GAMMEX
A SUN NUCLEAR COMPANY

Doppler **403**™ & Mini-Doppler **1430**™ Flow Phantoms

Ensure years of consistent QC measurements and high quality diagnostic imaging.

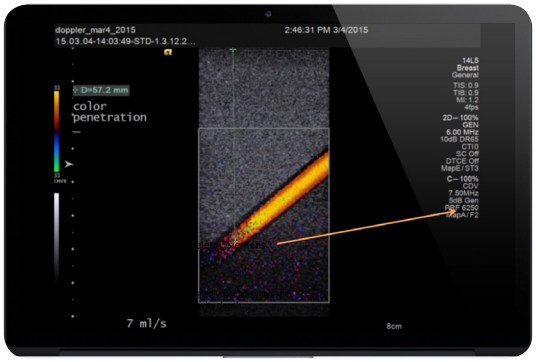
- Collaboratively designed to better serve your needs
- Go from storage to use in less than 10 seconds



Gammex collaborated with clinical and academic thought leaders to develop our patented HE (High Equivalency) Gel™ and the first portable Doppler Flow Phantoms in the world.

The Doppler 403 and Mini-Doppler 1430 Flow Phantoms are second generation devices based on the proven, original designs, and developed with ongoing customer input.

- Precision pulsatile flow mode allows you to reliably test system velocities
- HE (High Equivalency) Gel™ is patented and proven
  - Helps ensure all transducers and system settings are fully tested across the entire frequency range from 2 to 18 MHz
  - Response of attenuation-to-frequencies over 8 MHz supports accurate axial resolution and penetration depth representative of human tissue[1,2]



Scanning the angled vessel displays the color flow sensitivity depth.

[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] When combined with the flow controller

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From routine QA to education and complex research

Doppler 403 Flow Phantom

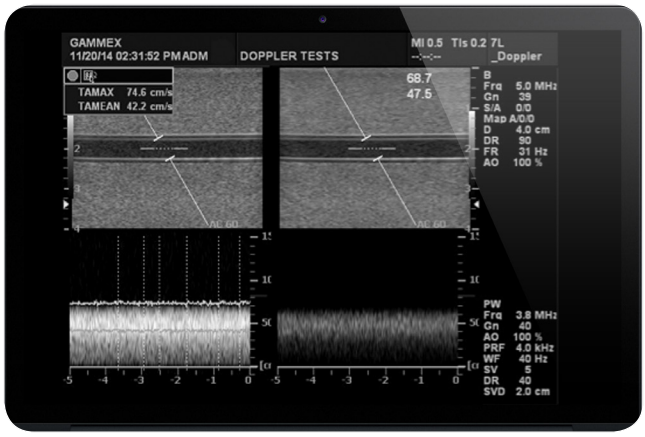
- The reference standard in Doppler Ultrasound QA
- Laminar and parabolic flows are available (velocity dependent)
- Includes the Sono Transducer Holder
- New blood mimicking fluid formulation
- No need to ever purchase or store blood mimicking fluid
- Increased viscosity and decreased Reynolds number

Mini-Doppler 1430 Flow Phantom

- Ideal for cardiology and musculoskeletal (MSK) applications
- Portable and lightweight (<10 lbs / 4.6 kg)

Common Highlights

- Patented multi-frequency HE Gel™
- Constant and pulsatile flow modes
- Rugged, self-contained, battery-operated



Volume flow settings on the phantom support reliable system velocity testing.

"The tissue-like properties in Gammex ultrasound phantoms make them ideal for testing the performance of scanners."

James A. Zagzebski, Ph.D., FAAPM
Professor Emeritus, Retired Chair
Department of Medical Physics,
Wisconsin Institutes for Medical Research

Sono Transducer Holder

The Sono Transducer Holder Accessory fits any Gammex phantom including the Sono Family and Doppler Flow phantoms.

- Place a transducer in a precise location in the holder for reproducible tests over time
- Support the transducer cable with the cable hook

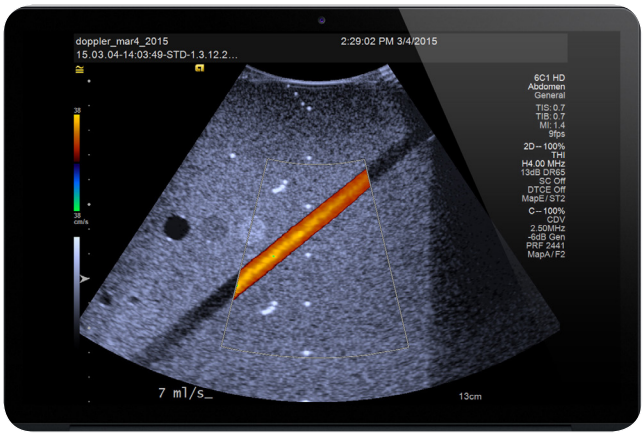


Sono Transducer Holder
Securely holds a transducer in a precise location to help you perform reproducible QC tests

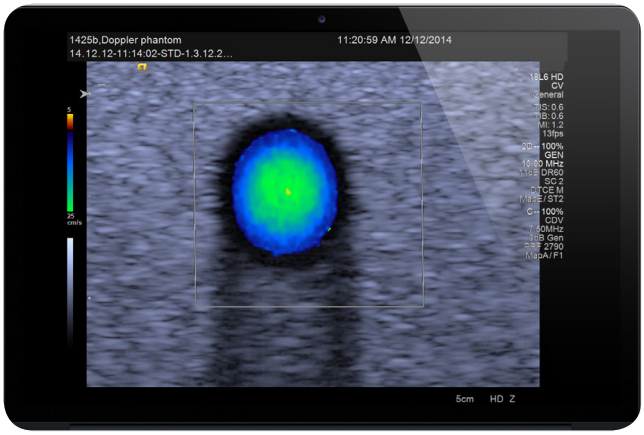
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Precision pulsatile flow mode supports reliable system velocity testing



The Doppler 403 Flow Phantom is used to test the Doppler color flow velocity measurement.



Cross section image showing the highest velocity at the center of the tubing. This represents a measurement of laminar, parabolic flow.

Rejuvenation Will Protect Your Investment

Our Doppler Flow and Sono (B-Mode) phantoms are the only ultrasound phantoms on the market that can be rejuvenated and re-validated. Implementing a rejuvenation program can extend the life of the phantom to 10+ years.

GAMMEX PHANTOM + REJUVENATION PROGRAM = 10+ YEARS OF PHANTOM LIFE = CONSISTENT SYSTEM PERFORMANCE EVALUATION OVER TIME

Specifications

	Doppler 403 Flow Phantom	Mini-Doppler 1430 Flow Phantom
HE Gel™: Gammex's multi-frequency tissue mimicking material:	✔	✔
Patented Composite Film Scanning Surface:	✔	✔
Vessels (2)	5 mm inner diameter; 1 horizontal at 2 cm depth, 1 diagonal at 40° from 2 to 16 cm deep	4mm inner diameter; 1 horizontal at 2 cm depth, 1 diagonal at 35° from 2 to 9 cm deep
Flow rates	Customizable, constant and pulsatile	Customizable, constant and pulsatile
Blood Mimicking Fluid	Speed of Sound 1550 +/- 10 m/s	Speed of Sound 1550 +/- 10 m/s
Targets	Strings, cysts, grey scale, resolution groups	Strings, cysts, grey scale, resolution groups
Dimensions (Case)	28 H x 30.5 W x 22 cm D (11 x 12 x 8.65 in.)	20 H x 23 W x 15.2 cm D (7.87 x 9.06 x 5.94 in)
Weight	8.34 kg (18 lbs. 4 oz.)	4.6 kg (9 lbs. 15 oz.)

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