

Semiflex™ Ionization Chamber, 0.125 cm³, Waterproof

Model 30-344



- Suitable for use in water phantoms or solid state phantoms
- Measuring volume is fully vented via the connector
- Fully guarded up to measuring volume
- Touchable parts free of high voltage
- Extension cables up to 100 meters in length are available

The 0.125 cm³ ionization chamber type (Model 30-344) is designed for measurements in the useful beam of high energy photon and electron fields. The chamber is waterproof and is used mainly for relative measurements in a water phantom or in an air scanner. The measuring volume is approximately spherical resulting in a flat energy response over an angle of 160° and a uniform spatial resolution, in all three axes, during measurements in a phantom. The chamber includes a 4.3 ft (1.3 m) cable, BNC Triax connector, PMMA buildup cap, and a short (36 mm) rigid stem for easy mounting.

Specifications

Volume 0.125 cm³

Response $4 \cdot 10^{-9}$ C/Gy

Leakage $\pm 4 \cdot 10^{-15}$ A

Polarizing voltage Maximum 500 V

Cable length 4.3 ft (1.3 m)

Cable leakage 10^{-12} C/(Gy • cm)

Wall material PMMA (C₅H₈O₂), Graphite (C)

Wall density 1.19 gm/cm³ (PMMA), 0.82 gm/cm³ (C)

Wall thickness 0.55 mm PMMA, 0.15 mm C

Area density 78 mg/cm²

Electrode Aluminum, 1.0 mm Ø, 5.0 mm long

Nominal useful range 30 keV to 50 MeV

Range of temperature 10° to 40°C

Range of relative humidity 10% to 80%

Ion collection time

300 V 0.14 ms

400 V 0.10 ms

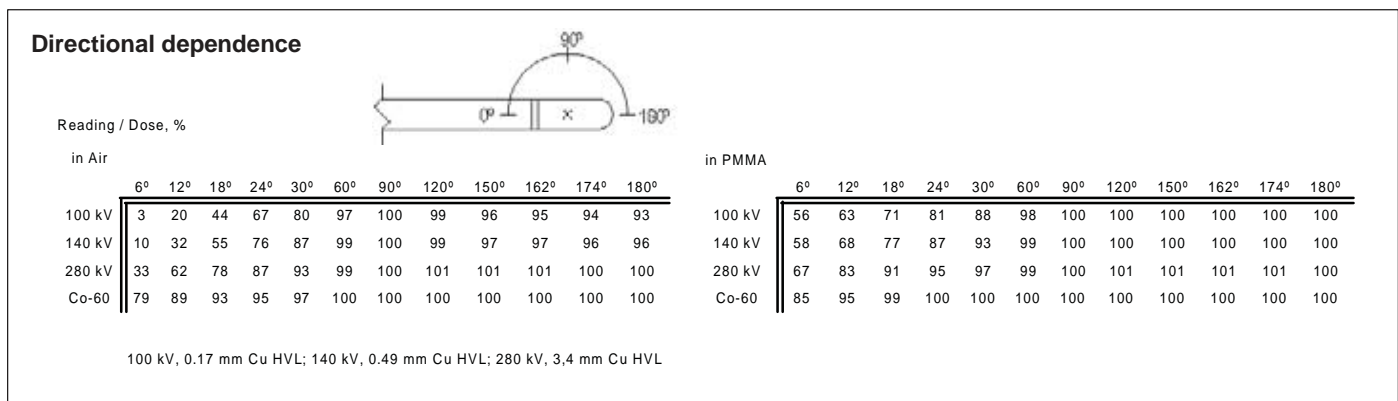
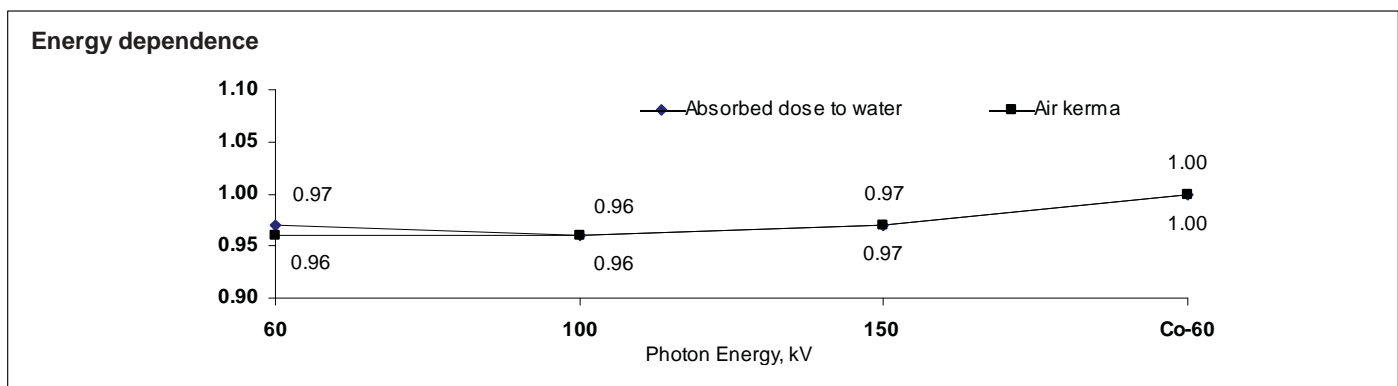
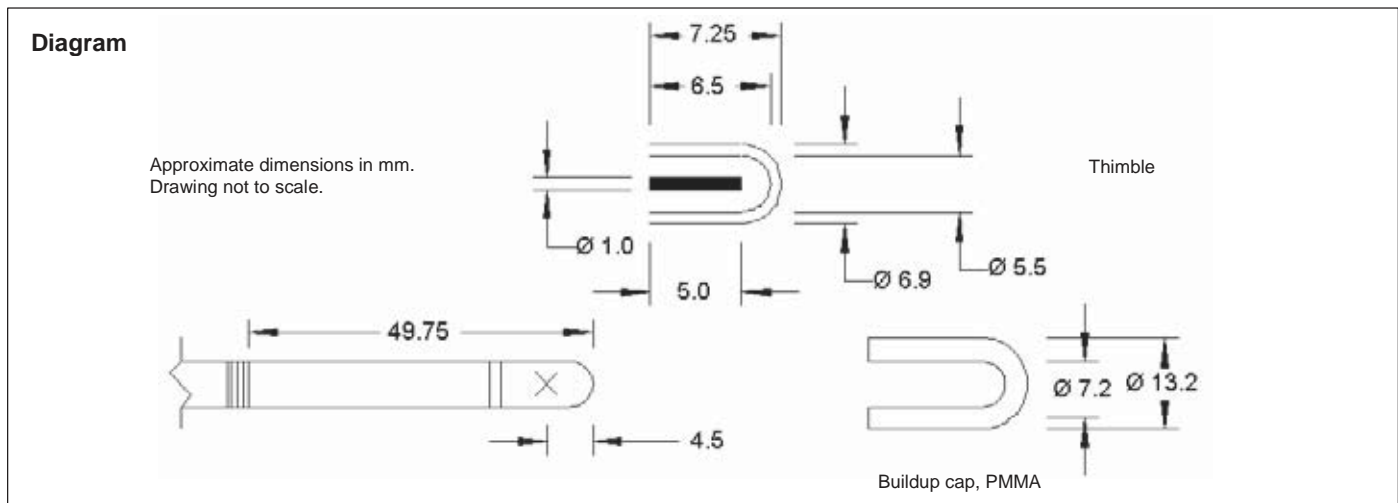
500 V 0.08 ms

Saturation behavior

Saturation behavior	Polarizing voltage	99.0% saturation	99.5% saturation
Maximum dose rate at continuous irradiation	300 V	5.6 Gy/s	2.8 Gy/s
	400 V	10.0 Gy/s	5.0 Gy/s
	500 V	15.0 Gy/s	7.5 Gy/s
Maximum dose rate per irradiation pulse	300 V	0.7 mGy	0.4 mGy
	400 V	1.0 mGy	0.5 mGy
	500 V	1.2 mGy	0.6 mGy

See next page for more specifications.

Specifications (cont)



Available model(s)

30-344 Semiflex Ionization Chamber, 0.125 cm³, Waterproof, includes BNC Triax connector, PMMA buildup cap, and 36 mm rigid stem for mounting

Other types of triaxial cable connectors available

For more information or to receive our full product catalog, contact **Fluke Biomedical** at 440.248.9300 or www.flukebiomedical.com/rms.

Specifications are subject to change without notice.

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