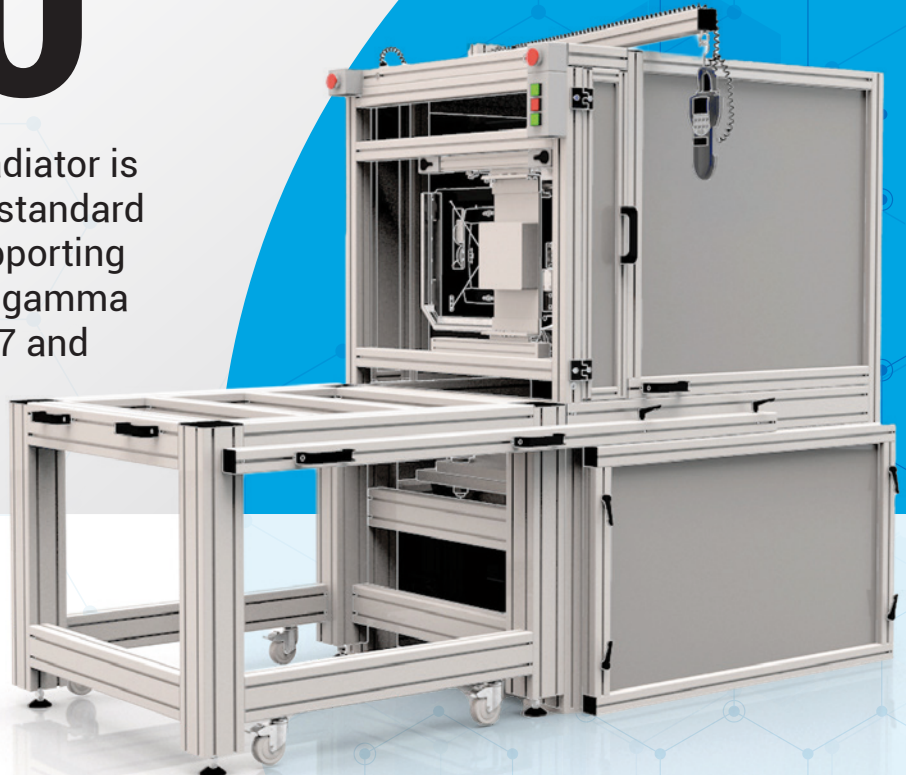


DOSIMETRIC IRRADIATOR T100

The High Level Gamma Irradiator is specifically engineered for standard dosimetry laboratories, supporting applications involving ^{60}Co gamma radiation at energies of 1.17 and 1.33 MeV.



DESCRIPTION

The Dosimetric Irradiator T100 architecture originates from parallel medicine facilities (destined for radiotherapy) and is adapted for usage in metrological laboratories. ^{60}Co source is placed in the irradiator; it generates a homogenous and collimated ionizing radiation beam, can be optionally adjusted. The collimator angle is 25 degrees (optionally decreased). The T100 High Gamma Irradiator consists of these main components and standard accessories:

- Radiation head with collimation system, shielded rotational shutter with cylindrical container for encapsulated ^{60}Co source insertion and electro-mechanic motion equipment (commutation motor, electromagnetic coupling, step belt, end switches)
- Laser indicator of beam axis for the precise positioning of the calibrated meter
- Backup power supply allowing the undergoing irradiation to be completed
- Control software
- Auxiliary devices, safety interlocks

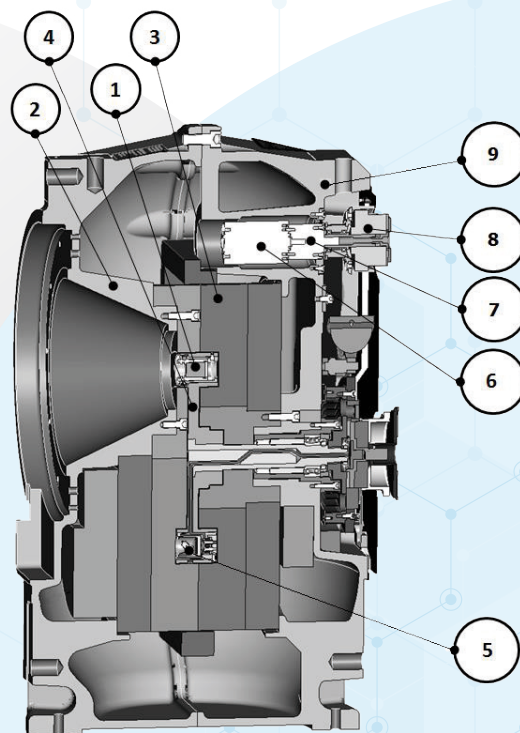
OPTIONAL ACCESSORIES

Several useful optional accessories and products can be provided with the irradiation unit within the scope of comprehensive installation:

- Calibration bench for calibrated detector accuracy positioning
- Safety interlocks (door open/close sensor and locker, PIR sensor, emergency STOP buttons, status light & acoustic signal unit)
- Centralized Database and Control System of the calibration laboratory (full irradiator control; database archiving; printable outputs; statistic evaluation of data measured: mean value, uncertainty, relative error, variation coefficient, dosimeter energy dependence, etc.)

SPECIFICATION

^{60}Co source	max. 444 TBq (12000 Ci)
Dimensions	1150 × 900 × 2000 mm
(L x W x H)	(45¼ x 35½ x 78¾ in)
Axis of the beam	1.5 m (59 in) above ground
Weight (radiation head)	app. 1850 kg (4100 lb)
Power supply	230 VAC, max. 8 A
Ambient temperature	+10 ~ 40 °C (50 ~ 104 °F)
Relative humidity	30% ~ 75%



MAIN ADVANTAGES

A very high gamma activity source can be installed.

- Proper safety shielding
- Safety remote control
- Provision of safety interlocks
- Integration into calibration system (optional)
- Precise optical positioning of the calibrated meter

The sealed high gamma radionuclide source in its holder is placed in the irradiator head carousel. Proper shielding is used, corresponding to the high energy source: The shielding is a combination of lead, depleted uranium, tungsten, and steel housing. Ordinarily, loading the source in a special capsule into the irradiator was included in the scope of supply. Operation of the Dosimetric Irradiator T100 is controlled by a PC, placed in the remote control cabinet. Control system communication is ensured via RS-232 or Ethernet interface. If any failure occurs (power supply, communication, safety system), the shutter disc automatically turns the source into the non-exposure safe position (via electric motion or via retracting spring).

The specifications contained in this brochure are for information purposes only and are subject to change without notice.

- 1 ^{60}Co source
- 2 Front frame
- 3 Shielding Pb-U-W
- 4 Shutter disc
- 5 Light source
- 6 Motor
- 7 Gearbox
- 8 Electromagnetic coupler
- 9 Back frame

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