

# DXA-Spine-QA-Phantom

## A Phantom for Quality Assurance of DXA Bone Mineral Density Measurements of the Spine.

Designed on the basis of the well established European Spine Phantom (ESP) the QRM-DXA-Spine-QA-Phantom incorporates a simplified and more cost effective design of the vertebrae specifically developed for quality assurance (QA) and stability monitoring of Dual X-ray Absorptiometry (DXA) devices.

With the QRM-DXA-Spine-QA-Phantom, areal Bone Mineral Density (aBMD) can be easily determined in AP and lateral projections.

### Benefits

- ✓ bone mineral content (BMC) in g
- ✓ bone mineral areal density (BMD) in  $g/cm^2$  for DXA AP and lateral projections
- ✓ projected area (A) in  $cm^2$

### Specification

Phantom body ..... tissue-equivalent plastic

at 120 kV (CT)

L1- L3 ..... 3 fully homogeneous

Phantom body ..... 260 mm x 180 mm ( $\pm 2mm$ )

Phantom weight ..... 4300 g

### Version 1

3 identical vertebrae:

aBMD (AP) .....  $1.0 g/cm^2$

### Version 2

3 different vertebrae:

aBMD (AP) .....  $0.5, 1.0$  and  $1.5 g/cm^2$

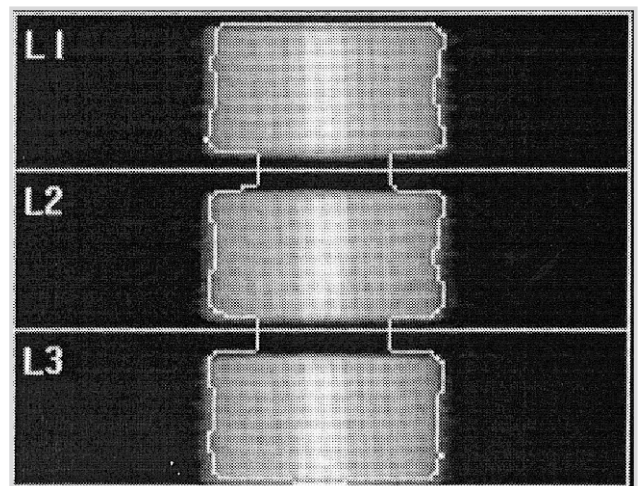
Accuracy .....  $\pm 3\%$  of specified values

$\pm 1\%$  of certified values

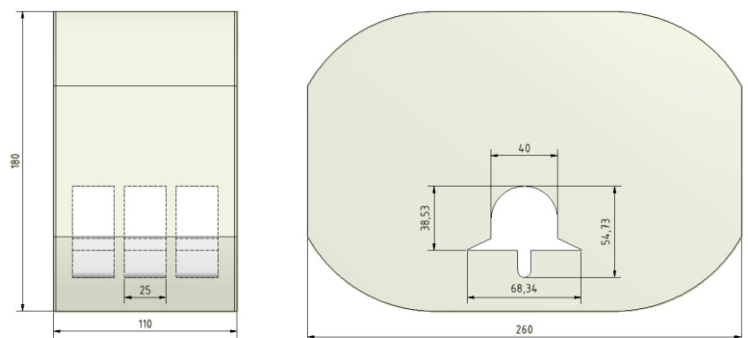
Different HA concentrations for the vertebrae



*The QRM-DXA-Spine-QA-Phantom*



*DXA AP scan of the phantom (3 identical vertebrae)*



*Measures of the QRM-DXA-Spine-QA-Phantom*