

RADGIL 2

X-RAY IRRADIATION SYSTEM



RADGIL 2

FAST, SAFE AND EFFECTIVE

RADGIL2® is an X-Ray irradiator specifically designed to prevent Transfusion-Associated Graft-versus-Host Disease (TA-GVHD), a rare but often fatal reaction caused by the donors' Lymphocytes-T when grafted into a recipient with a transfused blood product.

X-Ray irradiation is the recognized and safe method for TA-GVHD prevention in spite of the historical use of caesium-137 (¹³⁷Cs) for the same purpose.

¹³⁷Cs irradiators present serious problems including hazardous radioisotopes that remain active and hazardous for decades. They also require specifically skilled operators and extra safety measures.

RADGIL2®, on the other hand, is completely safe, easy to use, fast and extremely effective.

RADGIL2® is also useful for research applications including the irradiation of cells and tissues, bone marrow ablation on lab animals, and other research lab purposes. The standard **RADGIL2®** configuration includes a rotating system for blood bags with two types of plastic canisters. The canisters have 3 and 4 compartments for up to six blood bags. The required X-Ray dose can easily be programmed by adjusting the working parameters. The estimated dose will appear on screen and, once irradiation starts, a progress bar will show the elapsed time.

PRODUCT INFORMATION

Indications of use

- Blood products
- Other generic applications for research purposes only

Power requirement

- 400 VAC 50/60Hz three phases, 6KW

Water cooling requirement

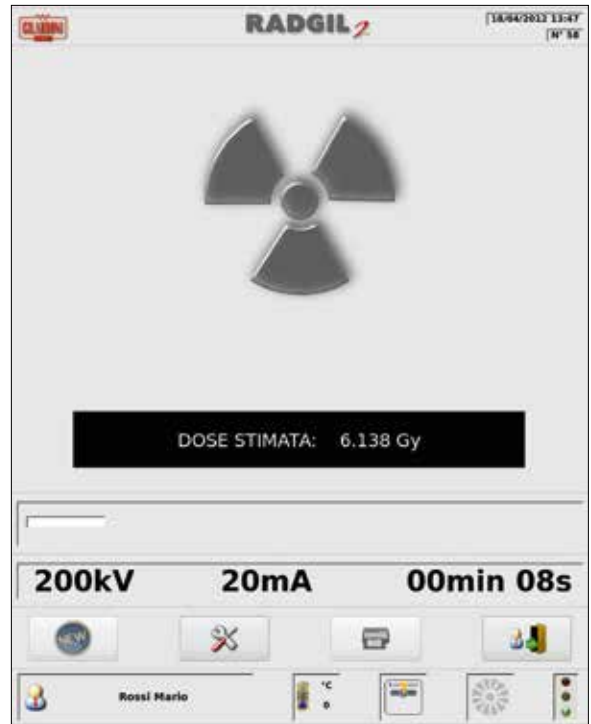
- Tap water 2.5 – 4.0 Bar, ≥5 l/min, max water hardness 27 French degree, or by optional chiller

Supplied complete with

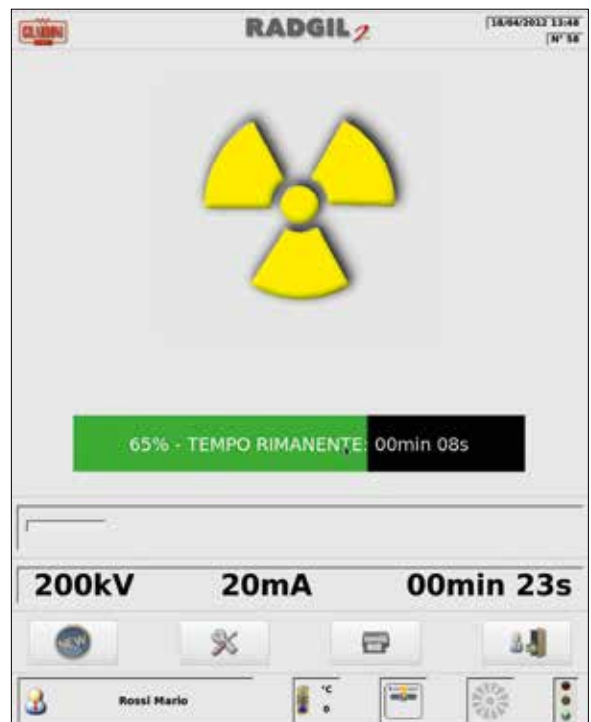
- Load distribution plate for floor with loading capacity ≥ 750kg/m²
- Five initialized operator smartcards
- Two canisters for blood bags (with 3 and 4 compartments)
- Pass-through and holder for lab dosimeter probe

User interface

- Wide colour touch screen display with on-line status
- Lockable settings panel
- X-Ray chamber with triple safety lock sliding door
- Optional label printer and barcode scanner



Dose setting view



Elapsing time view



View of the rotating canister for blood bags

Data entry and transfer

- With the optional barcode scanner, **RADGIL2®** automatically associates the ID of each bag to the results of the irradiation batch (bag ID, operator ID, date & time, alarms if any, working parameters etc.)
- The optional printer produces an adhesive label with relevant data for each processed bag
- All data is saved into a SQL database and can be exported as XXX.csv file via USB pen or Ethernet connection (Ethernet may require software updates on the host computer and application)

PERFORMANCE

With blood products (bags)

- Up to 1.800ml volume or up to six bags
- Rotating canister for best homogenous irradiation is standard
- A dose of 25 Gray (adjustable) requires about 5 minutes

With other products

- Rotating canister can be removed
- Max irradiation area is equal to a 29cm Ø circle
- Max height of sample to load into the chamber is 29cm
- Optional aluminium or copper X-Ray filters can be applied

X-RAY POWER RANGE

- Kilovolts:
Adjustable in steps of 20 from 80 to 200KV
- Current:
Adjustable in step of 5 from 5 to 20mA
- Time: Adjustable in min and sec up to 99:59
- X-Ray source distance:
Adjustable up or down positions to modify the irradiation area

DOSIMETRY MEASUREMENT

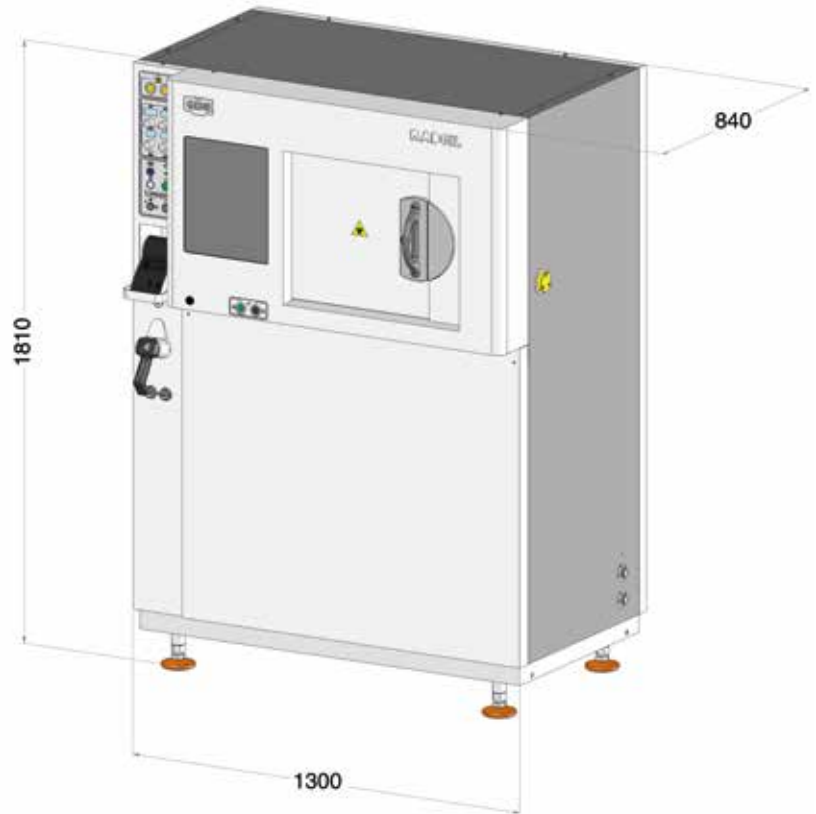
Internal sensor

- Solid state sensor inside the X-Ray chamber
- A self-diagnostic test is performed at each start-up or every 8 hours
- Internal cross matching with previously stored mapped energy is continuously performed. An acoustic alarm with written displayed warning appears if deviations are found

Lab dosimetry by qualified expert

- To be performed according to client's QC protocol
- Mapping and measuring instructions available from manufacturer
- Last mapping dose can be updated by a qualified expert and stored internally in the **RADGIL2®** database (X-ray emission alignment)

RADGIL 2



Dimensions in mm, weight 1400Kg

OPTIONS

- Label printer assembly (factory installed kit)
- Barcode scanner (factory installed kit)
- Filters kit (helps create a different dose/area of X-ray)
- Inner camera assembly (factory installed kit)
- Extra wide base for floor with loading capacity between 350 and 750Kg/m²
- Fumigated pallets set for overseas shipping
- Fumigated wooden case for overseas shipping
- Water chiller 2.5kW - 4.5 l/min - 230VAC, 1ph, 50/60Hz (instead of tap water)

CONSUMABLES

- Roll of adhesive labels
- 4 compartment plastic canister
- 3 compartment plastic canister
- Yellow plastic cover for canisters
- Initialized smartcard
- Plastic bottom inner base

Reserving the right to improve and modify

Acknowledged as "HIGHLY QUALIFIED LABORATORY" with decree D.M. 9-10-1985 - L.46/82 art.4

Head office and facilities:

Via **Arturo Gilardoni**, 1 - 23826 Mandello del Lario (LC) - Italy
tel. (+39) 0341-705.111 - fax (+39) 0341-73.50.46
e-mail: ucmedicale@gilardoni.it - www.gilardoni.it

Export department:

tel. (+39) 0341-705.225 - 705.241

Headquarters:

Piazza Luigi di Savoia, 28 - 20124 Milano
tel. (+39) 02-669.05.38 - 669.07.37

Branch:

Via dei Foscari, 7 - 00162 Roma - tel. (+39) 06-442.907.17 - 442.912.38
fax (+39) 06-442.912.94

