# for measurement of head-scatter factors



The Standard Imaging miniPHANTOM allows the measurement of Head-scatter factors with a standard Farmer Type Ion Chamber.

Head-scatter, the stray radiation that bounces around inside the head of a linear accelerator, occurs with each machine. Some of this radiation is scattered forward and hits the patient. This radiation must be taken into account when determining the total radiation dose given.

The detection system is comprised of an ion chamber and the columnar mini PHANTOM, a d<sub>max</sub> build up cap which is 3 cm in diameter and 12 cm in length. <sup>1,2</sup> Scribed lines on the mini PHANTOM facilitate alignment. The stand also allows the miniPHANTOM to be positioned horizontally when horizontal beams need to be measured.

- Measurement of Head-scatter factors with cylindrical build-up caps and columnar miniphantoms; P.A. Jursinic and B.R. Thomadsen; Medical Physics. 26(4) April 1999.
- 2. Accuracy of dose calculations in Megavoltage photon beams; W.A. Wagenaar; 2000.

## Radiation Calibration and QA Instruments

- Measure head-scatter factors simply and easily
- Designed to work with standard Farmer Type Ion **Chambers**
- Can be positioned horizontally to measure horizontal beams
- Scribed lines for easy alignment
- **Customized stand** designed to minimize scatter
- The stand is also useful as an in-air comparison jig, allowing two chambers to be positioned side-by-side in a highly reproducible fashion

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#### **Specifications**

mini **PHANTOM Detection System** <sup>1</sup> **REF 72195 is comprised of: REF 72194** mini**PHANTOM** for Exradin<sup>®</sup> A12 Farmer Type Ion Chamber <sup>2</sup> **REF 72193** mini**PHANTOM** Stand/In-Air Comparison Jig

 <sup>1</sup> Individual components can be sold separately.
<sup>2</sup> mini PHANTOM available for other Farmer Type Ion Chambers. Contact Standard Imaging for details.

#### **Options:**

REF 92700 Exradin<sup>®</sup> A12 Farmer Type Ion ChamberREF 80031 Calibration for therapy ionization chamber, cobalt point in WATERREF 80032 Calibration for therapy ionization chamber, cobalt point in AIR

### MAX 4000 Electrometer

an ideal addition for all of your external beam measurements



Exceptional sensitivity and a wide range makes the MAX 4000 (REF 90015) the ideal electrometer for all of your external beam measurements.

- Intuitive, simple and straightforward user interface
- Built in digital filter virtually eliminates noise
- Comprehensive display



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