General Purpose Ultrasound Phantom

Model 054GS

The CIRS Model 054GS General Purpose Ultrasound Phantom contains gray scale targets and improved sensitivity targets that exceed the phantom requirements outlined in the ACR accreditation program.

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, rugged carry case, 48-month warranty and user’s guide.

Exceed ACR Accreditation Requirements

- Test the full range of standard diagnostic ultrasound probes (2 MHz to 18 MHz)
- Detachable water wells allow for testing curvilinear and endocavity probes
- Ensure over ten years of reliable use through reinspection and repair services

Includes best in industry four-year warranty

Key Tests with Model 054GS

- 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
- Dead Zone Assessment
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.

**Model 054GS**

**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 |

**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: 10
- Wire diameter: 100-micron, nylon monofilament
- Depth range: 1 to 18 cm
- Spacing: 20 mm

**HORIZONTAL DISTANCE GROUP**

- Number of groups: 7
- Wire: 100-micron, nylon monofilament
- Depth: 9 cm
- Spacing: 20 mm respectively

**NEAR FIELD GROUP**

- Number of targets: 6
- Wire Diameter: 100 microns, nylon monofilament
- Depth range: 1 to 6 mm
- Distance b/w Targets: 1 mm

**MODEL 054GS INCLUDES**

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<thead>
<tr>
<th>QTY</th>
<th>COMPONENT DESCRIPTION</th>
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<tr>
<td>1</td>
<td>General Purpose Ultrasound Phantom</td>
</tr>
<tr>
<td>1</td>
<td>Detachable Protective Cover</td>
</tr>
<tr>
<td>1</td>
<td>Detachable Water Well (1 cm 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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<td>48-Month Warranty</td>
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<td>User Guide</td>
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<td>Certificate of Compliance</td>
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**AXIAL-LATERAL RESOLUTION GROUPS**

- Wire diameter: 80 microns
  - Group 1 Depth: 3 cm
  - Axial separation: 4, 3, 2, 1, 0.5 & 0.25 mm
  - Lateral separation: 4, 3, 2, 1, 0.5 & 0.25 mm
  - Group 2 Depths: 11 cm
  - Axial separation: 5, 4, 3, 2 & 1 mm
  - Lateral separation: 5, 4, 3, 2 & 1 mm

**ANECHOIC CYLINDERS**

- Number of targets: 5
  - Diameter of targets: 8 mm
  - Depth of Targets: 4, 7, 10, 13, & 16 cm
  - Contrast: Anechoic, Cyst-like

**GRAY SCALE TARGETS**

- Number of targets: 6
  - Contrast: -6 dB, -3 dB, +3 dB, +6 dB & hyperechoic (about 12 dB) with respect to background
  - Depth: 4 cm
  - Diameter: 8 mm

Phantom includes detachable scanning wells and air tight case.