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

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 reinspection and repair services

*Includes best in industry four-year warranty*
It is important to read these instructions in their entirety before attempting to assemble the phantom. Improper assembly and disassembly can result in damage to the phantom.

Computerized Imaging Reference Systems, Inc. has been certified by UL DQS Inc. to (ISO) 13485:2016. Certificate Registration No. 10000905-MP2016.

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

<table>
<thead>
<tr>
<th>QTY</th>
<th>COMPONENT DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Multi-Purpose, Multi-Tissue Ultrasound Phantom</td>
</tr>
<tr>
<td>1</td>
<td>Detachable Protective Cover</td>
</tr>
<tr>
<td>1</td>
<td>Detachable Water Well (1cm deep)</td>
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<tr>
<td>1</td>
<td>Detachable Endocavity Well</td>
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<tr>
<td>1</td>
<td>Carry Case</td>
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<tr>
<td>-</td>
<td>48-Month Warranty</td>
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<td>-</td>
<td>User Guide</td>
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<tr>
<td>-</td>
<td>Certificate of Compliance</td>
</tr>
</tbody>
</table>

### 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 & 8 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:**
- Depth: 1.5 cm deep, Ø 6 mm
- Elasticity: 10, 40 & 60 kPa
- GrayScale Contrast: 0 dB with respect to background

**Group 2:**
- Depth: 5 cm deep, Ø 8 mm

### 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

### ANECOIC 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:**
- Depth: 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:**
- Depth: 11.5 cm deep, Ø 10 mm
- Contrast: -6 dB, -3 dB, +3 dB, +6 dB & > +15 dB with respect to background

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