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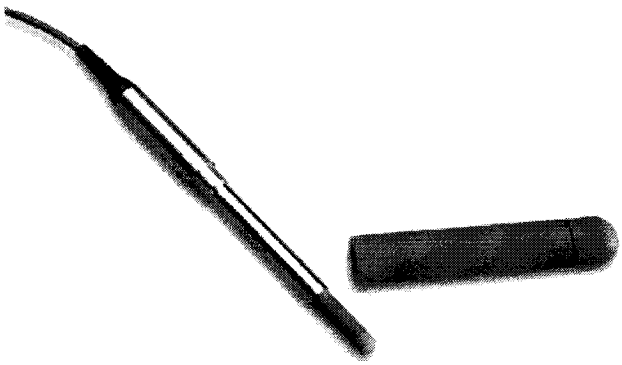
RPD is an authorized distributor

RPD Product Information

Item Number Description

300-305	*** Gammex/RMI Model RMI448 - 0.6cc Solid Water Phantom**

Solid Water Farmer Chamber RMI 448



The Solid Water® Farmer Chamber is a 0.6 cm3 volume ionization chamber, the standard for absolute dosimetry measurements in air, water or phantom material. The chamber is constructed entirely out of GAMMEX RMI's trademark Solid Water material with a central aluminum electrode. It is fully guarded up to the measuring volume and comes with a Solid Water build-up cap.

The Solid Water Farmer Chamber is ideal for dosimetry measurements using Solid Water phantom material. Because the ion chamber and phantom are constructed of uniform material the measurements require fewer correction factors. the versatile chamber can also perform measurements in air and in water tanks.

User Features and Benefits:

Thimble and stem are Solid Water to preserve phantom equivalence.

Chamber can be used with existing Solid Water phantoms.

Fully guarded for negligible stem effect.

Durable thimble is integral part of the stem.

Other build-up caps are available.

Solid Water Farmer Chamber RMI 448

SPECIFICATIONS

Specifications

Ionization Chamber ..... Farmer-type

Application ..... High energy photon and electron radiation

Chamber volume ..... Open to air, fully guarded

Measuring Quantities ..... Air kerma and kerma rate, absorbed dose and dose rate to water, exposure and exposure rate

Measuring volume ..... 0.6 cm^3

Directional dependance ..... Preferable direction of radiation is perpendicular to the chamber axis

Chamber voltage ..... ±(300...500)V

Nominal response ..... 2×10^{-8} C/Gy

Leakage current ..... $<\pm 4 \times 10^{-15}$ A

Wall Material ..... Solid Water thimble, aluminum stem

Wall thickness ..... 0.45 mm

Weight per unit area ..... 46.6 mg/cm^2

Build-up cap thickness ..... 4.05 mm around measuring volume

Inner radius of measuring volume ..... 6.1 mm

Electrode ..... Aluminum

Electrode diameter ..... 1 mm

Ion collection time

300V	0.9 msec
400V	0.7 msec
500V	0.5 msec

Maximum dose rate for continuous irradiation

	99% saturation	99.5%
300V	5.3 Gy/s	2.3 Gy/s
400V	9.4 Gy/s	4.6 Gy/s
500V	14.5 Gy/s	6.5 Gy/s

Maximum dose per radiation dose

	99% saturation	99.5%
300V	0.5 mGy	0.2 mGy
400V	0.7 mGy	0.3 mGy
500V	0.9 mGy	0.35 mGy

Nominal conditions

Temperature	10°C - 40°C
Humidity	10% - 75% relative humidity

Transient periods

Pressure equilibrium	≤ 10s
Temperature equilibrium	2 - 3 min/°K