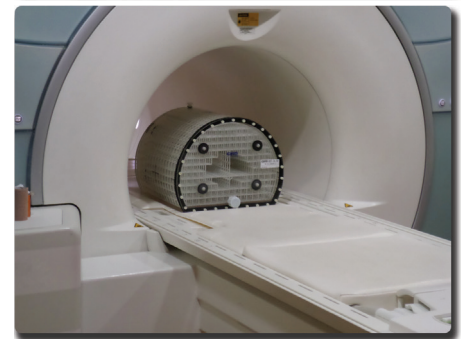
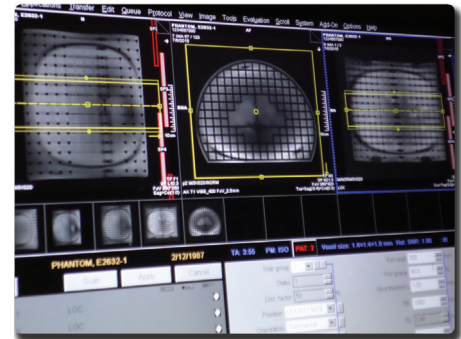
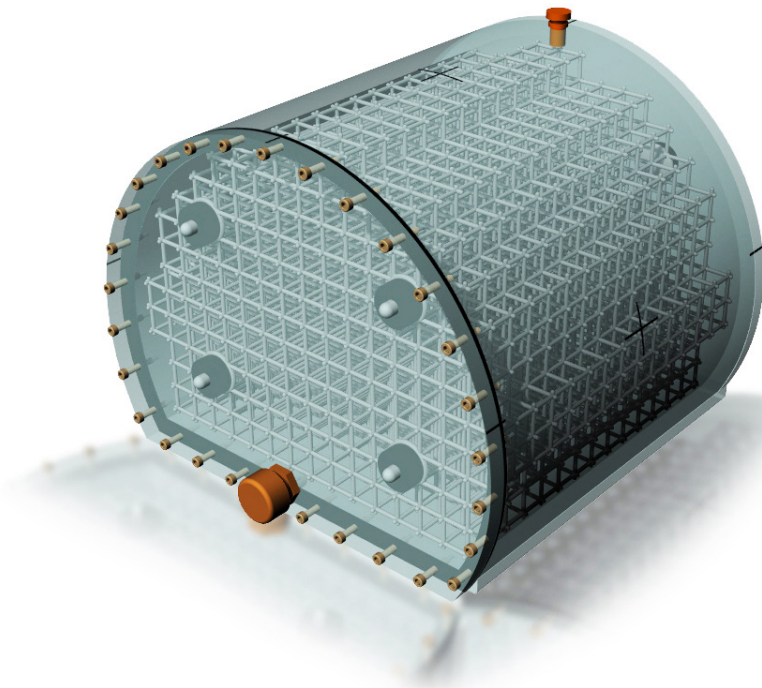


# Large Field MRI Distortion Phantom

Model 604



## ASSESS IMAGE DISTORTION IN LARGE-BORE MRI

The Large Field MRI Distortion Phantom, Model 604 is designed for assessment of magnetic resonance imaging distortion caused mainly by the nonlinearity of the magnetic gradients. It can also help quantify MRI image distortion due to chemical shifts and susceptibility due to density differences common in Diagnostic and RT treatment planning. The phantom's 3D grid of large size and equal spacing in all three orthogonal dimensions makes it suitable for distortion QA of large bore MRI and CT scanning for distortion-free imaging. The phantom can be filled with various signal-generating solutions for use in magnetic resonance imaging. Contrast of the grid-liquid interface varies under computed tomography depending on the liquid used for generating MRI background signal. When empty, the grid-air interface provides good contrast under CT. The phantom images well with all CT techniques and MRI sequences tested to date, including T1 weighted, T2 weighted, 3D Time of Flight, MPRAGE and CISS sequences.

The phantom is comprised of a leak-proof PMMA cylinder and measures 330 mm in diameter by 300 mm long. The entire volume is filled with a unique orthogonal 3D grid of

3 mm diameter rods spaced 20 mm apart to provide complete geometric data throughout the imaging volume. The phantom is marked for ease of alignment to positioning lasers and is designed for use with both curved and flat gantry tables.

Image Analysis Software is under development to enable rapid assessment of distortion throughout the field of view.

### Features

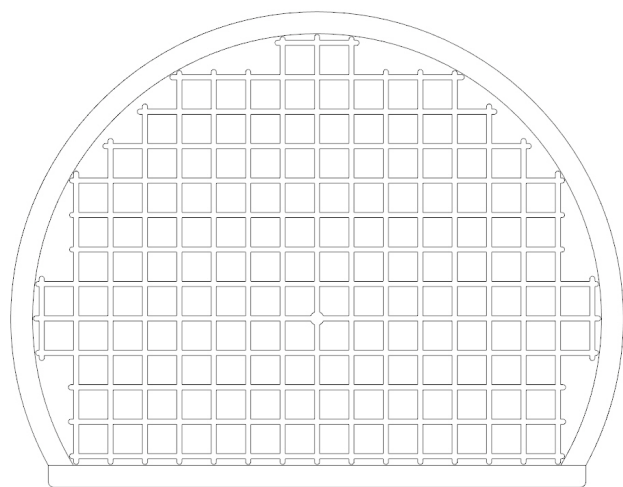
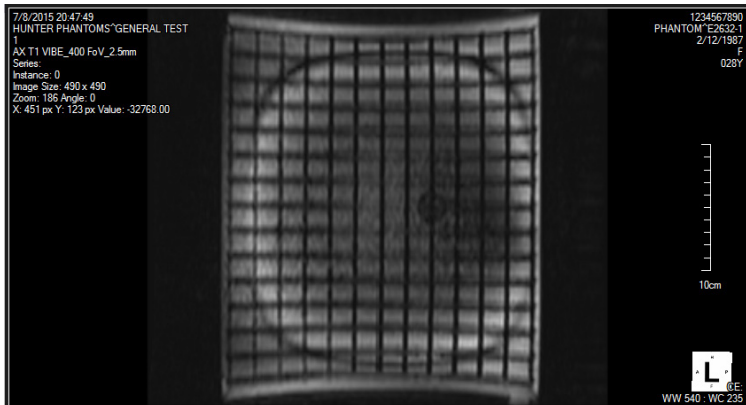
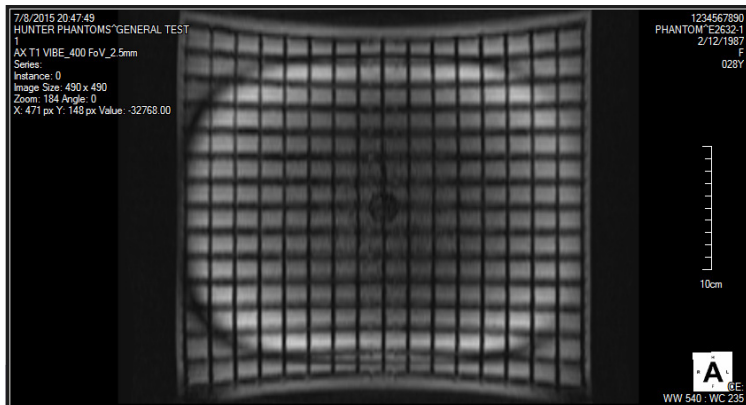
- Large FOV distortion evaluation
- Unique orthogonal grid with equal 3D spacing
- Leak-proof design
- Sub-millimeter precision
- Easy integration and laser alignment
- Ground truth files for grid available in various digital formats

900 Asbury Ave • Norfolk, Virginia 23513 • USA  
Tel: 800.617.1177 • 757.855.2765 • Fax: 757.857.0523

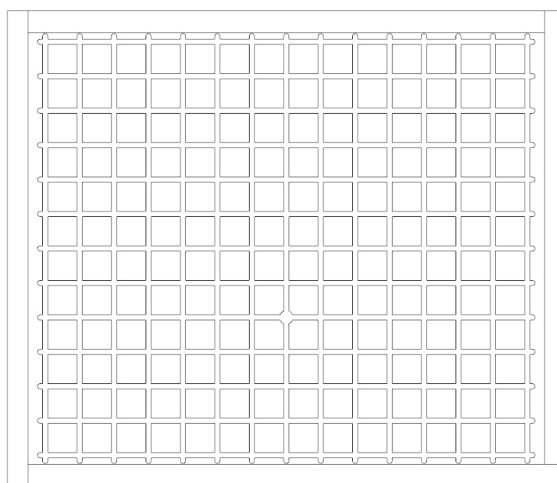
[WWW.CIRSINC.COM](http://WWW.CIRSINC.COM)

**CIRS**

Tissue Simulation & Phantom Technology



Model 604 Axial Cross-Section



Model 604 Lateral Cross-Section

SPECIFICATIONS

OVERALL DIMENSIONS	300 mm (L), 276 mm (H) , 330 mm (DIA)
WEIGHT (DRY)	17 lb. (7.7 kg)
WEIGHT (FILLED)	62 lb. (28.1 kg)
MATERIAL	PMMA

MODEL 604 INCLUDES

QTY	COMPONENT DESCRIPTION
1	Large Field MRI Distortion Phantom
1	3/4" garden hose filling tube (USA)
1	User Guide
1	Foam-Lined Carry Case
-	48-Month Warranty

