

# Invenia ABUS Phantom

Performance measures:

- Axial Measurement Accuracy
- Lateral Measurement Accuracy
- Axial and Lateral Resolution
- Contrast Resolution
- SNR: Signal to Noise Ratio



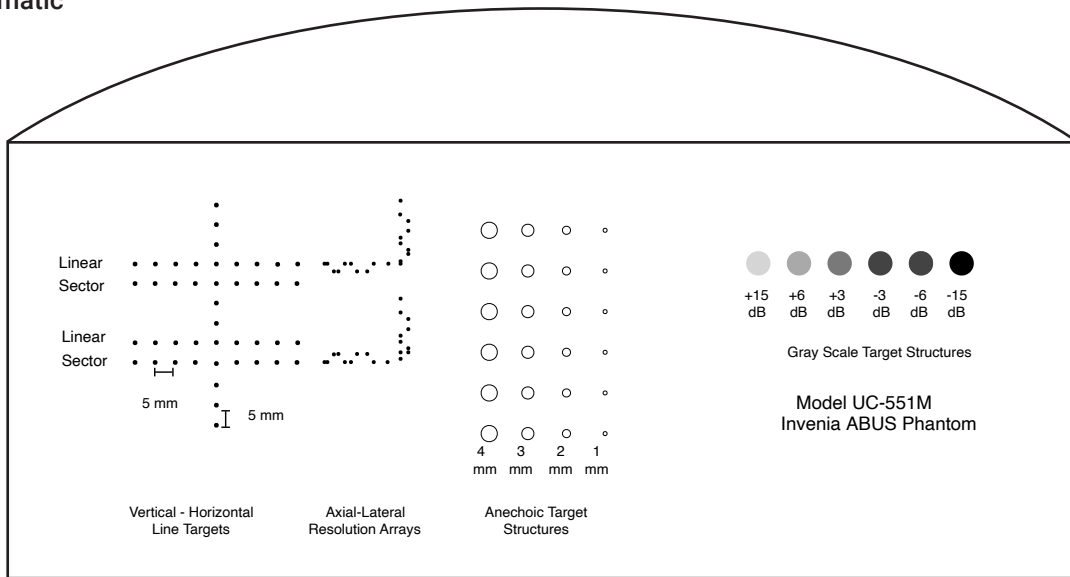
## Designed for Use with GE's Invenia ABUS Scanner

The CIRS Model ATS UC-551M, a modified version of the ATS Model 551 Small Parts Phantom, is designed for use with GE's Invenia ABUS scanner. The scan surface has a 17.5-inch radius of curvature, which matches the shape of the Invenia ABUS scan head.

The rubber-based tissue mimicking material has a sound velocity of 1450 m/sec and an attenuation of 0.5dB/cm/MHz at room temperature (23°C). To ensure measurement accuracy, CIRS incorporates a thermometer strip affixed to the outside surface of the phantom housing.

The phantom is packaged in a carrying case providing added protection during transporting and storage. GE-recommended QA test procedures for the Invenia ABUS and Invenia ABUS 2.0 scanners are provided in separate documents.

## Target Schematic



### Specifications

<b>Dimensions</b>	28.5 cm x 12 x 10.6 cm (11" x 5" x 4")
<b>Weight</b>	8 lbs (3.6 kg)
<b>Housing Material</b>	PVC
<b>Scan Surface Dimensions</b>	26.7 cm x 10 cm curved radius of 44.5 cm (17.5")
<b>Tissue-Mimicking Material</b>	Urethane Rubber
<b>Urethane Properties</b>	Freezing Point: < -40° C Melting Point: Above 100° C Speed of Sound: 1450 m/s at 23° Attenuation: 0.5 dB/cm/MHz (measured at 3.5 MHz)
<b>Line Targets</b>	Material: Monofilament nylon

### Items Included with CIRS Model ATS UC-551M

Quantity	Description
1	Invenia ABUS Phantom
1	Carry Case
1	User Guide
-	GE QA Test Procedures
-	Certificate of Compliance

### Vertical Distance Group (12 targets)

Depth range 0.5 - 5 cm

Spacing 0.5 cm

### Horizontal Distance Group (2 Groups)

Depths Linear: 2 & 4cm  
Sector: 2.5 & 4.5 cm

Spacing 0.5 cm

### Axial and Lateral Resolution Groups (2 targets)

Target sets per depth 10

Spacing 0.25, 0.5, 1, 2, 3 mm

Depth 2, 4, 5 cm

### Anechoic Stepped Cylinders (4 groups)

Type Non-echogenic, cylindrical

Number of targets 6

Diameter 1, 2, 3, 4 mm

Depth 1 - 6 cm

Spacing 1 cm center to center

### Grayscale Targets (6 targets)

Type Echogenic, cylindrical

Diameters 6 mm

Spacing 1 cm center to center

Depth 4 cm

Contrast (dB) -15, -6, -3, +3, +6, +15