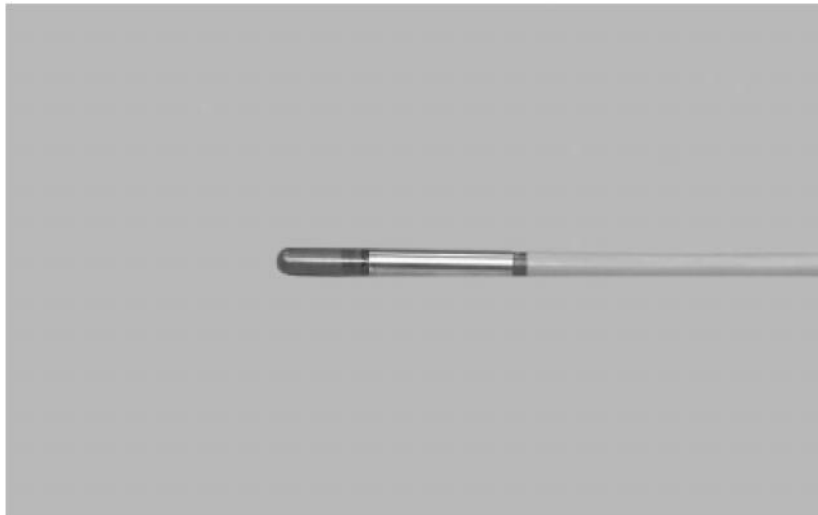


# Semiflex™ Ionization Chamber, 0.3 cm<sup>3</sup>, Waterproof

Model 30-316



- 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
- Type tested by PTB Braunschweig 

|       |
|-------|
| 23.21 |
| 85.1  |

The 0.3 cm<sup>3</sup> ionization chamber (Model 30-316) 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 open to the surrounding air via the 4.3 ft (1.3 m) cable and BNC Triax connector. This chamber has a short rigid stem for easy mounting, includes a PMMA buildup cap, and is type tested by PTB Braunschweig.

## Specifications

**Volume** 0.3 cm<sup>3</sup>

**Response**  $1 \cdot 10^{-8}$  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 (C<sub>5</sub>H<sub>8</sub>O<sub>2</sub>)

**Wall density** 1.19 gm/cm<sup>3</sup> (PMMA)

**Wall thickness** 0.7 mm PMMA

**Area density** 83.3 mg/cm<sup>2</sup>

**Electrode** Aluminum, graphite coated, 1.0 mm Ø, 14.25 mm long

**Nominal useful range** 30 keV to 50 MeV

**Range of temperature** 10° to 40°C

**Range of relative humidity** 20% to 75%

### Ion collection time

**300 V** 0.10 ms

**400 V** 0.08 ms

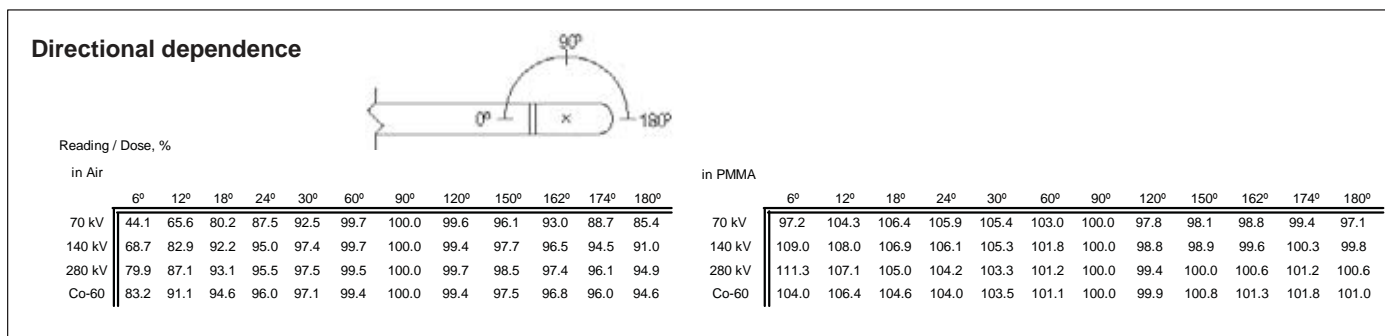
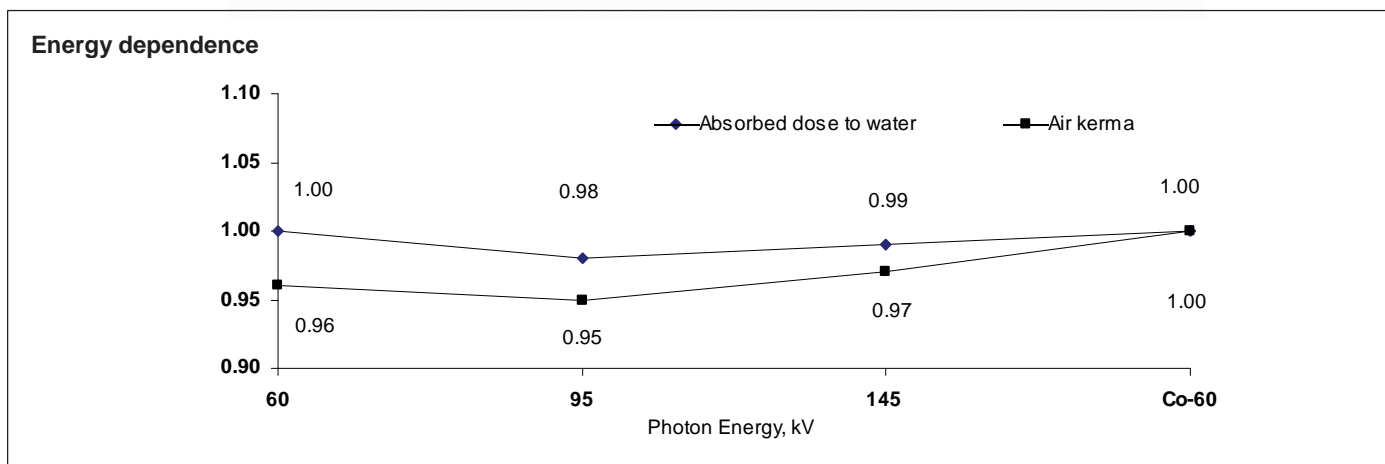
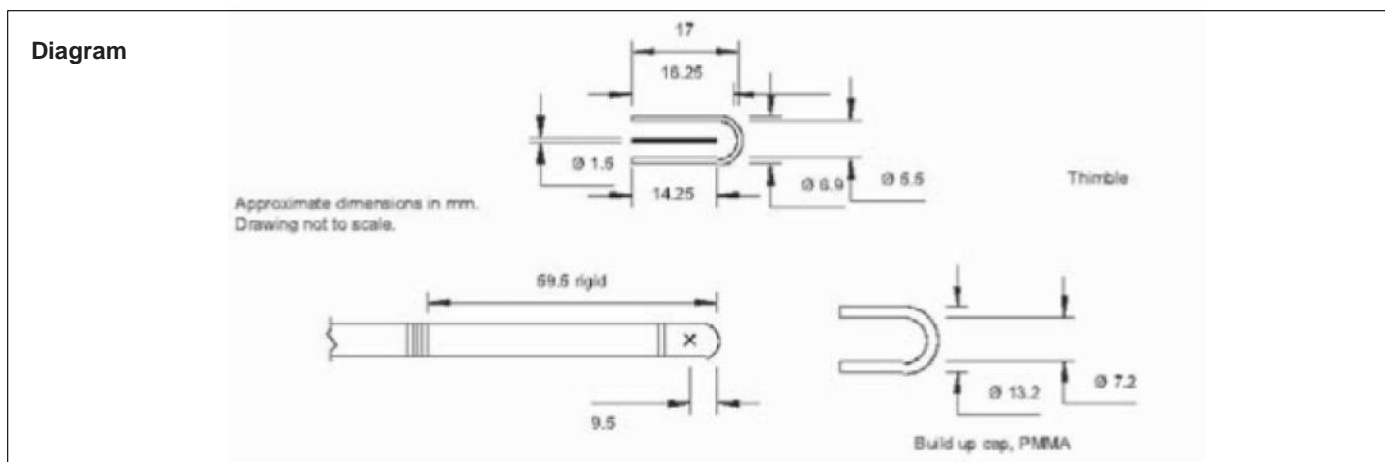
**500 V** 0.06 ms

### Saturation behavior

| Saturation behavior                         | Polarizing voltage | 99.0% saturation | 99.5% saturation |
|---|--------------------|------------------|------------------|
| Maximum dose rate at continuous irradiation | 300 V              | 17.0 Gy/s        | 8.5 Gy/s         |
|   | 400 V              | 30.0 Gy/s        | 15.0 Gy/s        |
|   | 500 V              | 45.0 Gy/s        | 23.0 Gy/s        |
| Maximum dose rate per irradiation pulse     | 300 V              | 1.0 mGy          | 0.4 mGy          |
|   | 400 V              | 1.3 mGy          | 0.5 mGy          |
|   | 500 V              | 1.7 mGy          | 0.7 mGy          |

See next page for more specifications.

## Specifications (cont)



### Available model(s)

**30-316** Semiflex Ionization Chamber, 0.3 cm<sup>3</sup>, Waterproof, includes BNC Triax connector, PMMA buildup cap, and 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](http://www.flukebiomedical.com/rms).

*Specifications are subject to change without notice.*

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