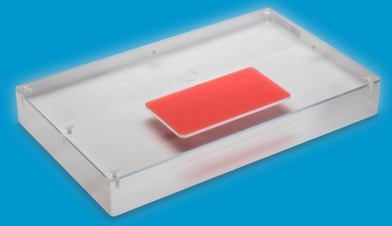
Solutions Portfolio

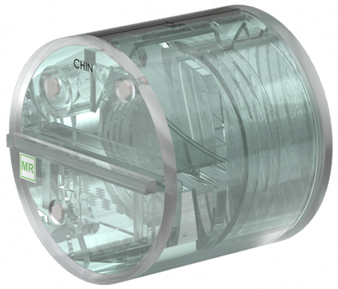
Diagnostic Imaging QA 2025

SUN NUCLEAR
A MIRION MEDICAL COMPANY

Better Quality Management. Better Care.

Sun Nuclear provides the broadest range of advanced Patient Safety solutions.





Trusted.

Hospitals & clinics worldwide choose Sun Nuclear.

Linac manufacturers, imaging manufacturers, researchers, and scientific associations leverage Sun Nuclear solutions routinely, too. Collectively, the fields of Radiation Therapy and Diagnostic Imaging count on us to help:

- ***Mitigate errors***
- ***Reduce inefficiencies***
- ***Validate technologies and techniques***
- ***Elevate clinical care***

Through 40 years of service, we have come to know Quality Management from all angles — and we're proud of the unique role we play in protecting Patient Safety.

Today, Sun Nuclear is stronger than ever as the cornerstone of Mirion Medical, a growing division within Mirion. Mirion Medical innovations power the fields of Radiation Therapy QA, Diagnostic Imaging QA, Occupational Dosimetry, Nuclear Medicine and Medical Imaging Tables and Accessories.

Comprised of brands and product lines including Sun Nuclear, ec² Software, Dosimetry Services, Capintec and Biodex, the Mirion Medical group is dedicated to offering healthcare practitioners and patients a safer, more efficient healthcare experience -- in pursuit of The Science of Better.

Learn more: mirion.com/medical

40
Years Serving the Radiation Oncology and Diagnostic Imaging Fields

130+
Countries with Sun Nuclear Solutions

5,000+
Worldwide Cancer Treatment Facilities Use Sun Nuclear Solutions

>90%
of U.S. Cancer Treatment Centers Use Sun Nuclear Solutions

20+
Countries with SunServices Team Member Representation

CT ACR 464 Phantom

Multi-Modality CT Accreditation

PN 804740, Stand (PN 804868) sold separately

Comprehensive CT Testing

- Test positioning and alignment accuracy, CT number accuracy, slice thickness, low contrast detectability, image resolution and uniformity, spatial resolution, and inter- and intra-plane distance measurement accuracy
- Meet AAPM TG-66 requirements

Proven & Versatile Design

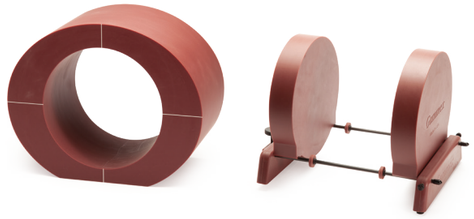
- Made of the original Solid Water® Zero HU formulation
- Works with **RapidCHECK™** software to automate CT image quality testing
- Optional Phantom Body Ring and Extensions available

Specifications

Material	Zero HU Solid Water®
Diameter	20.0 cm (7.9 in)
Length	16.0 cm (6.3 in)
Weight	5.3 kg (11.7 lbs)

Imbedded Test Objects

Water Equivalent Linearity Rod	Solid Water, Zero HU
Bone Equivalent Linearity Rod	Bone tissue equivalent material
Acrylic Linearity Rod	Cast Acrylic
Polyethylene Linearity Rod	Low Density Polyethylene
Low Contrast Rods	6 ±0.5 HU Contrast rods , in sizes ranging from 2 mm to 6 mm, plus 25 mm
Tungsten Carbide Beads	0.28 mm (0.011 in) in diameter grade 25 tungsten carbide beads
Line pair Material	6061 Aluminum and Polystyrene



CT ACR 464 Phantom Accessories

Body Ring, Extensions & Cases

PN 805384 (Body Ring), PN 805558 (Extension Kit)

CT ACR 464 Phantom Body Ring

Material	Zero HU CT Solid Water®
Inner Diameter	20 cm
Depth	61 cm
Outer Diameter	33 cm wide, 26.4 cm high

CT ACR 464 Phantom Extension Kit

Material	Zero HU CT Solid Water®
Plate Thickness	4.0 cm (1.6 in)
Diameter	20 cm (7.9 in) (same as CT ACR 464 Phantom)

Soft Case for CT ACR 464 Phantom & Stand

PN 804867

Soft Case for Extension Plate Kit

Fits Extension Stand & 2 End Plates/ Advanced iqModules™

PN 805540

Soft Case for CT ACR 464 Phantom & Extension

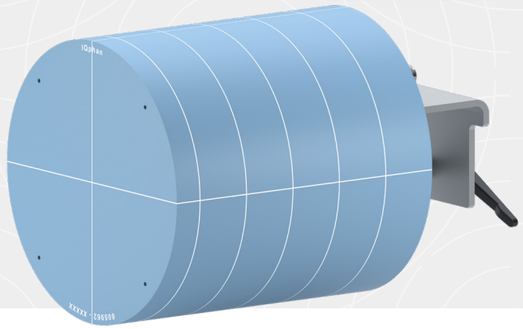
Fits CT ACR 464 Phantom, Extension Stand & 2 End Plates/Advanced iqModules™ Plate Kit

PN 805541

IQphan™

Comprehensive CT Image Quality Phantom

PN 806107



Comprehensive CT QA — All in One Phantom

- Perform QA across CT imaging systems, from sophisticated diagnostic scanners to cone beam to on-board radiotherapy systems
- Use with RapidCHECK™ Image Quality Analysis software for exacting CT imaging quality testing, with quick, consistent analysis
- Made from true tissue-mimicking HE CT Solid Water®

Modular Testing Support

- **High-Contrast Resolution Module** features high-resolution line pairs, large 3D patterns that are easy to visualize, and robust data analysis in the RapidCHECK software
- **Slice Thickness & Geometric Evaluation Module** with multiple wire-ramp materials and diameters enable analysis of slice thickness on range of scanners -- from diagnostic CT to CBCT and MVCT
- **Low-Contrast Detectability Module** provides a low-contrast test covering radiation therapy systems and diagnostic CT
- **Uniformity Module** supports assessment of noise and uniformity in HE CT Solid Water
- **HU Module** tests the consistency of known HU materials and measures the effective energy of the scan.

High-Contrast Resolution Module Specifications

Material	HE CT Solid Water®
Diameter	20.0 cm (7.9 in)
Length	A 4.0 cm (1.57 in) measurement region plus 2.0 cm on the end for mounting and scatter equilibrium
Resolution Pattern Size	1.5 cm x 1.0 cm x 4.0 cm
Resolutions Tested	2,4,5,6,7,8,9,10,12,14,16,18,20,22 lp/cm
Automated Analysis	Solid material samples improve computational analysis
Contrast Material	Zinc

Slice Thickness & Geometric Evaluation Module Specifications

Material	HE CT Solid Water®
Diameter	20.0 cm (7.9 in)
Wire Ramps	2x Tungsten wire, 0.15 mm diameter, and 2x Stainless Steel wire, 0.635 mm
Geometric Evaluation	Four air holes, 125 mm apart
MTF BB's	1 - 0.18 mm; 2 - 0.28 mm
MTF Wire	Tungsten wire, 5 degrees off-vertical, 0.05 mm diameter
Acrylic Spheres	1.0, 1.5, 2.0, 3.0, 4.0, 6.0, 8.0, and 9.5 mm diameter

Low-Contrast Detectability Module Specifications

Material	Epoxy interior, with a shell of our new HE CT Solid Water®
Diameter	20.0 cm (7.9 in)
Length	4.0 cm (1.57in)
Resolution Pattern Size	0.3%(3HU),0.6%(6HU),1.0%(10HU), 2.0% (20 HU)
Resolutions Tested	2,3,4,5,7,9, 12, 15, and 25 mm
Automated Analysis	2, 3, 5, 7, and 10 mm (cylinder diameter and length), at each contrast level

Uniformity and HU Modules Specifications

Material	HE CT Solid Water®
Diameter	20.0 cm (7.9 in)
Length	4.0 cm (1.57in)
HU Insert Materials	2x HE CT Solid Water, HE Inner Bone, HE Cortical Bone, Acrylic, Polystyrene, LDPE, PMP, Teflon, Delrin, 2x Air

Multi-Energy CT Phantom

Comprehensive Testing, Tissue Equivalence

PN 805754

Comprehensive Testing of Scanner Performance

- Test efficacy of clinical protocols for multi-energy analysis
- Compare consistency and stability across scanners

Automated Material Discrimination

- Solid rods represent iodine, calcium, blood, adipose, and more
- Patented rod markers enable automated analysis
- Expanded range of testing to exceed draft AAPM Task Group 299 requirements
- Combination Kit option with the **Advanced Electron Density Phantom** (PN 805940)
- Cross-Over Kit available to add Electron Density functionality (PN 805941 and 805942)

Modular Base

The Solid Water® HE base is compatible with two sets of rods for multi-energy CT QA as well as TPS calibration. See page 10 for details.

Specifications

In-Plane Dimensions	40.0 cm (15.7 in) x 30.0 cm (11.8 in)
Depth	16.5 cm (6.3 in)
Removable Head Section Diameter	20.0 cm (7.87 in)
Material	HE CT Solid Water®
Interchangeable Inserts	27 solid inserts plus 1 true water container, each tagged with a CT visible rod identification code
8 Iodine Inserts with Variable Concentrations	Concentrations of 0.2, 0.5, 1.0, 2.0, 5.0, 10.0, 15.0, and 20.0 mg/mL
3 Iodine Inserts with Variable Diameters	5.0 mg/mL concentration at diameters of 2.0, 5.0, and 10.0 mm
8 HE Calcium Inserts with Variable Concentrations	Concentrations of 0, 5, 10, 20, 50, 100, 200, and 300 mg/mL
3 Blood [iron] Inserts	Blood-mimicking material at relative electron densities of 1.03, 1.07, and 1.10
2 Blood [iron] with Iodine Inserts	Blood-mimicking material plus iodine at 2.0 and 4.0 mg/mL
3 Tissue-Mimicking Inserts	High-Equivalency Brain, High-Equivalency Adipose, High-Equivalency CT Solid Water
Weight	15.5 kg (34.1 lbs)
Wheeled Case	Included
Stand	Included

Advanced Electron Density Phantom

Tissue-Equivalent CT-to-Electron Density Calibration in a Single Workflow

PN 805810

Automated CT-to-Electron Density Analysis

- Patented rod markers* uniquely identify each material in a CT scan
- CT-to-density tables are automatically generated in the **RapidCHECK™** software
- Option to kit with the **Multi-Energy CT Phantom**

Sized for Wide-Beam Applications

- Larger phantom body diameter supports evaluation of cone-beam CT and wide-beam CT scanners
- Removable section for head and small body protocols

Superior Tissue Equivalence & Chamber Compatibility

- Meets medical standards ICRU-44 and ICRP for human tissue densities
- Compatible with any ion chamber

Specifications

Software Analysis	Automatically process CT-to-density tables using RapidCHECK, based on patented rod marker technology
In-plane Dimensions	40.0 cm (15.7 in) x 30.0 cm (11.8 in)
Depth	16.5 cm (6.3 in)
Removable Head Section Diameter	20.0 cm (7.87 in)
Material	HE Energy-Matched CT Solid Water®
Interchangeable Inserts	14 solid inserts plus 2 true water containers
Optional Inserts	Aluminum, Stainless Steel, Titanium
Available Upon Request	Ion Chamber conversion rod
Weight	15.5 kg (34.1 lbs)
Wheeled Case & Stand	Included

**U.S. Patent No. 10,939,891*

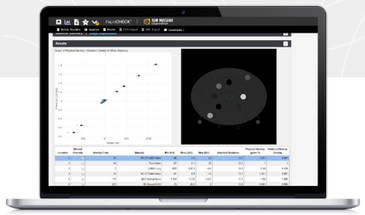
Standard Inserts

Material	Physical Density (g/cm3)	Electron Density Relative to Water
455 Lung LN-300	0.29	0.28
485 Lung LN-450	0.45	0.44
1553 HE Gen Adipose	0.96	0.94
1454 HE Breast 50:50	0.98	0.97
4 - 1451 HE CT Solid Water® Inserts	1.02	1.00
1481 HE Brain	1.05	1.02
1482 HE Liver	1.08	1.05
1456 HE Inner Bone	1.21	1.16
484 CB2 + 30% CaCO3	1.33	1.27
480 CB2 + 50% CaCO3	1.56	1.46
1450 HE Cortical Bone	1.93	1.78
2 - True Water Inserts	1.00	1.00

RapidCHECK™ Software

Automated CT-to-Density Calibration & CT Image Quality Analysis

PN 806017



Automate QA Workflows

- Use with **IQphan Phantom** to quickly process CT data into results and reports
- Use with **Advanced Electron Density Phantom** for faster, less-tedious calibration of CT-to-electron density tables
- Use with **CT ACR 464 Phantom** for automation of image quality analysis, trending reports, and an easily searchable permanent record

Browser-Based Software

- Use RapidCHECK software from any browser in your clinical network
- Get results immediately – load data, see analysis, print report, and track changes over time

Specifications

Current Device Compatibility	Advanced Electron Density Phantom, CT ACR 464 Phantom, IQphan
Operating System	Windows 10 Pro with Creators Update (Version 1703) and Fall Creators Update (Version 1709, build 16299), Window 10 Enterprise, or Windows 10 Educational
Regional Settings	US or International
Minimum Computer Specifications	Intel i3 processor; total RAM: 4 GB (8 GB recommended); 10 GB of drive space; Display resolution: 1280 x 1024; Color depth: 32-bit
Browser	Google Chrome® (recommended) or Microsoft Edge®

Mercury 4.0 Phantom

Advanced CT Performance Assessment

PN 805835

Characterize Advanced CT Features

- Address performance and effectiveness of Automatic Exposure Control/Tube Current Modulation
- Evaluate image quality for Iterative Reconstruction
- Meet AAPM TG-233 requirements

CT Protocol Optimization

- 5-tiered sections reflect range of patient sizes, and enable size-dependent image quality evaluation
- Software analysis, featuring imQuest software licensed from Duke University

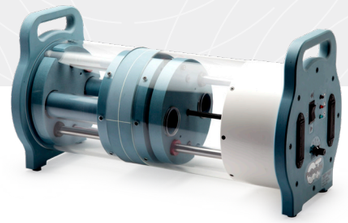
Specifications

Material	Polyethylene
Diameter	16.0, 21.0, 26.0, 31.0, and 36.0 cm
Length	52.0 cm
Contrast Materials	HE CT Solid Water®, Bone Mimicking Material, Polystyrene,10 mg/mL Iodine, and Air
Resolution Wedge	HE CT Solid Water®
Software Analysis	Works with ImQuest software, available from Duke
Included	Wheeled Case and Stand

CT Perfusion Phantom

Optimize Imaging & Perfusion Protocols

PN 805607



Consistent, Optimized CT Perfusion Programs

- Ensure CT scanner and perfusion software are providing consistent results
- Benchmark perfusion rates and time-attenuation curves for each system
- Meet ACR CT Perfusion and FDA recommendations

Image Gently

- Use the dose port to optimize imaging and perfusion protocols
- Gain insights to image at the lowest possible dose

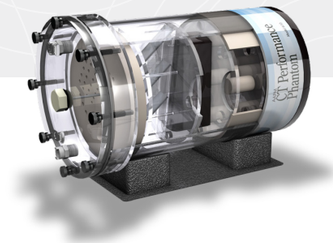
Specifications

Covers and housings	PVC, Acrylic
Dosimetry Port	Standard CT Pencil Chambers up to 12.7 mm (0.5in) diameter
Central Scan Disk	High Equivalency (HE) Brain Mimicking Material
Artery Rod	16 discrete sections of blood and contrast simulating materials to mimic arterial flow rates following a contrast bolus injection
Vein Rod	16 discrete sections of blood and contrast simulating materials to mimic venous flow rates following a contrast bolus injection
Tissue Rods (Qty 2)	HE Brain Mimicking Material of 16 discrete sections of brain tissue to mimic tissue uptake rates following a contrast bolus injection
Velocity settings (mm/second)	1.31, 1.50, 1.75, 2.10, 2.63 +/- 2%
Rod Travel Distance	10.5 cm (4.1 in)
Dimensions (L/ W/H)	55.5 x 25.4 x 30.5 cm (22 x 10 x 12 in)
Power	8 AA batteries (included)
Weight	13.6 kg (29.9 lbs)

CT Performance Phantom

Performance Evaluation and Quality Assurance of CT Scanners

610



Highlights

- Measures 10 distinct CT performance parameters per AAPM Report 1.
- CT number linearity insert, high contrast resolution insert, and slice width insert.
- Noise, Sensitivity / Detectability, Mechanical Alignment, Beam Hardening, Slice Thickness, Size Independence, Radiation Dose, Spatial Uniformity, HU Linearity, Spatial Resolution and line spread function.
- Low Contrast test insert (610-06), Whole Body noise ring (610-07), TLD insert (610-08), and Low Contrast insert spherical targets (610-10) options available.

Specifications

Overall Dimensions	21.6 cm x 39.4 cm (8.5" OD x 15.5" L)
Empty Weight	7.8 kg (17.25 lbs.)
Materials	PMMA cast tubing 21.6 cm OD, 20.3 cm ID x 32.4 cm L (8.5" OD, 8" ID x 12.75" L) with removable lid

CTDI Phantoms

Computed Tomography Dose Index Phantom

PN 805561 (Two-Piece), PN 805549 (Three-Piece)

Compliance Maintenance

- Measure absorbed dose and monitor scanner output for Dose Index QA
- Address specifications outlined by the FDA (FDA 21CFR 1020.33) and IEC (IEC 60601-2-44, IEC 61223-2-6 and IEC 61223-3-5IEC 60601-2-44)
- Meet AAPM TG-66 requirements

Configurable

- 2-piece configuration supports adult body and adult head/ pediatric body sizes
- 3-piece configuration offers an additional pediatric head size
- Nested modules adapt the phantom to the size required by user protocol

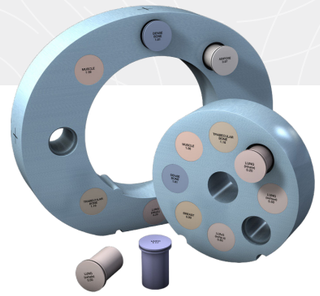
Specifications

Material	Polymethyl-Methacrylate (PMMA/Acrylic)
Density	1.19 g/cm^3
Alignment Markings	Etched lines centered at the transverse, coronal and sagittal planes
Module	Dimensions (OD x Length)
Adult Body	32 cm x 14.5 cm
Adult Head/Pediatric Body	16 cm x 14.5 cm
Pediatric Head (468-BHP only)	10 cm x 14.5 cm
Weight	19.9 kg (30.5 lbs)
Chamber Ports Diameter	1.31 cm

Electron Density Phantom

Basic Electron Density Phantom

062M



Highlights

- Evaluate CT scan data
- Correct for inhomogeneities
- Document relationship between CT number and tissue electron density
- Simulate indicated tissue within the diagnostic energy range
- Quickly assess distance registration

Specifications

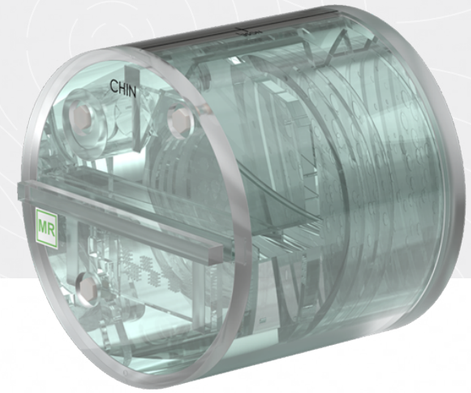
Dimensions	Electron Density Head Insert: Ø 180 mm x 50 mm (Ø x D); Electron Density Body without Head Insert: 330 mm x 270 mm x 50 mm (W x H x D)
Weight	Electron Density Head Insert: ≈ 0.950 kg (2 lbs.); Electron Density Body without Head Insert: ≈ 2.1 kg (4.7 lbs.)
Materials	Water and Tissue Equivalent Epoxy Resins

Refer to product data sheet for optional accessories.

ACR Medium MRI Accreditation Phantom

ACR Accreditation for Medium-Sized and Modern Phased Array Head Coils

224400



Highlights

- Approved solution for ACR medium MR phantom test guidance procedures.
- Standard of reference for diagnostic MRI QA measures.
- Meets AAPM Report 28, 34, and 100
- Accommodates more common, medium-sized opening head coils.
- Includes accessories for easy workflow: MR-safe soft case, Refilling kit with background and target solutions, Torpedo bubble level
- ACR-PH1 Large MRI Phantom, Model 715318 also available.
- Refer to ACR website for order form.

Specifications

Dimensions	External Diameter: 177.8 x 157.2 mm Internal Diameter: 165.1 x 134 mm
Weight	~ 4000 g / 9 lbs
Imaging Features	Background Solution: 10 mM NiCl2 + 0.45% by weight NaCl2 T2 Contrast Vial filled with 20 mM NiCl2 Solution Chemical Shift Inserts: 20 mM NiCl2 Solution, Vegetable Shortening Fat Solution Slice Position Wedges Low Contrast Detectability Film Stacks Slice Thickness Ramps Resolution Array Inserts Geometric Accuracy Plate

Accessories

Soft Case	34.3 x 30.5 x 24.1 cm / 13.5 x 12 x 9.5"
Refilling Kit	Replacement Background Solution (125 cc) Replacement Target Solution (125 cc) 10 cc Syringes (2)
8" Torpedo Level	Quantity 1
Plastic Nut Driver	Quantity 1

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

Reliable, Reproducible System Velocity Testing

PN 805660 (0.5 dB/cm/MHz), PN 805661 (0.7)

PN 805204 (0.5 dB/cm/MHz), PN 805206 (0.7)

Comprehensive QA & Testing

- Determine maximum signal penetration, channel isolation, and flow rate readout accuracy
- Doppler flow and B-Mode QA test systems
- Meet ACR, ECR, and AIUM QA requirements
- **Doppler 403™ Flow Phantom** ideal for abdominal flow measurements
- **Mini-Doppler 1430™ Flow Phantom** ideal for cardiology and musculoskeletal applications

Unparalleled Tissue Mimicking

- Blood-mimicking fluid ultrasonically similar to human tissue
- Patented High Equivalency Gel* (HE Gel™) offers tissue mimicking for evaluating image uniformity, detecting dead transducer elements, and assessing maximum penetration depth

Doppler 403™ Flow Phantom Specifications

HE Gel™ Multi-Frequency Tissue-Mimicking Material	Included
Patented Composite Film Scanning Surface	Included
Vessels (2)	5 mm inner diameter; 1 horizontal at 2 cm depth, 1 diagonal at 40° from 2 to 16 cm deep
Flow Rates	Customizable, constant and pulsatile
Blood Mimicking Fluid	Speed of Sound 1550 +/- 10 m/s
Targets	Strings, cysts, grey scale, resolution groups
Dimensions (Case)	28 H x 30.5 W x 22 cm (11 x 12 x 8.65 in.)
Weight	8.34 kg (18 lbs. 4 oz.)

Mini-Doppler 1430™ Flow Phantom Specifications

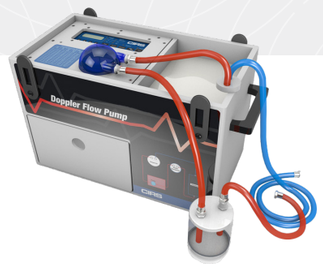
HE Gel™ Multi-Frequency Tissue-Mimicking Material	Included
Patented Composite Film Scanning Surface	Included
Vessels (2)	4 mm inner diameter; 1 horizontal at 2 cm depth, 1 diagonal at 35° from 2 to 9 cm deep
Flow Rates	Customizable, constant and pulsatile
Blood Mimicking Fluid	Speed of Sound 1550 +/- 10 m/s
Targets	Strings, cysts, grey scale, resolution groups
Dimensions (Case)	20 H x 23 W x 15.2 cm (7.87 x 9.06 x 5.94 in.)
Weight	4.6 kg (9 lbs. 15 oz.)

**U.S. Patent No. 6,352,860*

Doppler Flow Pump

Flexible Testing Platform for Doppler Ultrasound

769



Features

- Simulates blood flow when testing Doppler ultrasound devices.
- Used in conjunction with ATS Urethane or Zerdine phantoms
- Max Flow Rate: 750 mL/min; Min Flow Rate can be as low as 0.04 mL/ min (Actual value will vary depending on phantom use)
- Pulsatile or Constant Velocity configurations available
- Doppler fluid simulates acoustic and physical characteristics of blood
- All components stored in compact case for easy transport

Compatible Phantoms

- Peripheral Vascular Doppler Flow Phantom (ATS 524)
- Doppler Ultrasound Flow Phantom (069A)
- Cardiac Doppler Flow Phantom (ATS 523A)

Specifications

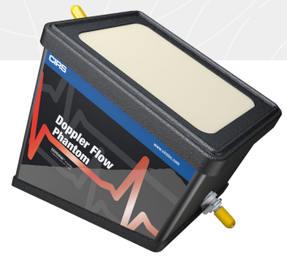
Motor Type	Step motor
Motor Steps per Revolution	200
Microstepping	1/8 to 1/1 depending on motor speed
DC Connector	2.1mm, center positive
Voltage at DC Connector	24V DC at full load
Amperage	900mA at full load
Power Supply Type	Unregulated linear external wall adapter, country and power source specific
Power Supply Output Rating	24V DC @ 1A
Dimensions	9" x 4" x 8" High (23 cm x 10cm x 20 cm)
Weight	4.51 lbs. (2.05 kg)

Refer to website for additional specifications.

Doppler Ultrasound Flow Phantom

Sensitivity & Velocity Doppler Ultrasound QA

069A



Features

- Tissue-Equivalent Phantom
- Used in conjunction with Doppler Flow Pump (769)
- Varying tube depths for peripheral and abdominal vessel simulation
- Suitable for doppler sensitivity and velocity accuracy quality assurance testing
- Hard shell case

Specifications

Dimensions	20 cm x 12.5 cm x 27.5 cm
Tubing	Inside diameter: 3/16" Outside diameter: 1/4"
Scan Surface	Saran laminate membrane; 12.5 cm x 17.5 cm
Background Material	Zerdine® SoS: 1540 m/s ± 10 m/s Attenuation: 0.7 dB/cm-MHz

Doppler Fluid

Acoustic & Physical Tissue-Mimicking Blood Fluid

769DF

Features

- Evaluate performance of Doppler imaging systems
- Compatible with Doppler Flow Pump + Zerdine® and Urethane Doppler flow phantoms
- ½ gallon / 1.9 liter container

Sono403™ Phantom

Multi-Purpose Ultrasound Phantom

PN 802259 (0.5 dB/cm/MHz)

Multi-Purpose B-Mode Ultrasound QA

- Ensure accurate ultrasound system imaging
- Generally compatible with AIUM, ACR, AAPM, IEC 62736, IPEM 102, and EFSUMB TQA QA Guidelines
- Verify system settings and depth of penetration for small to very large patients
- Simulates typical depth through abdomen to the liver
- Precisely placed targets support grey scale and axial resolution system measurements

Unparalleled Tissue Mimicking

- Patented High Equivalency Gel* (HE Gel™) provides multi-frequency, high quality, reproducible images
- Test across the entire frequency range (2 - 18 MHz)

Specifications

Attenuation Coefficient[1]	0.5 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
Cystic Targets Diameters & Placement	2, 4, 6, and 10 mm; 3, 7, 8, and 14 cm deep
Grey Scale Target Diameters & Placement	10 mm; 6 cm deep
Pin Targets Diameter & Placement	0.1 mm; 2 cm at 2 to 16 cm deep vertical spacing, and 3 cm at 2 and 12 cm deep horizontal spacing
Resolution Target Groups Depths	3, 8, and 14 cm deep
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.)

**U.S. Patent No. 6,352,860*

Multi-Purpose Ultrasound Phantoms

Complete B-Mode Multi-Purpose Phantoms

040GSE, ATS 539 & ATS 570

040GSE Features

- Elastography
- Dual Attenuation Zones (0.7 dB/cm/MHz and 0.95 dB/cm/MHz)
- Supports nearly all transducer shapes
- Zerdine® Hydrogel Material: Speed of sound = 1540 m/s for highest image quality
- Detachable water well

ATS 539 Features

- Durable urethane rubber construction
- Supports most transducer shapes
- Permanent water well prevents testing of endo (linear) and some intraoperative probes
- ATS Urethane Rubber Material: Speed of sound = 1450 m/s
- Standard attenuation = 0.5 dB/cm/MHz at 3.5 MHz

ATS 570 Features

- Durable urethane rubber construction
- Curved scan surface, endocavity well provide enhanced testing of curved probes and endo(linear)probe
- Supports nearly all transducer shapes
- ATS Urethane Rubber Material: Speed of sound = 1450 m/s
- Standard attenuation = 0.5 dB/cm/MHz

Refer to website for additional specifications.

040GSE 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

ATS 539 Specifications

Dimensions	23.4 x 20.5 x 9.5 cm (9" x 8" x 4")
Phantom Weight	7 lbs. (3.1 kg)
Housing Materials	PVC
Wall Thickness	1.0 cm
Scan Surfaces	4
Scan Surface Dimensions	17.5 x 7.5 cm 14.0 x 7.5 cm
Tissue-Mimicking Material	Urethane Rubber

ATS 570 Specifications

Dimensions	27 x 21.5 x 9.6 cm (11" x 8" x 4")
Phantom Weight	10 lbs. (4.55 kg)
Housing Materials	PVC
Scan Surfaces	2
Scan Wells	1 cm
Tissue-Mimicking Material	Urethane Rubber

3D Ultrasound Calibration Phantom

AIUM Compliance for Spatial Measurements

055

Features

- For advanced volume measurements with 3D probes
- Supports nearly all transducer shapes
- Zerdine® Hydrogel Material: Speed of sound = 1540 m/s for highest image quality
- May desiccate
- Standard attenuation = 0.7 dB/cm/MHzPermanent water well
- Artifacts may be present when testing curved arrays with water well

Specifications

Dimensions	15 x 15 x 15 cm
Material	ABS Housing
Scanning Membrane	Saran-based laminate
Scan Window Dimensions	Top: 2 cm x 12 cm Side: 11 cm x 11 cm

Ultrasound Uniformity Phantom

ACR image uniformity testing

552

Features

- Uniform speckle background for testing image uniformity
- Supports nearly all transducer shapes
- Elastic material conforms to the transducer shape
- Z-skin™ Elastomer: Speed of sound = 1470 m/s
- Attenuation = 0.4 dB/cm/Mhz

Specifications

Dimensions	Ø 11.2 cm x 7.5 cm
Phantom Weight	2.2 lbs. (1 kg)
Material	Z-Skin™ elastomer

Sono405™ Phantom

Troubleshooting Ultrasound Phantom

PN 802267 (0.5 dB/cm/MHz)

Troubleshooting B-Mode Ultrasound QA

- Ensure accurate ultrasound system imaging
- Generally compatible with AIUM, ACR, AAPM, IEC 62736, IPEM 102, and EFSUMB TQA QA Guidelines
- Supports Biomeds who need to troubleshoot ultrasound systems
- Two horizontal cross fibers in the middle of the phantom can be used for aligning the transducer and as reference markers to ensure consistent setup over time.
- Triangular grey scale targets support resolution testing of high-performance ultrasound scanners

Unparalleled Tissue Mimicking

- Patented High Equivalency Gel* (HE Gel™) provides multi-frequency, high quality, reproducible images
- Test across the entire frequency range (2 - 18 MHz)

Specifications

Attenuation Coefficient[1]	0.5 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
Cystic Targets Diameters & Placement	2, 4 and 6 mm; 3, 8 and 14 cm deep
Grey Scale Target Diameters & Placement	9.5 x 9.5 x 13.4 mm; 4 cm deep
Pin Targets Diameter & Placements	0.1 mm; 2 cm at 2 to 16 cm deep vertical spacing, and 3 cm at 2 and 12 cm deep horizontal spacing
Resolution Target Groups Depth	3, 8, and 14 cm
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)

**U.S. Patent No. 6,352,860*

Brachytherapy QA Phantom

045B

Features

- Supports AAPM Task Group 128: Quality Assurance Tests for Prostate Brachytherapy Ultrasound Systems
- Zerdine® Hydrogel Material: Speed of sound = 1540 m/s for highest image quality
- May desiccate
- Comes with water tank for performing needle alignment test

045B Specifications

Dimensions	14 x 11 x 7.5 cm
Phantom Weight	4 lbs. (1.5 kg)
Housing Material	PVC Plastic
Tank Material	ABS
Membrane	Saran-based laminate
Tissue-Mimicking Material	Zerdine® solid elastic hydrogel

3D Calibration Phantom

ATS 560H

Features

- Combines 3D volume target with Basic QA imaging features
- No side-fire endocavity (permanent water well)
- ATS Urethane Rubber Material: Speed of sound = 1450 m/s
- Does not desiccate
- Standard attenuation = 0.5 dB/cm/MHz
- Permanent water well
- Artifacts may be present when testing curved arrays with water well
- Depth of penetration may be greater than phantom depth with some low-frequency probes

Specifications

Dimensions	23.4 x 20.5 x 9.5cm (9" x 8" x 4")
Phantom Weight	7 lbs. (3.1 kg)
Housing Materials	PVC
Scan Surfaces	4
Scan Surfaces Dimensions	17 x 8 cm 19 x 8 cm
Tissue-Mimicking Material	Urethane Rubber

Invenia ABUS Phantom

ATS UC551-M

Features

- Curved surface allows complete B-mode QA of GE Invenia automated breast ultrasound
- ABUS (GE Invenia) transducer shape
- ATS Urethane Rubber Material: Speed of sound = 1450 m/s
- Does not desiccate
- Standard attenuation = 0.5 dB/cm/MHz

Specifications

Dimensions	28.5 x 12 x 10.6 cm (11" x 5" x 4")
Phantom Weight	8 lbs. (3.6 kg)
Housing Materials	PVC
Scan Surfaces	1
Scan Surfaces Dimensions	26.7 cm x 10 cm Curved, radius of 44.50 cm (17.5")
Tissue-Mimicking Material	Urethane Rubber

Small Parts Phantom

ATS 551

Features

- Complete B-Mode QA
- Nearly all transducer shapes
- ATS Urethane Rubber Material: Speed of sound = 1450 m/s
- Does not dessicate
- Standard attenuation = 0.5 dB/cm/MHz at 3.5 MHz with nonlinear frequency dependence
- Permanent water well
- Artifacts may be present when testing curved arrays with water well

Specifications

Dimensions	8 x 11 x 11 cm (3" x 4" x 4")
Phantom Weight	7 lbs. (3.1 kg)
Housing Materials	PVC
Scan Surfaces	1
Scan Surfaces Dimensions	25 cm x 8 cm
Tissue-Mimicking Material	Urethane Rubber

Sono404™ Phantom

Small Parts Ultrasound Phantom

PN 802261 (0.5 dB/cm/MHz)

Small Parts B-Mode Ultrasound QA

- Ensure accurate ultrasound system imaging
- Generally compatible with AIUM, ACR, AAPM, IEC 62736, IPEM 102, and EFSUMB TQA QA Guidelines
- Supports Cardiology, Breast Care, Musculoskeletal and Vascular applications
- Closely spaced pin targets make it ideal for testing high frequency transducers
- Enables training and testing the most difficult cases, including small parts and intra-cavity ultrasound systems

Unparalleled Tissue Mimicking

- Patented High Equivalency Gel* (HE Gel™) provides multi-frequency, high quality, reproducible images
- Test across the entire frequency range (2 - 18 MHz)

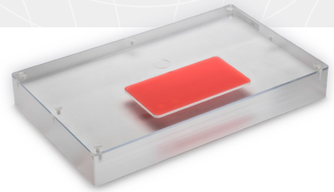
Specifications

Attenuation Coefficient[1]	0.5 or 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
Cystic Targets Diameters & Placement	1, 2, 4 and 7 mm; 1, 3, 3.5 and 6 cm deep
Grey Scale Target Diameters & Placement	7 mm; 3 cm deep
Pin Targets Diameter & Placement	0.1 mm; 5 mm at 1–9 cm deep vertical spacing, and 10 mm at 1 and 5 cm deep horizontal spacing
Resolution Target Groups Depths	1, 3.5 and 6 cm deep
Case Material	Extruded ABS Plastic
Weight	1.75 kg (3 lbs. 13 oz)
Dimensions	17 x 8.25 x 15.875 cm (6.75 x 3.25 x 6.25 in.)

Mammo FFDM™ Phantom

Full Field Digital Mammography

PN 806022



Ensure Optimal FFDM Performance

- Evaluate artifacts over the entire detector with a single image
- Meet ACR, MSQA and EUREF requirements
- Test objects designed and located per ACR specifications, and reduced backscatter and equalized attenuation
- Meets ACR 2018 Digital Mammography Quality Control Manual requirements

Specifications

Materials	Wax and acrylic equivalent to 4.2 cm thick compressed breast tissue
Nylon Fibers	6
Specks	6 Groups, Glass Spheres
Masses	6
Dimensions (L x W x H)	31.0 ± 0.1 x 19 ± 0.1 x 4.1 ± 0.03 cm
Dimensions: Wax Insert (L x W x H)	12.98 (+ 0, - 0.04) x 6.98 (+0, -0.04) x 0.7 ± 0.02 cm
CNR Cavity Depth	0.1 ± 0.005 cm
CNR Diameter	2.0 ± 0.05 cm
Compensator	9 mil Polyvinylidene Chloride
Case	Soft case included; Optional custom hard-sided case, with 1-year warranty, available (PN 805772)

Refer to website for additional specifications.

Mammo 3D™ Performance Kit

Digital Mammography System QC

PN 805857

Acceptance Testing for 3D Tomosynthesis Systems

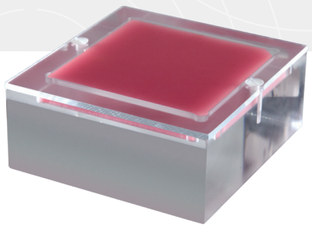
- Includes PMMA plates, spacers, aluminum plates and foils, steel plates and customized test tools
- Meet IEC Protocol 601223-3-6, EUREF/EFOMP 1.03 (Tomosynthesis), & German DIN 6868-14 requirements
- Custom case included

PMMA Plates, Spacers, & Phantoms	
Standard Test Plate	1 - 320 x 260 x 45 mm
10 mm PMMA Plate	7 - 320 x 260 x 10 mm
15 mm PMMA Plate	1 - 320 x 260 x 5 mm
2 mm PMMA Plates	7 - 40 x 20 x 2 mm
10 mm PMMA Spacers	2 - 180 x 15 x 10 mm
30 mm PMMA Spacers	2 - 180 x 30 x 30 mm
Geometric Distortion & Z-Resolution Phantom	1 - 320 x 260 x 5 mm
Aluminum Plates & Foils	
2 mm Aluminum Plate	1 - 100 x 100 x 2 mm
0.2 mm Aluminum Foil Sheet	1 - 10 x 10 x 0.2 mm
0.1 mm Aluminum Foil Sheets	8 - 100 x 100 x 0.1 mm
Steel Plates	
3 mm Stainless Steel Plate	1 - 320 x 260 x 3 mm
MTF Edge Tool	1 - 120 x 60 x 0.6 mm
Wire, Spacers, X-ray Rulers	
25 micron Tungsten Wire (cm)	100
Polystyrene Foam Spacers	5 - 240 x 180 x 20 mm
1mm scale X-ray Rulers	4 - +2.5 to -5 cm

Mammo 156™ Phantom

Digital Mammography System QC

PN 800004



Measure & Monitor Digital Mammography Systems

- Meet ACR and MQSA requirements.
- Simulates radiographic characteristics of 4.2 cm compressed breast tissue
- Quickly detect objects from 0.16 to 2.0 mm
- Includes 4 mm acrylic disc included to establish and monitor density differences

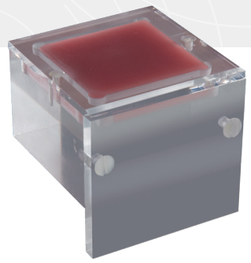
Specifications

Materials	Wax and acrylic equivalent to 4.2 cm thick compressed breast tissue. 50% adipose & 50% glandular. Fibers, specks and masses follow ACR specifications.
Nylon Fibers (monofilament) DIA (mm)	0.40, 0.54, 0.74, 0.93
Micro-calcifications (Aluminum Oxide) DIA (mm)	0.20, 0.24, 0.32, 0.54
Masses DIA (mm)	0.25, 0.50, 0.75, 1.00
Dimensions (L x W x H)	6.7 x 6.8 x 6.1 cm
Case (PN 805296)	Optional soft-sided case with foam insert, with 1-year warranty

Mammo 156D™ Phantom

Biopsy and Localization

PN 805298



Stereotactic Breast Biopsy QC

- Meet ACR and MQSA requirements.
- Quickly detect objects from 0.20 to 1.00 mm — visible on any system, but, by design, difficult to see on the best stereotactic mammography systems
- Can hang on the biopsy system detector during rotation

Specifications

Materials	Wax and acrylic equivalent to 4.2 cm thick compressed breast tissue. 50% adipose & 50% glandular
Nylon Fibers (Fibrils)	6
Micro-calcifications	5 Groups
Masses	5
Dimensions (L x W x H)	10.2 x 10.8 x 4.5 cm
Case (PN 805296)	Optional soft-sided case with foam insert, with 1-year warranty

Contrast Enhanced Spectral Mammography Phantom

Simple, Comprehensive Routine CESM QA

022

Features

- Daily and routine QC
- Tests performance and stability of CESM
- Contains clinically relevant iodine concentrations
- Represents both dense and fatty breasts
- Background provides clinically relevant challenge for target detection

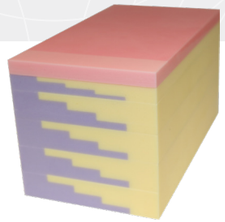
Specifications

Overall Dimensions	180 mm x 127 mm x 100 mm
Individual Slab Dimensions	3 Slabs: 180 mm x 110 mm x 10 mm, 1 Slab: 180 mm x 110 mm x 25 mm
Phantom Weight	1.4 kg (3.09 lb)
Materials	BR50/50, 100% Gland and Adipose

Mammo CESM™ Phantom

QC for Contrast Enhanced Spectral Mammography

PN 805929



Independently Verify Beam Qualities

- Stack of modules supports a variety of tests across a range of iodine concentrations and breast glandularity
- Blocks can be arranged to represent compressed breast for small to large patients

Specifications

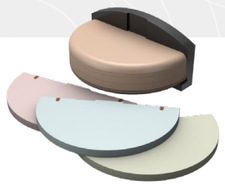
Overall Weight	1.8 kg (4 lbs)
Carrying Case Weight	1.4 kg (3 lbs)
Overall Stack Dimensions (L x W x H)	181 x 100 x 100 mm (7-1/8 x 4 x 4 in)
Hard Case	Included
Warranty	5 years

	Breast-Iodine Step Block Characteristics	GL/AD Step Block, 10 mm	GL/AD Step Block, 20 mm
Materials	1454 HE Breast 50/50, 1454 HE Breast 50/50 doped with 10 mg/ml Iodine (pink)	1453 HE Br. Adipose (yellow), 1466 HE Glandular (purple)	1453 HE Br. Adipose (yellow), 1466 HE Glandular (purple)
Quantity	1	1	4
Length x Width	181 x 100 mm	181 x 100 mm	181 x 100 mm
Thickness	10 mm	10 mm	10 mm
Step Increments	1 mm	2.5 mm	5 mm

Digital Breast Tomosynthesis QC Phantom

Thorough Tomosynthesis System Performance Testing

021



Comprehensive Digital Testing

- Acceptance testing, daily and routine QC
- Tests image quality and stability of DBT systems
- Consistent, repeatable targets in homogeneous background
- Optional complex background provides clinically relevant challenge for target detection
- Slab configurations provide range of thicknesses with or without targets
- Developed to meet developing requirements of EUREF and AAPM TG-245

Specifications

Overall Dimensions	127 mm x 80 mm x 100 mm
Individual Slab Dimensions	6 Slabs: 110 mm x 180 mm x 10 mm; 1 Slab: 115 mm x 180 mm x 10 mm (support slab); 1 Slab: 110 mm x 180 mm x 5 mm, semicircular shape
Phantom Weight	1.62 kg (3.55 lbs)
Materials	BR50/50, BRSW5050
Set Includes	4 Solid Homogeneous Slabs 1 cm thick; 1 Solid Homogeneous Slabs 0.5 cm thick; 3 Target Homogeneous Slabs 1 cm thick; 1 Positioning Holder with Magnetic Fixation

Stereotactic Needle Biopsy Phantom

Enabling Critical Testing & Training

013

Highlights

- For ACR stereotactic breast biopsy localization accuracy test
- Use upon system installation or repair, to ensure accurate needle placement
- Anthropomorphic shape allows accurate simulation of breast compression
- Re-usable - will not dry out, or leak when punctured; Masses can be biopsied multiple times
- 11 dense masses in three sizes; Two microcalcification clusters
- Compatible with standalone and add-on stereotactic biopsy systems

Specifications

Dimensions	10 cm x 16.6 cm x 5 cm (6.5" x 2.5" x 4")
Phantom Weight	1.0 lb. (0.4 kg)
Phantom Volume	530 cc
Material	Polyurethane

Key Mammography QA Resources

Go to sunnuclear.com for:

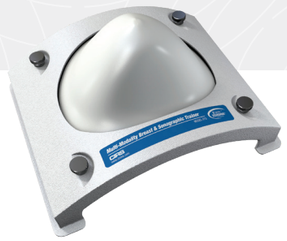
- Demos: Request One-on-One Presentations
- Webinar: Customer Experience with Mammo FFDM Phantom
- Datasheets: Mammography Phantoms

Mammography Solutions

Multi-Modality Breast Biopsy and Sonographic Trainer

For Breast Imaging and Image-Guided Interventional Procedures

073



Highlights

- Durable Training Phantom for Ultrasound, Mammography, X-Ray, and MRI
- Includes cystic and dense lesions embedded within breast background
  - Half of dense lesions spherical with embedded 100-300 micron microcalcification, half with spiculated shape
  - Calcifications serve as useful markers for image registration between modalities
- Features patent-pending Z-Skin™ membrane to simulate skin, providing protection from desiccation even after multiple sessions

Specifications

Tray Dimensions	26 cm x 23 cm x 7.5 cm (10" x 9" x 3")
Breast Size	500 cc (14 cm x 11 cm at base, 8 cm high)
Total Weight	1 lb. (0.4 kg)
Membrane Material	Z-Skin™ elastomer
Background Material	Zerdine®, white
Cystic Masses	Qty: 5-10
Dense Masses	Material: Zerdine®-based, anechoic under ultrasound

Mammo Digital Compression Device

Compression Force Measurement for Accuracy and Reproducibility

PN 805939

Specifications

Accuracy	±0.01 lb [0 - 2 lb], ±0.02 lb [2 - 75 lb] ±0.005 kg [0 - 1 kg], ±0.01 kg [1 - 34 kg]
Display Units	g, lb:oz, kg, lb, oz
Scale Dimensions	8.9 x 8.2 x 2.9 in (225 x 208 x 73 mm)
Foam Compression Block (included)	Polyethylene Foam 7.25 x 4.75 x 1 in (184 x 108 x 25.4 mm)
Scale Weight	2 lbs. (0.95 kg)
Power	Alkaline Batteries Size C (4x), not included
RoHS Compliant, CE Mark	Yes
Case (PN 805972)	Optional Soft Case

Mammography Phototimer Consistency Testing Slabs

Assess AEC system performance

014A-BR12

Highlights

- Simple, precise assessment of AEC system performance in accordance with ACR + MQSA recommendations.
- Accurately simulate breast tissue over mammography energy range.
- 47% glandular / 53% adipose matrix: 0.5, 1, and 2 cm thickness slabs at 12.5 x 10 cm.

Aluminum Step Wedge

PN 800013

Construction	High Purity Aluminum Alloy and Copper, 9 steps 0.3 mm high x 1.4 cm deep
Size	14.2 x 4 cm (5.6 x 1.9 in)
Weight	10 g (0.4 oz)

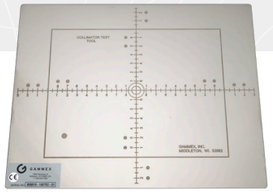
Beam Alignment Test Tool

PN 800423

Construction	Acrylic Cylinder
Height	16 cm (6.3 in)
Diameter	7 cm (2.8 in)
Weight	260 g (9.2 oz.)
Construction	Acrylic Cylinder
Warranty	5 Years

Collimator Alignment Test Tool

PN 805818

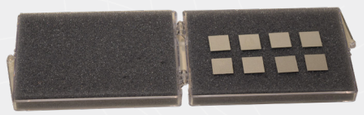


Construction	Etched Stainless Steel
Dimensions	20.0 x 25.0 cm (8.0 x 10.0 in)
Weight	200 g (6.2 oz.)
Warranty	5 Years

DR QC Phantom

139702

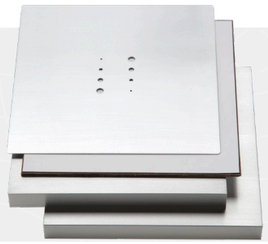
Dimensions	17" x 17" x ~1/2"
Weight	8 lb
Materials	PMMA, Copper, Aluminum



Signal Difference to Noise Ratio (SDNR) Set

PN 805760

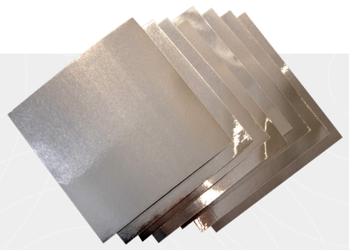
Construction	Aluminum Alloy 99.0%
Size	10 cm x 10 cm
Thickness	0.2 mm



Fluoroscopic Dose Rate & Low Contrast Resolution Test Tool Kit

PN 800421

Construction	2 Aluminum Blocks, 1 Lead Blocker, 1 Aluminum Resolution Plate
Dimensions	18 x 18 x 4.5 cm (7 x 7 x 1.8 in)
Weight	4 kg (8.8 lbs)
Warranty	5 Years



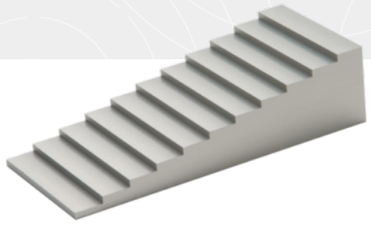
Half Value Layer (HVL) Attenuator Sets

PN 800012 (115A), PN 805755 (115B), PN 800051 (115H)

Construction	**115A** - 99.00% High Purity 1100 Aluminum Alloy; **115B** - 99.00% High Purity 1100 Aluminum Alloy; **115H** - 99.99% Ultra High Purity Aluminum
Quantity	**115A** - 9; **115B** - 8; **115H** - 6
Thickness/Quantity	**115A** - 0.1 mm (3), 0.2 mm (1), 0.5 mm (2), 1.0 mm (2), 2.0 mm (1) **115B** - 0.1 mm (8) **115H** - 0.1 mm (6)
Length	10 cm (4 in)
Width	10 cm (4 in)

Radiographic Aluminum Stepwedge, 11 Steps (117)

PN 800414



Construction	6061 Aluminum Alloy
Steps	Eleven (11) steps, 3.2 mm high and 12.7 mm deep
Dimensions	14 x 6 cm (5.5 x 2.4 in)
Weight	450 g

Half Value Layer Attenuator Set, Pure Copper (116)

PN 800413

Construction	Pure Copper
Dimensions	10 x 10 cm (4 x 4 in)
Weight	0.55 kg (1.1 lbs)
Sheet Count	9 individual copper sheets
Thickness	1 - 2.0 mm 2 - 1.0 mm 1 - 0.5 mm 1 - 0.25 mm 4 - 0.1 mm

Ultra Star Test Pattern (1-360°) & Ultra Star Test Pattern (4-15°)

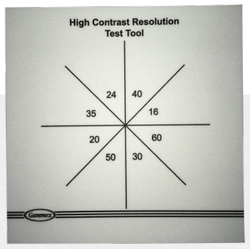
PN 800021, PN 800431

Lead Foil Thickness	0.05 mm
Diameter	55 mm
Angle of Single Line within a Sector	0.5°
Number and Size of Patterned Sector	1-360°; 4-15°
Focal Spot Size Measured	0.1-0.3 mm
Warranty	5 Years

Focal Spot Test Tool

PN 800428

Construction	Six-inch acrylic cylinder with a 12-group bar pattern target mounted on top
Dimensions	0.84 to 5.66 lp/mm
Warranty	5 Years



High Contrast Resolution Test Tool

(141) – Standard, 16-60 Mesh

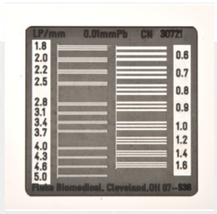
PN 800417, PN 800416

Geometric Progression	2 1/3
Construction	White Plastic (outside)
Wire Mesh Patterns (inside)	8 - 16 to 60 mesh (141 Standard)
Dimensions	18 x 18 x 1 cm (7 x 7 x 0.4 in)
Weight	113 g (4 oz)
Warranty	1 Year

Radiography Fluoroscopy QA Phantom

903

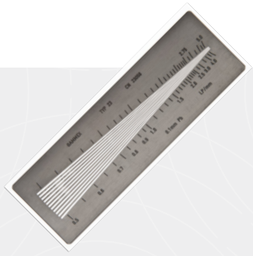
Dimensions	25.4 cm x 25.4 cm x 20.3 cm (10" x 10" x 8")
Phantom Weight	16.8 kg (37 lb)
Materials	PMMA-equivalent epoxy
Includes	1 - Test Object Plate; 1 - 4.1 cm Block with Lead Markers; 1 - 7.6 cm Block with Aluminum Plate & Detachable Support Legs; 1 - 7.6 cm Block



Resolution Test Pattern, 0.6-5.0 bar, 20 groups

PN 800438

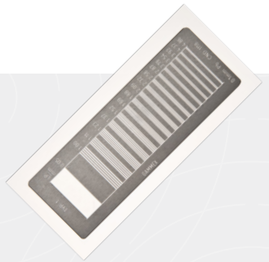
Resolution	0.6 to 5.0 lp/mm
Dimensions	50 x 50 mm (1.9 x 1.9 in.)
Thickness	PN 800438 0.01 mm PN 800439 0.10 mm



Resolution Test Pattern, 1 sector

PN 800437

Dimensions	157 x 50 mm (6.2 x 1.9 in)
Weight	9 g (0.3 oz)



Resolution Test Pattern, 0.5-4.86 LP/mm bar, 16 groups

PN 800436

Dimensions	110 x 40 mm (4.3 x 1.6 in)
Weight	9 g (0.3 oz.)

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