



# 10XF-3CT – Ionization Chamber

Quality Assurance in Medical Imaging  
Beam QA – CT

# 10XF-3CT – Ionization Chamber

The 10XF-3CT is designed for Computed Tomography Dose Index [CTDI] and DLP measurements.

## Key benefits

- Flat energy response covering the total active chamber length
- High confidence with individual factory calibration sheet

## 10XF-3CT is the ionization chamber for measurements on CT scanners

- Air ionization chamber
- Homogeneous sensitivity over the entire active length of the chamber
- Provided with protective shielding [guarded]
- Delivered with an individual calibration document



## Material

|                    |                            |
|--------------------|----------------------------|
| External electrode | C552                       |
| Inner electrode    | C552                       |
| Connector          | 7-pin multi plug connector |
| Cable              | 2 m flexible, low noise    |

## Size

|                                          |                   |
|------------------------------------------|-------------------|
| Active volume                            | 3 cm <sup>3</sup> |
| Total active length                      | 100 mm            |
| Outer diameter of the external electrode | 9 mm              |

## Operating Data

|                                     |                                                               |                 |
|-------------------------------------|---------------------------------------------------------------|-----------------|
| Leakage current                     | < ± 4 × 10 <sup>-15</sup> A                                   |                 |
| Measuring range for CT beam quality | RQR 8 - RQR 10                                                | 100 kV - 150 kV |
|                                     | RQR 8 - RQR 10                                                | 100 kV - 150 kV |
|                                     | RQR 8 - RQR 9                                                 | 100 kV - 120 kV |
| Calibration factor [typical]        | N <sub>D,K</sub> = 72 mGy cm/nC [120 kV/4.5 mm Al HVL]        |                 |
| Sensitivity                         | 1.11 nC/ Gy                                                   |                 |
| Dose measuring range                | 0.015 mGy - 15 Gy                                             |                 |
| Dose rate measuring range           | 0.15 mGy/s - 0.05 Gy/s                                        |                 |
| Dose length measuring range         | 0.15 mGycm - 150 Gycm                                         |                 |
| Dose rate length range              | 1.5 mGycm/s - 0.5 Gycm/s                                      |                 |
| Uncertainty                         | < 5 %                                                         |                 |
| Calibration reference               | RQT 9: in the chamber axis at the center of the cavity volume |                 |
| Beam incidence direction            | the central beam axis is perpendicular to the chamber axis    |                 |

## IBA Dosimetry

Independent & Integrated Quality Assurance  
Europe, Middle East, Africa | +49-9128-607-38  
North America and Latin America | +1 786 288 0369  
Asia Pacific | +65 3129 2472  
dosimetry-info@iba-group.com | iba-dosimetry.com  
MI-TF-E-10XF-3CT-Rev.1-0722 | © IBA 2022 | All rights reserved.

