

Multi-Purpose & Endoscopic Phantom

Performance measures:

- Uniformity
- Depth of Penetration
- Beam Profile/ Focal Zone/ Lateral Response Width
- Vertical Measurement Calibration
- Horizontal Measurement Calibration Linear & Sector
- Axial and Lateral Resolution
- Contrast Resolution
- Grayscale Contrast Sensitivity
- Dead Zone Assessment



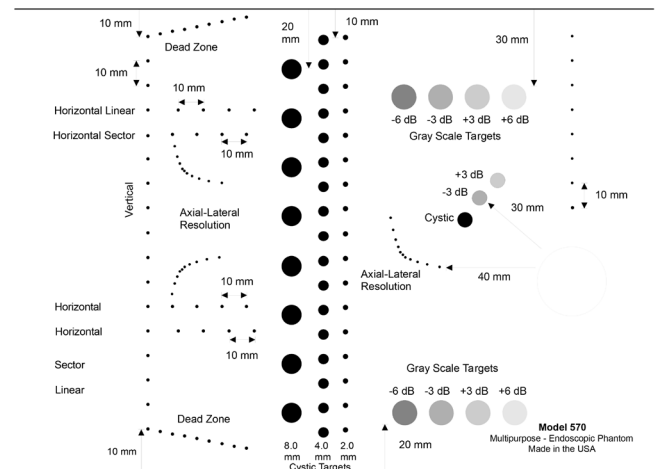
Evaluate Full Range of Clinical Imaging Frequencies

The CIRS Model ATS 570 Multi-Purpose & Endoscopic Phantom is an easy, comprehensive means of evaluating imaging systems over the full range of clinical imaging frequencies (2 MHz to 18 MHz).

The phantom is designed with a combination of monofilament line targets for distance measurements and tissue mimicking target structures of varying sizes and contrasts. Due to the acoustic similarity of the background material and the target structures, artifacts caused by distortion, shadowing and enhancement have been eliminated. Four gray scale targets ranging in contrast from +6 to -3 dB are provided to evaluate the system's displayed dynamic range and gray scale processing performance.

The Model 570 offers a new and improved scan surface design to easily accommodate linear, sector, endoscopic probes and mechanical sector probes such as used for rectal scanning. .

Target Schematic



Specifications

Dimensions	27 cm x 21.5 x 9.6 cm (11" x 8" x 4")
Weight	10 lbs (4.5 kg)
Housing Material	PVC
Scan Surfaces	2
Scan Wells	1 cm
Tissue-Mimicking Material	Urethane Rubber
Urethane Properties	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)
Line Targets	Material: Monofilament nylon Diameter: 0.12 mm
Endocavity	Opening: Ø 26.9mm x 71mm deep Slots: 12.7 mm; Ø 0.5" x 10 mm deep (from bottom of the curve to the flat surface)

Items Included with CIRS Model ATS 570

Quantity	Description
1	Multi-Purpose & Endoscopic Phantom
1	User Guide
-	Certificate of Compliance

Vertical Distance Group (B1: 17 targets; B2: 8 targets)

Depth range B1: 10 - 160 mm
B2: 10 - 80 mm

Spacing B1 & B2: 10 mm

Horizontal Distance Group (2 groups & 10 targets)

Depths 5 cm

Spacing 2 cm

Dead Zone Group (9 targets)

Depth range 20 - 10 mm

Spacing 1 mm

Axial and Lateral Resolution Groups (11 targets)

Lateral displacement 1 mm

Spacing 5, 4, 3, 2, 1 mm

Depth 7, 11, 4, 16 cm

Contrast Targets (Cysts)

Type Non-echogenic, cylindrical

Column 1 8 mm targets, Qty 8; spaced at 2 cm intervals

Column 2 4 mm targets, Qty 17; spaced at 1 cm intervals

Column 3 2 mm targets, Qty 17; spaced at 1 cm intervals

Grayscale Targets (3 sets)

Type Echogenic, cylindrical

Set 1 (4 targets)

Contrast Levels +6, +3, -3, -6 dB

Diameter 10 mm

Depth from top of scan surface 30 mm

Set 2 (4 targets)

Contrast Levels +6, +3, -3, -6 dB

Diameter 10 mm

Depth from bottom of scan surface 20 mm

Set 3 (2 targets)

Contrast Levels +3, -3 dB

Diameter 6 mm

Distance from Endocavity opening 30 mm