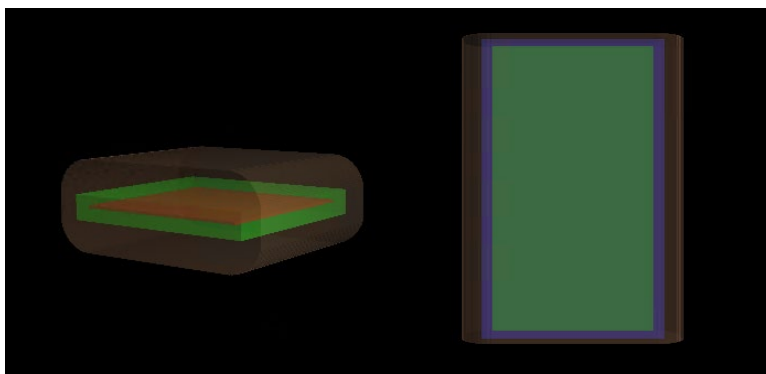


Virtual CT MatriXX RESOLUTION™ in miniPhantom R Quick Start Guide

How to setup your Virtual MatriXX RESOLUTION miniPhantom R CT Dataset in your Treatment Planning System.

What you get:

1. Virtual CT dataset inclusive RT Structure file for MatriXX Resolution in miniPhantom R for **standard configuration**.
2. Virtual CT dataset inclusive RT Structure file for MatriXX Resolution in miniPhantom R for **combined fields configuration**.



3D rendering of the single (left) and extended (right) virtual CT of the MatriXX Resolution in miniPhantom R. The indicated volumes are the miniPhantom R (brown), the MatriXX Resolution (green), and the detector layer (orange).

Characteristics:

- 2 homogeneous volumes: MatriXX Resolution in miniPhantom R
- 2 mm CT slice thickness, pixel resolution 0.389 mm
- Isocenter at DICOM origin (0,0,0)

Preparation of the virtual CT in the TPS

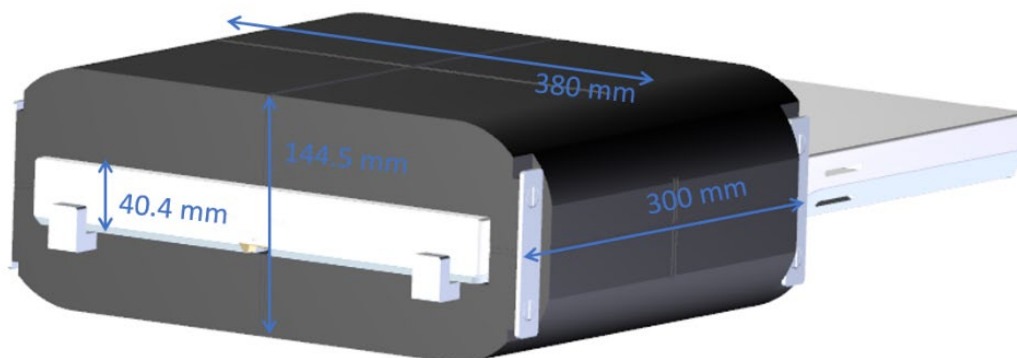
- Download the Virtual CT scan of the MatriXX Resolution in miniPhantom R, and the corresponding structure file.
- Import the CT scan and the structure file into the TPS:
 - Verify that the import contains 151 CT slices for the standard configuration, and 261 CT slices for the extended one
 - Position the isocenter at the DICOM origin (0,0,0)
 - Check that the CT scan slice thickness is 2 mm
 - Three structures should be contoured: miniPhantom R, MatriXX Resolution, and Detector
- Select the HU display tool in your TPS and verify the following assignments:
 - miniPhantom R and MatriXX Resolution body (RW3 and ABS): 45 HU
 - MatriXX Resolution detector layer (water): 0 HU
- Verify the HU against the densities of the miniPhantom R system using your calibration curve. When needed override to the corresponding densities.

Possible density overrides:

- miniPhantomR (RW3): 1.045 g/cm³
- MatriXX RESOLUTION (ABS): 1.04 g/cm³
- Detector area (water): 1.00 g/cm³

Cross Calibration with TPS

- Verify the dimensions of the miniPhantom R and MatriXX Resolution in the virtual CT.



- In the TPS, create a static reference field (recommended: 10 x 10 cm² open field, 100MU) at 0° gantry and calculate the dose using the grid size used clinically.
- Find the isocenter plane and export the dose plane or export the 3D-dose and then select the evaluation plane in myQA Patient.

Dimension	Size (mm)
Length miniPhantom R (extended)	300 (520)
Width miniPhantom R	380
Height miniPhantom R	144.5
Height MatriXX Resolution body	40.4
Height MatriXX Resolution detector	4.6
Build-up from isocenter to the top of miniPhantom R	73.4

IBA Dosimetry assumes no responsibility or liability for any errors or omissions in the content of this document. The information contained in this document is provided on an "as is" basis to omit CT artefacts during dose calculation and avoid additional contouring. The usage of the MatriXX Resolution in miniPhantom R virtual CT scan shall be validated by the user on his own responsibility even though IBA has cautiously validated.

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Please contact IBA Dosimetry Help Center (helpcenter.iba-dosimetry.com) with any further questions:

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