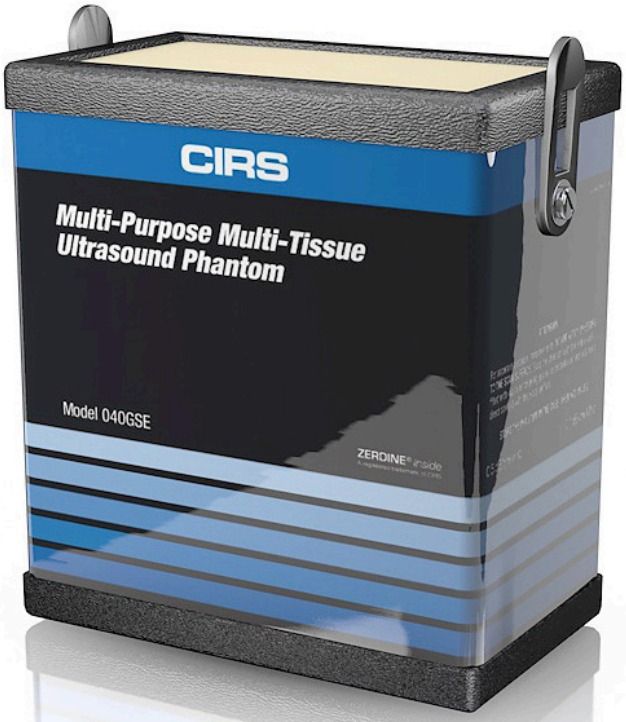
Multi-Purpose, Multi-Tissue Ultrasound Phantom

Model 040GSE



The Standard for Ultrasound Quality Assurance

- Test the full range of standard diagnostic ultrasound probes (2 MHz to 18 MHz)
- Dual attenuation design provides challenging testing environment for high sensitivity probes
- 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 rein-spection 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.

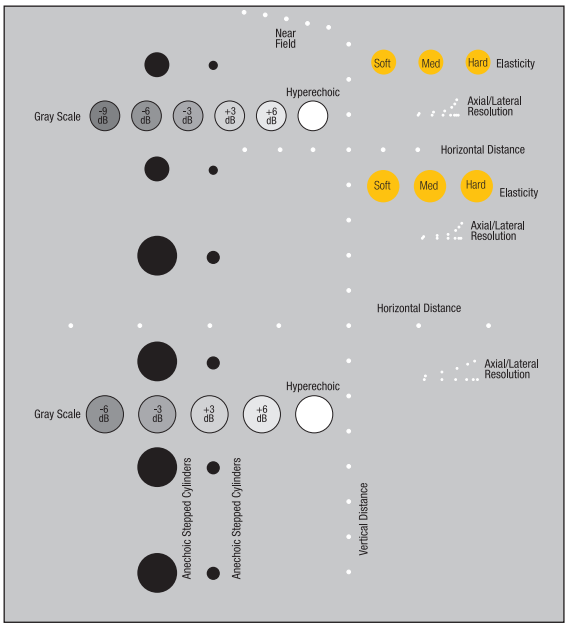
Key Tests with Model 040GSE

- 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

CIRS
900 Asbury Ave • Norfolk, Virginia 23513 • USA • Tel: 757-855-2765 • **WWW.CIRSINC.COM**

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

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

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

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*: Soft, medium & hard
Grayscale Contrast: -3 db with respect to background

*Modulus values are nominal; details are available upon request.

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

GRAY SCALE TARGETS

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

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