<table>
<thead>
<tr>
<th>Item Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>300-645-BNC-M</td>
<td>* PTW Model 30002 / 30011 - 0.6cc Graphite Farmer Chamber</td>
</tr>
</tbody>
</table>
**IONIZATION CHAMBER TYPE 30002**

Graphite „Farmer“ Chamber 0.6 cm$^3$

**Description**

The graphite 0.6 cm$^3$ ionization chamber type 30002 is the chamber for absolute dosimetry for use with therapy dosimeters where a completely graphite-built chamber is required. This chamber is of delicate construction since it is equipped with a graphite cap and a graphite central electrode. It should be handled with care. The chamber is fully guarded up to the measuring volume. The outer dimensions are fully compatible with the Farmer chambers of other manufacturers.

**Technical data**

- **Volume**: 0.6 cm$^3$
- **Response**: $2 \times 10^3$ C/Gy
- **Leakage**: $4 \times 10^{-10}$ A
- **Polarizing voltage**: max. 500 V
- **Cable leakage**: $10^9$ C/(Gy · cm)
- **Wall material**: Graphite
- **Wall density**: 1.85 g/cm$^3$
- **Wall thickness**: 0.45 mm
- **Area density**: 83.3 mg/cm$^2$
- **Electrode**: Graphite; 1 mm Ø; 20.7 mm long
- **Range of temperature**: +10 °C ... +40 °C
- **Range of rel. humidity**: 20 % ... 75 %
- **Ion collection time**: 300 V: 0.18 ms, 400 V: 0.14 ms, 500 V: 0.11 ms

**Saturation behaviour**

<table>
<thead>
<tr>
<th>Polarizing voltage</th>
<th>99.0 % saturation</th>
<th>99.5 % saturation</th>
</tr>
</thead>
<tbody>
<tr>
<td>300 V</td>
<td>5.3 Gy/s</td>
<td>2.3 Gy/s</td>
</tr>
<tr>
<td>400 V</td>
<td>9.4 Gy/s</td>
<td>4.6 Gy/s</td>
</tr>
<tr>
<td>500 V</td>
<td>14.5 Gy/s</td>
<td>6.5 Gy/s</td>
</tr>
</tbody>
</table>

- Guard ring up to measuring volume
- Suitable for use in solid state phantoms
- Guard ring at potential of the collecting electrode. Touchable parts free of high voltage
- High voltage to be connected only with active current-limiting device ($I_{max} < 0.5$ mA)
- Open measuring volume, without check device air density correction is necessary
- Lengthening cable up to 100 m available
IONIZATION CHAMBER TYPE 30002

Graphite ,,Farmer“ Chamber 0.6 cm³

Design

Energy Dependence

Directional Dependence

Reading / Dose [%]

PMMA