



Well-Type Chamber Type 33004

***Vented well-type ionization chamber
for afterloading source strength
measurements***

Features

- ▶ Represents a sturdy well-type chamber for measurements with afterloading sources
- ▶ Vented sensitive volume of 200 cm³
- ▶ Makes it possible to measure the source strength of afterloading sources according to AAPM TG-56
- ▶ Accommodates suitable applicator adapters for commercial afterloading brachytherapy systems
- ▶ Allows the calibration of HDR, PDR and LDR afterloading sources

According to AAPM TG-56, the well-type chamber is required for the source strength measurement of radioactive afterloading sources. The recommended calibration factor is the air kerma strength (cGy m² h⁻¹). The PTW calibration certificate also includes factors for apparent activity (GBq or Ci) and exposure strength (R m² h⁻¹). Suitable applicator adapters and calibrations are available for the commercial standard afterloading systems. The calibration of the well-type chamber is traceable to the NIST, USA and PTB, Germany. For measurements, the chamber is connected to a sensitive PTW electrometer (UNIDOS, UNIDOS E, MULTIDOS, TANDEM), which has a reading in pA, a wide dynamic range and an interval time function. The well-type chamber is suitable for the calibration of high dose rate (HDR) and pulsed dose rate (PDR) sources such as ¹⁹²Ir. Calibrations for low dose rate sources (LDR) such as ¹³⁷Cs are available upon request. The chamber can be supplied with BNT, TNC and M connectors. The delivery includes a manual in English.

Ordering Information

TN33004 Well-type chamber, connecting system BNT
 TW33004 Well-type chamber, connecting system TNC
 TM33004 Well-type chamber, connecting system M

Options

T33004.1.012 Universal adapter for catheters with diameters between 1.0 and 1.8 mm (e.g. for Varian applicators type AL13113000 or AL13115000)
 T33004.1.013 Universal adapter for catheters with diameters between 1.8 and 3.2 mm (e.g. for Gammamed probe type 11-00200 or 11-00297)
 T33002.1.008 Adapter for Nucletron microSelectron afterloaders (type 077.095)

Specification

- ▶ Type of product Vented well-type chamber type 33004
- ▶ Application Calibration of afterloading sources in connection with a therapy dosimeter
- ▶ Calibration ¹⁹²Ir, others upon request
- ▶ Measuring quantities Air kerma strength, apparent activity, exposure strength
- ▶ Measuring ranges (in connection with PTW-UNIDOS)
 - LOW 1.7 MBq ... 1.7 GBq
 - MEDIUM 85 MBq ... 85 GBq
 - HIGH 8.5 GBq ... 8.5 TBq¹⁾

¹⁾The upper limit of the measuring range at 400 V for a saturation of 99.5 % is 4 TBq
- ▶ Resolution The resolution of the digital display is at least 0.5 % of the measuring ranges given
- ▶ Measuring volume 200 cm³
- ▶ Reference point 84.5 mm (3.327 in) below chamber top
- ▶ Change of response with source positioning change ± 1 cm < 1 %
- ▶ Chamber voltage max. 500 V
- ▶ Leakage current < 0.5 pA
- ▶ Temperature (10 ... 40) °C, (50 ... 104) °F range
- ▶ Relative humidity (10 ... 80) %, max. 20 g/m³ range
- ▶ Air pressure (700 ... 1060) hPa range
- ▶ Dimensions
 - Height 190.5 mm, 7.5 in
 - Base diameter 178 mm, 7 in
 - Shaft outer diam. 93 mm, 3.66 in
 - Shaft inner diam. 32 mm, 1.26 in
- ▶ Weight 2.4 kg, 5.29 lbs