

CONTRAST RESOLUTION PHANTOMS MODELS 512A & 512B



The Models 512A and 512B Contrast Resolution phantoms are composed of a hydrogel-based tissue-mimicking material. The phantoms are contained in an acrylic housing to provide strength and permanence. A soft polyurethane film with an impedance closely matching human skin is used, thereby allowing easy transmission of the ultrasound beam into the phantom. These models are provided with a built-in scanning well to permit the use of water or a low viscosity gel as a coupling medium.

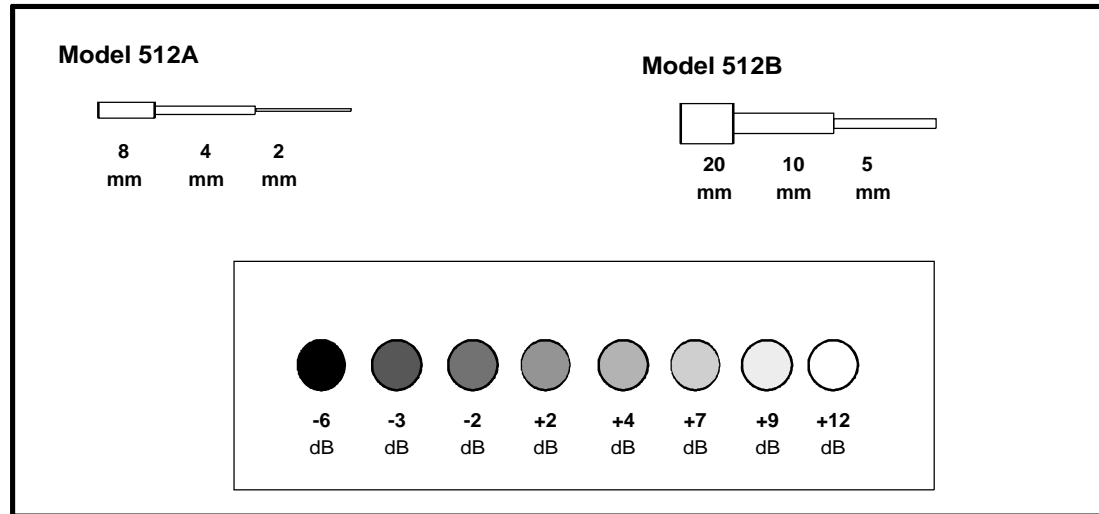
The Contrast Resolution phantoms are designed to evaluate an imaging system's gray scale processing and displayed dynamic range. Both models contain three target sizes at eight levels of contrast, ranging from -3 to +12 dB/cm/MHz relative to the background material.

The difference between the models is the size of the targets. The Model 512A contains 2, 4 and 8 mm cylindrical targets. Whereas, the Model 512B contains cylindrical targets of 5, 10, 20 mm.

Test Performed

- Functional Resolution
- Definition and fill-in
- Gray Scale
- Displayed Dynamic Range

Contrast Resolution Phantoms



Specifications

General

Overall dimensions:	30.5 x 14.5 x 13.5 cm*
Weight:	6.4 Kg*
Housing Material:	Acrylic
Wall Thickness:	1.0 cm*
Scanning Material:	Polyurethane membrane
Dimensions:	28.5 x 12.5 cm*

Tissue Mimicking Material

Type:	Hydrogel
Speed of Sound:	1540 m/s at 23° C
Attenuation (Background):	0.5 dB/cm/MHz
Freezing Point:	0° C
Melting Point:	49° C

Gray Scale Targets

Type:	Cylindrical, echogenic
Total number of targets:	24
Target groups:	3
Diameters:	
Model 512A:	2.0, 4.0, 8.0 mm \pm 5.0%.
Model 512B:	5.0, 10.0, 20.0 mm \pm 5.0%.
Horizontal spacing:	3.0 cm (center to center) \pm 0.1 mm
Depth:	7.5 cm \pm 1.0 mm.
Contrast relative to the background material:	-3 to +12 dB

Warranty

1 years

* Nominal dimensions

ATS Laboratories, Inc.

404 Knowlton Street • Bridgeport, CT 06608 • Tel (203) 579-2700 • Fax (203) 333-2681