QRM A PTW COMPANY

D100

QRM-D100-3DSR

D100 - 3D Spatial Resolution Insert

The D100-3DSR provides the opportunity to optimize collimation, pitch value and image reconstruction to achieve isotropic spatial resolution in all types of clinical applications.

The high-contrast spatial resolution D100 insert visualizes the impact of collimation, slice width, pitch and image reconstruction algorithms.
The test pattern is a series of drilled holes with varying diameter and spacing from 4.0 mm down to 0.4 mm (table 1) allowing for an order of magnitude in spatial frequency.

With spiral/helical CT, evaluating both axial images and coronal reformations, spatial 3D resolution can be tested by a single scan.
The D100-3DSR insert fits excellent in our standard D100 phantoms as QRM-Thorax or QRM-Abdomen.

The tableon the right summarizes the geometrical properties of the test pattern: diameter of cylindrical drill holes, spacing (space between two drilled holes), and resulting spatial frequency in p/cm. Each line of the pattern consists of five holes. In order to ease localization, checkholes are placed in the vicinity of two lines.

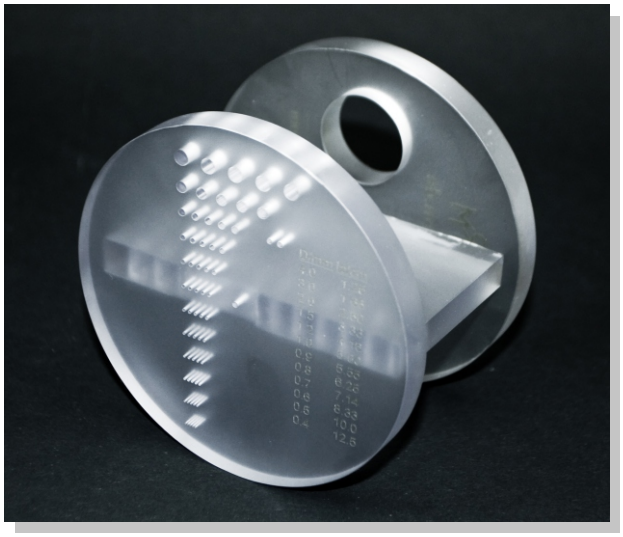
Specifications

Two plates with test patterns perpendicular aligned:

- Ø 100 mm x 10 mm (xy)
- 50 mm x 100 mm x 10 mm (z)

Between 70 and 100 HU at 120 kV.

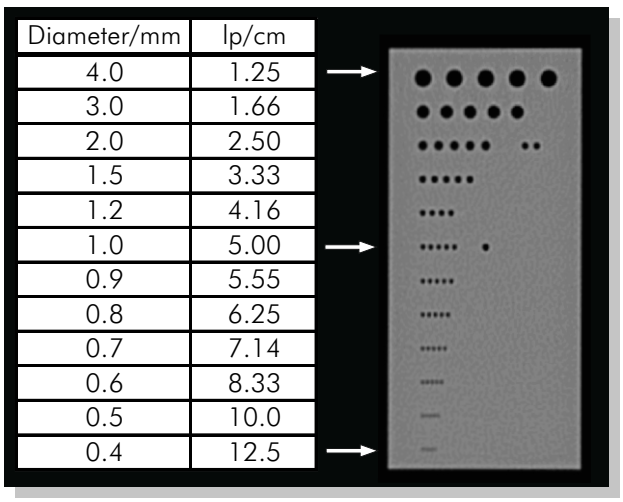
Overall phantom diameter ..... 100 mm
Overall phantom length ..... 70 mm



D100-3DSR

D100-3DSR in QRM-Thorax

Diameter/mm	lp/cm
4.0	1.25
3.0	1.66
2.0	2.50
1.5	3.33
1.2	4.16
1.0	5.00
0.9	5.55
0.8	6.25
0.7	7.14
0.6	8.33
0.5	10.0
0.4	12.5



Geometrical properties of patterns

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