

# Multi-Purpose, Multi-Tissue Ultrasound Phantom

Model 040GSE



## The Standard for Ultrasound Quality Assurance

- Unique dual attenuation design allows testing on low frequency abdominal probes up to 5 MHz and high frequency probes to 15 MHz and higher
- Detachable water wells allow for testing curvilinear and endocavity probes
- Only general purpose QA phantom on market with elasticity targets
- Ensure over ten years of reliable use through reinspection and repair services

**Includes best in industry four-year warranty**

**ZERDINE® Inside**  
A registered trademark of CIRS

The CIRS Model 040GSE Multi-Purpose, Multi-Tissue Ultrasound Phantom is the most complete solution available for performance and quality assurance testing. Its dual frequency design and detachable water wells allows testing of most transducer shapes – including curvilinear and endocavity – and frequencies. It is also the only QA phantom on the market that provides both elasticity targets and all the standard B-mode imaging test objects.

The phantom is 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 Model 040GSE

- Uniformity
- Depth of Penetration
- Beam Profile/ Focal Zone/ Lateral Response Width
- Vertical Distance Measurement
- Horizontal Distance Measurement
- Axial and Lateral Resolution
- Elevational Resolution
- Contrast Resolution
- Grayscale Contrast Sensitivity
- Elasticity Sensitivity
- Dead Zone Assessment

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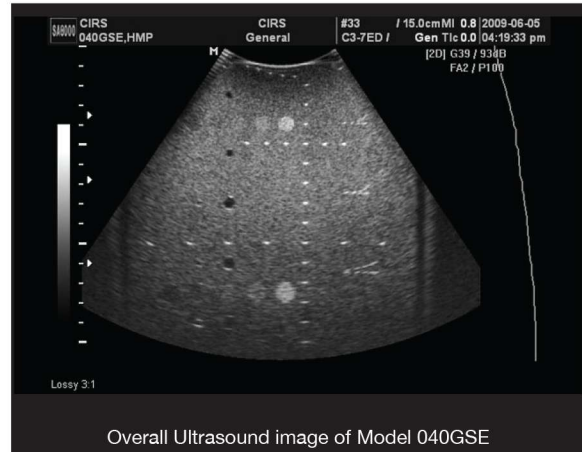
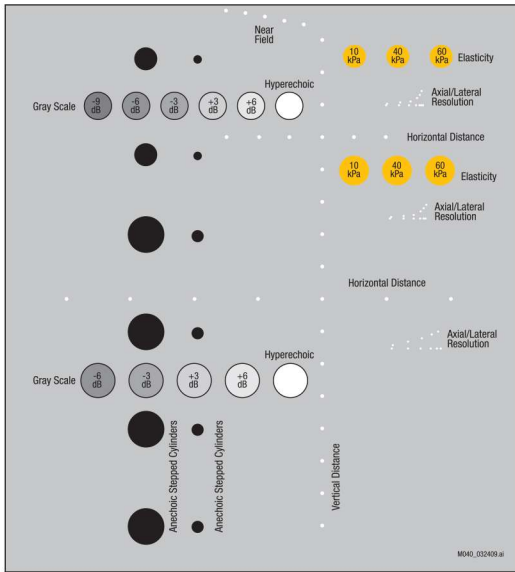
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MULTI-PURPOSE MULTI- TISSUE ULTRASOUND PHANTOM

Model 040GSE



Overall Ultrasound image of Model 040GSE



Phantom comes with detachable scanning wells to accommodate large sector probes and small endocavity probes. It is packaged in a foam lined carry case.

SPECIFICATIONS

<b>DIMENSIONS:</b>	17.8 cm x 12.7 cm x 20.3 cm (7" x 5" x 8")
<b>PHANTOM WEIGHT:</b>	11 lbs. (4.1 kg)
<b>HOUSING MATERIALS:</b>	ABS Plastic
<b>MEMBRANE</b>	Saran-based laminate
<b>TISSUE-MIMICKING MATERIAL</b>	Zerdine® solid elastic hydrogel

ZERDINE® PROPERTIES

Freezing point: 0° C  
 Melting point: Above 100° C  
 Speed of Sound: 1540 m/s  
 Other: Compatible with harmonic imaging

VERTICAL DISTANCE GROUP

Number of targets: 16  
 Wire diameter: 100-micron, nylon monofilament  
 Depth range: 1 to 16 cm  
 Spacing: 10 mm

HORIZONTAL DISTANCE GROUP

Number of groups: 2  
 Wire: 100-micron, nylon monofilament  
 Depths: 4 & 9 cm  
 Number of Targets: 6 & 7 respectively  
 Spacing: 10 & 20 mm respectively

NEAR FIELD GROUP

Number of targets: 5  
 Wire Diameter: 100 microns  
 Depth range: 1 to 5 mm  
 Distance b/w Targets: 1 mm

ELASTICITY TARGETS

Group 1: 1.5 cm deep, Ø 6 mm  
 Group 2: 5 cm deep, Ø 8 mm  
 Elasticity: 10, 40 & 60 kPa  
 Grayscale Contrast: 0 db with respect to background

MODEL 040GSE INCLUDES

QTY	COMPONENT DESCRIPTION
1	Multi-Purpose, Multi-Tissue Ultrasound Phantom
1	Detachable Protective Cover
1	Detachable Water Well (1cm deep)
1	Detachable Endocavity Well
1	Carry Case
-	48-Month Warranty
-	User Guide

AXIAL-LATERAL RESOLUTION GROUPS

Wire diameter: 80 microns  
 Group 1&2 Depths: 3 & 6.5 cm  
 Axial separation: 4, 3, 2, 1, 0.5 & 0.25 mm  
 Lateral separation: 4, 3, 2, 1, 0.5 & 0.25 mm

Group 3 Depths: 10.5 cm  
 Axial separation: 5, 4, 3, 2 & 1 mm  
 Lateral separation: 5, 4, 3, 2 & 1 mm

ANECHOIC STEPPED CYLINDERS

Number of targets: 12  
 Diameter of targets: 1.3, 2.0, 3.0, 4.5, 6.7 & 10.0 mm  
 Depth of Targets: 1.5, 4.5, 7.0, 10.0, 13.0, 16.0 cm  
 Contrast: Anechoic, Cyst-like, 1mm

GRAY SCALE TARGETS

Group 1: 3 cm deep, Ø 8 mm  
 Contrast: -9, -6, -3, +3, +6 & > +15 dB with respect to back ground  
 Group 2: 11.5 cm deep, Ø 10mm  
 Contrast: -6, -3, +3, +6 & > +15 dB with respect to back ground

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 Specifications subject to change without notice.  
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