

dental CBCT QA Phantom (EXPERT)

Measure imaging performance of dental Cone-Beam CT equipment. Perform acceptance and constancy tests with a compact easy-to-use phantom.

The QRM-dental CBCT QA Phantom (EXPERT) is designed to evaluate the imaging performance of Cone-Beam CT devices according to international guidelines. (e.g. dental CBCT, Digital Volume Tomography)

The phantom offers the possibility to assess image quality metrics in accordance with national and international standards. (e.g. DIN IEC 61223-3-5 or DIN IEC 61223-2-6)

The following image quality metrics can be obtained:

- CT value uniformity
- CT value accuracy
- Image noise
- Contrast-to-noise ratio
- Spatial resolution (3D MTF, sphere)
- Spatial resolution (visual, hole pattern)
- Artifact behavior metal / bone / soft tissue

5 defined sections:

- Section I** 4 inserts in water: air, -3% contrast, +3% contrast and bone arranged concentrically
- Section II** Centrally placed high attenuating sphere
- Section III** Homogenous water-equivalent slice
- Section IV** Acrylic resolution pattern
- Section V** Titanium rods and tissue-equivalent inserts

Technical Specifications:

Diameter (xy) : 100 mm

Height (z) : 100 mm

Body : CTWater®

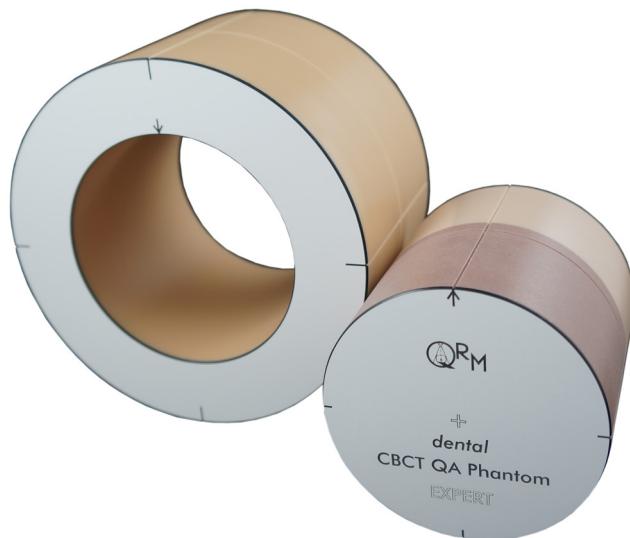
Sphere : Al, Ø 12 mm

Inserts : Ø 13 mm, L 17.5 mm
Ø 9 mm, L 17.5 mm

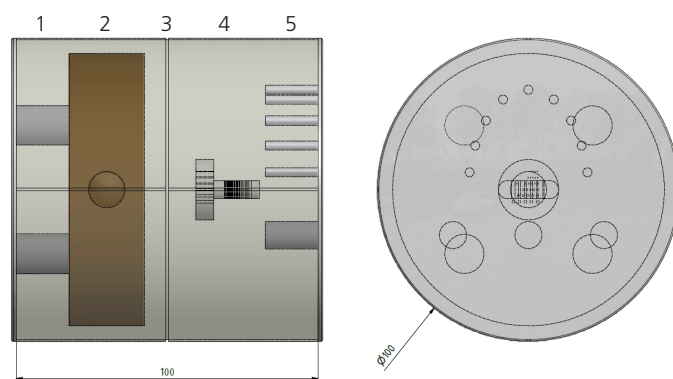
Hole pattern : 0.3 to 1.0 mm h°/v°

Extension ring : Ø 160 mm

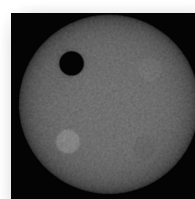
Please ask for more information:
qrmphantoms@ptwdosimetry.com



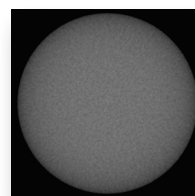
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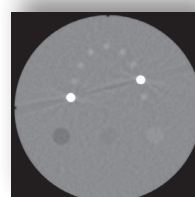
cross sections of phantom



1 SCALING
bone
water
+3%; -3%



3 NOISE
noise
homogeneity

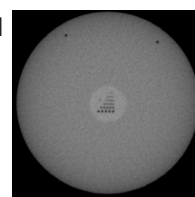


5 ARTEFACTS
-8%; 0%; +8%
tooth sector (HA)
titanium rods

2 MTF
12 mm sphere



4 RESOLUTION
hole pattern
0.3 - 1.0 mm



in-plane reconstruction of X-ray CBCT scans