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**RPD is an
authorized distributor**

RPD Product Information

Item Number Description

300-630-BNC-M * PTW Model 23344 - 0.2cc Big Soft X-Ray Chamber

IONIZATION CHAMBER TYPE 23344

Radiation Therapy
Diagnostic Radiology
Nuclear Medicine
Radiation Protection

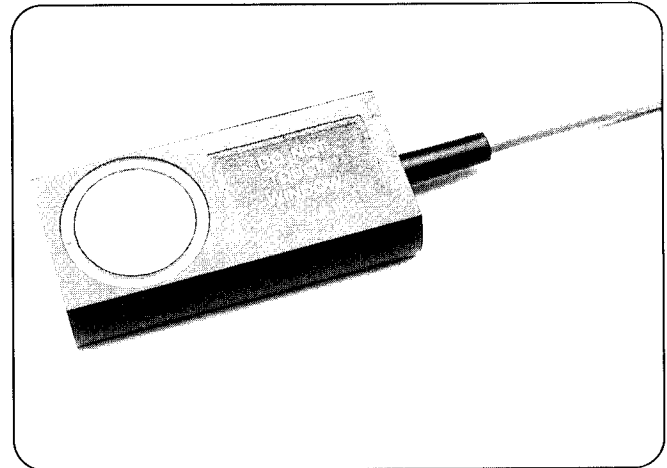
Big Soft-X-Ray Chamber 0.2 cm³

Description

The soft X ray ionization chamber type 23344 is an alternative chamber for measurements in skin therapy or mammography, where a higher response is necessary. It can be used in air or in the depth of solid phantoms. The usual calibration is 15 kV to 70 kV. The measuring volume is open to the surrounding air. This chamber has a very flat energy dependence from 10 kV to 100 kV.

Technical data

| | |
|-------------------------|---|
| Volume: | 0.20 cm ³ |
| Response: | 7 · 10 ⁻¹³ C/Gy |
| Leakage: | + 1 · 10 ⁻¹⁴ A |
| Polarizing voltage: | max. 500 V |
| Cable leakage: | 1 · 10 ⁻¹⁴ C/(Gy · cm) |
| Wall material: | PE (CH.) |
| Membrane thickness: | 0.03 mm |
| Area density: | 2.5 mg/cm ² |
| Electrode: | Graphite with amber, graphite coated; 13 mm Ø |
| Range of temperature: | + 10° C ... + 40° C |
| Range of rel. humidity: | 20 % ... 75 % |
| Ion collection time: | 300 V: 0.05 ms 400 V: 0.04 ms 500 V: 0.03 ms |



- Guard ring up to measuring volume
- Suitable for use in solid state phantoms
- Guard ring at potential of the collecting electrode. Touchable parts free of high voltage
- High voltage to be connected only with active current-limiting device ($I_{max} < 0.5$ mA)
- Open measuring volume, without check device air density correction is necessary
- Lengthening cable up to 100 m available

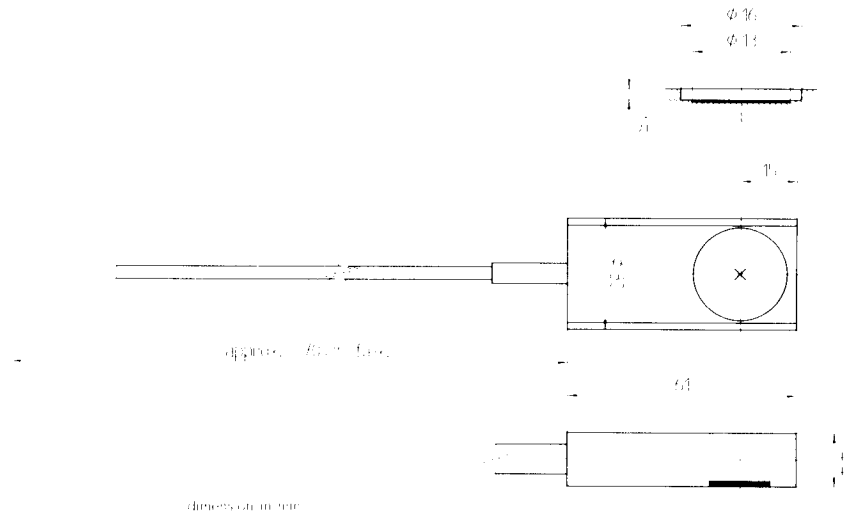
| Saturation behaviour | Polarizing voltage | 99.0 % saturation | 99.5 % saturation |
|--|-------------------------|---------------------------------|-------------------------------|
| Max. dose rate at continuous irradiation | 300 V 400 V 500 V | 70 Gy/s 120 Gy/s 190 Gy/s | 35 Gy/s 60 Gy/s 95 Gy/s |
| Max. dose per irradiation pulse | 300 V 400 V 500 V | 2.0 mGy 2.7 mGy 3.3 mGy | 0.8 mGy 1.1 mGy 1.4 mGy |

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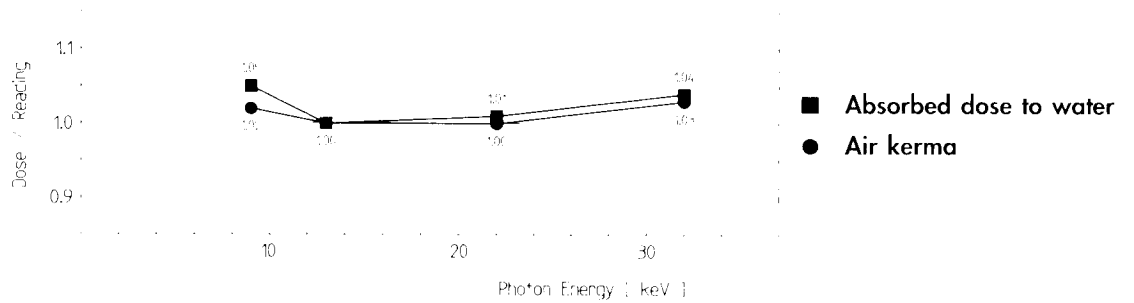
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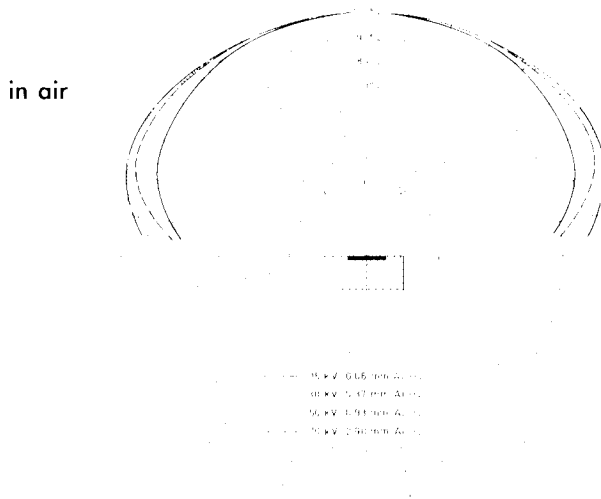
Design



Energy Dependence



Directional Dependence



Reading / Dose [%]

| | 6° | 24° | 36° | 54° | 66° | 90° | 114° | 126° | 144° | 156° | 174° |
|-------|----|-----|-----|-----|-----|-----|------|------|------|------|------|
| 15 kV | 75 | 92 | 96 | 99 | 99 | 100 | 99 | 99 | 96 | 92 | 75 |
| 30 kV | 79 | 102 | 103 | 102 | 101 | 100 | 101 | 102 | 103 | 102 | 79 |
| 50 kV | 88 | 105 | 104 | 102 | 101 | 100 | 101 | 102 | 104 | 105 | 88 |
| 70 kV | 91 | 105 | 105 | 103 | 101 | 100 | 101 | 103 | 105 | 105 | 91 |

The values given in the diagrams are typical for the construction.