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RPD is an authorized distributor

RPD Product Information

Item Number Description

300-230-A11	*** Exradin Model A11 - 0.62cc Spokas Planar Chambers**
300-230-P11	*** Exradin Model P11 - 0.62cc Spokas Planar Chambers**
300-230-T11	*** Exradin Model T11 - 0.62cc Spokas Planar Chambers**

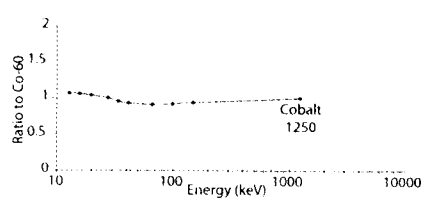
EXRADIN®

PARALLEL PLATE CHAMBERS

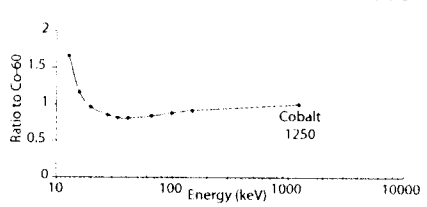
For use in routine electron beam measurements and for depth-dose studies in electron, photon, proton, and neutron beams

- Completely characterized in TG 51 & TRS-398.
- The Model 11 is inherently waterproof without any additional cap or covering. The 11TW and the A10 require waterproof caps due to their Kapton film windows.
- Fully guarded for extremely uniform field lines and negligible variation of polarizing potential, thus polarity corrections are not needed.
- Exceptionally wide 4.14 mm guard rings exceed the benefits described in TG-39 for 3 mm rings. This allows for no perturbation in field lines, even at low electron energies, ensuring precision in depth-dose measurement.
- Strong, reliable construction with homogeneous conductive plastic allows for little to no scatter when compared to other similar type chambers.
- Rigid stem allows accurate positioning of the chamber. No stem effects are present.
- The chamber vents through a flexible tube that surrounds the triaxial cable. This vent tube is sealed to the chamber body and open near the connector.
- The Model 11's larger volume is ideally suited for routine electron field measurements in a water phantom. A Cobalt-60 buildup cap is available.
- Model A10's small measuring volume allows for excellent spatial resolution. It is ideally suited for smaller electron field measurements in a water phantom for absolute electron dosimetry calibration. A 1.0 mm waterproof acrylic buildup cap for TG 51 is included.
- Model A10 is capable of measuring in zero depth in the buildup region of an electron field.
- **For detailed technical specifications see the fold-out pages at the back of this brochure.**

Model A10 Characterization Curve



Model 11 Characterization Curve

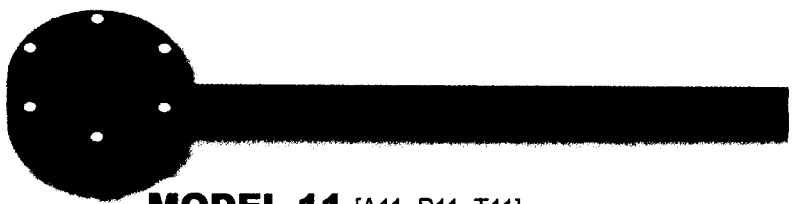




MODEL A10

Waterproof Parallel Plate Electron Markus™-Type Chamber, 0.05 cc

Centroid of Collecting Volume (from surface window) . 1.0 mm
Window Collector Gap. . . . . 2.0 mm
Collector Diameter. . . . . 5.4 mm
Window Film. . . . . 3.86 mg/cm^2 Kapton
Nominal Leakage. . . . . <10^{-15} amps
Maximum Polarizing Voltage . . . . . 1000 volts



MODEL 11 [A11, P11, T11]

Waterproof Parallel Plate Chamber, 0.62 cc

Centroid of Collecting Volume (from surface window) . 2.0 mm
Window Collector Gap. . . . . 2.0 mm
Collector Diameter. . . . . 20.0 mm
Nominal Leakage. . . . . <10^{-15} amps
Maximum Polarizing Voltage . . . . . 1000 volts



MODEL 11TW [A11TW, P11TW, T11TW]

Thin Window Parallel Plate Chamber, 0.94 cc

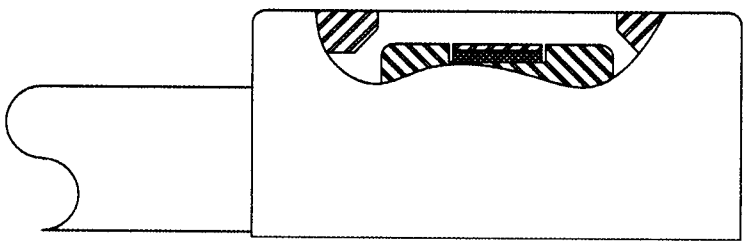
Centroid of Collecting Volume (from surface window) . 1.5 mm
Window Collector Gap. . . . . 3.0 mm
Collector Diameter. . . . . 20.0 mm
Window Film. . . . . 3.86 mg/cm^2 Kapton
Nominal Leakage. . . . . <10^{-15} amps
Maximum Polarizing Voltage . . . . . 1000 volts

Markus is a registered trademark of PTW-Freiburg

A10

Parallel Plate Electron Chamber
Model A10

Collecting Volume: 0.05 cc
Nominal Calibration Factor: 60 R/nC (TG-21)
Nominal Calibration Factor: 527.4 Gy/μC (Air Kerma)

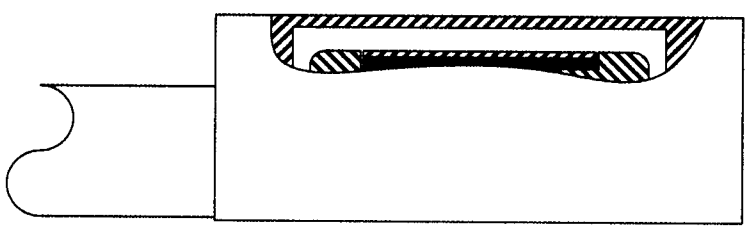


Centroid of Collecting Volume: 1.0 mm from window surface
Collector Diameter: 5.4 mm
Window-Collector Gap: 2.0 mm
Window: Conductive Kapton film, 3.86 mg/cm^2
Window Support Rings, Collector and Guard Material:
A10 – C552 Shonka air-equivalent plastic
Stem: 8.9 mm OD black polycarbonate one-piece 7.6 cm long; not removable
Waterproof: Yes, waterproofing cap required to seal window
Venting: Through Tygon® PVC tubing secured to chamber body and running the full length of the triaxial cable; cable is inside tubing.
Waterproofing Cap included with Chamber: 1.0 mm acrylic cap, TG-51 compliant
Buildup Caps Available: Co-60 cap made of black delrin (3.5 mm thick), also acts as waterproofing cap
Options: None available

A11, P11 or T11

Spokas Parallel Plate Chamber
Model A11, P11 or T11

Collecting Volume: 0.6 cc
Nominal Calibration Factor: 5.5 R/nC (TG-21)
Nominal Calibration Factor: 48.3 Gy/μC (Air Kerma)

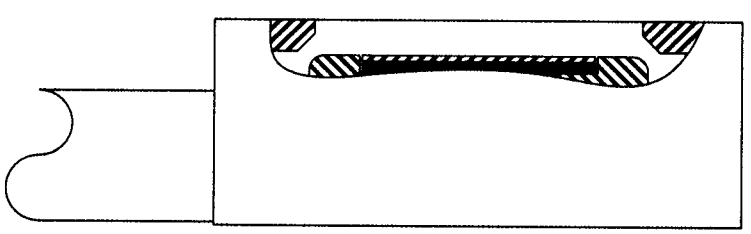


Centroid of Collecting Volume: 2.0 mm from window surface
Collector Diameter: 20.0 mm
Window-Collector Gap: 2.0 mm
Window Thickness: 1.0 mm
Window, Collector and Guard Material:
A11 – C552 Shonka air-equivalent plastic
P11 – D400 polystyrene-equivalent plastic.
T11 – A150 Shonka tissue-equivalent plastic
Stem: 11.1 mm OD black phenolic two-piece 10.1 cm + 12.7 cm long; removable; others available upon request
Waterproof: Yes, as furnished; no sheath required
Venting: Through Tygon® PVC tubing secured to chamber body and running the full length of the triaxial cable; cable is inside tubing.
Buildup Caps Available: Co-60 thickness; same material as chamber window
Options: CRS stem

A11TW, P11TW or T11TW

Thin-Window Parallel Plate Chamber
Model A11TW, P11TW or T11TW

Collecting Volume: 0.94 cc
Nominal Calibration Factor: 3.4 R/nC (TG-21)
Nominal Calibration Factor: 29.9 Gy/μC (Air Kerma)



Centroid of Collecting Volume: 1.5 mm from window surface
Collector Diameter: 20.0 mm
Window-Collector Gap: 3.0 mm
Window: Conductive Kapton film, 3.86mg/cm^2
Window Support Rings Material: C552
Collector and Guard Material:
A11TW – C552 Shonka air-equivalent plastic
P11TW – D400 polystyrene-equivalent plastic.
T11TW – A150 Shonka tissue-equivalent plastic
Stem: 11.1 mm OD black phenolic two-piece 10.1 cm + 12.7 cm long; removable; others available upon request
Waterproof: Yes, waterproofing cap required to seal window
Venting: Through Tygon® PVC tubing secured to chamber body and running the full length of the triaxial cable. Cable is inside tubing.
Waterproofing Cap included with Chamber: 1.0 mm acrylic cap, TG-51 compliant
Buildup Caps Available: Co-60 thickness; same material as chamber shell; others available upon request
Options: CRS stem

EXRADIN™

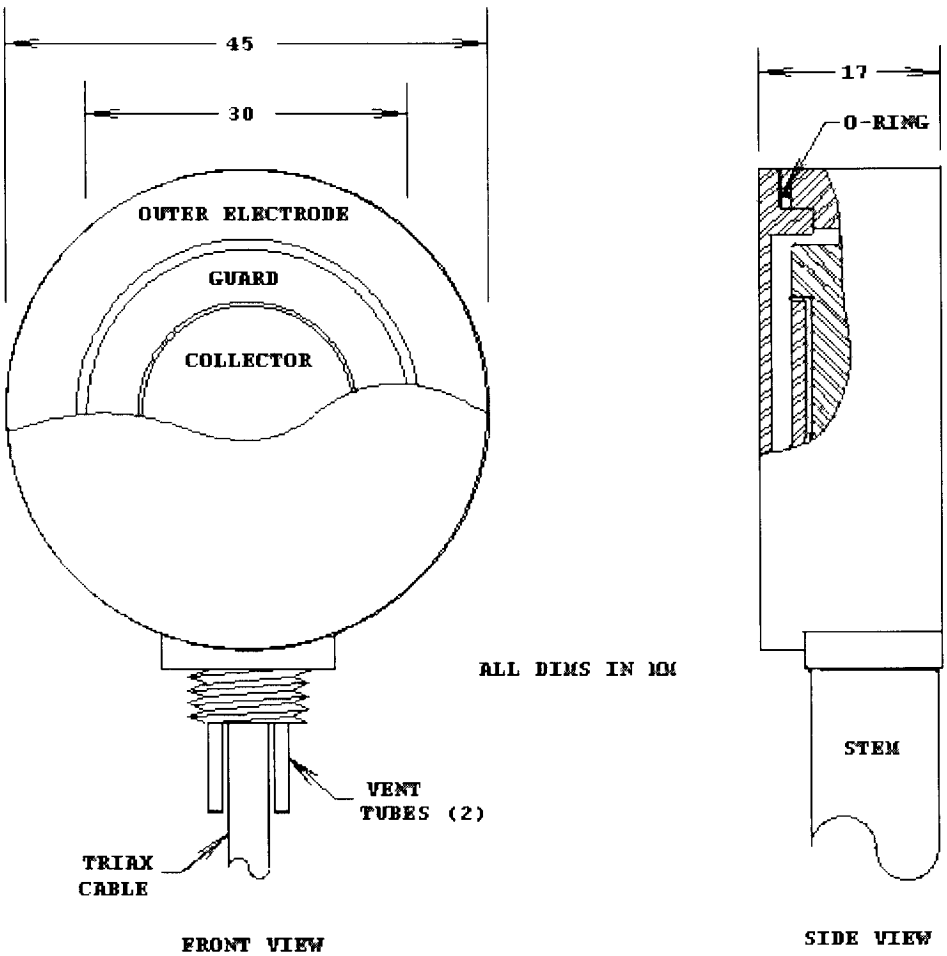
IONIZATION

CHAMBER

SPECIALISTS

Model 11 - Spokas Planar Chamber

- Planar geometry
- Homogeneous construction
- Complete guarding
- Waterproof construction
- Low mass collector
- Gas flow capability
- Integral flexible low-noise cable
- Separable minimum scatter stem
- Handsome wooden case



ALL DIMS IN MM

Features

Collecting Volume: 0.62 cm^3

Centroid of Collecting Volume: 2.0 mm from surface of window

Collector Diameter: 20.0 mm

Window-Collector Gap: 2.0 mm

Window Thickness: 1.0 mm

Body, Collector, and Guard Material:

Model A11 – Shonka air-equivalent plastic C552

Model P11 – Polystyrene equivalent plastic D400

Model T11 – Shonka tissue-equivalent plastic A150

Maximum Polarizing Potential: Greater than 1000 V

Inherent Leakage Currents: Less than 10^{-15} Amperes

Cable: 50 Ohms, 29pF/f, 2 m long

Signal Connector: Choice of coaxial and triaxial BNC plugs and jacks and triaxial TNC plug

High Voltage Connector: Integral with triaxial connectors (shell of chamber is common with connector body). Banana, MHV, and SHV plugs are also available.

Vent Tubes: Two 21 Ga stainless steel tubes which may be extended to connector via 22 Ga TFE tubing for possible immersion in liquid phantoms.

Stem: Black phenolic, 7/16 in OD by 9, 5, or 4 in long. Two-piece stem consisting of a 4 in segment at chamber and a 5 in segment threaded together is also available.