The **RS™ 3400 Blood Irradiator**

**The Premier X-Ray Blood Irradiator in the World**

Providing Superior Dose Uniformity, Productivity and Industry Leading Reliability

- **Highest Product Throughput and Flexibility**
  Processes a variety of blood configurations of up to 6L capacity in 5 minutes - whole blood bags, platelet bags and loaded syringes in the same cycle

- **Excellent Dose Uniformity**
  A combination of the patented Quastar® x-ray emitter, rotating carousel and new canister with Support Inserts may achieve as low as ~1.35 DUR

- **Direct Replacement for Gamma Irradiator**
  U.S. Government recognized safe, direct alternative for radioactive isotope (gamma) source irradiators

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*US-FDA CLEARED, CE MARKED, AND CB SCHEME CERTIFIED*
We pioneered the first FDA-cleared blood x-ray irradiation medical device used to prevent the highly fatal transfusion-associated graft-versus-host disease (TA-GVHD) in blood transfusion recipients.

Blood transfusion is a lifesaving procedure for people who are bleeding and people who cannot make a sufficient amount of blood on their own.

A rare but almost always fatal complication from blood transfusion is called transfusion-associated graft-versus-host disease (TA-GVHD), where immune cells from the donor blood attack the recipient’s organs and cause a deadly infection that is nearly impossible to fight off.

Started over 20 years ago, we pioneered the first-ever FDA-cleared blood x-ray irradiation medical device used to prevent TA-GVHD, and today with over 250 worldwide installations, we have maintained our status as the industry leader and gold-standard in blood irradiation technology and instrumentation ever since.

Our patented x-ray irradiation technology effectively and routinely inactivates the immune cells in donor blood, which diminishes the risk of developing TA-GVHD for the transfusion recipient.

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**“The performance of the RS 3400 has been great. The staff have not had any issues using the irradiator. Very simple to operate and user-friendly. I would purchase another RS 3400 and would recommend this product. Great company to work with.”**

- Greg Early, Children’s Hospital of Alabama
Optional Items Available

RS 3400 Canisters (2021)
Dose Uniformity Optimized
PN # 1402055
- New and improved design.
- Holds any standard blood or platelet bag.
- Onboard Support Inserts provide an improved dose uniformity ratio (from 1.6 to ~1.35).
- Made of durable Polycarbonate ABS.
- Provides improved durability, security & ease-of-use.
- The cap features a built-in groove which assists in holding the canister in place.
- Canister dimensions:
  - Volume: 868 mL
  - External Dimensions: 4.0” x 5.0” (10.2 cm x 12.7 cm)

RS 3400 Canisters (2021)
Standard Version
PN # 1409383
- New and improved design.
- Holds any standard blood or platelet bag.
- Made of durable Polycarbonate ABS.
- Provides improved durability, security & ease-of-use.
- The cap features a built-in groove which assists in holding the canister in place.
- Canister dimensions:
  - Volume: 1000 mL
  - External Dimensions: 4.0” x 5.0” (10.2 cm x 12.7 cm)

RS 3400 Syringe Holder
PN # 3400-09401
- Allows for syringes to be run simultaneously with whole blood and platelets in the same cycle.
- Accepts up to (3) 30 mL or 60 mL drawn syringes per holder (up to 18 total per cycle).

Dose Mapping Phantom
* available outside the US only
PN # PHANTOM
A Dose Mapping Phantom is a cylindrical device placed into one of the canister holders to simulate a canister full of blood. Thermoluminescent dosimeters (TLDs) are placed in the phantom to measure the dose. A Phantom is required to perform commissioning and routine dosimetry.
## Specifications

### Physical Dimensions

<table>
<thead>
<tr>
<th>Equipment Dimensions</th>
<th>33.9 x 33.3 x 68.3&quot;</th>
<th>86.0 x 84.5 x 173.4 cm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crated Dimensions</td>
<td>38.0 x 37.0 x 75.0&quot;</td>
<td>96.5 x 94 x 190.5 cm</td>
</tr>
<tr>
<td>Equipment Weight</td>
<td>1735 lbs.</td>
<td>786.98 kg</td>
</tr>
</tbody>
</table>

### Irradiation Guidelines

<table>
<thead>
<tr>
<th>USA (FDA)</th>
<th>15 Gy min/25 Gy cental/50 Gy max</th>
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</thead>
<tbody>
<tr>
<td>Europe (EDQM) &amp; UK (BCSH)</td>
<td>25 Gy min/50 Gy max dose rate: 5.5 - 6.5 Gy/min</td>
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### Electrical Requirements

<table>
<thead>
<tr>
<th>Power</th>
<th>208/240VAC, Single phase, 50/60Hz, 30 Amp, true earth ground</th>
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<tbody>
<tr>
<td>Instrument Wiring</td>
<td>10 AWG L1, L2/N</td>
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</table>

### Processing

<table>
<thead>
<tr>
<th>Dose Uniformity Ratio (DUR)</th>
<th>~1.6 to as low as ~1.35*</th>
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<tbody>
<tr>
<td>*when using the Support Inserts</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Processing Volume / Cycle</th>
<th>Blood Bags</th>
<th>Up to (6) 600 mL bags</th>
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<tbody>
<tr>
<td>Platelet Bags</td>
<td>Up to (6) 500 mL bags</td>
<td></td>
</tr>
<tr>
<td>Syringes</td>
<td>Up to (18) 60 mL Syringes</td>
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</tbody>
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### Warranty

#### 12 Month Full Warranty

- Includes Installation, Training, Initial Dose Map, Radiation Survey, 2nd Dose Map and all parts, labor & travel.

#### Extended Warranty Program

- Available for purchase anytime within 12 months from date of installation.

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**Quastar**

The X-Ray Reinvented™

Our mission is to become the world leader in creating x-ray technologies and solutions that enable our customers to improve the world through life science. For over 24 years we have been a trusted and reliable partner to approximately 900 hospitals, pharmaceutical, academic and research institutions worldwide. Quastar, our patented technology, produces high output x-ray irradiation safely, efficiently and reliably for a wide variety of applications in life sciences.

To learn more about our positive impact on our world, contact us today.