

Sono406™ Dual Attenuation Phantom

Healthy & Diseased Tissue Testing

- Background attenuations simulate healthy and diseased tissue in a side-by-side configuration to aid characterizing pathological tissue structures
- Evaluation of high resolution ultrasound systems
- Testing over a wide range of frequencies

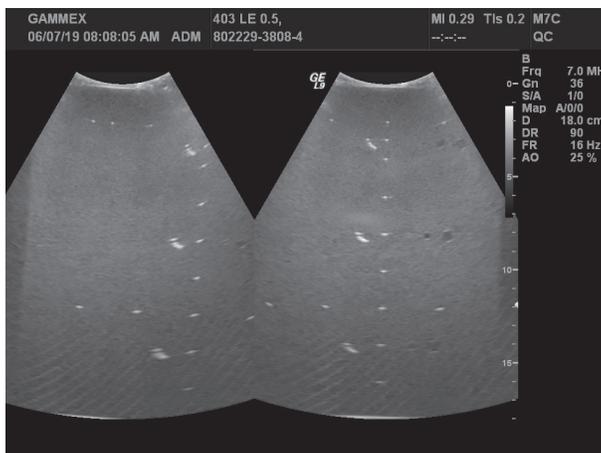


The Sono406 Phantom supports quality control testing over a wide range of frequencies to provide a comprehensive view of the scanner image quality range. Meet or exceed ACR, AIUM, EFSUMB, IAC, IEC, IPEM, and WHO QA guidance/standards.

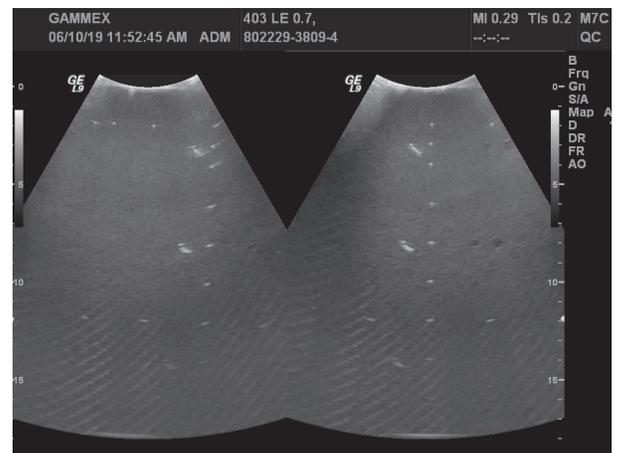
Target depths of the phantom extend to 16 cm, offering greater scanner and transducer performance testing capability and electronic caliper measurement. Pin targets enable testing high frequency transducers that are designed to image the first few centimeters of tissue.

Performance measures include:

- Image uniformity
- Artifact surveys
- Lateral resolution
- Horizontal and vertical distance
- Depth of penetration
- Signal-to-noise ratio
- Anechoic and echogenic mass resolution



0.5 dB/cm/MHz side of the phantom



0.7 dB/cm/MHz side of the phantom

Sono406 Dual Attenuation Phantom

- Intended for routine and periodic verification of high resolution ultrasound patient diagnostic imaging performance.
- Three sets of axial resolution targets make this phantom extremely effective for demonstrating high resolution detail.
- Rejuvenate and re-certify your phantom any time to strengthen your investment.

Specifications

Attenuation Coefficient ¹	0.5 and 0.7 dB/cm/MHz
Variation of Attenuation with Frequency ^{2,3}	f ^{1.08} at 0.5 dB/cm/MHz f ^{1.1} at 0.7 dB/cm/MHz
HE Gel Freezing Point	< 0°C
HE Gel Melting Point	>100°C
Frequency Range	2 - 18 MHz
Speed of Sound	1540 m/s
Scanning Surface	Composite Film
Pin Target Material	Nylon monofilament
Case Material	Extruded ABS Plastic
Weight	2.8 kg (6 lbs. 5 oz)
Dimensions	23.2 x 8.25 x 18.5 cm (9.25 x 3.25 x 7.25 in)

Target Specifications

Cystic Targets

Diameters	2, 4, and 6 mm
Placement	3, 8, and 14 cm deep

Pin Targets

Diameter	0.1 mm
Vertical Spacing	10 mm at 2 to 4 cm deep; 20 mm at 4 to 16 cm deep
Horizontal Spacing	30 mm at 2 and 12 cm deep. Additional pin spaced at 10 mm in shallow set.

Resolution Target Group

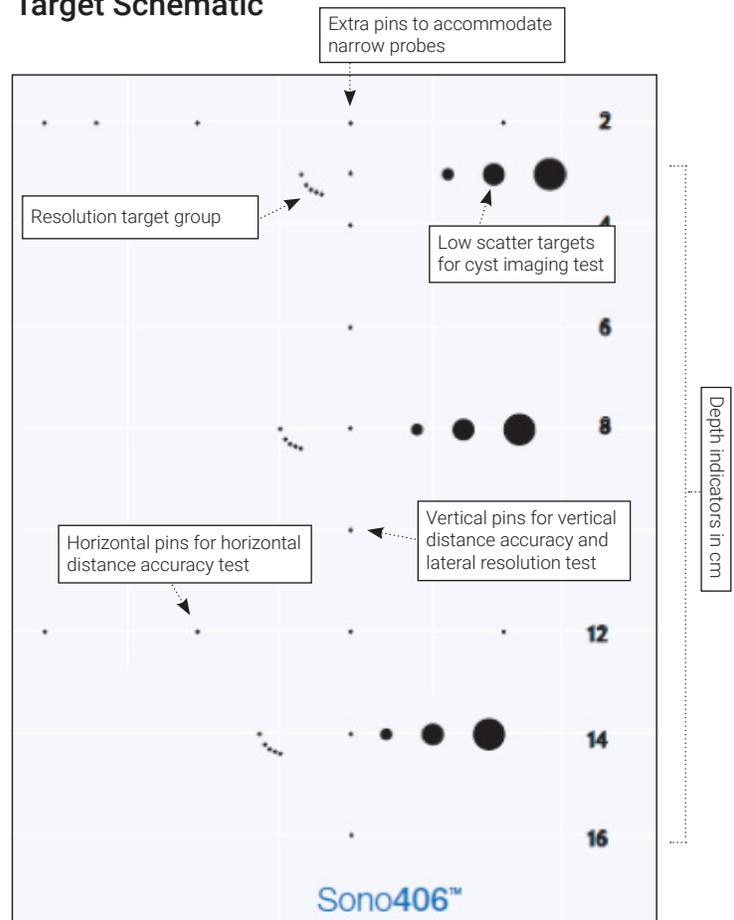
Depth	3, 8, and 14 cm deep
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Accessories

- Precision Transducer Holder
 - Securely holds a transducer in a precise location for reproducible tests over time.
 - Fits most Sun Nuclear B-Mode & Doppler Flow phantoms
- Padded travel case with shoulder strap



Target Schematic



¹ Browne, J., Ramnarine, K., Watson, A., Hoskins, P., Assessment of the Acoustic Properties of Common Tissue-mimicking Test Phantoms. Ultrasound in Medicine and Biology, Vol. 29 (7), pp. 1053-1060, 2003.

² Goldstein, A., The Effect of Acoustic Velocity on Phantom Measurements. Ultrasound in Medicine and Biology, Vol. 26, pp. 1133-1143, 2003.

³ An attenuation coefficient of 0.5 dB/cm/MHz represents healthy human liver tissue and 0.7 dB/cm/MHz represents fatty liver tissue.