Expect Service

Radiation Products Design Inc

SPEC SHEET

RPD INFORMATION

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RPD IS AN AUTHORIZED DISTRIBUTOR

Item Number	Description
300-650-BNC-M	PTW 30004 / 30012 - 0.6cc C/A1 Farmer Chamber

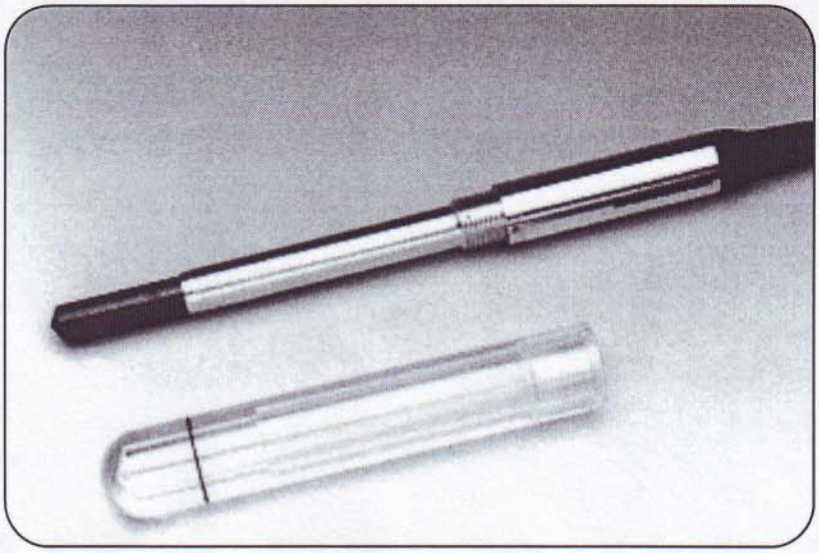
IONIZATION CHAMBER TYPE T30004

PTW Farmer™ Chamber, 0.6 cm³, Graphite / Aluminum

Diagnostic Radiology
Radiation Therapy
Radiation Protection

Description:

The 0.6 cm³ PTW Farmer ionization chamber type T30004 is the standard chamber for absolute dosimetry in radiation therapy when a graphite thimble and aluminum electrode is required. This high quality chamber is of delicate construction due to its graphite thimble. The chamber is fully guarded up to the measuring volume.



Technical Data:

Volume	0.6 cm^3
Response	$2 \cdot 10^{-8}$ C/Gy
Leakage	$\pm 4 \cdot 10^{-15}$ A
Polarizing voltage	max. 500 V
Cable leakage	10^{-12} C/(Gy • cm)
Wall material	Graphite (C)
Wall density	1.85 gm/cm^3
Wall thickness	0.425 mm
Area density	78.6 mg/cm^2
Electrode	Aluminum, 1.0 mm ∅, 21.2 mm long
Nominal useful range	60 keV ... 50 MeV
Range of temperature	10 ... 40°C
Range of rel. humidity	10 ... 80%
Ion collection time	300 V: 0.18 ms
	400 V: 0.14 ms
	500 V: 0.11 ms

- Suitable for use in solid state phantoms
- Vented measuring volume
- Fully guarded up to measuring volume
- Touchable parts free of high voltage
- Extension cables up to 100 meters in length are available
- Suitable for BNT or TNC triaxial cable connectors

Saturation behavior	Polarizing Voltage	99.0% saturation	99.5% saturation
Maximum dose rate at continuous irradiation	300 V	5.70 Gy/s	2.80 Gy/s
	400 V	10.00 Gy/s	5.00 Gy/s
	500 V	16.00 Gy/s	7.80 Gy/s
Maximum dose per irradiation pulse	300 V	0.69 mGy	0.34 mGy
	400 V	0.91 mGy	0.46 mGy
	500 V	1.14 mGy	0.57 mGy

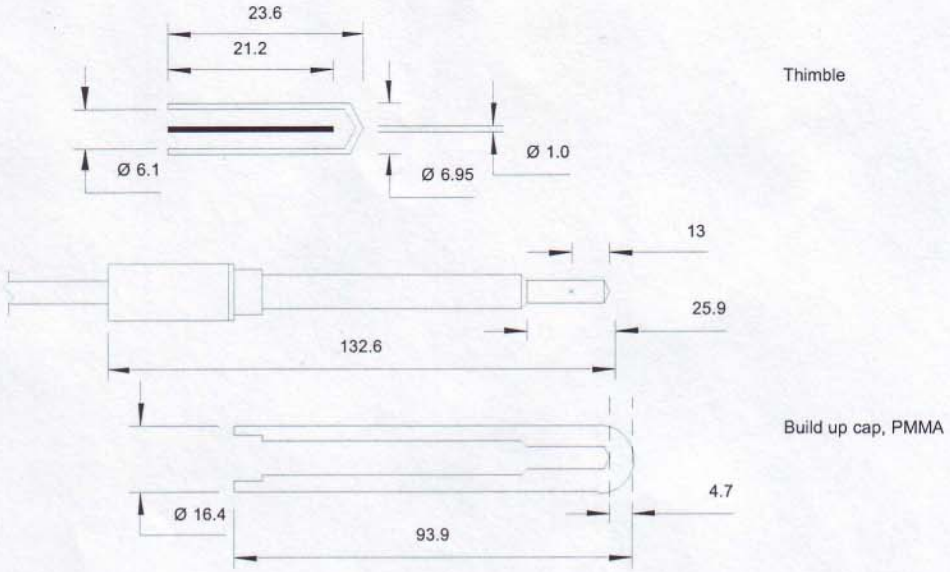
PTW NEW YORK

PTW FREIBURG

IONIZATION CHAMBER TYPE T30004

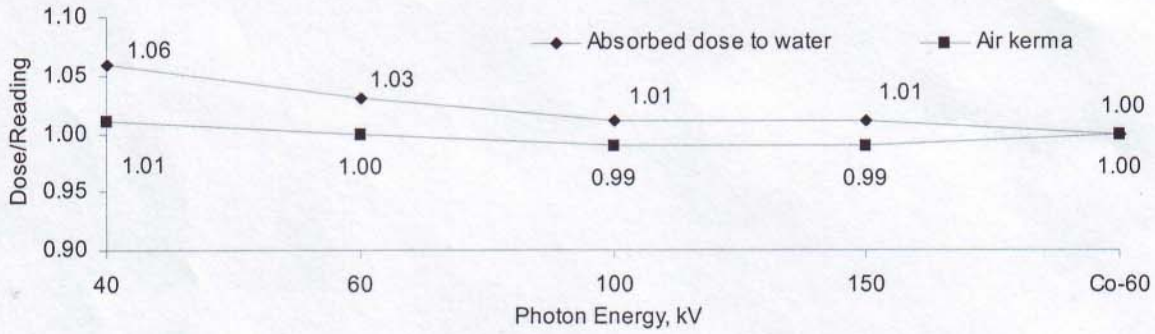
PTW Farmer™ Chamber, 0.6 cm³, Graphite / Aluminum

Diagram:

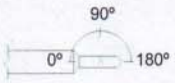


Approximate dimensions in mm.
Drawing not to scale.

Energy Dependence:



Directional Dependence:



Reading / Dose, %

in Air

	6°	12°	18°	24°	30°	60°	90°	120°	150°	162°	174°	180°
70 kV	20	48	69	81	88	99	100	100	98	96	91	88
140 kV	36	66	82	90	94	100	100	100	100	98	96	94
280 kV	57	80	90	94	96	100	100	100	100	99	98	97
Co-60	67	85	91	95	97	100	100	100	100	99	99	98

in PMMA

	6°	12°	18°	24°	30°	60°	90°	120°	150°	162°	174°	180°
70 kV	78	88	96	100	101	100	100	100	100	101	102	102
140 kV	90	97	101	102	103	101	100	100	99	100	102	102
280 kV	100	102	103	103	103	101	100	100	100	101	102	102
Co-60	102	101	101	101	101	100	100	100	101	102	102	102

For additional information please contact:

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PTW Farmer is a registered trademark of PTW Freiburg.

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