

Model L-042 Ultrasound Urethane Phantom - ATS-535H

Introduction

The Model L-042 rubber-based, tissue-mimicking phantom is designed to fulfill the basic testing requirements of a Quality Assurance Program. The phantom is designed with a combination of monofilament line targets and six tissue mimicking cylindrical targets of varying sizes. The monofilament line targets have a diameter of 0.12 mm, to optimize the displayed image at frequencies ranging from 2.25 to 7.5 MHz. Four groups of line targets are provided to evaluate the vertical and horizontal calibration measurements, axial-lateral resolution, and the dead zone.

Applications

- Quality Assurance
- Basic Clinical Performance
- In-Process Manufacturing



Specifications

Part Number: 99-9013

SIZE: 23.4 x 20.9 x 9.5 cm (9 x 8 x 4 in.)

WEIGHT: 3.1 kg (7 lb)

HOUSING MATERIALS: PVC

WALL THICKNESS: 1 cm (0.4 in.)

SCAN SURFACES: 4

SCAN SURFACES DIMENSIONS:

17.5 x 8 cm (6.9 x 3.2 in.), 19 x 8 cm (7.5 x 3.2 in.)

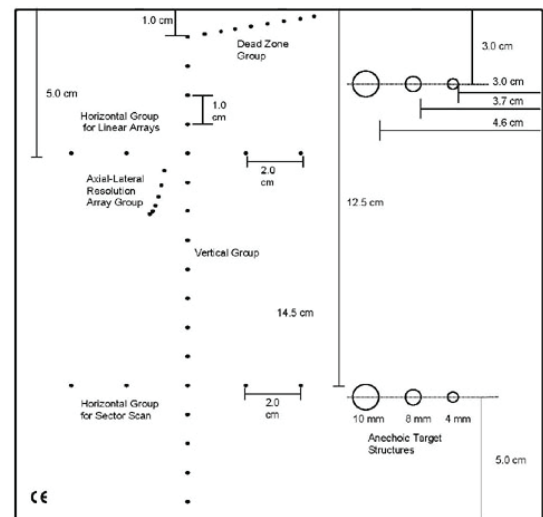
TISSUE-MIMICKING MATERIAL: Urethane rubber

Freezing Point: < -40 °C (-40 °F)

Melting Point: above 100 °C (212 °F)

Speed of Sound: 1450 m/s at 23°

Attenuation Coefficient: 0.5 dB/cm/MHz (measured at 3.5 MHz)



LINE TARGETS

Material: Monofilament nylon
Diameter: 0.12 mm

VERTICAL DISTANCE GROUP

Number of Targets: 17
Depth Range: 1.0 - 17.0 cm
Spacing: 1 cm

HORIZONTAL DISTANCE GROUP

Number of Groups: 2
Depths: 5 cm from Scanning Surface #1
5 cm from Scanning Surface #3
Number of Targets: 10
Spacing: 1 cm

DEAD ZONE GROUP

Number of Targets: 9
Depth Range: 2.0 - 10.0 mm
Lateral Displacement: 5 mm
Spacing: 1 mm

AXIAL-LATERAL RESOLUTION GROUPS

Number of Targets: 6
Lateral Displacement: 1 mm
Spacing: 5, 4, 3, 2, 1 mm
Axial Depth: 5.5, 11 cm
Lateral Depth: 4.5, 16.5 cm

ANECHOIC STEPPED CYLINDERS

Type: Non-echogenic, cylindrical
Number of Targets: 6
Diameter: 4, 8, 10 mm
Spacing: 1.0 cm
Depth: 3, 5, 13 cm