

## Model PPC05 Plane-Parallel Ionization Chamber

The Model PPC05 is the latest development of an electron chamber, with improved performance compared to the well-known Markus® chamber. The chamber features flat energy response within the nominal useful range from 2 MeV to 45 MeV.

The PPC05 design is similar to the Markus® chamber, having the same external dimensions that allow it to fit into existing solid phantom cavities made for the Markus® chamber. Although the sensitive volume is the same, it is achieved with a 9.9 mm diameter collector and 0.6 mm electrode spacing. The wide guard ring greatly reduces the influence of scattered radiation from the housing and makes it possible to perform absolute electron dosimetry with negligible perturbation and polarity effects. The entrance window material is 1 mm thick C552 Shonka airequivalent conductive plastic. The relatively thick window prevents sensitivity change due to window distortion under water, as the chamber is watertight without the use of a protective cap.

The Model PPC05 is vented to the atmosphere, therefore density correction must be made for each measurement. It is supplied with 1m cable, choice of connectors, a protective cap, buildup cap and spacer ring, and a foam padded case.

### Features:

- ▶ Waterproof
- ▶ Wide guard ring design for negligible polarity and perturbation effects
- ▶ 9.9 mm diameter collector
- ▶ Characterized for TG-51



### Specifications

Ngas/(NxAlon) (cGy/R):	..... 0.8734
Kecal:	..... 0.896
Volume:	..... 0.046 cc nominal, vented to the atmosphere
Sensitivity:	..... 0.02 nC/cGy, nominal
Leakage current:	..... < 5x 10 <sup>-16</sup> A
Entrance window:	..... C-552, 1 mm thick, 176 mg/cm <sup>2</sup>
Ion collector:	..... 9.9 mm diameter, graphite coated PEEK (Polyetheretherketone) 1.32 g/cm <sup>2</sup>
Body material:	..... C-552
Electrode separation:	..... 0.6 mm
Guard ring width:	..... 3.4 mm
Reference point in water:	..... 1 mm from window surface
Bias voltage:	..... ±300 V
External dimensions:	..... 30 mm diameter x 14 mm
Protective cap:	..... acrylic, 0.87 mm thick, 102.6 mg/cm <sup>2</sup>
Cable:	..... 1 meter, low-noise triaxial, BNC male triaxial, (TNC optional)

### Accessories

CH-1	..... Cradle-type holder with 7 mm diameter stem for Markus®, PPC05, A10 and NACP chambers
3BM-F10	..... 10 m extension cable, triax BNC, male/female with caps and chains (also available in custom lengths and/or mounted in a reel)
3BF-3TMF	..... Triaxial BNC to TNC adapter

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