

CT Dose Phantom Kit for Adult Head and Body

Model 76-414-4150

Allows the user to calculate:

- **Computed Tomography Dose Index (CTDI)**
- **Dose profile**
- **Meets requirements of FDA Performance Standards**

Specifications

Weight *Body phantom:* 32 lb (14.5 kg);

Head phantom: 8 lb (3.6 kg)

Optional accessories

Carrying Case (Model 89-414)

CT Head Dose Phantom with five plugs (Model 76-414)

CT Body Dose Phantom with five plugs (Model 76-415)

Available model(s)

76-414-4150 CT Dose Phantom Kit for Adult Head and Body, including carrying case

Introduction

These phantoms can be used with any computed tomography (CT) system designed to image both head and body. They can separate dose information for each. When performing dose profile measurements, the dose phantoms allow the user to collect information for the maximum, minimum and mid-range value of the nominal tomographic section thickness.

This essential phantom consists of two parts: a body phantom and a head phantom. Both are made of solid acrylic, 15 cm thick, with diameters of 32 cm and 16 cm, respectively. Each part contains five probe holes, one in the center and four around the perimeter, 90° apart and 1 cm from the edge. The inside diameter of the holes is 1.31 cm. Each part includes five acrylic rods for plugging all the holes in the phantom. A storage and carrying case is available for your convenience.



Applications

The CT Dose Phantoms were designed in accordance with the Food and Drug Administration's performance standard for diagnostic x-ray systems, which includes regulations specifically applicable to CT systems (21 CFR 1020.33).

CT Ion Chambers

Specifications

Detector type Vented air ion chamber

Volume 3.2 cc

Sensitive length 10.0 cm

Chamber material Polystyrene

Chamber inside diameter 6.4 mm

Chamber wall thickness 54 mg/cm²

Electrode material Aluminum

Sensitivity 10 R. cm/nC (nominal)

Standard calibration 100 kVCP, 5.5 mm Al HVL (NIST Tech. M100)

Energy response ± 5%, 1 mm Al to 10 mm Al HVL

Beam orientation Normal to chamber axis

Phantom adapter OD 1.27 ± 0.04 cm (0.50 ± 0.015 in)

Leakage current (300 V collection potential) less than 1013 A at 10 min polarization time, less than 1014 A at 2 hr polarization time

Intensity limits *Continuous beam:* 4.86 kR/min (1% recombination loss)

Pulsed beam 51.5 mR/pulse (1% recombination loss)



Maximum pulse repetition rate 3.3 kHz

Cable length 3 ft (0.9 m)

Weight 1 lb (0.46 kg)

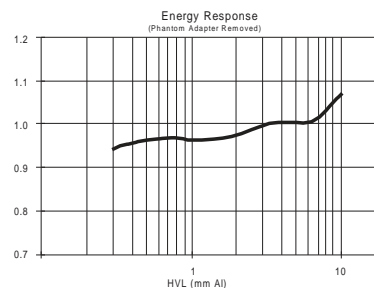
Available model(s)

660-6 CT Ion Chamber, 3.2 cm³, with UHF termination: used with Victoreen® Model 660 Electrometer

500-100 CT Ion Chamber, 3.2 cm³: used with Model 35040 (ATD)

500-200 CT Ion Chamber High Sensitivity, 10 cm³: used with Model 35040 (ATD) and other electrometer/dosimeters

For specifications on 10 cc high sensitivity ion chamber, see previous page.



6000-100 CT Ion Chamber, 3.2 cm³: used with Victoreen Models 4000, 6000, 8000, and RAD-CHECK® PLUS

6000-200 CT Ion Chamber High Sensitivity, 10 cm³, for multislice CT: used with Victoreen Models 4000, 6000, 8000, and RAD-CHECK PLUS

For more information, receive our full product catalog, or order online, contact **Radiation Management Services** business of **Fluke Biomedical**: 440.248.9300 or www.flukebiomedical.com/rms.

Specifications are subject to change without notice.

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