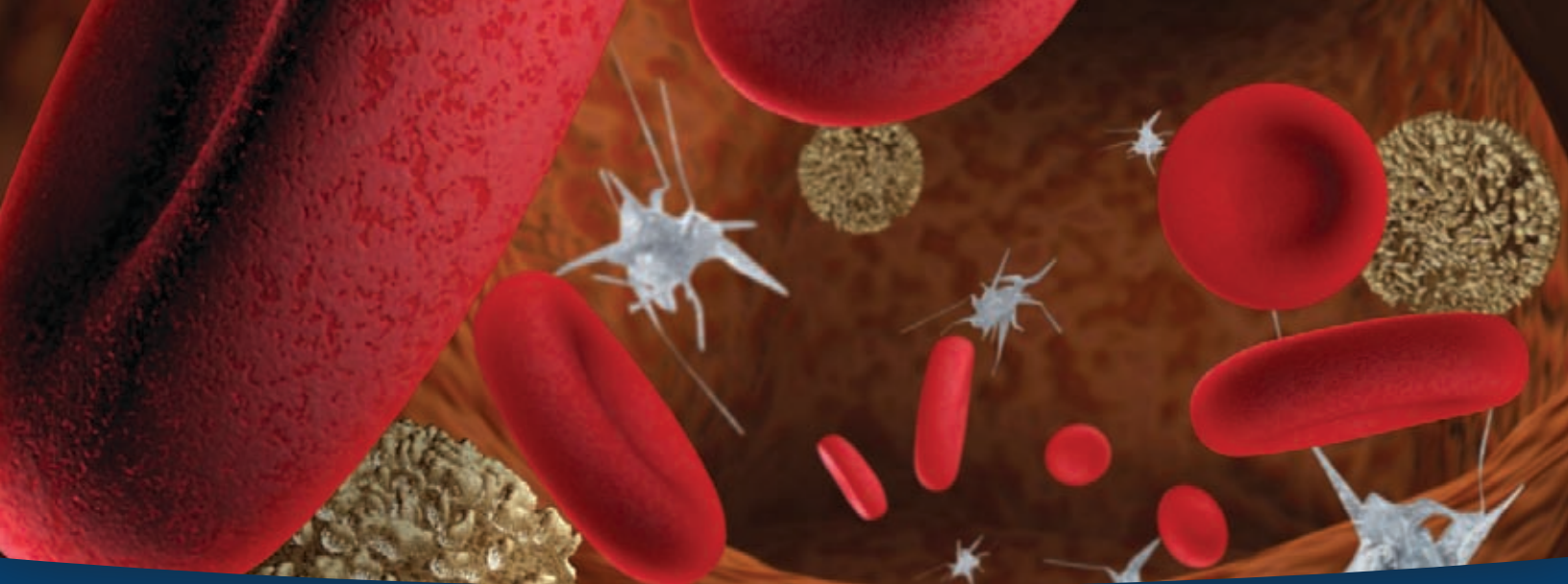


*Best*<sup>®</sup>  
Theratronics



**Raycell<sup>®</sup> Mk2**  
X-ray Blood Irradiator  
2.0 L or 3.5 L Canisters

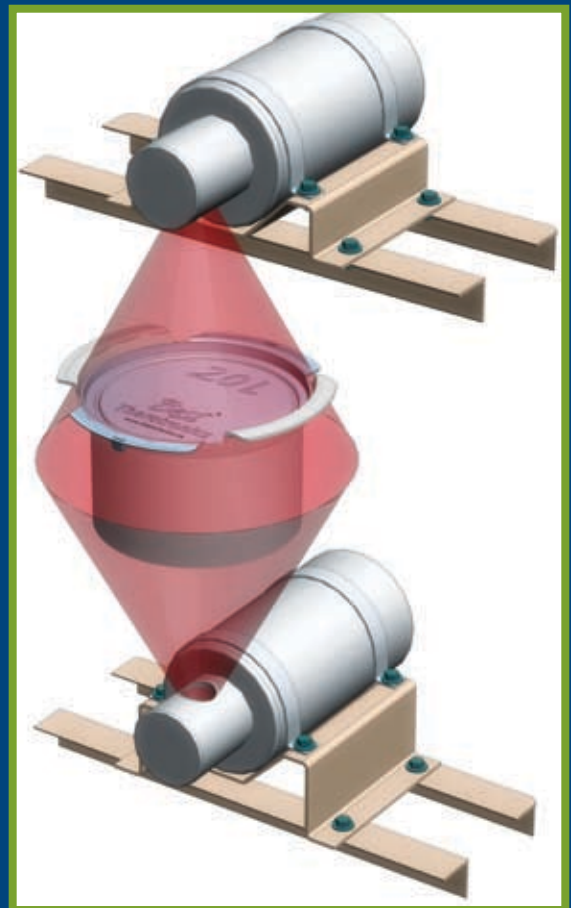


## A Convenient Choice for Blood Irradiation

Efficient, convenient and user friendly, the Raycell® Mk2 X-ray Blood Irradiator provides a safe and cost-effective choice for blood irradiation – backed by Best® Theratronics' trusted expertise and commitment to quality. It delivers the required dose to help prevent TA-GVHD.

### Raycell® Mk2 Features

- Larger canister size facilitates irradiating more blood bags – 2.0 L and 3.5 L (0.53 and 0.92 US Gallons)
- Two opposing x-ray tubes deliver a uniform dose to the product
- Dose delivery is controlled by setting and monitoring the irradiation time, based on the central dose rate
- Irradiation time is controlled by two independent microprocessors
- Detailed dosimetry of the sample canister volume is obtained and provided at the time of installation
- Installation can take 1-3 days depending on individual installation and training requirements



# Technical Specifications

## Weight

1,000 kg (2200 lbs)

## Floor Loading

111 kg/cm<sup>2</sup> (1580 lbs/in<sup>2</sup>)

## Dimensions

Height: ..... 1525 mm (60 in)

Width: ..... 1450 mm (57 in)

Depth with Shelf: ..... 1000 mm (40 in)

Depth without Shelf: ..... 800 mm (32 in)

## Electricity Requirements

Single-phase 60 Hz, 60A typically at 240V

Three-phase 50 Hz, 25A typically at 400V

## Photon Energy

160 KV (60-80 keV average)

## Water Requirements

Flow Rate: ..... >10 L/min (2.6 US gal/min)

Potable Quality: ..... ≤ 7 grains/US gal hardness

Pressure: ..... 35-60 psi (241-414 kPa)

Temperature: ..... 10-25 °C (50-77 °F)

Canister Features	2.0 L Version (0.53 US gal)	3.5 L Version (0.92 US gal)
Canister Diameter	167 mm (6.6 in)	175 mm (6.9 in)
Canister Height	97 mm (3.8 in)	150 mm (5.9 in)
Estimated Number of Bags per Cycle	4 Bags (300 ml each) OR 2 Bags (600 ml each)	6-8 Bags (300 ml each) OR 4 Bags (600 ml each)
Central Dose Rate	8.9 Gy/min (± 5%)	5.1 Gy/min (± 5%)
Time for 25 Gy Central	~ 2.8 min	~ 4.9 min
Dose Uniformity	~ 20 to 30 Gy (1.5:1)	~ 23 to 41 Gy (1.8:1)
Time for 25 Gy Minimum	~ 3.8 min	~ 5.7 min
Dose Uniformity	~ 25 to 37.5 Gy (1.5:1)	~ 25 to 45 Gy (1.8:1)

## Additional Options

IPDM System

Heat Exchanger (included by default)

Service Agreements

Irradiator Verification Indicators

Additional Canisters

Chiller



# IPDM System

Raycell®



## Irradiated Products Database Management (IPDM) System Features (Optional)

- Scans and stores bar-coded information about the irradiated product (unit number, product code, blood type, etc.), irradiation cycle number, operator details, date/time stamp, and irradiation indicator verification
- Scans barcodes using ISBT 128<sup>1</sup> and ABC Codabar<sup>2</sup> decoders, or as is without decoding
- Includes three modes of operation: product entry, cycle database review, and administration
- Performs additional verification of the irradiation time
- Stores up to 10,000 cycles or 50,000 product entries of data in main database and archives the rest
- Exports data conveniently onto a USB memory stick (1 stick provided, 2 USB ports)
- Ensures efficient, error-free operation

1. "ISBT 128 Standard, Technical Specification," version 3.1.0 – June 2007

2. ABC Codabar: Based on the US FDA "Guideline for the Uniform Labelling of Blood and Blood Components" – August 1985

# Superior Performance and Unparalleled Dose Uniformity

X-rays are produced by bombarding targets with electrons, which are accelerated in a vacuum through a high-voltage electrical field. The dose is delivered by two opposing X-ray tubes with the sample canister located centrally between them. The two cone-shaped beams ensure a tight dose is delivered to the product and that exceptional dose uniformity is attained.



# Healthcare For Everyone

Best® Theratronics' products and services are used throughout the world to prevent, diagnose and treat disease. Our applied research and innovation play an integral part in improving global healthcare.

“Our TeamBest™ companies are committed to making quality healthcare affordable and accessible globally.”

Krishnan Suthanthiran  
President, Best Medical International

Best® Theratronics Ltd. is a member of TeamBest™  
– a family of Best® Medical companies.

From brachytherapy seeds and equipment, dosimetry kits, phantoms, treatment planning systems, an array of medical/health physics equipment, and product remanufacturing/servicing, to radioactive sources, gamma teletherapy machines, cyclotron systems, and particle therapy treatment, TeamBest™ has it all!

Check out each company's site at [www.teambest.com](http://www.teambest.com)

*Best*® *Theratronics*

413 March Road Ottawa, ON K2K 0E4 Canada  
Tel: 613 591 2100 866 792 8598  
Fax: 613 591 6627 [www.theratronics.ca](http://www.theratronics.ca)

*Best*® *medical international*

7643 Fullerton Road Springfield, VA 22153 USA  
Tel: 703 451 2378 800 336 4970  
Fax: 703 451 5228 [www.teambest.com](http://www.teambest.com)

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