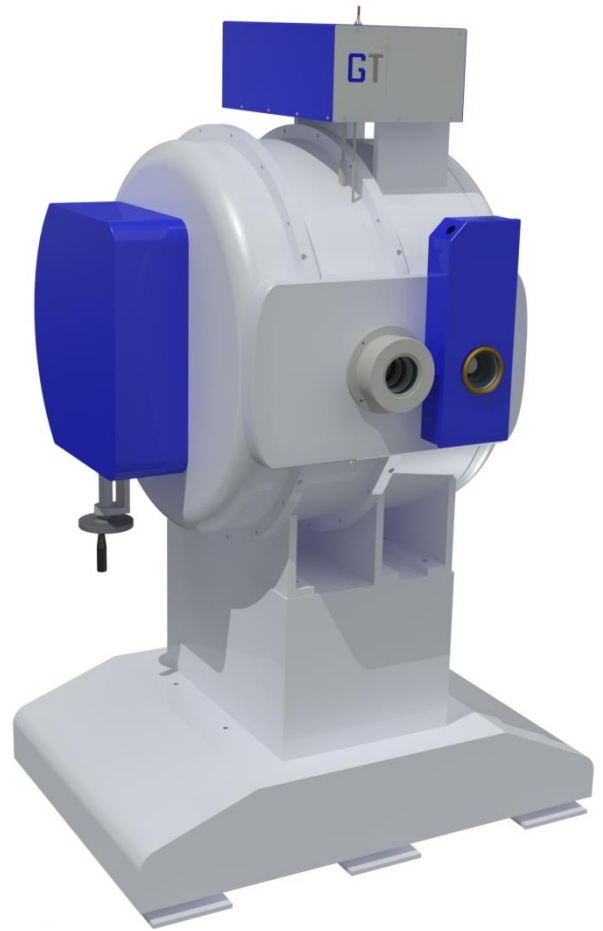


LEGACY IRRADIATOR

Gemini have listened to our customers and designed a Legacy Irradiator that still possesses the key design features and build quality of our Gemini systems but allows the use of existing 3rd party Radioactive sources.

MECHANICAL FEATURES

- Proven **Fail-Safe Shutter** and **Rotary Source Carousel** design as used in our Gemini Irradiators in service for over 20 years.
- Proven fail-safe Am-241 Exposure Unit as used on our latest Gemini Irradiators.
- Multi ring lead and Tungsten shutter as used on our current Gemini Irradiators.
- Solid Tungsten Source Carousel minimises dose interference from adjacent source positions
- Side entry loading of Radioactive Sources to eliminate awkward top entry using ladders and overhead crane.
- Specially designed Source Transfer Flask supplied with Irradiator, compatible with Gemini SSV.

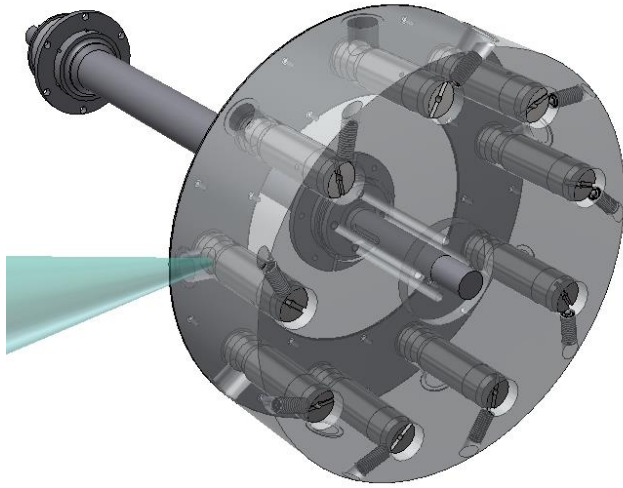


MODULAR DESIGN

- Enables the assembly of Irradiator inside a cell and later be dis-assembled and moved to new cell in the future.
- Easy transport of components into small existing cells.
- Design optimised by use of Tungsten in key areas to keep overall Irradiator size to minimum.
- Enables precision alignment of internal features as its built.

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IRRADIATOR CAPACITY

- Shielding calculated to safely store **6 TBq Co-60 Source**.
- Internal carousel designed to hold **8 radioactive sources** plus a blank 9th position.
- Front mounted Am-241 Exposure Unit designed to shield **100 GBq Am-241**.
- Surface Dose-Rate less than **2.5 uSv/hr** at Irradiator casing.
- We can be flexible with design and in process of designing **Cs-137** Irradiator for customers that don't require **Co-60**.

CUSTOMER BENEFITS

- Designed to accommodate existing Mainance source holders.
- Allows equipment to be purchased without the expensive cost of new sources until required.
- No high disposal cost of old sources until no longer useful in terms of dose-rate.
- Gemini can supply & load new sources on an individual basis as and when they are each due for replacement.
- Takes away worries over known weaknesses with old Irradiator design.
- No harsh movement of Sources in Irradiator means that lifetime of capsule is increased.
- Sources securely housed in Source carousel.
- New Irradiator will comply with BS EN standards unlike current old Irradiators.

