

# 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



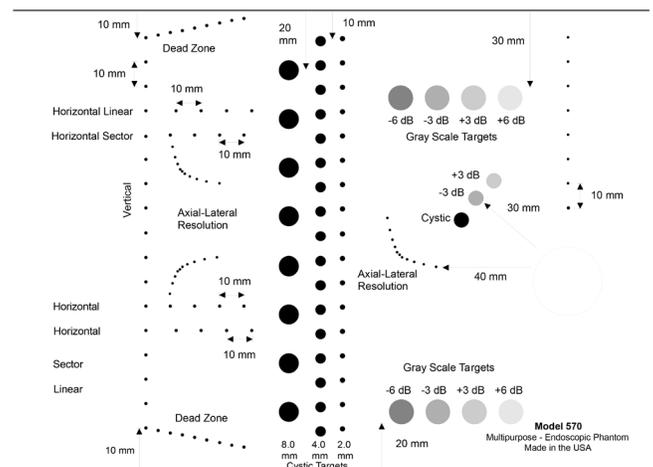
## Evaluate Full Range of Clinical Imaging Frequencies

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 those used for rectal scanning.

## Target Schematic



## Specifications

<b>Dimensions</b>	27 cm x 21.5 x 9.6 cm (11" x 8" x 4")
<b>Weight</b>	10 lbs (4.5 kg)
<b>Housing Material</b>	PVC
<b>Scan Surfaces</b>	2
<b>Scan Wells</b>	1 cm
<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 Diameter: 0.12 mm
<b>Endocavity</b>	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
-	5-Year Warranty
-	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