Therapax 225
The world's most advanced Medium Energy X-ray Therapy Treatment System

The **Therapax 225** uses the latest technology in high frequency, high stability x-ray systems, offering safety and convenience, while assuring accurate and consistent treatments. The Therapax 225 features a microprocessor controlled, continuously adjustable 225 kV generator, and a metal ceramic x-ray tube with a 2mm Be window. Together these provide x-ray energies in the range 30 kV (HVL = 0.1mm Al) to 225 kV (HVL = 2.0mm Cu). The microprocessor-based control console provides a digital display of kV, mA, filtration, dose rate, set time, elapsed time and backup time. An alphanumeric screen displays the selected treatment parameters, system status during the treatment, and indicates system faults. The control system also incorporates an automatic warm-up key and filter which permit complete, unattended warm-up of the x-ray tube, thereby leaving the staff free for other activities during this period. A set of eight encoded filters is provided, each of which, when inserted into the x-ray beam, selects and causes the display to show kV and mA at which the system will operate. In addition to the back-up timer, which terminates the treatment within the pre-set time after the set time, there is a radiation monitor which continuously displays the dose rate.

The applicator cones are manufactured to the highest specifications to provide treatments at 15, 30 and 50 cm FSD. In addition, custom filters and applicators with different FSD's can be provided to suit the specific needs of most treatments.

The **Therapax 225** is supplied with a rugged, easy to position tube stand, which rotates against the wall when not in use. The tube stand allows rotation in six planes providing complete flexibility even for the most difficult positioning, such as the eyelid for which a micro-adjuster allows precision placement, safety and comfort.

Using Therapax, a single operator can easily perform radiation therapy treatments that may currently be carried out on expensive and sometimes overbooked linear accelerators supplementing the work done by LINACs, especially palliative treatments.

Optionally available for use with the **Therapax 225** is an intracavity applicator for performing the Papillon technique for the treatment of rectal cancers. This treatment method has become both practical and more effective through the use of fiber optic viewing scope that ensures proper placement.

Technical data

Standard System Comprises:
· Control electronics cabinet
· Operators microprocessor control console
· Metal ceramic x-ray tube
· Tube stand
· HT generator
· HT and LT cables
· Water hoses
· 8 Filters
· Wide choice of applicators
· Closed circuit water cooler

Technical Data
Line input voltage: 208-480V single phase, +/- 15% fluctuation
Line frequency: 47 - 63 Hz
Input Power: 8 kW
Tube output Voltage: 10 -225 kV adjustable
Tube output Current: 1 - 30 mA adjustable

Operating Parameters
Timer: 0.00 - 99.99 minutes, accuracy 0.01 minute.
Filters: 5mm Pb (warm-up), range of 8 Al, Al/Cu for pre-set treatments. *
Applicators: Standard cones FSD 15cm 1.0, 2.0, 3.0 cm diameter, Standard cones FSD 30 cm 4.0, 5.0, 6.0 cm diameter, Standard cones FSD 50 cm 8.0, 10.0, 15.0 cm diameter. *
***** Other HVL values and applicators are optionally available
Tube Head: Angulation of +/- 45 degrees from horizontal
Movement: Rotation +/- 180 degrees; mechanical locks
Tube stand: Adjustable movement in 3 planes *
***** A ceiling suspended tube stand is an option
Movement: Electromagnetic locks; Column rotation 360 degrees, (mechanical locks every 90 degrees)

Tube technical data
Model: MXR 226 metal ceramic
Focal spot size: 3mm x 7mm
Beam emission angle: 40 degrees
Inherent filtration: 2mm Beryllium
Water cooling: 4 litres per minute minimum
Leakage: < 1.0 mGy / h @ 1 meter from the focal spot

Typical operating parameters Therapax 225

Filter	kV	HVL
1	30	0.1 mm Al
2	50	0.4 mm Al

3	80	1.0 mm Al
4	100	3.0 mm Al
5	120	4.0 mm Al
6	150	0.5 mm Cu
7	225	1.0 mm Cu
8	225	2.0 mm Cu

Physical Dimensions and weights metric

Component	Height	Length	Depth	Diameter	Weight
Operators Console	191mm	487mm	430mm	.	15kg
Electronics Cabinet	775mm	525mm	530mm	.	145kg
HT Generator	635mm	508mm	1249mm	.	351kg
Water Cooler	675m	330mm	730mm	.	80kg
X-ray tube	.	279mm	.	124mm	11kg
Tube stand	Unistat Minimum room height 2.5 meters				

Physical Dimensions and weights imperial

Component	Height	Length	Depth	Diameter	Weight
Operators Console	7.5 inches	19.2 inches	16.9inches	.	33 lb
Electronics Cabinet	30.5 inches	20.7 inches	20.9 inches	.	319 lb
HT Generator	25 inches	20 inches	49 inches	.	751 lb
Water Cooler	26.6 inches	13 inches	28.7 inches	.	176 lb
X-ray tube	.	10.88 inches	.	4.84 inches	24 lb
Tube stand	Unistat Minimum room height 99 inches				

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