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 table on 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
Phantom weight ........................ 220 g