

Ultrasound Phantoms for 2D & 3D Evaluation

Models 055 & 055A



Designed for Compliance with AIUM Standards

- Perform spatial measurement system checks according to published AIUM standard
- Ensure over ten years of reliable use through reinspection and repair services

Includes best in industry four-year warranty

The CIRS Model 055 3D Ultrasound Calibration Phantom and 055A 3D Wire Test Object, may be used to perform the following tests of the accuracy of spatial measurements, which is especially for 3-D and 4-D ultrasound systems equipped with spatial encoding algorithms.

In the Model 055, these tests are performed with the aid of three volumetric targets, while in the Model 055A they are performed using wire targets. The test methodology is described in the AIUM publication "Standard Methods for Calibration of 2-Dimensional and 3-Dimensional Spatial Measurement Capabilities of Pulse Echo Ultrasound Imaging Systems," which is provided with the phantoms. The phantoms may be purchased separately or as part of a set, and may also be used to perform Image uniformity and depth of penetration tests.

Both phantoms are made of CIRS, proprietary Zerdine® hydrogel polymer, which has been formulated to provide tissue mimicking properties including compatibility with

harmonic imaging. To maximize phantom lifetime, this gel is contained in a rugged ABS plastic housing with a Saran-based laminate membrane.

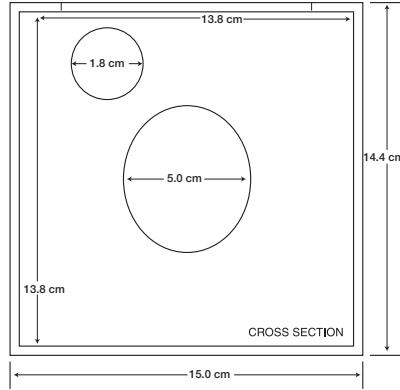
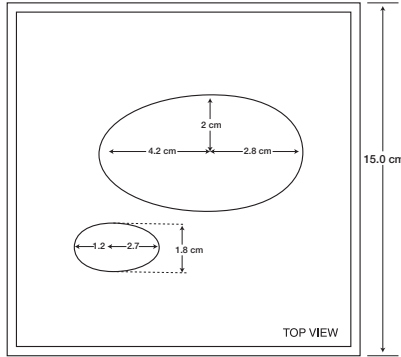
CIRS ultrasound QA phantoms come standard with a robust housing, carry case, 48-month warranty, and user guide.

Key Tests with Models 055 & 055A

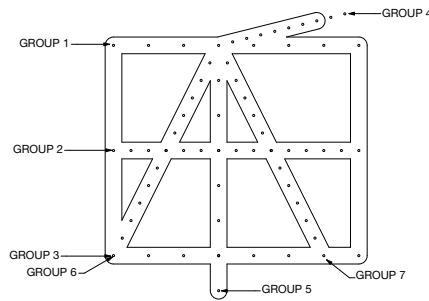
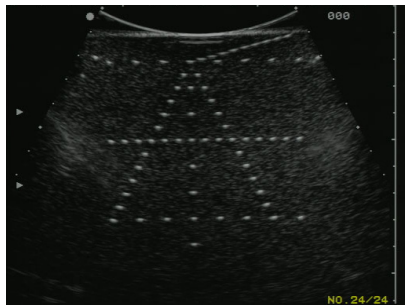
- Linear Distance
- Perimeter
- Area
- Surface Area
- Volume

CIRS

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Model 055



Model 055A

SPECIFICATIONS

ZERDINE® PROPERTIES (BOTH PHANTOMS)

Description: Solid elastic water-based polymer
 Freezing point: 0° C
 Melting point: Above 100° C
 Speed of Sound: 1540 m/s
 Other: Compatible with harmonic imaging

MODEL 055

CONTAINER
 Dimensions: 15 x 15 x 15 cm
 Material: ABS Housing

SCAN WINDOWS
 Membranes: Saran-based laminate
 Dimensions (Top): 12 cm x 12 cm
 Dimensions (Side): 11 cm x 11 cm

SMALL VOLUME
 Nominal Volume: 6.9 cc
 Depth of target: 2.5 cm from top scanning surface
 2 cm from side scanning surface
 Appearance: Hyperechoic

LARGE VOLUME
 Nominal Volume: 75 cc
 Depth of target: 6 cm from top scanning surface
 6 cm from side scanning surface
 Appearance: Hyperechoic

MODEL 055 INCLUDES
 3D Ultrasound Calibration Phantom
 Carry Case
 Certificate of Compliance
 QA Worksheet
 48-month Warranty

MODEL 055A

CONTAINER
 Dimensions: 13 x 18 x 11 cm
 Material: ABS Housing

SCAN WINDOW
 Scanning Membrane: Saran-based laminate
 Dimensions: 14 cm x 9 cm

WIRE TARGETS
 Material: 0.1 mm Nylon Monofilament
 Positions: See table below

GROUP	STARTING POSITION (X, Y)	SUBSEQUENT WIRE MOVES
1	(0 cm, 0 cm)	$\Delta x= 1 \text{ cm}, \Delta y= 0 \text{ cm}$
2	(0 cm, 4 cm)	$\Delta x= 0.5 \text{ cm}, \Delta y= 0 \text{ cm}$
3	(0 cm, 7 cm)	$\Delta x= 1 \text{ cm}, \Delta y= 0 \text{ cm}$
4	(3 cm, 0 cm)	$\Delta x= 0.4 \text{ cm}, \Delta y= -0.1 \text{ cm}$
5	(3 cm, 0 cm)	$\Delta x= 0 \text{ cm}, \Delta y= 1 \text{ cm}$
6	(3 cm, 0 cm)	$\Delta x= -0.25 \text{ cm}, \Delta y= 0.5 \text{ cm}$
7	(3 cm, 0 cm)	$\Delta x= 0.25 \text{ cm}, \Delta y= 0.5 \text{ cm}$

MODEL 055A INCLUDES
 3D Wire Test Object Phantom
 Removable water well
 Removable endocavity cover
 Removable storage cover
 Carry Case
 Certificate of Compliance
 48-month Warranty

