Doppler Ultrasound Flow Phantom

Model 069A



PERFORM SENSITIVITY & VELOCITY QA ON DOPPLER ULTRASOUND

The Doppler Ultrasound Flow Phantom, when used with the model 769 Doppler Flow Pump, provides a complete solution for QA testing of doppler ultrasound devices. The two most common tests are sensitivity and velocity accuracy, but many other useful tests are also described in the literature (see references).

The phantom is a tissue-mimicking flow phantom with a bloodvessel-simulating, ultrasound-compatible tube that enters the phantom at an angle. The phantom has both a top and bottom scanning surface that allows testing at varying depths and angles of orientation. This makes the phantom suitable for testing both peripheral flow and deeper abdominal vessels. The phantom is filled with Zerdine[®] tissue mimicking gel with a speed of sound of 1540 m/s, an attenuation of 0.7 dB/cm/ MHz and a backscatter contrast designed to match that of the liver. It is housed in rugged ABS plastic for added durability.

Features

- Tissue-Equivalent phantom
- Used in conjunction with CIRS Model 769
- Varying tube depths for peripheral and abdominal vessel simulation
- Suitable for doppler sensitivity and velocity accuracy quality assurance testing
- Hard shell case

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DOPPLER ULTRASOUND FLOW PHANTOM



Doppler ultrasound images with Doppler Ultrasound Flow Phantom showing pulsatile and continuous flow.

SPECIFICATIONS

TISSUE EQUIVALENT PHANTOM

DIMENSIONS	20 amx 12.5 amx 27.5 am
TUBING	Inside Dimensions: 3/16" Outside Dimensions: 1⁄4"
SCAN SURFACE	Saran laminate membrane; 12.5 cm x 17.5 cm
BACK- Ground Material	Zerdine® SoS: 1540 m/s ± 10 m/s Attenuation: 0.7 dB/cm-MHz

MODEL 069A INCLUDES

Must purchase Model 769, Doppler Flow Pump, separately.



Configuration 2: Abdominal Vessels



Configuration 1: Peripheral Vessels

References: 1.Performance Criteria and Measurements for Doppler Ultrasound Devices: Technical Discussion; Second Edition. AlUM Technical Standards Committee, 2002. 2.Testing of Doppler Ultrasound Equipment. Institute of Physical Sciences in Medicine, Report No. 79, ed. PR Hoskins, SB Sherriff and JA Evans, 1994. 3.IEC TS 61895: Ultrasonics – Pulsed Doppler diagnostic systems – Test procedures to determine performance. First edition,

1999-10.



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