SUN NUCLEAR CORPORATION

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Sun Nuclear Corporation

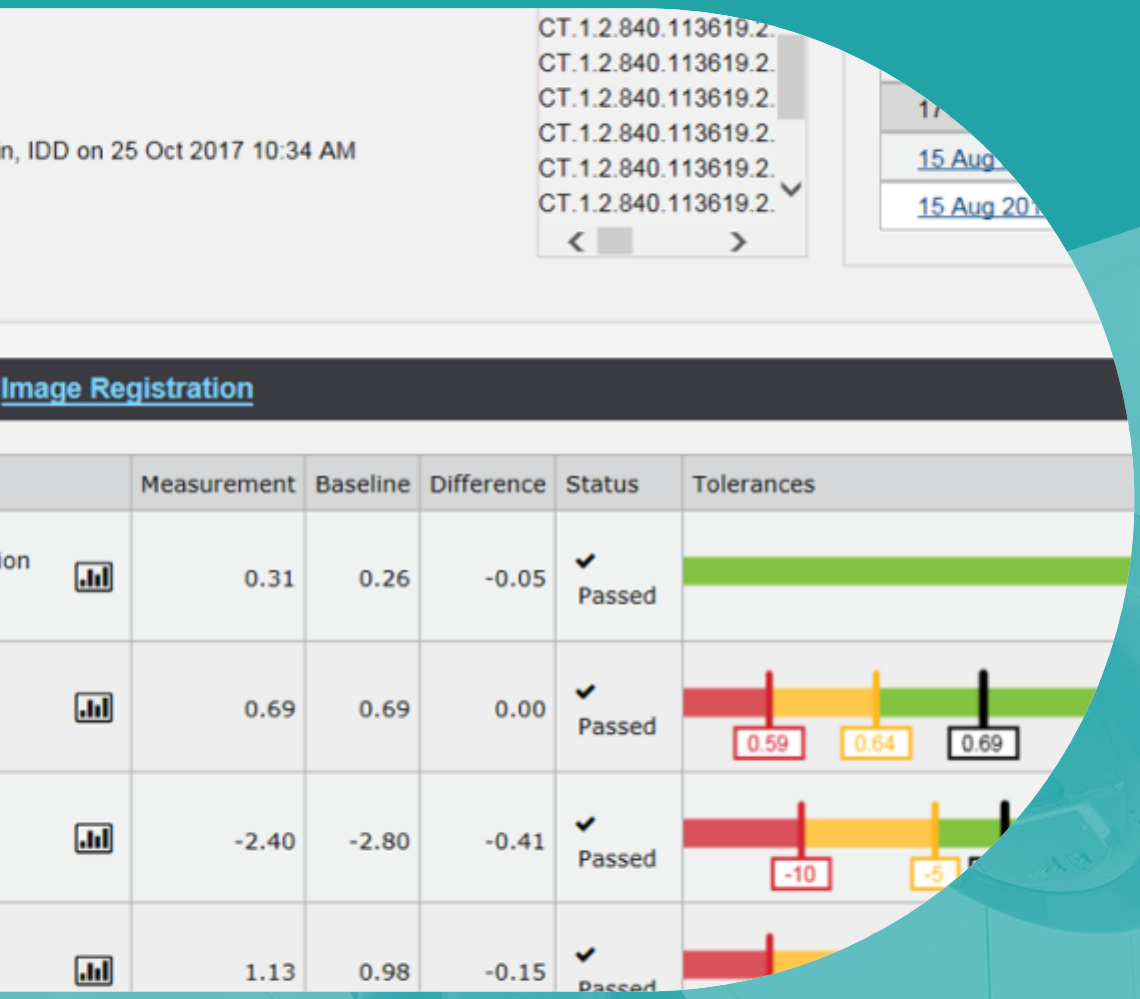
Sun Nuclear is a leading provider of comprehensive Quality Management solutions for radiation therapy and diagnostic imaging. Their portfolio encompasses positioning systems, dosimetry tools, QA phantoms, detectors, dose rate monitoring devices, analysis software, and training phantoms. These solutions are designed to support medical professionals in ensuring accurate, safe, and efficient patient care.

In radiation therapy, Sun Nuclear's tools assist clinicians in verifying treatment plans, monitoring machine performance, and maintaining consistent dose delivery. Their diagnostic imaging QA solutions enable precise calibration and performance assessment of CT, MRI, and ultrasound systems, contributing to reliable imaging and diagnosis.

By integrating advanced technologies with user-friendly interfaces, Sun Nuclear supports healthcare providers in achieving high standards of patient safety and treatment efficacy.

Enhance your clinical practice with Sun Nuclear's trusted Quality Management solutions, tailored to meet the evolving demands of modern healthcare.

ANALYSIS SOFTWARE



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RapidCHECK™ – Sun Nuclear

RapidCHECK Diagnostic QA Software from Sun Nuclear is an automated, diagnostic QA software platform that brings together proven diagnostic QA phantoms and intuitive software for efficient and standardized diagnostic QA workflows.

Automate Diagnostic QA

You can use RapidCHECK with your CT ACR 464 Phantom for faster analysis and an easily searchable permanent record and trending reports. But you can also use RapidCHECK with your Advanced Electron Density Phantom to automatically find and identify the material of each rod, and to streamline the CT-to-Electron Density table report.

Browser-Based

Access RapidCHECK from any browser in your clinical network to simplify workflow regardless of clinic size.

RapidCHECK is the new diagnostic QA software platform from Gammex, a Sun Nuclear Company. This tool leverages the proven QA phantoms from Gammex and user-friendly software interface from Sun Nuclear to help you streamline your QA workflow and enhance quality and consistency. Whether you have one CT scanner, an entire fleet, or consult for dozens of different centers, RapidCHECK provides a framework for simplifying your clinical workflow. Software is installed locally and can be accessed from any browser within your clinical network.

Computed Tomography Module

The first RapidCHECK module integrates with your Gammex CT ACR 464 Phantom. From slice thickness, to resolution, to uniformity–generate a complete report of your CT ACR 464 Phantom in seconds. Remove the subjectivity from your evaluations with RapidCHECK's evidence-based metrics.

How it Works

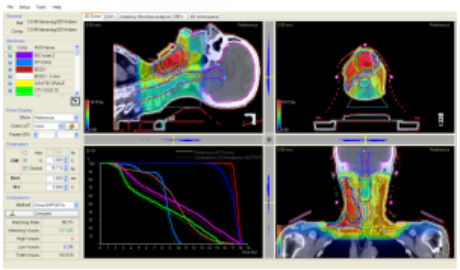
Define a baseline with your initial scan. RapidCHECK suggests tolerance values based on ACR guidelines and the empirical measurements. With the baseline set, each scan is evaluated and scored against your defined tolerances, eliminating inter/intra-use variation.

Trending and Historical Data

All images, analysis, trending and data are stored locally for fast and easy access. Configure reporting results to suit your needs. Easily review prior scans, analyze trends, and investigate anomalous results.

Combine RapidCHECK with the CT ACR 464 Phantom to automate CT image quality testing. Generate a complete report in seconds, with analysis of slice thickness, resolution, and uniformity. Built-in evidence-based metrics remove subjectivity from evaluations.

3DVH Software for Patient QA – Sun Nuclear



3DVH Software transforms the field of per-patient dose QA by generating clinically-relevant and intuitive analyses of complex IMRT and VMAT plans. With proven accuracy, 3DVH estimates the 3D dose to the patient-specific geometry.

3DVH Software features:

- fast results with automated tools – Quick Stat Templates,
- quick Dose Profiles, DICOM compliant workflow
- no forward dose calculation into the patient CT
- no commissioning
- uses existing measurements and devices
- with optional Respiratory MotionSim module, analyze the dosimetric impact of a moving target
- transform 2D measurements to 3D dose volume for advanced analysis
- perform 3D dose and DVH QA analysis on patient – not phantom – geometry
- supports coplanar and non-coplanar beams
- identify TPS and beam delivery errors
- intuitive and familiar presentation of dose and DVH with statistics per anatomical structure

3DVH Software compatibility:

- hardware: ArcCHECK, MapCHECK 2
- software: SNC Patien, EPIDose
- rotational therapy: RapidArc, VMAT
- static gantry: IMRT
- treatment planning systems: Pinnacle, Eclipse, and most TPS systems that can export DICOM data
- FFF & non-FFF deliveries

Read more about 3DVH Software on the Sun Nuclear website

DOSIMETRY

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SunSCAN™ 3D

SunSCAN 3D is Faster, Easier & Hyper-Accurate

SunSCAN 3D simplifies beam scanning with SRS-class accuracy and user-centered design.

Commissioning and beam scanning are fundamental to building a strong radiation therapy program. That's why Sun Nuclear significantly enhanced their pioneering cylindrical tank design for greater clinical confidence and workflow efficiency.

Made for Every Clinical User

Conventional linac, SRS linac or bore-based. Commissioning novice or experienced clinician. SunSCAN 3D makes commissioning and annuals easier and more efficient than ever before — with SRS-class scanning accuracy and compatibility with nearly every machine and user.

Simplified Beam Scanning

From your Trusted End-to-End Quality Management Provider

SunSCAN 3D standardizes water tank setup with automation and mitigates the need for tank shifts.

- Unique Cylindrical Shape – removes need for tank shifts, which take time and compromise scanning setup
- Single Setup – 65 cm scan range allows 40 x 40 cm field scans, even at 100 cm SSD and 40 cm depth
- Consistent Detector Orientation – smallest part of the detector always measures the beam edge, minimizing stem and cable effects and water movement

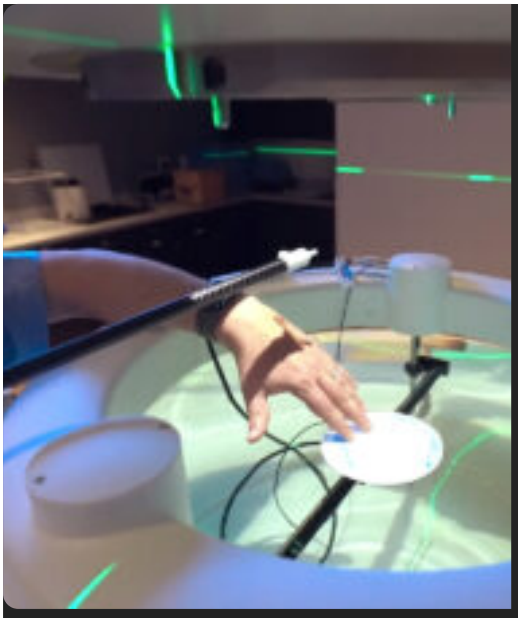
Enhanced SRS & SBRT Accuracy

Meeting the Demands of Stereotactic Programs

SunSCAN 3D's enhanced electronic resolution **improves Signal to Noise Ratio by as much as a factor of 2**, and an enhanced Median Filter provides glassy smooth scans while maintaining data integrity.

Hyper accurate scanning, verified with a Coordinate Measuring Machine (CMM), delivers:

- 0.1 mm accuracy throughout the tank,
- 0.05 mm reproducibility, and
- 0.02 mm resolution.



SunSCAN 3D, Ready to Scan in 15 Minutes

Fast & Easy Setup

Set up your water tank in a third of the time it takes with other tanks.

1. Simply roll the tank in place
2. Starting the filling process (~7 minutes), and
3. Run the faster, more accurate AutoSetup™ routine (~7 minutes)

True leveling is achieved through a proven automatic leveling routine, perfected and optimized over 10+ years. A physically level tank makes leveling confirmation and QA easy.

If you want to see more of our dosimetry products, go here!

Consistent Detector Orientation

For more information about the SunScan 3D, go to our partner's website.

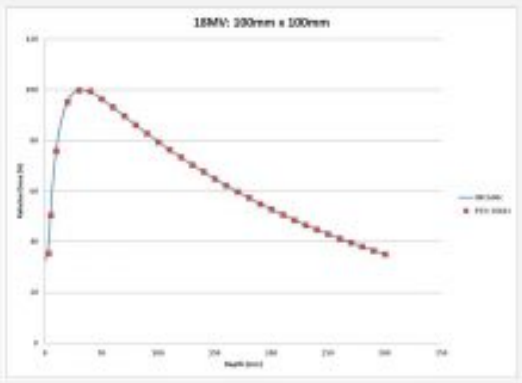
SNC 600c™ Reference Ion Chamber

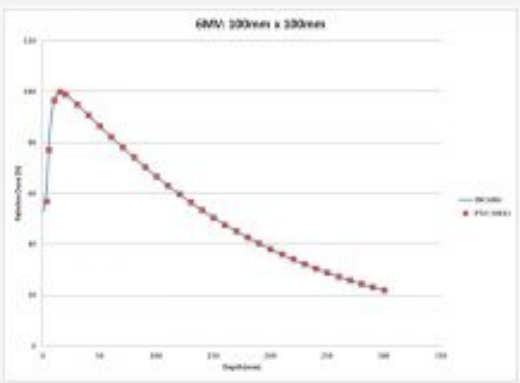
SNC600c for Photon and Electron Reference Dosimetry
SNC600c is a reference class dosimeter based on the classic Farmer Chamber design.

- Reference class performance (IEC 60731) allows for use in X-ray and electron reference dosimetry protocols – TG-51 and TRS-398
- Classic Farmer Chamber design allows use in most slab phantoms
- White thimble provides easy setup verification

Meet Requirements
Properly QA your linac, in accordance with the reference class and dosimetry protocols of IEC 60731, AAPM TG-51, and IAEA TRS-398.

Reliable & Accurate
Reference-class ion chambers are vented, waterproof and fully guarded. A white chamber body makes visualization easy during setup and relative to cross hairs and lasers.





Model 330 – Digital kV, Dose and Time Meter – Sun Nuclear

The Gammex 330 Digital kV, Dose and Time Meter is a test device for quality control and acceptance testing in radiographic, mammographic and fluoroscopic x-ray systems.

Digital kV, Dose and Time Meter features:

- includes digital display of the quantity PPV (pratical peak voltage) according to IEC 61676
- compact and light-weight
- easy-to-read LC Display
- measures kVp, dose and time non-invasively
- touch key controls

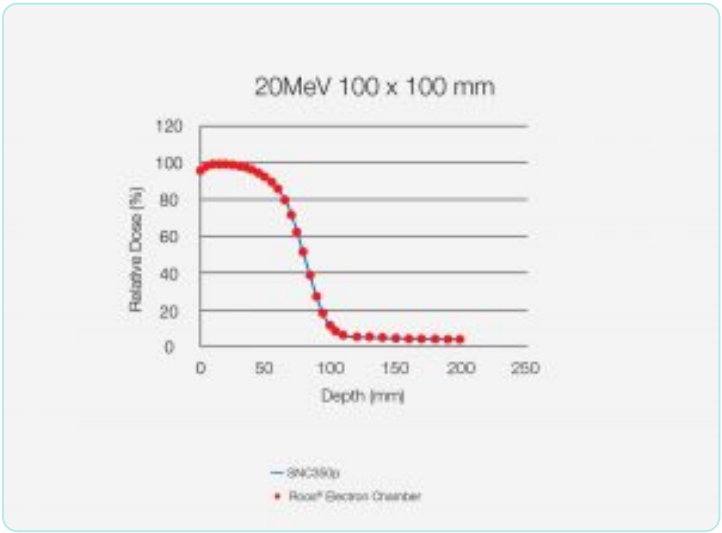
SNC350p™ Reference Ion Chamber

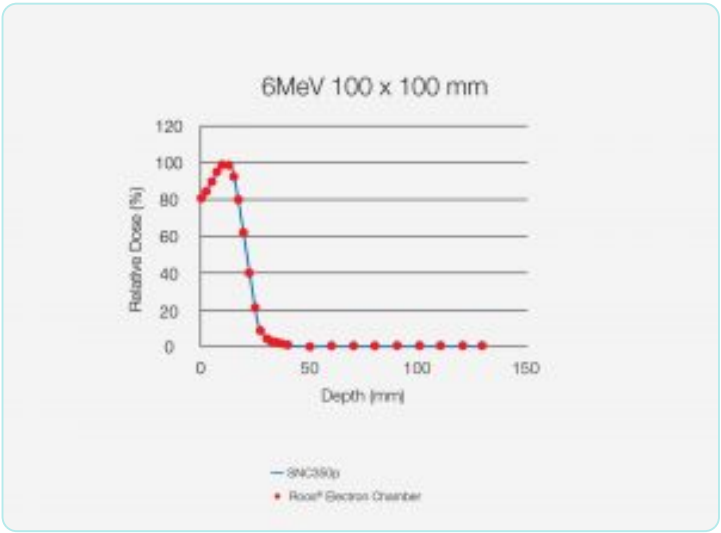
SNC350p for Electron Reference Dosimetry
This parallel-plate ion chamber is well-guarded to minimize perturbation effects for reference, field, and scanning dosimetry of therapeutic electron beams, and TDD/TPS commissioning and QA.

- Supports absolute or relative dose point measurements and PDD measurements
- Conforms to the design principles as stated by Dr. M. Roos et al. (IAEA TRS-381)
- Meets AAPM TG-51 and IAEA TRS-398 requirements for low-energy beams (< 10MeV)
- Meets reference-class dosimeter standards of performance (IEC 60731), and may be used to cross calibrate field-class dosimeters

Meet Requirements
Properly QA your linac, in accordance with the reference class and dosimetry protocols of IEC 60731, AAPM TG-51, and IAEA TRS-398.

Reliable & Accurate
Reference-class ion chambers are vented, waterproof and fully guarded. A white chamber body makes visualization easy during setup and relative to cross hairs and lasers.





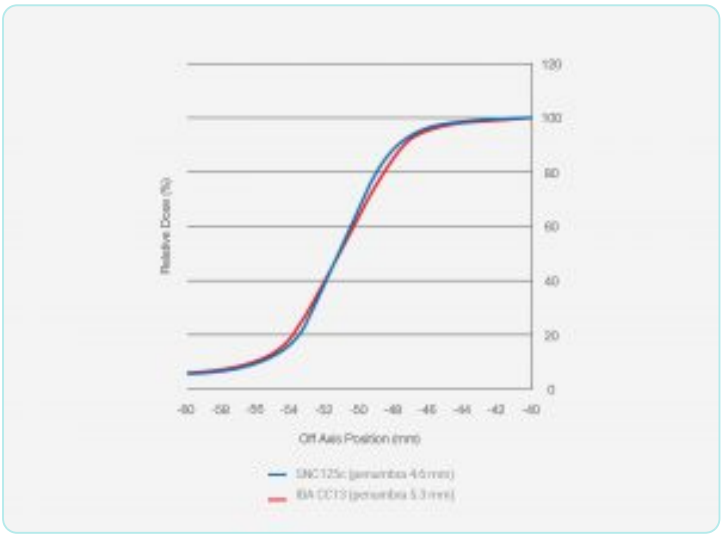
SNC125c™ Reference Ion Chamber

SNC125c for Reference Class Dosimetry
With a design that reduces the convolution of high-dose gradient regions during profile and depth measurements, SNC125c meets IEC 60731 standards and more:

- Enhanced penumbra without loss of signal strength
- Optimized to work with 3D SCANNER™
- Maintains ideal orientation during scans
- Sensitivity of a 0.125 cm^3 chamber and penumbra closer to a micro-chamber

Meet Requirements
Properly QA your linac, in accordance with the reference class and dosimetry protocols of IEC 60731, AAPM TG-51, and IAEA TRS-398.

Reliable & Accurate
Reference-class ion chambers are vented, waterproof and fully guarded. A white chamber body makes visualization easy during setup and relative to cross hairs and lasers.



3D TPR™ – Sun Nuclear

Highlights

• Supports Varian Medical Systems®, Elekta, Siemens and CyberKnife® delivery systems
• Less than 5-minute installation with no additional tools
• 20 cm TPR drain measurement 2.5 minutes
• 20 cm TPR fill measurement 3.5 minutes

EDGE Detector – Sun Nuclear

Ultimate Small Field Detector
for Precision 3D Dosimetry

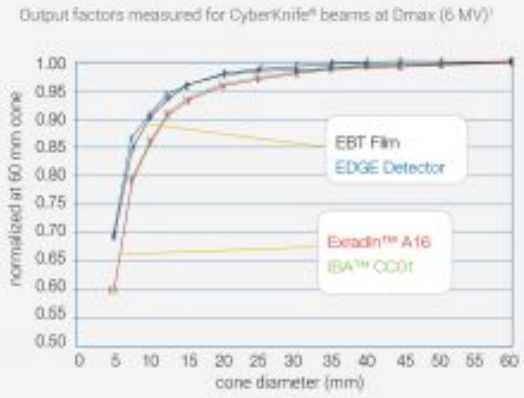
EDGE Detector™ characterizes penumbra more precisely and with less averaging than ion chambers, making it the preferred detector for small field beam modeling and QA.

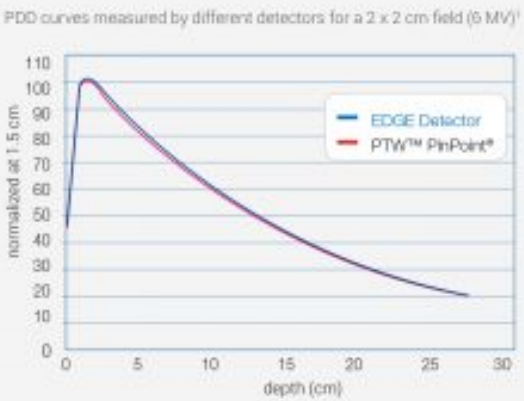
Waterproof and highly accurate, it works with all common water phantoms for SRS and IMRT beam modeling and TPS commissioning.

Well-Suited for Small Fields
EDGE Detector is comprised of a SunPoint® Diode Detector that is 842 times smaller, and has 100 times more signal, than micro ionization chambers. Its small size makes it ideal for accurate penumbra characterization and steep gradients for fields ≤10 cm.

Maintain Compliance
EDGE Detector supports compliance with TRS483 and precision dosimetry.

“The practical methods described can be used for commissioning an SRS system with small cones. New correction factors significantly improve agreement between different detectors.”
- E. Lief, et al
- Measurement of Output and Percent Depth Dose (PDD) for Small Stereotactic Radiosurgery (SRS) Cones Using Semiconductor and Microdiamond Detectors





Reference Detector – Sun Nuclear

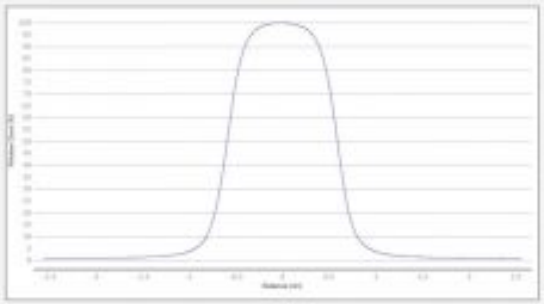
Interference-Free Dosimetry Scanning

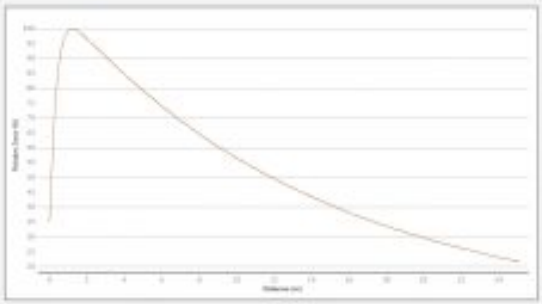
Reference Detector is a patented, out-of-field detector that uses linac head leakage to obtain a reference signal during water tank scanning of photon energies.

Small Field Annuals & Commissioning
The Reference Detector can be used for commissioning measurements of any field size, but it is especially helpful for small fields because it is fully out-of-field and does not impinge on the measurement.

Use it with 3D SCANNER™ for comprehensive commissioning and annual beam scanning.

Easy & Efficient
Reference Detector mounts to the top surface of a supported linac gantry using a non-invasive dual-lock fastener and includes a 2-meter cable with triax connector. Once setup, there is no need to move the detector when changing field sizes.





Model 008P Dynamic Pelvis Phantom – CIRS

The Model 008P Dynamic Pelvis Phantom is a precision instrument for investigating and minimizing the impact of prostate motion inside the pelvis. It delivers accurate, known and repeatable 2-dimensional target motion inside a water-equivalent phantom.

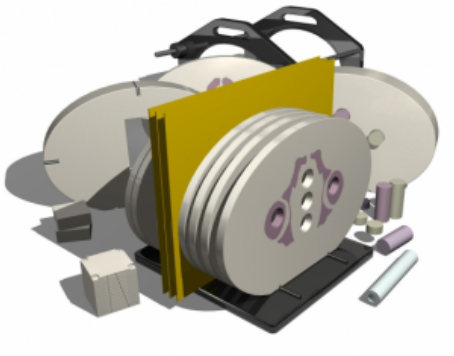
Model 008P Dynamic Pelvis Phantom features:

- tissue equivalent from 50 keV to 15 MeV
- sub-millimeter reproducibility and accuracy
- compatible with micro-chamber, film and 3D dosimeters
- motion software enables amplitudes, cycles and wave forms

Read more about the Model 008P Dynamic Pelvis Phantom on the CIRS website.

Model 002PRA Pelvic 3D Phantom – CIRS

The Model 002PRA Pelvic 3D Phantom represents human pelvic anatomy in density, proportion, structure and shape. The phantom is made of proprietary tissue equivalent epoxy materials. Linear attenuations of the simulated tissues are within 1% of actual attenuation for bone and water from 50 keV to 15 MeV.



Model 002PRA Pelvic 3D Phantom features:

- 3D and 2D isodoses
- correlates CTU to electron density
- verifies individual patient treatment plans
- checks dose distributions in sensitive areas
- verifies heterogeneity corrections
- checks depth doses and absolute dose
- calibrates film with ion chamber

Read more about the Model 002PRA Pelvic 3D Phantom on the CIRS website

Model 002LFC IMRT Thorax Phantom – CIRS

The Model 002LFC IMRT Thorax Phantom is designed for ion chamber and film dosimetry. Its shape is elliptical and properly represents an average human torso in proportion, density and two-dimensional structure.

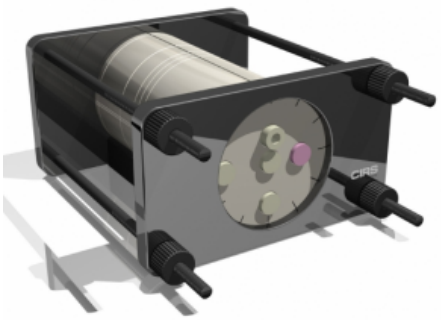
Model 002LFC IMRT Thorax Phantom features:

- 2D and 3D isodoses
- correlates CTU to electron density
- verifies heterogeneity corrections
- verifies individual patient treatment plans
- checks dose distributions in sensitive areas
- calibrates film with ion chamber & other detectors
- checks depth doses and absolute dose

Read more about the Model 002LFC IMRT Thorax Phantom on the CIRS website

Model 002HN IMRT Head and Neck Phantom – CIRS

The Model 002HN IMRT Head and Neck Phantom represents human head and neck anatomy in proportion, shape, structure and density. This enables thorough analysis of both the treatment planning and delivery systems.

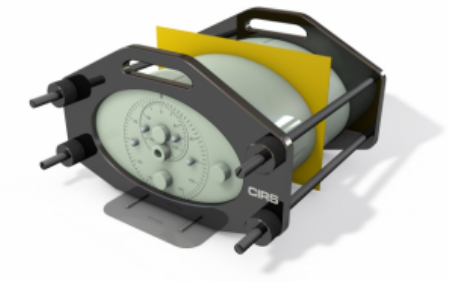


Model 002HN IMRT Head and Neck Phantom features:

- verifies individual patient treatment plans
- verifies heterogeneity corrections
- checks dose distributions in sensitive areas
- 2D and 3D isodoses
- checks absolute dose and depth doses
- correlates CTU to electron density
- calibrates film with ion chamber

Read more about the Model 002HN IMRT Head and Neck Phantom on the CIRS website

Model 002H9K IMRT Head and Torso Freepoint Phantom – CIRS



The Model 002H9K IMRT Head and Torso Freepoint Phantom is a complete QA from CT imaging to dose verification. With this phantom you can choose any point dose location within a circular area with diameter of 11.2 cm by adjusting the 2 rotating cylinders.

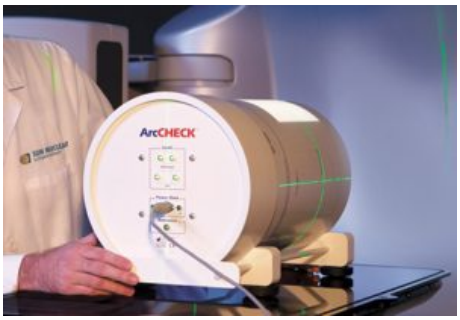
Model 002H9K IMRT Head and Torso Freepoint Phantom features:

- configure with or without heterogeneities
- uses Gafchromic or Ready Pac radiographic dosimetry film
- close placement of detectors to film improves film calibration
- surfaces are etched with indices for precise alignment
- CT; film markers ensure accurate film to plan registration
- ionization chambers, MOSFET, TLD and Diodes easily positioned using interchangeable rods

Read more about the Model 002H9K IMRT Head and Torso Freepoint Phantom on the CIRS website

ArcCHECK 4D – Sun Nuclear

ArcCHECK is the only true 4D array specifically designed for QA of today’s modern rotational deliveries. At its heart are over 1300 SunPoint Diode Detectors providing consistent and highly sensitive measurements for all gantry angles, with no additional hardware required. Independent absolute dose measurements enable the gold standard for stringent and efficient patient plan and machine QA testing.



ArcCHECK 4D features:

- smallest available detectors for accurate measurements
- BEV is consistent regardless of gantry angle
- 3D and DVH Analysis
- Flattening Filter Free (FFF)
- easy setup and lightweight (16kg)
- measure both composite and per control point
- real-time updates (50ms)

ArcCHECK 4D compatibility:

- rotational therapy: RapidArc, VMAT, TomoHelical
- static gantry: IMRT, TomoDirect
- treatment planning systems: Pinnacle, Eclipse, Monaco, iPlan, and any TPS system that can export DICOM data
- FFF and non-FFF deliveries

Contact our product specialist or download the datasheet below.

WaterProof Profiler – Sun Nuclear

The Sun Nuclear WaterProof PROFILER is a linear detector array used in place of a single detector for commissioning and routine measurements. WaterProof PROFILER works in air or in water and drastically reduces the time required to collect high quality beam profile data for any beam type.

WaterProof Profiler features:

- speed – 127 detectors capture complete beam profiles instantly, and with a fraction of the MU's needed when using a single detector
- accuracy – data is comparable to data collected when using a single ion chamber
- ease of use – attaches directly to 3D SCANNER in seconds with no tools, warm-up, or external electrometer needed
- scanning dosimetry – acceptance testing, treatment planning system commissioning and QA
- open fields – measure entire field instantaneously
- wedges – measure electronic and physical wedges instantaneously in a single measurement
- compatible with Sun Nuclear 3D SCANNER
- can be used for in-air measurements
- quickConnect connects WaterProof PROFILER to the Sun Nuclear 3D SCANNER in seconds
- oversampling feature provides more accurate scans
- SunPoint Diode Detectors measure only 0.8 x 0.8 mm and provide the sharpest penumbra for the highest accuracy in beam modeling
- best detector spacing of any waterproof array: only 0.4 cm
- best detector count of any waterproof array: 127 detectors
- best detector array length of any waterproof array: 50.4 cm
- calibration is fully automated and performed in the 3D SCANNER with no need to go in and out of bunker

Read more about the WaterProof Profiler on the Sun Nuclear website

PC Electrometer – Sun Nuclear

PC Electrometer is a dual channel reference class electrometer for absolute dose calibration. The system is designed for accuracy and convenience. It offers small size (0.4 kg), near no warm-up time (< 1 minute), and complete operation through USB, with no batteries or external power connections.

PC Electrometer features:

- reference class dosimetry for absolute dose calibration
- two independent measurement channels
- lightweight and portable; only 0.4 kg
- USB powered — no batteries or power cord
- fully configurable and intuitive software interface
- interfaces directly with the Sun Nuclear 1D SCANNER
- less than 1-minute warm-up time
- single USB cable connection
- fast 500 ms sampling interval
- detector library

Read more about the PC Electrometer at the Sun Nuclear website

1D Scanner Water Tank – Sun Nuclear

The 1D Scanner Water Tank is used for dosimetry measurements in water including output factors, dose calibrations, annual, and routine QA. Setup subjectivity is reduced with a water surface detection feature that automatically sets the dosimetry detector at the water surface.

1D Scanner Water Tank features:

- PC software control and multi-function pendant included
- all common electron cones are accommodated
- scanning software (optional)
- detector positioning depth and 30 cm scan
- off-axis detector positioning (horizontal ruler)
- reference detector holders included
- 50 liters at 35 cm depth: interior volume
- 37.6 x 40.6 x 36.8: exterior dimensions L/W/H (cm)
- 35.0 x 39.0 x 36.2: inner dimensions L/W/H (cm)

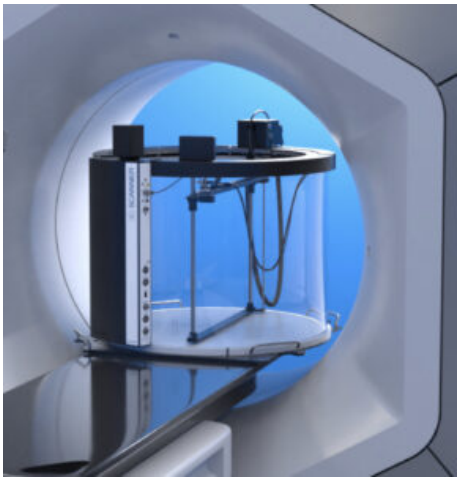
Read more about the 1D Scanner Water Tank at the Sun Nuclear Website.

Cylindrical 3D Water Tank Scanner – Sun Nuclear

Sun Nuclear purpose-built this Cylindrical 3D Water Tank Scanner for modern treatment modalities. It achieves faster and more accurate commissioning, and annual QA with consistent scan orientation and automated setup.

The 3D SCANNER is different by design. To provide accurate and reproducible beam data, Sun Nuclear developed the machine from the ground up.

Everything, from the geometrical design, to the setup process, is developed to improve both the accuracy and the objectivity of the data.



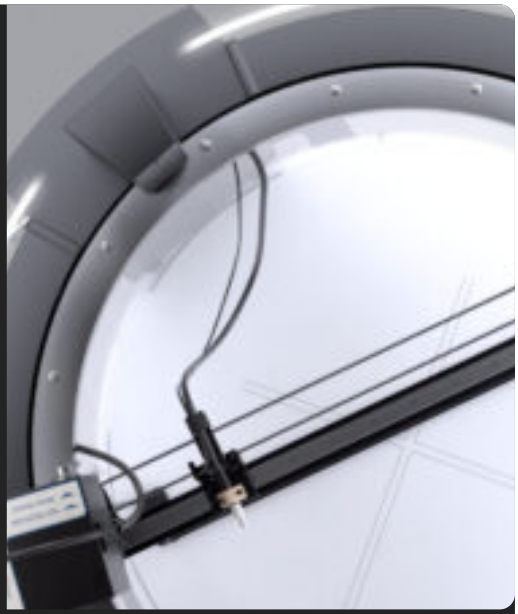
AUTOSETUP

The 3D SCANNER is less subjective and saves time, because of AutoSetup™.

First, the machine's water sensor measures water surface relative to the scanning mechanism at three points and automatically adjusts the water tank levelling. After that, the device measures a 10 x 15 beam to determine the center of the beam, and align the center of the scanner with the beam center. Last, the scanner uses a series of beam measurements to automatically establish in-plane and cross-plane home positions. The ring drive electric motor's zero position is set to the found cross-plane direction.

Because of this setup, it only takes less than 20 minutes to set up.

3D SCANNER offers a diameter drive for consistent detector orientation for all angles. Because of the 360º degree circumference and rotation range of 330º, there is no need for tank shifts.



INTUITIVE SOFTWARE

3D SCANNER uses SNS Dosimetry scanning software. This software offers powerful analysis and smart features for enhanced efficiency. This software can queue scans, it is a multi-scan comparison tool with a searchable database and it has processing layers.

CYLINDRICAL 3D WATER TANK SCANNER BENEFITS

- Easy and fast setup because of AutoSetup™
- No tank shifts necessary
- Better, more objective data

- 360º scanning
- Timesaving SNC Dosimetry software

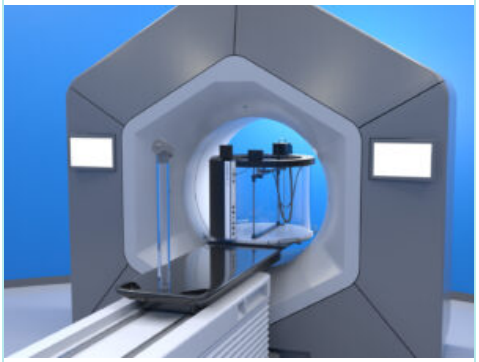
For more info on the scanner, read our article!

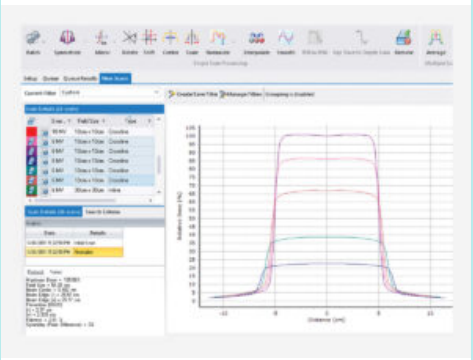
GO ANYWHERE

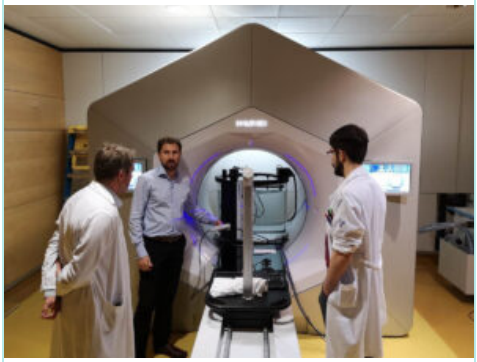
The 3D MiniLift is specially designed for transporting the 3D SCANNER. The lift is part of a convenient and portable 3D SCANNER system. The lift is easily stored, easy to use, small and fits through standard doors.

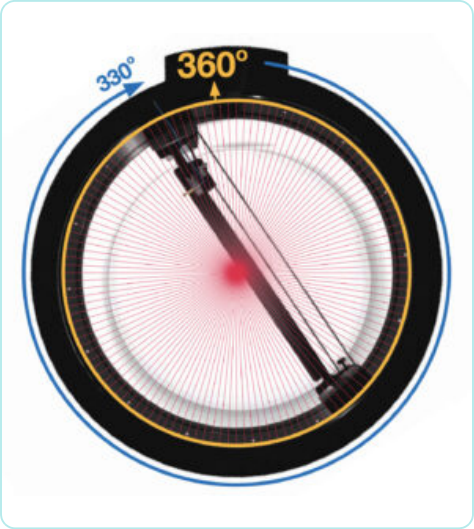
The MiniLift enables you to easily take the 3D SCANNER from room to room when necessary. It is 57 cm high, 95 cm in length and weighs 105 kg.

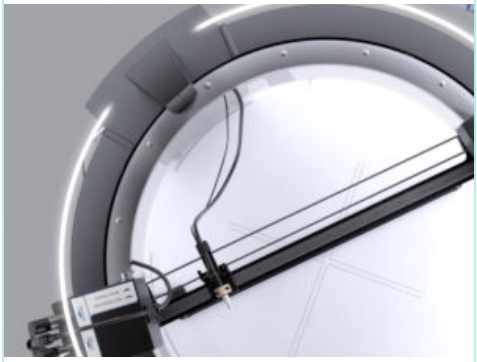
If you want to know more about the 3D SCANNER an the MiniLift, visit our partner's website!



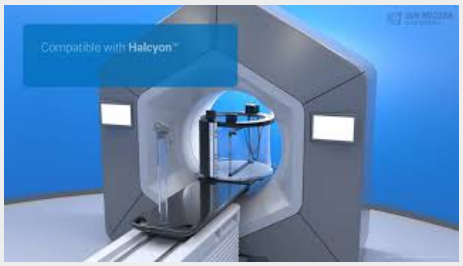








3D SCANNER™ from Sun Nuclear https://youtu.be/B6EEZokqZ8k



SCAN TO VIEW VIDEO

Model 038 STEEV Steriotactic End-to-end Verification Phantom Patient

STEEV™ Phantom

The STEEV Phantom provides the most realistic clinical simulation to perform end-to-end testing of SRS QA systems in the most challenging anatomical regions.

The Model 038 STEEV Steriotactic End-to-end Verification Phantom Patient is used for comprehensive testing of stereotactic radiosurgery systems. The Phantom provides a means to check every step the patient will undergo in the treatment process from diagnostic imaging with MR, CT, and PET to treatment plan verification.

Model 038 STEEV Steriotactic End-to-end Verification Phantom Patient features:

- Performs IGRT QA procedure for X-ray and onboard kV and MV imagers including CBCT
- TPS Deformable Image registration algorithm accuracy QA
- Performs end-to-end testing for commissioning as directed by AAPM TG-101
- Verifies patient treatment plan in critical regions
- performs geometric machine QA Winston-Lutz isocenter verification tests and localization/repositioning with couch shift
- Verifies patient positioning using frame/frameless systems, head and shoulder masks or other positioning fixation devices
- Assesses image transfer QA, image fusion, accuracy verification and TPS testing with Multi-modality imaging capabilities (CT, MRI and PET)

Workflow step:

- Treatment planning
- Pre-Treatment delivery
- Commissioning & acceptance
- Monthly QA
- Annual QA
- Dosimetry
- End-to-End QA

Modality:

- Linac
- SRS/SBRT
- Bore-based Linacs
- Cyberknife
- TomoTheraphy
- Imaging

The standard model 038 includes:

- Phantom head and neck with external fiducials and markings
- Three brain equivalent spacers to fill rectangular intercranial cavity
- Two tissue-equivalent rods to fill cylindrical channels (one includes MRI/CT fiducial)
- MRI/CT/PET ISO Center Insert
- Neck alignment plate
- Foam-lined carry case
- User guide and warranty

Read more about the Model 038 STEEV Steriotactic End-to-end Verification Phantom Patient on the Sun Nuclear website

DETECTORS

peo MEDICAL

Mammo Digital Compression Device – Sun Nuclear

The Mammo Digital Compression Device measures compression force to assure accuracy and reproducibility.

The device has a removable display panel that supports prone and standard mammo systems, with compression force up to 34 kg. It also has a backlit LCD screen that displays the force, with continuous monitoring for time study. The screen can display the force in standard, or in metric units.

MAMMO DIGITAL COMPRESSION DEVICE FEATURES

- Removable display pannel
- Backlit LCD screen that displays force in standard or metric units
- Foam-lined tray and foam compression block support and protect curved paddles
- Analog readout easily legible from multiple viewpoints
- Maximum force reading memory
- 1-button reset

If you want to read more about this device or other mammography accessoires, take a look at our partner's website!

Model MA5034 – Portable Blue / Green Sensitometer – Sun Nuclear

For day to day processor quality control, the Gammex MA5034 Portable Blue / Green Sensitometer provides a versatile, reliable, and highly accurate test. Sensitometry is the single most effective way to test the processor operation and consistency.

With its 21 step light modulator, a full range of densities can be tested with a single piece of film. It can be used with a wide range of films

Portable Blue / Green Sensitometer features:

- versatile, reliable, and highly accurate testing device
- can test either blue sensitive or green sensitive film
- easy to expose the film, simply close the cover and listen for the tone
- battery powered
- compact design

Model 330 – Digital kV, Dose and Time Meter – Sun Nuclear

The Gammex 330 Digital kV, Dose and Time Meter is a test device for quality control and acceptance testing in radiographic, mammographic and fluoroscopic x-ray systems.

Digital kV, Dose and Time Meter features:

- includes digital display of the quantity PPV (pratical peak voltage) according to IEC 61676
- compact and light-weight
- easy-to-read LC Display
- measures kVp, dose and time non-invasively
- touch key controls

DOSE RATE MONITORING

peo MEDICAL

Model 330 – Digital kV, Dose and Time Meter – Sun Nuclear

The Gammex 330 Digital kV, Dose and Time Meter is a test device for quality control and acceptance testing in radiographic, mammographic and fluoroscopic x-ray systems.

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- compact and light-weight
- easy-to-read LC Display
- measures kVp, dose and time non-invasively
- touch key controls

QA PHANTOMS

peo MEDICAL

Elasticity QA Phantom (model 049) – CIRS

The Elasticity QA Phantom (model 049 & 049A) is a tool you can use for both shear wave and compression elastopraphy. These models are the only phantoms commercially available for sonoelastography quality assurance. The phantoms contain targets of known stiffness relative to the background material and range in stiffness, diameter and depth.

Both phantoms come standard with a four-year warranty and carry case.

The Model 049 is a basic QA phantom as it contains two sizes of spheres positioned at two different depths. At each depth there are two spheres that are softer than the background and two that are harder than the background.

Model 049A has a broader range of target sizes than the 049. This phantom has stepped mass targets instead of spheres. Each stepped mass consists of six diameters so that you can evaluate the ability to visualize targets that are located at the same depth and have the same relative stiffness but vary in diameter.

Both models are housed in the same size container as the original Model 049.

ELASTICITY QA PHANTOM FEATURES

- Four types of lesions with discrete elastic moduli
- Compatible with both shear wave and compression elastography
- Customized versions available for magnetic resonance elastography
- Ensure over ten years of reliable use through reinspection and repair service

The phantoms are suitable for determining dynamic range, checking system performance over time, training and demonstrating, and research and development.

If you want to read more about these models, take a look at our partner's website!

Image-Guided Abdominal Biopsy Phantom (model 071B) – CIRS

The Image-Guided Abdominal Biopsy Phantom is a simplified abdominal phantom. It's suitable for training and demonstrating image-guided needle biopsy navigation tools or procedures that require a constant visual reference for needle placement. The phantom allows many uses over time because of the background gel minimizes needle tracks when punctured.

The phantom contains 12 lesions, 5-12 mm in diameter, positioned in groups of three in consistent locations within the phantom. It also includes simulated spine and ribs, and an "H" marker within the spine to assist in determining the head side within a CT-image. You can see the lesions and spine under ultrasound, CT and MRI. The solid polymer gel background is anechoic and will also not leak when it is punctured.

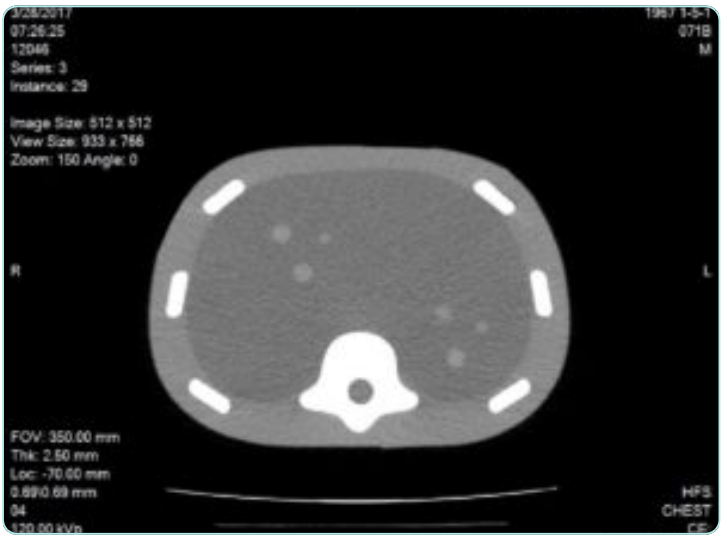
The phantom also includes a foam lined hard carry case and it's useful in multiple fields. The phantom is perfect for CT, Ultrasound and MRI, live scanning and biopsy training.

IMAGE-GUIDED ABDOMINAL BIOPSY PHANTOM FEATURES

- Improve performance of freehand abdominal biopsies
- Minimal needle tracking- Z-skin fat layer and softer gel provide better self-healing properties
- Validate automated biopsy systems
- Suitable for CT, MRI and Ultrasound

If you want to read more about this phantom, take a look ar our partner's website!


PHILIPS
MI 0.4
TIS 0.0
Abdomen
C6-2
29 Hz
15.0cm
2D
Gen
Gn 89
56
3/3/3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Loc: -70.00 mm
HFS
CHEST

Model 1425 – Doppler Flow System – Sun Nuclear

The Doppler Flow System from Sun Nuclear (formerly Gammex) tests both Doppler and B-mode ultrasound systems in a single unit. The compact, easy to store and transport designed system combines the flow system, phantom and electronic flow controller into a single unit. Scanner selection, quality control testing, training and research can all be performed using this multi-faceted ultrasound tool. A wide range of targets and vessels are included in the unit.

Doppler Flow System features:

- the Choice of attenuations of 0.5 or 0.7 dB/cm/MHz
- combines low echo matrix with line reflectors and anechoic cyst targets at 2, 4 and 6 mm depths
- two 5mm vessels in the system adhere to FDA Doppler sensitivity recommendations.
- flow controller with a range of 1 to 12.5 ml/sec
- 5 preset pulse flow patterns

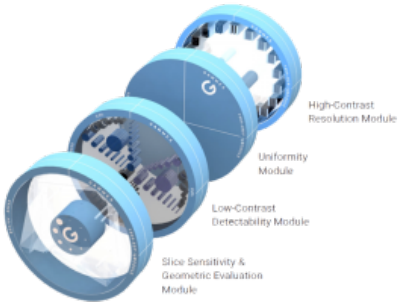
Do you want to know more about the Doppler Flow System?

If you want to continue your search for additional information on this product try this link.

Advanced iqModules™ – Sun Nuclear

Expanded Image Quality CT QA

Perform robust image quality testing of advanced CT systems with Advanced iqModules from Sun Nuclear (formerly Gammex). This set of 4 modules provides comprehensive testing of high-contrast resolution, low-contrast detectability, slice sensitivity, geometric evaluation, and uniformity.



Unmatched Image Quality Testing

Versatile and unique, the Advanced iqModules offer resolution up to 32 lp/cm, the widest range of test objects to evaluate low contrast detectability, and a broad range of methods to evaluate Slice Sensitivity.

Modular CT QA Support

Combine modules with the CT ACR 464 Phantom for expanded, independent CT QA. Or, combine them with the Advanced Electron Density Phantom or the Multi-Energy Phantom, to create a robust system for testing image quality and other parameters such as dose distributions concurrent with evaluating Multi-Energy CT performance and performing HU calibrations.

Low-Contrast Detectability Module

Use this module to test the low-contrast detectability of the most demanding CT scanners.

- Test performance across scanners and protocols with 3 different contrast levels

0.3%, 0.6%, and 1.0% (3 HU, 6 HU, and 10 HU)

- Ensure robustness against noise with multiple contrast objects

Sized from 1.5 to 25 mm with two of each size

High-Contrast Resolution Module

Use this module to expand your CT ACR 464 testing.

- Includes all resolutions from the CT ACR 464 Phantom, plus high resolution up to 32 lp/cm
- Large bar patterns offer easy visualization and analysis
- Zinc high-contrast material provides visibility without over-ranging scanners

Slice Sensitivity & Geometric Evaluation Module

Use this module to validate slice thickness, slice sensitivity profile, and system geometry.

- Measure slice thickness and slice sensitivity profile with an opposed pair of wire ramps and 2 opposed pairs of bead ramps
- Calculate Modulation Transfer Function with one-off vertical wire
- Check geometric accuracy with 8 acrylic spheres
- Perform MTF measurements with BBs of two different sizes

Uniformity Module

Use this module to assess CT number uniformity.

- Measure uniformity and noise
- Measure distance and calibrate pixel size using 2 embedded BBs spaced 100 mm apart
- Calculate MTF, NPS, and other noise-related metrics
- Doubles as an extension plate for use with the CT ACR 464 Phantom and other Advanced iqModules

Read the full specifications, benefits and scope in datasheet.

Links

Advanced Electron Density Phantom link – https://www.sunnuclear.com/products/advanced-electron-density-phantom

CT ACR-464 Phantom link – https://www.sunnuclear.com/products/ct-acr-464-phantom

RapidCHECK Diagnostic QA Software – https://www.sunnuclear.com/products/rapidcheck-software

View Sun Nuclear website: https://www.sunnuclear.com/products/multi-energy-ct-phantom

Model 1430 – Mini-Doppler Flow System – Sun Nuclear

The Doppler Flow System tests both Doppler and B-mode ultrasound systems in a single unit. The compact, easy to store and transport designed system combines the flow system, phantom and electronic flow controller into a single unit. Scanner selection, quality control testing, training and research can all be performed using this multi-faceted ultrasound tool. A wide range of targets and vessels are included in the unit.

Mini-Doppler Flow System features:

- the Choice of attenuations of 0.5 or 0.7 dB/cm/MHz
- includes 404GS LE components with Grey Scale targets
- combines low echo matrix with line reflectors and anechoic cyst targets at 2, 4 and 6 mm depths
- two 4 mm vessels in the system adhere to FDA Doppler sensitivity recommendations.
- flow controller with a range of 0 to 10 ml/sec
- 8 preset pulse rates

Do you want to know more about the Mini-Doppler Flow System?

If you want to continue your search for additional information on this product try this link.

Mercury 4.0 Phantom – Sun Nuclear

This Advanced CT Performance Assessment Phantom makes it possible to characterize advanced CT features, including Automatic Exposure Control and Iterative Reconstruction, to support protocol optimization and proper dose management for your patients.

Characterization for Effective Dose Management

The Mercury 4.0 Phantom addresses performance and effectiveness of Automatic Exposure Control / Tube Current Modulation, and evaluates image quality for Iterative Reconstruction.

TG-233 Compliance

Meet AAPM Task Group 233 requirements for performance evaluation of CT systems.

Advanced CT Metrics

Collect and analyze data for advanced CT testing recommended by AAPM Task Group 233:

- Automatic Exposure Control
- Noise Power Spectrum
- Modulation Transfer Function & Task Transfer Function
- Detectability (d’)
- Cone-beam artifacts
- Superior-Inferior resolution

If you want to know more, take a look at our partner’s website!

Model 164A – Stereotactic Breast Biopsy Phantom – Sun Nuclear

The Stereotactic Breast Biopsy Phantom form Sun Nuclear (formerly Gammex) is designed to be used as a training phantom for performing biopsy procedures. It provides a good representation of breast tissue.

Multiple radiopaque lesions are impeded in the phantom to permit multiple uses of the phantom by different personnel.

Model 164A Stereotactic Breast Biopsy Phantom features:

- made of clear gel encased in a soft vinyl for easy compression and a skin-like resistance to needle insertion
- embedded in the gel are radiopaque lesions ranging in size for practicing core biopsies
- liquid dye filled lesions allow for the practice of fine needle aspiration
- compressible within a biopsy instrument

If you want to continue your search for additional information on this product try this link.

Model 083 – Soft Carrying Case – Sun Nuclear

This Soft Carrying Case is designed to protect and transport the Gammex/ Sun Nuclear Ultrasound phantom that is placed in it. It is compact and easy to clean if it becomes soiled.

The case can be used with any of the Gammex/ Sun Nuclear Ultrasound phantoms except the Doppler Flow System (1425A LE) or the (1430LE).

Soft Carrying Case features:

- shoulder strap for easy carrying
- foam-lined for protection of the phantom and other contents
- specifically designed for holding the Gammex Ultrasound phantoms
- made of durable material for long lasting protection of the phantom

Model 711-HN ATOM Max Dental & Diagnostic Head Phantom – CIRS

The Model 711-HN ATOM Max Dental & Diagnostic Head Phantom is a standard of reference for diagnostic radiology of the head. The phantom has been developed to assist clinical and technical staff in the monitoring, selection, verification and training of scanning parameters common to most radiological procedures requiring fine anatomical details.

Model 711-HN ATOM Max Dental & Diagnostic Head Phantom features:

- tissue Equivalent from 50 keV to 25 MeV
- carrying case included
- includes detailed anatomical features
- Frankfurt plane identified to ensure proper alignment
- positioning stand with six degrees-of-freedom
- easy to set up and use

Read more about the Model 711-HN ATOM Max Dental & Diagnostic Head Phantom on the CIRS website

Model 404 – Precision Small Parts Grey Scale Phantoms – Sun Nuclear

The 404GS LE precision Small Parts Grey Scale Phantom provides advanced technology for measuring image quality of small parts and intra-cavity ultrasound scanning systems. The phantom also contains grey scale parts for additional measurement capability.

The 404 LE has the same general target layout and specifications as the 404GS LE but it does not include grey scale targets.

Both Sun Nuclear phantoms incorporate the latest Gammex Tissue Mimicking gel technology to provide a smoother background texture than what is provided by conventional tissue mimicking gels.

The convertible water dam permits easy changeover for its use or non-use. It is included on both the 404GS LE and the 404 LE.

Precision Small Parts Grey Scale Phantoms features:

- the phantom utilizes the unique Tissue Mimicking gel of Gammex
- combination of anechoic cyst, grey scale and pin targets to permit a wide range of testing.
- convertible water dam
- measure to depths of up to 9 cm
- varying sizes and depths of each type of target
- resolution patterns and all vertical and horizontal targets are made of 0.1 mm nylon fibers
- low scatter cysts of 1, 2, 4 and 7 mm diameters to better evaluate system noise and distortion

Model 405 – Precision Resolution Grey Scale Phantom – Sun Nuclear

The Precision Resolution Grey Scale Phantom is designed to work with high resolution ultrasound systems.

Sun Nuclear's 405GSX LE incorporates the latest Gammex Tissue Mimicking gel technology to provide a smoother background texture than what is provided by conventional tissue mimicking gels. The phantom contains all of the quality indicators for performing a wide range of evaluations. Grey scale targets are included in the phantom.

The convertible water dam permits easy changeover for its use or non-use.

Precision Resolution Grey Scale Phantom features:

- the phantom utilizes the unique Tissue Mimicking gel of Gammex
- combination of anechoic cyst, grey scale and pin targets to permit a wide range of testing.
- convertible water dam
- reference markers within the phantom permits exact alignment of transducer each time testing is performed
- measure to depths of up to 16 cm
- varying sizes and depths of each type of target

Model 406 – Dual Attenuation Phantom – Sun Nuclear

The Sun Nuclear (formerly Ga Dual Attenuation Phantom is essentially 2 phantoms in 1. The phantom permits quality control tests over a wide range of frequencies.

The 406 LE is a highly effective instrument for demonstrating superior image quality while challenging high performance ultrasound systems. The phantom provides a comprehensive profile of the scanner's overall image quality.

Dual Attenuation Phantom features:

- contains both 0.5 and 0.7 dB/cm/MHz attenuations in a side-by-side configuration
- the phantom uses the Gammex Tissue Mimicking gel with a smoother background texture.
- the Phantom uses a composite film scanning surface with improved transmission properties
- the phantom has target depths to 16 cm deep
- resolution patterns and all vertical and horizontal targets are constructed of 0.1 mm nylon fiber.
- three sets of axial resolution targets.
- scatter-free cylinders of 2, 4 and 6 mm diameter that mimick blood vessels

Do you want to know more about the Dual Attenuation Phantom?

If you want to continue your search for additional information on this product try this link.

Model 408 – Spherical Lesion Phantom – Sun Nuclear

This Spherical Lesion Phantom from Sun Nuclear (formerly Gammex) is used to test the resolution of Ultrasound scanners. It tests in 3 dimensions: axial, lateral and elevational.

The phantom contains both 2mm and 4mm diameter tissue mimicking spherical lesions which lie in a single plane at the center of the phantom. Axial, lateral and elevational resolution are accouted for simultateously and equally for all types of ultrasound systems and configurations.

Spherical Lesion Phantom features:

- contains both 2mm and 4mm diameter tissue mimicking spherical lesions
- the 2mm section contains 105 anechoic spheres at 0.5cm depther intervals
- the 4mm section contains 211 anechoic spheres at 0.75 depth intervals
- tissue Mimicking gel used provides smoother background texture
- lesions produced with negligible echogenicity while producing no distal enhancement or shadowing
- TM gel optimized for use with tissue harmonics imaging technology
- composite film scanning surface provides improved transmission properties permitting more of the ultrasonic beam to be transmitted and received.

Do you want to know more about the Spherical Lesion Phantom?

If you want to continue your search for additional information on this product try this link.

Model 416 – Ultrasound Transducer Evaluation Device UTED – Sun Nuclear

The Ultrasound Transducer Evaluation Device UTED provides an EASY, FAST & ECONOMICAL way to test your transducer elements.

Ultrasound Transducer Evaluation Device UTED features:

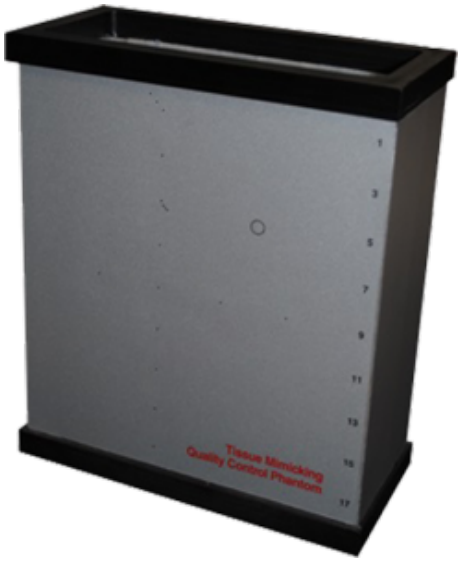
- silicone-based phantom
- varying surfaces and chambers
- compact

Model 411 – LE Tissue Mimicking QC Phantom – Sun Nuclear

The Tissue Mimicking QC Phantom 411 LE is designed to meet the needs of the small ultrasound lab. This phantom provides a standard of quality assurance required for routine testing of ultrasound scanning systems.

411 LE Tissue Mimicking QC Phantom features:

- the phantom utilizes the unique Tissue Mimicking gel of Gammex
- one mid-depth axial resolution target at 6 cm with pins spaced at 0.5, 1 and 2 mm.
- single 6 mm diameter anechoic cyst at 5 cm
- all pin targets are constructed of 0.374 mm nylon fibers



Model 410 – Multi-Purpose Accreditation Phantom – Sun Nuclear

The 410 family of Multi-Purpose Accreditation Phantom lets you pick and choose what level of testing is right for your quality assurance program. All 410 phantoms will allow you to evaluate uniformity and artifacts, geometric accuracy and system sensitivity. This phantom provides a standard of quality assurance required for routine testing of ultrasound scanning systems.

Multi-Purpose Accreditation Phantom features:

- the phantom utilizes the unique Tissue Mimicking gel of Gammex
- multiple scanning surfaces to easily test all types of transducer shapes
- uniformity Assessments
- sensitivity Assessment Dead zone Assessments
- harmonic Imaging

Do you want to know more about the Multi-Purpose Accreditation Phantom?

If you want to continue your search for additional information on this product try this link.

Model 1151 – Radiographic Contrast / Detail Phantom – Sun Nuclear

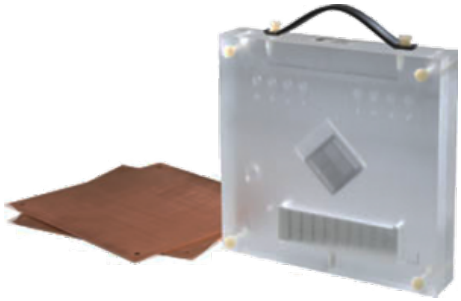
This Radiographic Contrast / Detail Phantom from Sun Nuclear (formerly Gammex) is used to determine the threshold contrast characteristics and to monitor performance of a radiographic or fluroscopic system.

The phantom is an aluminum plate with a matrix of holes. All of the holes in a given row have a constant depth. All of the holes in a given column have a constant diameter. From this a 10 point curve is constructed by observing the shallowest depth hole that can be seen for each hole diameter.

Radiographic Contrast / Detail Phantom features:

- aluminium construction
- easy to use tool
- easy to transport

Model 170NJ – Radiographic Survey Phantom – Sun Nuclear



The Sun Nuclear (formerly Gammex) 170NJ phantom provides a simple and reproducible test tool for interfacility surveys and intra-department comparison of radiographic systems.

For routine quality control, the phantom images provide a rapid assessment of high contrast resolution, low contrast detectability, radiographic exposure consistency as well as radiation light-field alignment and collimation accuracy.

Radiographic Survey Phantom features:

- designed to optimize portability and ease of use
- designed for use in 3 ranges of clincal settings:
  - 60 kVp
  - 75 kVp
  - 120 kVp
- each phantom is equipped with a carrying strap, tripod mounting assembly and built-in levels for quick set up and orientation in a variety of clinical settings
- includes 2 thicknesses of Copper plate.

Model 610 – Neonatal Chest Phantom – Sun Nuclear

The Gammex 610 Neonatal Chest Phantom is designed for routine quality assurance monitoring of computed and digital radiography systems.

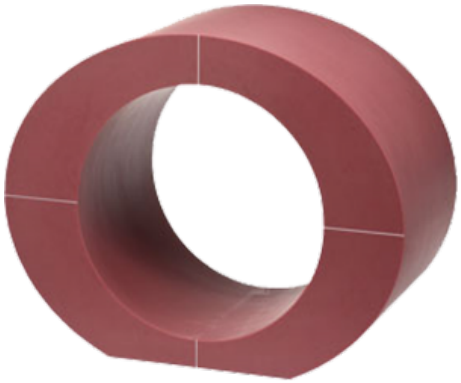
The phantom replicates both the anatomic structure and the tissue attenuation characteristics of a real neonate. The 610 phantom can be imaged using clinical protocols, requiring in a test of the entire imaging chain, including image processing parameters.

The phantom is the first anthropomorphic neonatal phantom that adequately represents a 1-2 Kg neonate in its transmission characteristics, histogram, physical size and structure.

Neonatal Chest Phantom features:

- accurate representation of neonate in transmission characteristics.
- interchangeable lung insert pieces that permit imaging examination of pneumothorax and hyaline membrane conditions
- compact size
- composed of Solid Water material
- light weight custom carrying case

Model 464-Ring – CT Phantom Extension – Sun Nuclear



Users of Sun Nuclear's (formerly Gammex) 464 CT phantom frequently want a better indication of the scanner's performance with a phantom that more accurately mimics a torso. The optional 464-Ring torso adapter permits the use of the 464 Accreditation in this type of application.

The 464 phantom can easily be inserted into the 464-Ring adapter to permit quick imaging in these situations. Users gain the advantage of being able to check the Quality Assurance on 16 different parameters with an anthropomorphic testing phantom in additional to other QA applications they may be required to perform, thus saving money that would otherwise be required for purchase of an entirely new phantom.

The Torso adapter is not a requirement for use in any Quality Assurance testing program.

CT Phantom Extension features:

- Solid Water construction
- made of multiple modules and shaped to better mimic a torso
- white scribed markings help ensure proper alignment
- designed to work exclusively with the 464 CT Phantom

Do you want to know more about the CT Phantom Extension?

If you want to continue your search for additional information on this product try this link.

CT ACR 464 Phantom – Sun Nuclear

The ACR CT Accreditation Phantom from Sun Nuclear (Gammex) is designed to be an integral part of the American College of Radiology (ACR) CT Accreditation Program. This voluntary program provides physicians with an opportunity for a comprehensive peer review of their CT facility, personnel qualifications, image quality and quality assurance programs.

The phantom can be used for initial QA assessment and routine monthly QA testing to help ensure that patients are receiving the lowest possible CT dose.

The Gammex ACR CT phantom is the only phantom authorized for use in the ACR CT Accreditation Program. Gammex submits the phantoms to rigorous quality control testing standards, as outlined by ACR, to assure users of the high level of performance and intergrity of each phantom.

ACR CT Accreditation Phantom features:

- designed to meet specifications of ACR for CT accreditation
- Solid Water construction
- made of 4 modules designed to measure a wide range of scanner parameters
- white scribed markings on the axial coronal and sagittal axis help ensure proper alignment
- measure
  - positioning
  - CT number accuracy
  - alignment
  - slice thickness
  - low contrast resolution
  - CT number uniformity
  - high contrast resolution

Do you want to know more about the ACR CT Accreditation Phantom?

If you want to continue your search for additional information on this product try this link.

Links

RapidCHECK Diagnostic QA Software – https://www.sunnuclear.com/products/rapidcheck-software

Advanced iq modules – https://www.sunnuclear.com/products/advanced-iqmodules

Multi Energy CT Phantom –

https://www.sunnuclear.com/products/multi-energy-ct-phantom

View Sun Nuclear
website: https://www.sunnuclear.com/products

Model 464 – ACR CT Accreditation Extension Plates – Sun Nuclear

Accurately represent scatter effects from widebeam CT scanners with the ACR 464 extension plates from Sun Nuclear (Gammex). Made from identical solid water materials, these extension plates allow images to begin and end in the same material to eliminate artifacts that may be introduced by scanning in air.

ACR CT Accreditation Extension Plates features:

- this kit includes two Extension Plates with an adjustable stand to accurately represent scatter effects from wide-beam CT scans. The extension plates allow images to begin and end in the same material to eliminate artifacts that may be introduced by scanning in air.
- Solid Water construction
- designed to work exclusively with the 464 CT Phantom

Do you want to know more about the ACR CT Accreditation Extension Plates?

If you want to continue your search for additional information on this product try this link.

Model 183 – Routine Mammographic QC Kit – Sun Nuclear

The Sun Nuclear (formerly Gammex) 183 Routine Mammographic QC Kit contains all the tools, instructions, and data recording forms needed for a film-screen mammography program that meets MQSA requirements.

The instruments evaluate image quality, compression force, film-screen contact, processor performance and film hypo retention.

Model 183 Routine Mammographic QC Kit features:

- multiple instruments and tools for performing a wide range of tests
- rugged carrying case
- ACR Mammography Accreditation phantom is included
- ACR Mammographic Quality Control Manual included

Model 182M – Mammographic QC Kit – Sun Nuclear

Quality control provides the necessary assurance that your images contain all the information possible for the delivered dose. Sun Nuclear's (formerly Gammex) 182M Mammographic QC Kit can be used at every type of mammography facility, from small clinics to large medical centers.

Each kit is complete and will provide you with the tools used to perform essential tests.

Model 182M Mammographic QC Kit features:

- image quality
- film/screen contact
- kVp accuracy
- automatic exposure control reproducibility
- timer accuracy
- half value layer
- focal spot size
- output reproducibility and linearity

Model 179 – Artifact Identification Phantom – Sun Nuclear

Sun Nuclear’s (formerly Gammex) 179 Artifact Identification Phantom is a full field device that allows for a grey film to be produced when the phantom is imaged. This will indicate any artifacts that may be caused by a mammographic system’s grid or filters.

Model 179 Artifact Identification Phantom features:

- acrylic design

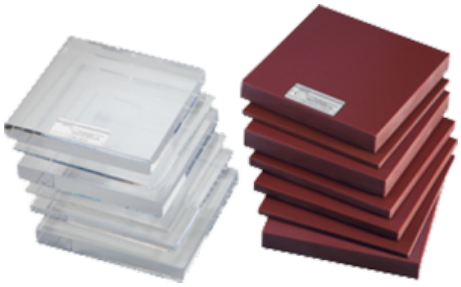
Model 118 – Mammographic Aluminum Stepwedge – Sun Nuclear

Sun Nuclear’s (formerly Gammex) 118 Mammographic Aluminum Stepwedge is constructed from a single piece of High Purity Aluminum. The nine steps have thickness ranging from 0.3 mm to 2.27 mm.

Model 118 Mammographic Aluminum Stepwedge features:

- made of High Purity Aluminum Alloy and Copper
- made from a single piece of High Purity Aluminum
- compact design

Model 159A / 159A-BR – Mammographic Phototimer Consistency Tool – Sun Nuclear



Sun Nuclear's (formerly Gammex) model 159A and 159A-BR Mammographic Phototimer Consistency Tools are designed to test Automatic Exposure Control (AEC) performance.

Model 159A / Model 159A-BR Mammographic Phototimer Consistency Tool features:

- test tools come in either 7 pieces of acrylic (159A) or 7 pieces of breast tissue equivalent material (159A-BR)
- multiple thicknesses and densities

If you want to continue your search for additional information on mammography accessoires, try this link.

Model 150K – Mammographic DCF Test Tool – Sun Nuclear

Sun Nuclear's (formerly Gammex) Model 150K Mammographic Density Control Function (DCF) test tool enables a quick and accurate assessment of a film-screen mammography unit's Automatic Exposure Control (AEC).

Model 150K Mammographic DCF Test Tool features:

- engraved density scale and sliding exposure plate
- can slide exposure place without moving the cassette
- the tool consists of a base plate with a sliding exposure plate which contains a small window
- design permits sliding the exposure plate without moving the plate
- light weight and convenient to use

Model 429 – Ultrasound Biopsy Phantom – Sun Nuclear

The same eye and hand coordination skills required to perform ultrasound-guided biopsies of other organs can be learned using this phantom from Sun Nuclear (formerly Gammex).

The use of ultrasound-guided needle biopsy to diagnose the form and structure of lesions is growing worldwide.

The Ultrasound Biopsy Phantom simulates the look and feel of a human breast.

Model 429 Ultrasound Biopsy Phantomeatures features:

- 11 test objects on three different levels, allowing you to practice identification, aspiration and biopsy procedures on cysts, high-contrast and low-contrast lesions
- simulates the look and feel of a human breast
- the lesions are:
  - 3 fluid-filled cysts
  - 4 high contrast lestions
  - 4 low contrast lesions
- material in the solid lesions are colored to differentiated them from the surrounding tissue
- designed for multiple uses

If you want to continue your search for additional information on this product try this link.

Model 156D – Stereotactic Mammographic Accreditation Phantom – Sun Nuclear

Sun Nuclear's 156D Stereotactic Mammographic Accreditation Phantom with Gammex technology, is used for monitoring digital mammography systems currently used for stereotactic biopsy and localization.

The 156D is accredited by the ACR.

Model 156D Stereotactic Mammographic Accreditation Phantom features:

- compact size
- wax insert contains 12 sets of test objects
- approximates the size of a 4.2 cm compressed breast of 50% glandular and 50% adipose compostion
- wax insert contains
  - simulated micro-calcifications of Aluminum oxide specks
  - 4 different size nylon fibers to simulate fibrous structures
  - 4 different size lens-shaped masses to simulate tumors
- replaceable wax insert which contains the targets

Do you want to know more about the Stereotactic Mammographic Accreditation Phantom?

If you want to continue your search for additional information on this product try this link.

Model 157A – Mammographic Film/Screen Contact Test Tool – Sun Nuclear

Today’s mammography film/screen systems from Sun Nuclear (with Gammex technology) have higher resolution than diagnositic radiography x-ray systems and require test tools with finer detail. Regular testing with the Gammex 157A detects problems and artifacts early.

Use of the tool and the evaluation of the resulting images is simple. Areas of poor screen contact appear darker than areas of good contact. Any dark areas greater than 1 cm should be investigated and corrective action taken.

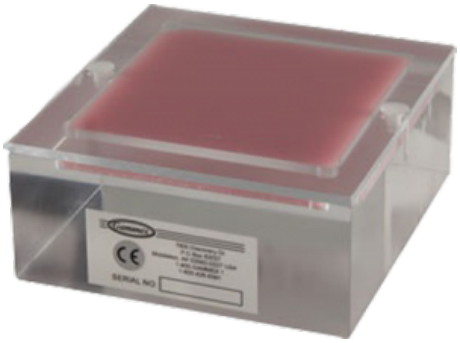
Sun Nuclear recommends testing cassettes every six months or when new or repaired cassettes are put into service.

Model 157A Mammographic Film/Screen Contact Test Tool features:

- screen size of 24 x 30 cm
- mesh size of #40 copper makes the tool ideal for testing new cassettes.
- compact and easy to store

If you want to continue your search for additional information on this product try this link.

Model 156 – Mammographic Accreditation Phantom – Sun Nuclear



Sun Nuclear's (formerly Gammex) Model 156 Mammographic Accreditation Phantom has been #1 phantom listed by the ACR since the start of the MQSA program in 1994. The Gammex 156 provides the physical standard baseline for assuring the quality of the images produced by your mammographic system.

The 156 simulates the x-ray attenuation of a 4.2 cm slab of compressed human breast composed of 50% adipose tissue and 50% glandular tissue. Target objects in the phantom are of known size, shape, and density. These represent the different structures or malignancies found when imaging the breast.

Image quality and system sensitivity is evaluated using these targets and following ACR/MQSA guidelines.

Model 156 Mammographic Accreditation Phantom features:

- the 156 simulates the x-ray attenuation of a 4.2 cm slab of compressed human breast composed of 50% adipose tissue and 50% glandular tissue
- acrylic construction with a replacable wax insert
- test objects composes of nylon fibrils and simulated micro-calcification specs
- provides the test step needed to measure density differences

If you want to continue your search for additional information on this product try this link.

Model 468 – CT Dose Index Phantom – Sun Nuclear

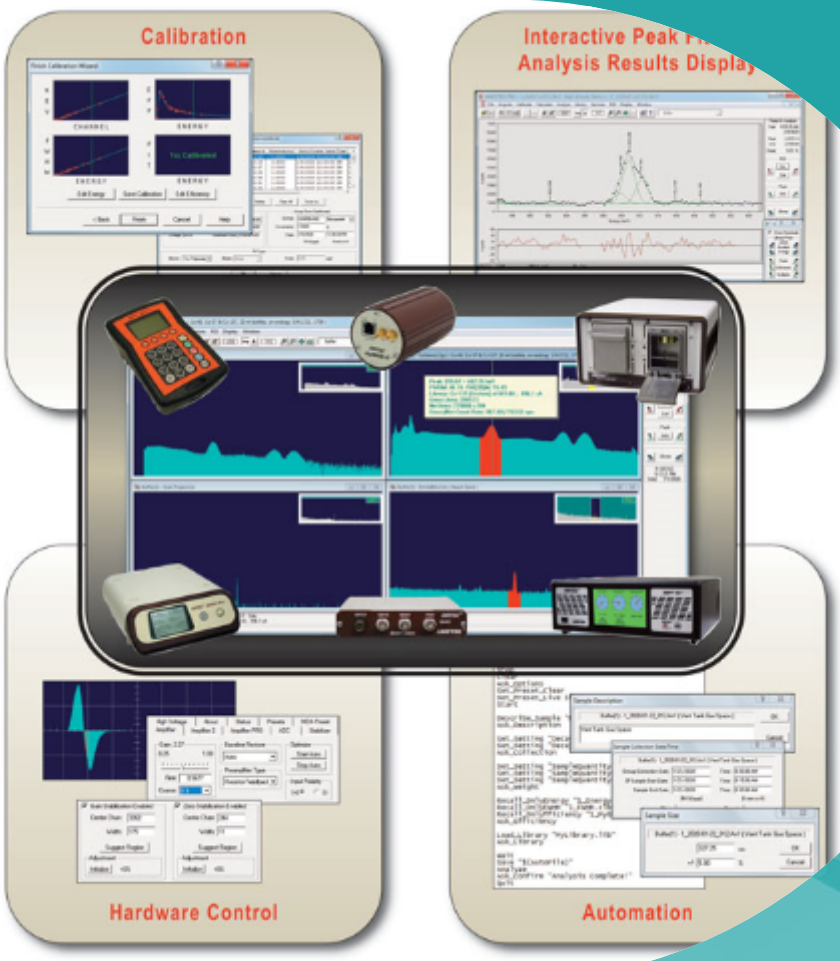
The Model 468 CT Dose Index Phantom from Sun Nuclear (formerly Gammex) has been designed to meet specifications outlined by the Food and Drug Administration (FDA 21CFR 1020.33) and the International Electrotechnical Commission (IEC 60601-2-44). The phantom is offered as a 2-piece or 3-piece nested configuration. Each configuration includes a custom case with nested modules, allowing the user to adapt the phantom to the desired size required by the protocol in use.

CT Dose Index (CTDI) Phantom features:

- easy to use design
- measures absorbed dose and monitor scanner output very fast
- includes a custom hard case for safe storage and easy transportation
- material: polymethyl methacrylate (PMMA/Acrylic)
- adult body 32 cm diameter: 32 cm diameter x 14.5 cm thick
- adult head/pediatric body: 16 cm diameter x 14.5 cm thick
- pediatric head (model 468-BHP only): 10 cm diameter x 14.5 cm thick
- weight: 13.9 kg (30.5 lbs)

If you want to continue your search for additional information on this product try this link.

SOFTWARE



peo MEDICAL

GRID VIEW ® – CIRS

CIRS developed GRID-VIEW for mammography. It specifically addresses inadequacies in the post operative handling of surgical breast biopsy specimens and multiple core biopsy specimens.

The unique design and radio-opaque grid, provide an efficient system for imaging, transporting and identifying breast biopsies.

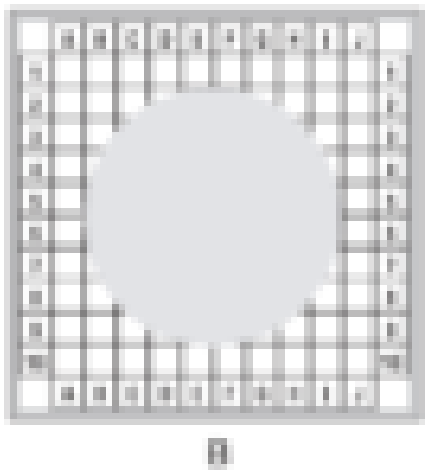
The product is available in three grid patterns and can be purchased as a carton of 12 units, or as a case of 12 cartons (144 units).

GRID-VIEW BENEFITS

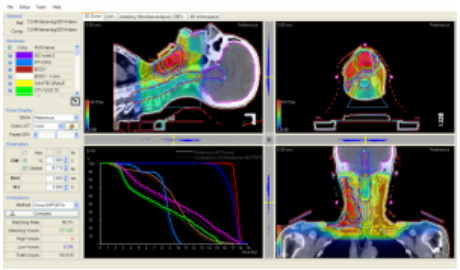
- Reduces surgery time through improved imaging turn-around.
- Improves communication between surgery, radiology and pathology.
- Eliminates physical handling of specimens in radiology.
- Eliminates the need for needles or wires.
- Reduces risk of exposure to blood-borne pathogens.

If you want to know more about this product, take a look at our partner's website.

Or… contact PEO!



3DVH Software for Patient QA – Sun Nuclear



3DVH Software transforms the field of per-patient dose QA by generating clinically-relevant and intuitive analyses of complex IMRT and VMAT plans. With proven accuracy, 3DVH estimates the 3D dose to the patient-specific geometry.

3DVH Software features:

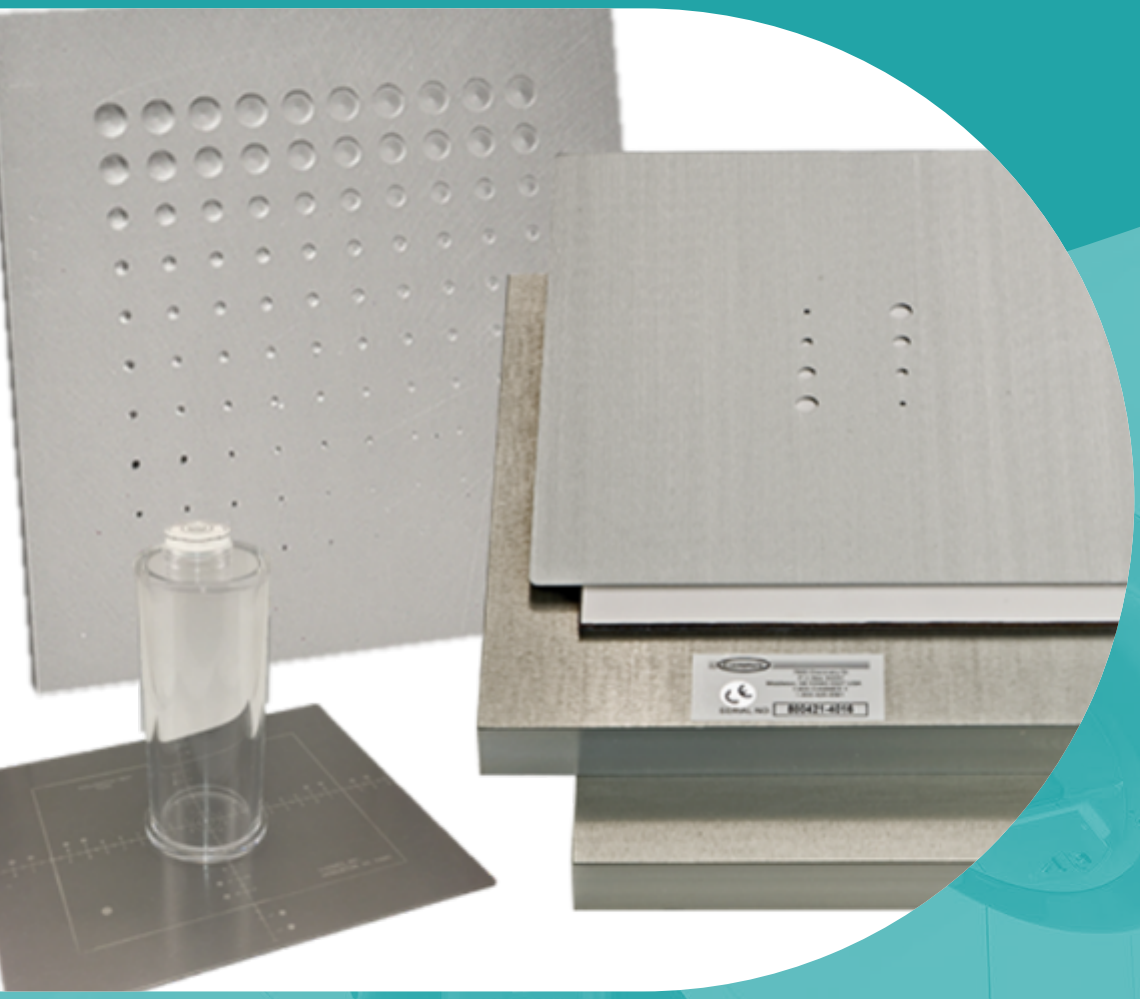
- fast results with automated tools – Quick Stat Templates,
- quick Dose Profiles, DICOM compliant workflow
- no forward dose calculation into the patient CT
- no commissioning
- uses existing measurements and devices
- with optional Respiratory MotionSim module, analyze the dosimetric impact of a moving target
- transform 2D measurements to 3D dose volume for advanced analysis
- perform 3D dose and DVH QA analysis on patient – not phantom – geometry
- supports coplanar and non-coplanar beams
- identify TPS and beam delivery errors
- intuitive and familiar presentation of dose and DVH with statistics per anatomical structure

3DVH Software compatibility:

- hardware: ArcCHECK, MapCHECK 2
- software: SNC Patien, EPIDose
- rotational therapy: RapidArc, VMAT
- static gantry: IMRT
- treatment planning systems: Pinnacle, Eclipse, and most TPS systems that can export DICOM data
- FFF & non-FFF deliveries

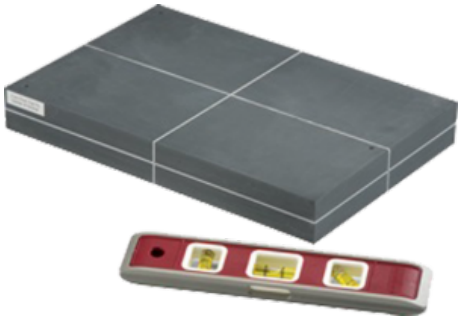
Read more about 3DVH Software on the Sun Nuclear website

MISCELLANEOUS & ACCESSORIES



peo MEDICAL

Model 440 – Couch / Laser Alignment Tool – Sun Nuclear

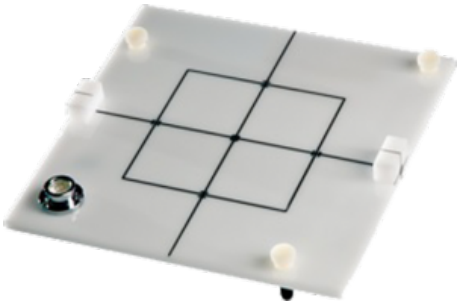


The Couch / Laser Alignment Tool from Sun Nuclear (formerly Gammex) can be used with all stationary laser systems to assure proper beam alignment.

Couch / Laser Alignment Tool features:

- use for either CT or MRI systems
- white recessed lines on the phantom that are easily visible across the room when a laser or LED light strikes it
- compact and easy to ship or store

Model 443 – Daily Laser and Light Field Plate – Sun Nuclear



The Daily Laser and Light Field Plate from Sun Nuclear (formerly Gammex) is designed to provide a quick daily check of the accuracy of the lasers and any wander that may occur within the collimator rotation. The plate includes hand guides for assisting in the alignment.

Daily Laser and Light Field Plate features:

- compact design makes it easy to ship and store
- alignment indicator lines included to simplify set up
- leveling “Bubble”
- light weight but durable plastic design

Model 442-R – Isocentric Rotation Plate – Sun Nuclear

The Sun Nuclear 442-R Isocentric Rotation Plate with Gammex technology is a quality assurance test instrument designed to make necessary tests on radiotherapy machines quickly and easily.

The 442-R performs routine QA tests. Its compact size and light weight make it an easy test tool to either ship or store.

Isocentric Rotation Plate features:

- light-weight durable plastic material
- uses standard size film
- leveling “bubble”
- plate markings to simplify alignment
- easy to use holders for film

Model 142D / 143D – Film / Screen Contact Test Tools – Sun Nuclear

The Film / Screen Contact Test Tools from Sun Nuclear (formerly Gammex) can test cassettes for good film-screen contact. The 142D is wire mesh while the 143D is perforated brass.

Good film-screen contact across the entire area of the screen is needed for quality diagnosis. Routine testing of all the cassettes in the department detects areas of poor film-screen contact as part of the QA process before blurred areas interface with patient care.

Film / Screen Contact Test Tools features:

- can test cassettes up to 14×17 inches
- made of durable materials (brass and wire enclosed in plastic) to last for a long time.
- compact and easy to store

Model 132 – Tomographic Test Tool – Sun Nuclear

The Sun Nuclear (formerly Gammex) 132 Tomographic Test Tool is designed to test the imaging capabilities of the tomographic x-ray system. Used in conjunction with other Gammex test instruments for measuing radiaton output (i.e., kV meters, dosimeters, timers) a complete test of the tomographic x-ray system can be performed.

Tomographic Test Tool features:

- determine the location of the cut plane
- determine the thickness of the cut
- test the overall resolution in the cut plane
- test the x-ray exposure uniformityd
- determine the path of the beam during exposure for both linear and multi-directional units

Model TM-99A – Digital Thermometer – Sun Nuclear

The Digital Thermometer from Sun Nuclear (formerly Gammex) with its fast acting probe (degrees Celsius or Fahrenheit) is designed to detect the minor shifts in developer temperature that can have a detrimental effect on the film contrast and density.

In order to achieve and maintain appropriate film speed, film contrast and film fog levels, the developer temperature must be monitored on a regular basis.

Digital Thermometer features:

- easy to use
- provides readings in either Celsius or Fahrenheit
- low battery indicator

Model 151 – Fluoroscopic Dose Rate and Low Contrast Resolution Test Tool Kit – Sun Nuclear

The Fluoroscopic Dose Rate and Low Contrast Resolution Test Tool (Gammex) kit helps users comply with regulatory requirements for QA testing of fluoroscopic output and low contrast response.

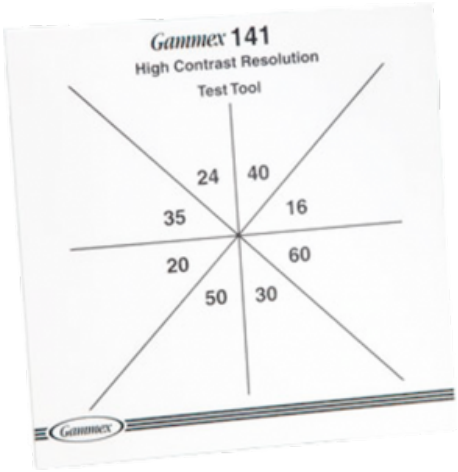
The kit permits monitoring of low contrast readings with less than 2% reading variance.

The aluminium block composition permits easy transport, shipping and storage of the kit.

Fluoroscopic Dose Rate and Low Contrast Resolution Test Tool Kit features:

- multiple block composition
- easy to use and flexible design
- light weight for easy transport

Model 141 / 141H – High Contrast Resolution Test Tools – Sun Nuclear



An important measure of your fluoroscopy system is its high contrast resolution. This test is used to assess the resolving power of your system and can be done easily with Sun Nuclear's model 141 and 141H High Contrast Resolution Test Tools with Gammex technology.

The test tools can be used with either standard or high resolution systems.

High Contrast Resolution Test Tools features:

- the 141 is used for standard radiographic systems with resolutions between 16 and 60 mesh
- the 141H is designed and recommended for systems with high resolution such as those used in cardiology suites, where resolution is between 60 and 150 mesh
- each test tool consist of eight patterns of copper wire mesh in a pie shape and are labeled with lead numbers for easy visualization

If you want to continue your search for additional information on this product try this link.

Model 144 – Grid Alignment Test Tool – Sun Nuclear

The Sun Nuclear (formerly Gammex) model 144 Grid Alignment Test Tool is used to improve the alignment of the radiographic grid and central ray of the x-ray tube. It can also be used to provide increased image contrast and shading in image density. Ultimately this can result in reduction in unnecessary patient dosage.

The Grid Alignment Test Tool is designed to test proper grid alignment with respect to the central ray of the x-ray tube.

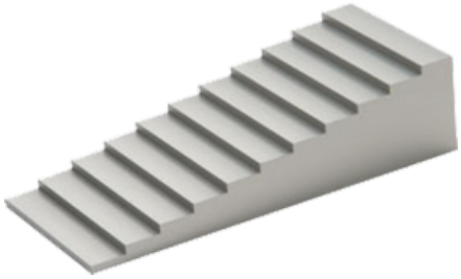
Grid Alignment Test Tool features:

- light weight and compact tool
- easy to use

Do you want to know more about the Grid Alignment Test Tool?

If you want to continue your search for additional information on this product try this link.

Model 117 – Radiographic Aluminum Stepwedge – Sun Nuclear



The Radiographic Aluminum Stepwedge from Sun Nuclear (formerly Gammex) is the standard tool for evaluating the dynamic range (latitude) of a digital of film-screen imaging system.

This wedge provides 11 steps in 3.2 mm increments. The number of distinguishable steps represents the dynamic range of the system. Images may be evaluated visually or by using a densitometer.

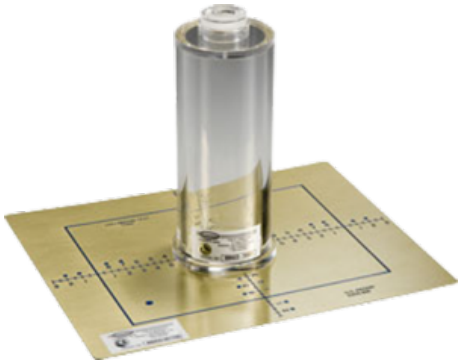
Radiographic Aluminum Stepwedge features:

- aluminium alloy composition
- eleven (11) distinguishable steps
- compact design

Collimator and Beam Alignment Test Tools – Sun Nuclear

The Collimator and Beam Alignment Test Tools ensure accurate x-ray beam alignment. There are two models available to meet your needs: Model 161B and model 162A.

You can use 161B for collimator alignment and model 162A for beam alignment.



Model 161B is a collimator test tool that evaluates the collimator light field congruence. It provides a direct ruled dimension on the radiograph with a normal x-ray exposure. The test tool is a brass plate with centimeter etchings.

Model 162A is a beam alignment tool that provides a simple test of alignment for x-ray beams. The tool is a plastic cylinder and is 16 cm (6.3 inch) high and it has two steel BBs, one at each end.

The two tools combined can visualise x-ray beam misalignments of 1% and 2%, without the need for measuring or calculating.

FEATURES

- Can give a direct ruled dimension on the radiograph because of the centimeter etchings
- Compact and easy-to-use
- The steel BBs are superimposed on the radiograph when everything is aligned
- Bubble level is included so that accurate tests can be performed with ease

If you want to know more about fluoroscopy solutions, take a look at our partner’s website!

Model 116 – Pure Copper Half Value Layer Attenuator Set – Sun Nuclear

The Copper Half Value Layer attenuator set from Sun Nuclear (formerly Gammex) has 9 sheets of pure copper with thickness ranging from 0,1 mm to 2,0 mm, with a surface of 10 x 10 cm.

Set content

- 4x 0,1 mm
- 1x 0,25 mm
- 1x 0,5 mm
- 2x 1,0 mm
- 1x 2,0 mm

The set also comes with a protective storage case to help maintain the flatness of the filters.

You use this set to determine the HVL (Half Value Layer): the necessary material quantity for cutting the intensity of an x-ray beam in half.

COPPER HALF VALUE LAYER SPECIFICATIONS

- Made of pure copper
- Sheets are 10 x 10cm (4″ x 4″)
- The set weighs 0,55 kg (1,1 lbs)
- The set contains of 9 sheets ranging in thickness
- Comes with plastic storage case

If you want to read more about HVL sets, try this page!

Model 115 – Half-Value-Layer Attenuator Sets – Sun Nuclear

Model 115 half-value-layer attenuator sets (A & H) are used to determine the Half Value Layer (HVL) of the x-ray beam. This is the standard method for specifying the quality of the x-ray beam.

This set is a product from Sun Nuclear (formerly known as Gammex).

MODEL 115 HALF-VALUE-LAYER ATTENUATOR SETS

MODEL 115A

Model 115A consists of 99,0% high purity 1100 aluminum alloy. The set has 9 aluminum sheets of 10 x 10 cm (4 x 4 in.).

The thickness of these sheets ranges from 0,1 mm to 2,0 mm. These sheets come in a plastic storage case to help maintain flatness and for ease of storage and transportation.

MODEL 115H

Model 115H consists of 99,99% pure aluminum. The set has 6 aluminum sheets of 10 x 10 cm (4 x 4 in.) with a thickness of 0,1 mm

These sheets also come in a plastic storage case to help maintain flatness and for ease of storage and transportation.

If you want to read more about Fluoroscopy solutions, try this link.


.2mm
.1mm
.1mm


.1mm
.1mm
.1mm
.1mm
.1mm

Model 175 – Universal Test Stand – Sun Nuclear

The Sun Nuclear 175 Universal Test Stand with Gammex technology, can be used to perform a variety of quality control tests for mammographic and radiographic x-ray systems.

Universal Test Stand features:

- height of the tower is easy to adjust
- cassette holder accomodates a variety of film cassette sizes

Model 185D – Processor QC Kit – Sun Nuclear

Quality assurance in radiology begins with film processor. The Processor QC Kit from Sun Nuclear (formerly Gammex) is the single most influential source of problems in the diagnostic imaging department.

To test all the parameters of the processor, Gammex provides the Gammex 185D Processor Quality Control Kit.

Processor QC Kit features:

- kit contains all of the tools necessary to test the processor parameters
- kit comes in a rugged case that is suitable for either shipping or storage

Model 184D – Radiographic / Fluoroscopic Kit – Sun Nuclear

The Radiographic / Fluoroscopic Kit from Sun Nuclear (formerly Gammex) contains the necessary test instruments for doing routine quality control tests of radiographic, fluoroscopic and tomographic x-ray units.

Radiographic / Fluoroscopic Kit features:

- each test tool within the kit is designed to evaluate one of the many important imaging parameters within the x-ray system
- QA handkbook is included with instructions for personnel who will find the procedures easy to perform and understand
- kit includes sample quality control forms
- comes in an easy-to-store or transport hard case that is sufficiently durable for shipment

Do you want to know more about the Radiographic / Fluoroscopic Kit?

If you want to continue your search for additional information on this product try this link.

Model 622 – Light Field Ruler – Sun Nuclear

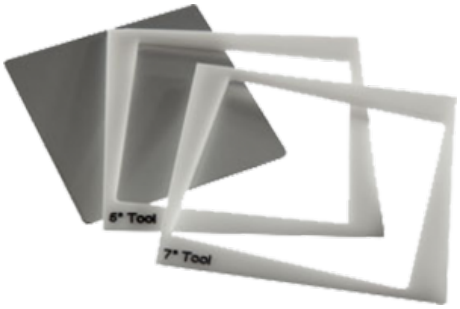
This Light Field Ruler tool from Sun Nuclear (formerly Gammex) is a tool to measure the coincidence of the light and radiation fields of analog or digital flat plate/film X-ray units including mammography systems.

The unit consists of the body which houses a strip of persistent phosphorescent material and calibration scribe marks with 1 mm spacing. A BB is also aligned with this mark that will show a small speck of film is used for a permanent record.

Light Field Ruler features:

- constructed out of Solid Water material
- pocket size for convenience
- convenient “Glow” time of 5-10 minutes

Model 617 – Edge Tool and Software – Sun Nuclear



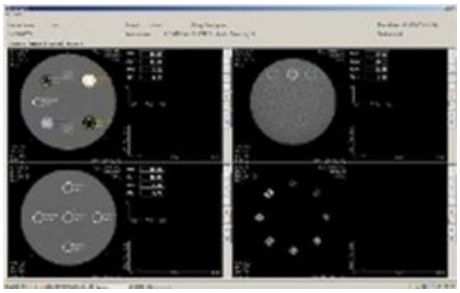
The Edge Tool and Software from Sun Nuclear (formerly Gammex) is designed to evaluate the imaging performance of Digital Radiography (DR) and Computed Radiography (CR) systems. The phantom and software together will measure the Modulation Transfer Function (MTF), the Noise Power Spectrum (NPS) and the Detector Quantum Efficiency (DQE).

The test tool itself consists of a piece of highly polished tungsten. Templates are provided to assist in the measurement of different angles.

Edge Tool and Software features:

- simple, comprehensive tool to use
- windows compatible software
- software runs on standard laptop or desktop PCs
- software permits easy storage of data over time for graphic comparisons
- the edge tool has two highly polished edges suitable for use in measuring the MTF of a radiographic system in both the horizontal and vertical directions from a single exposure image.
- the two edges not used in the measurement are notched for identification and orientation.
- the kit contains two templates (7º angle and 5° angle) to facilitate positioning of the Edge Tool.
- the Edge tool itself is a piece of tungsten with 4 highly polished sides

Model 464-Acts – Software for the ACR CT Accreditation Phantom – Sun Nuclear



The Software for the ACR CT Accreditation Phantom is designed to be an integral part of the American College of Radiology (ACR) CT Accreditation Program. The software was developed as an option that can be used to greatly simplify the data recording, storage and comparison.

The software will help medical physicists to significantly reduce their time spent analyzing the results of the scan. It provides excellent Region of Interest (ROI) positioning precision.

Software for the ACR CT Accreditation Phantom features:

- Windows XP and Win 7 compatible
- 32-bit or 64-bit system compatible
- generate reports and tables
- high resolution images generated
- easy to learn and use

Model 112B – Focal Spot Test Tool – Sun Nuclear

The Focal Spot Test Tool from Sun Nuclear (formerly Gammex) is designed to assist in determining the focal spot size. The tool works by forming a magnified image of the precision bar pattern. The cylinder provides accurate and reproducible target-to-image receptor spacing.

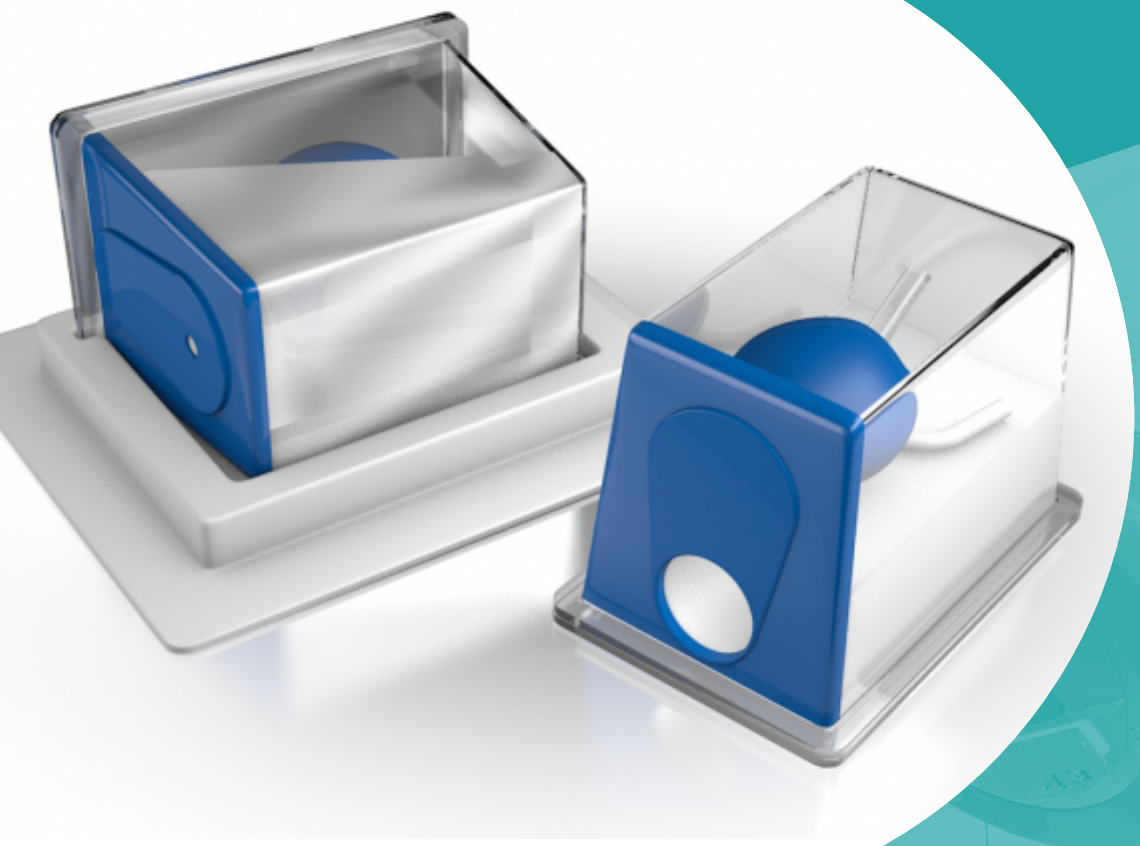
This process is simpler than using an IEC slit camera and can be easier to interpret than a star pattern.

Focal Spot Test Tool features:

- made of an acrylic cylinder with a 12 group bar pattern target mounted on the top
- resolution range is from 0.84 to 5.66 lp/mm
- compact and easy to store or ship

If you want to continue your search for additional information on this product try this link.

TRAINING PHANTOMS



peo MEDICAL

Image-Guided Abdominal Biopsy Phantom (model 071B) – CIRS

The Image-Guided Abdominal Biopsy Phantom is a simplified abdominal phantom. It's suitable for training and demonstrating image-guided needle biopsy navigation tools or procedures that require a constant visual reference for needle placement. The phantom allows many uses over time because of the background gel minimizes needle tracks when punctured.

The phantom contains 12 lesions, 5-12 mm in diameter, positioned in groups of three in consistent locations within the phantom. It also includes simulated spine and ribs, and an "H" marker within the spine to assist in determining the head side within a CT-image. You can see the lesions and spine under ultrasound, CT and MRI. The solid polymer gel background is anechoic and will also not leak when it is punctured.

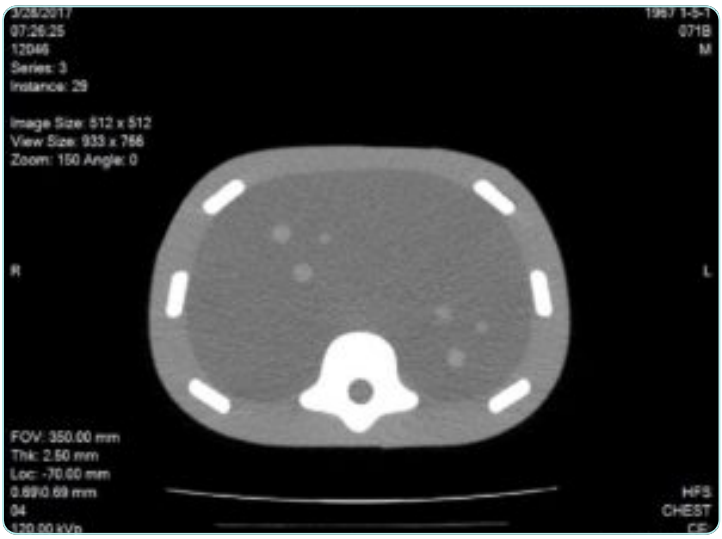
The phantom also includes a foam lined hard carry case and it's useful in multiple fields. The phantom is perfect for CT, Ultrasound and MRI, live scanning and biopsy training.

IMAGE-GUIDED ABDOMINAL BIOPSY PHANTOM FEATURES

- Improve performance of freehand abdominal biopsies
- Minimal needle tracking- Z-skin fat layer and softer gel provide better self-healing properties
- Validate automated biopsy systems
- Suitable for CT, MRI and Ultrasound

If you want to read more about this phantom, take a look ar our partner's website!


PHILIPS
MI 0.4
TIS 0.0
Abdomen
C6-2
29 Hz
15.0cm
2D
Gen
Gn 89
56
3/3/3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Model 1425 – Doppler Flow System – Sun Nuclear

The Doppler Flow System from Sun Nuclear (formerly Gammex) tests both Doppler and B-mode ultrasound systems in a single unit. The compact, easy to store and transport designed system combines the flow system, phantom and electronic flow controller into a single unit. Scanner selection, quality control testing, training and research can all be performed using this multi-faceted ultrasound tool. A wide range of targets and vessels are included in the unit.

Doppler Flow System features:

- the Choice of attenuations of 0.5 or 0.7 dB/cm/MHz
- combines low echo matrix with line reflectors and anechoic cyst targets at 2, 4 and 6 mm depths
- two 5mm vessels in the system adhere to FDA Doppler sensitivity recommendations.
- flow controller with a range of 1 to 12.5 ml/sec
- 5 preset pulse flow patterns

Do you want to know more about the Doppler Flow System?

If you want to continue your search for additional information on this product try this link.

Model 1430 – Mini-Doppler Flow System – Sun Nuclear

The Doppler Flow System tests both Doppler and B-mode ultrasound systems in a single unit. The compact, easy to store and transport designed system combines the flow system, phantom and electronic flow controller into a single unit. Scanner selection, quality control testing, training and research can all be performed using this multi-faceted ultrasound tool. A wide range of targets and vessels are included in the unit.

Mini-Doppler Flow System features:

- the Choice of attenuations of 0.5 or 0.7 dB/cm/MHz
- includes 404GS LE components with Grey Scale targets
- combines low echo matrix with line reflectors and anechoic cyst targets at 2, 4 and 6 mm depths
- two 4 mm vessels in the system adhere to FDA Doppler sensitivity recommendations.
- flow controller with a range of 0 to 10 ml/sec
- 8 preset pulse rates

Do you want to know more about the Mini-Doppler Flow System?

If you want to continue your search for additional information on this product try this link.

Model 164A – Stereotactic Breast Biopsy Phantom – Sun Nuclear

The Stereotactic Breast Biopsy Phantom form Sun Nuclear (formerly Gammex) is designed to be used as a training phantom for performing biopsy procedures. It provides a good representation of breast tissue.

Multiple radiopaque lesions are impeded in the phantom to permit multiple uses of the phantom by different personnel.

Model 164A Stereotactic Breast Biopsy Phantom features:

- made of clear gel encased in a soft vinyl for easy compression and a skin-like resistance to needle insertion
- embedded in the gel are radiopaque lesions ranging in size for practicing core biopsies
- liquid dye filled lesions allow for the practice of fine needle aspiration
- compressible within a biopsy instrument

If you want to continue your search for additional information on this product try this link.

Model 711-HN ATOM Max Dental & Diagnostic Head Phantom – CIRS

The Model 711-HN ATOM Max Dental & Diagnostic Head Phantom is a standard of reference for diagnostic radiology of the head. The phantom has been developed to assist clinical and technical staff in the monitoring, selection, verification and training of scanning parameters common to most radiological procedures requiring fine anatomical details.

Model 711-HN ATOM Max Dental & Diagnostic Head Phantom features:

- tissue Equivalent from 50 keV to 25 MeV
- carrying case included
- includes detailed anatomical features
- Frankfurt plane identified to ensure proper alignment
- positioning stand with six degrees-of-freedom
- easy to set up and use

Read more about the Model 711-HN ATOM Max Dental & Diagnostic Head Phantom on the CIRS website

PLAN VERIFICATION

peo MEDICAL

PlanCHECK™ – Sun Nuclear Corporation

Automate Plan Quality Verification with PlanCHECK:

- Physics Checks
- Dosimetric Checks
- Seamless, integrated Patient QA workflow

PLANCHECK™

Plan checks are a time-consuming task that requires significant experience and expertise to ensure treatment plans are created as intended. An independent and automated solution for physics and dosimetric checks, PlanCHECK™ eases this burden.

Part of the powerful SunCHECK™ Platform, PlanCHECK automatically loads loads patients' plan files into the Treatment Planning System and performs the plan checks – reducing the time required for this intensive process.

- Dose/Volume Results: automatically verified against a selected customizable clinical protocol
- Comprehensive Rules-Based Physics Plan Checks: automatically apply pass, warn, and fail criteria
- Compatible: works with multiple Treatment Planning Systems, via scripting or DICOM transfer

PlanCHECK fits seamlessly within the SunCHECK Patient workflow – providing an all-in-one solution for plan checks, secondary calculations, pre-treatment QA and in-vivo monitoring.

Physics Checks

Validate the treatment plan against your department's requirements, and easily identify deviations with user-defined pass/fail results. Rules -based checks include:

- Plan Parameter Checks
- Structure Checks
- Deliverability Checks

Dosimetric

Checks Automatically assess performance of a treatment plan versus treatment. Verify a variety of comprehensive, structure-based checks, including: • Various Dose and Volume Metrics, compared to pre-loaded, editable protocols • Complex dosimetry metrics such as: Conformality Index, Conformation Number, Gradient Index and Gradient Measure for multiple structures, plus Homogeneity Index, Inhomogeneity Index and more.

If you want to read more about PlanCHECK and SunCHECK, take a look at our partner's website!

MapCHECK®3 – Sun Nuclear

The Benchmark for 2D IMRT QA

MapCHECK®3 is the gold standard for IMRT QA requiring large field measurements.

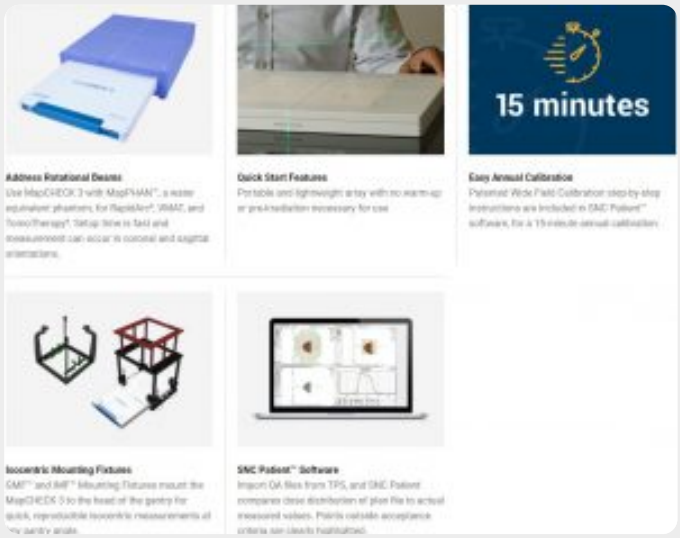
It offers the highest detector density, highest sensitivity, and largest field size of 2D arrays. Plus, it’s uniquely TG 218-compliant.

Built for Pre-Treatment IMRT QA

SunPoint® 2 Diode Detectors placed uniformly throughout the array offer high sensitivity and proven stability in a large active field size (26 cm x 32 cm). A real-time electrometer measures every pulse with 50-millisecond updates.

Easy Comparison Features

Simply import the QA files from your TPS, and let SNC Patient™ software compare dose distribution from the plan file to actual measured values. Measured points outside of acceptance criteria are highlighted for high and low dose.



SRS MapCHECK – SunNuclear

SRS PATIENT QA, NO FILM

SRS MapCHECK removes film and subjectivity from stereotactic QA, and offers efficient, electronic Patient QA and end-to-end testing.

It supports conventional linacs, CyberKnife® Systems, Varian HyperArc™ Systems, and vertex delivery beams to help prevent treatment errors.

But, most importantly, SRS MapCHECK's main objective is accuracy. Because of this product, patients will receive safe and accurate stereotactic radiotherapy. The treatments will also be more efficient and simple. MapCHECK can be used as a stand-alone 2D array, but it can also be used in combination with StereoPHAN.

MOVING BEYOND FILM

SRS MapCHECK takes the place of film and makes the workflow for time-sensitive patient QA more efficient. MapCHECK is a consistent and easy to maintain method for high-density, absolute dose measurements.

IRRADIATE FROM ANY ANGLE

In combination with the StereoPHAN, SRS MapCHECK uses a patented technique to account for angular dependence and correct when necessary. It also pairs this technique with field size and puls rate corrections to ensure accuracy from any angle, including vertex fields.

FLEXIBILITY, SPEED AND ACCURACY

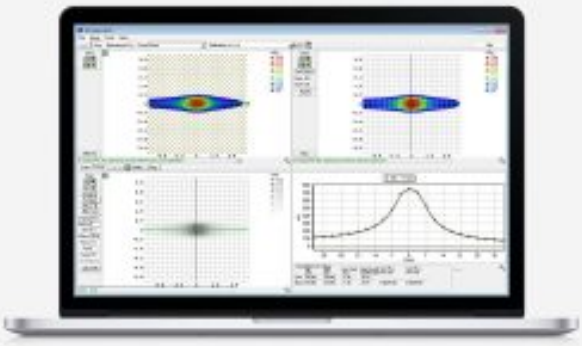
MapCHECK is proven to efficiently detect output factor, MLC, and grid size errors. SRS MapCHECK prevents the most common sources of SRS treatment errors.

NEW IN SNC PATIENT V8.4

The latest software update introduces the QA Setup Tool. This tool provides guidance for ideal setup of Single-Isocenter Multiple-Target (SIMT) plans, and simplified shifts for occasional larger fields.

SRS MAPCHECK FEATURES

- 2D array for SRS applications
- High resolution because of two diodes
- Relpaces film and standalone detector for efficiency
- Provides absolute and relative dose in a single measurement
- The QA setup tool in SNC Patient provides guidance for ideal setup
- Work with static, rotational and non-coplanar, CyberKnife®, FFF, cone and MLC fields
- In combination with the StereoPHAN, it supports irradiation at any angle



“This [array] gives us high-quality patient QA in minutes rather than hours and significantly enhanced patient throughput.”

- Brett Miller, University of Tennessee Medical Center
- Stereotactic QA: saving time, delivering outcomes, Physics World, July 2019

CLINICAL NOTE

Smaller, High Density Arrays vs. Larger, Lower Density Arrays for Stereotactic QA

Performing patient-specific stereotactic QA on plans with multiple targets and a single isocenter can be complex. Radiation therapy teams rely on arrays to ensure treatments will be delivered as expected. This clinical note explores the importance of detector density in arrays for measuring stereotactic patient QA.

For more information about SRS MapCHECK, take a look at this page from our partner.

Would you like to know more?

Contact PEO!

SunCHECK™ Patient

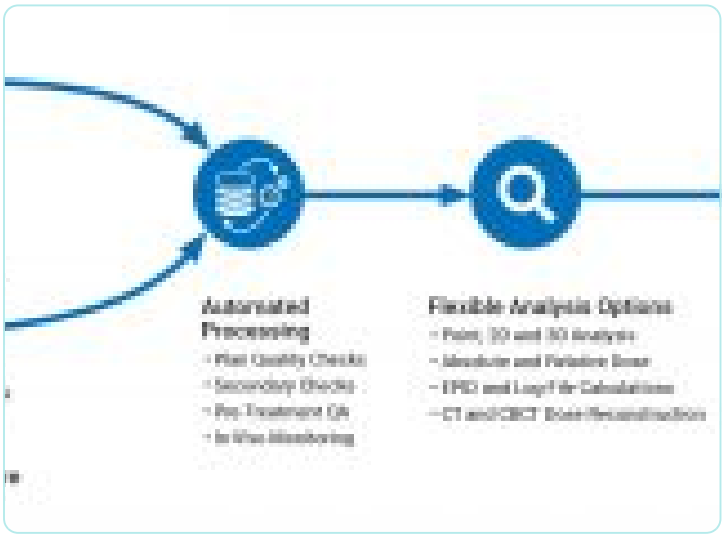
Independent Patient QA in a Single Workflow

SunCHECK™ Patient brings Plan Checks, Secondary Calculations, Pre-Treatment QA and In-Vivo Monitoring into a single workflow, on the same platform as your Machine QA.

Purposefully Automated
SunCHECK Patient streamlines data transfer and time-consuming tasks, enabling greater focus on improved treatment quality.

Common Analysis Tools & Centralized Storage of Results
In support of standardization, SunCHECK Patient provides common analyses across each Patient QA phase — and stores all results for easy retrieval and review.

Custom-Fit for Your Clinic
We optimize SunCHECK Patient for the planning and delivery technologies you use — and provide flexible, automated analysis options for every step. As updates occur and your needs evolve, SunCHECK Patient adapts.

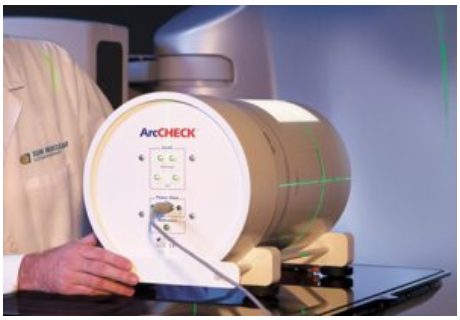


“Because this system is fully automated so that no physicist time is required for data acquisition and evaluation, daily patient treatment QA is feasible.”

- Zhuang AH, Olch AJ.,
- *J Appl Clin Med Phys (2018)*

ArcCHECK 4D – Sun Nuclear

ArcCHECK is the only true 4D array specifically designed for QA of today's modern rotational deliveries. At its heart are over 1300 SunPoint Diode Detectors providing consistent and highly sensitive measurements for all gantry angles, with no additional hardware required. Independent absolute dose measurements enable the gold standard for stringent and efficient patient plan and machine QA testing.



ArcCHECK 4D features:

- smallest available detectors for accurate measurements
- BEV is consistent regardless of gantry angle
- 3D and DVH Analysis
- Flattening Filter Free (FFF)
- easy setup and lightweight (16kg)
- measure both composite and per control point
- real-time updates (50ms)

ArcCHECK 4D compatibility:

- rotational therapy: RapidArc, VMAT, TomoHelical
- static gantry: IMRT, TomoDirect
- treatment planning systems: Pinnacle, Eclipse, Monaco, iPlan, and any TPS system that can export DICOM data
- FFF and non-FFF deliveries

Contact our product specialist or download the datasheet below.

Model 038 STEEV Steriotactic End-to-end Verification Phantom Patient

STEEV™ Phantom

The STEEV Phantom provides the most realistic clinical simulation to perform end-to-end testing of SRS QA systems in the most challenging anatomical regions.

The Model 038 STEEV Steriotactic End-to-end Verification Phantom Patient is used for comprehensive testing of stereotactic radiosurgery systems. The Phantom provides a means to check every step the patient will undergo in the treatment process from diagnostic imaging with MR, CT, and PET to treatment plan verification.

Model 038 STEEV Steriotactic End-to-end Verification Phantom Patient features:

- Performs IGRT QA procedure for X-ray and onboard kV and MV imagers including CBCT
- TPS Deformable Image registration algorithm accuracy QA
- Performs end-to-end testing for commissioning as directed by AAPM TG-101
- Verifies patient treatment plan in critical regions
- performs geometric machine QA Winston-Lutz isocenter verification tests and localization/repositioning with couch shift
- Verifies patient positioning using frame/frameless systems, head and shoulder masks or other positioning fixation devices
- Assesses image transfer QA, image fusion, accuracy verification and TPS testing with Multi-modality imaging capabilities (CT, MRI and PET)

Workflow step:

- Treatment planning
- Pre-Treatment delivery
- Commissioning & acceptance
- Monthly QA
- Annual QA
- Dosimetry
- End-to-End QA

Modality:

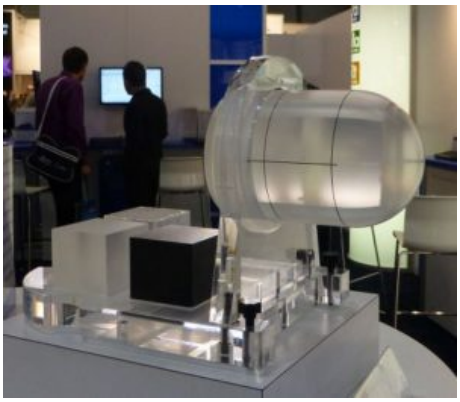
- Linac
- SRS/SBRT
- Bore-based Linacs
- Cyberknife
- TomoTheraphy
- Imaging

The standard model 038 includes:

- Phantom head and neck with external fiducials and markings
- Three brain equivalent spacers to fill rectangular intercranial cavity
- Two tissue-equivalent rods to fill cylindrical channels (one includes MRI/CT fiducial)
- MRI/CT/PET ISO Center Insert
- Neck alignment plate
- Foam-lined carry case
- User guide and warranty

Read more about the Model 038 STEEV Steriotactic End-to-end Verification Phantom Patient on the Sun Nuclear website

StereoPHAN Phantom – Sun Nuclear



StereoPHAN is designed for end-to-end commissioning and quality assurance testing on all parts of the SRS process. StereoPHAN inserts and configurations are quickly exchanged with no tools or change in setup. It's that simple, and that powerful.

StereoPHAN Phantom features:

- easy setup and assembly; no tools required for assembly, stand base can be mounted to a couch that uses the prevalent Lok-Bar system, phantom stand holds the inser ts, making them easily accessible during testing
- single cube insert tests CT and MRI imaging, including slice position, thickness and alignment
- target volumes in CT/MRI cube eliminate need for CT/MRI markers
- flat surface of ion chamber insert enables easier cross-calibration to water than the curved surface of a spherical geometry
- all components fit into a durable rolling case suitable for storage and air travel
- stereotactic (SRS/SRT/SBRT) end-to-end testing and patient-specific QA
- adapters for Head-Frames and CyberKnife
- quality assurance of image fusion algorithms for CT and MRI imaging modalities
- absolute, relative and point dose dosimetry QA measurements at isocenter with ion chambers; relative dose distribution using film
- dosimetry detector cabling remains outside of beam for interference-free dose measurement regardless of measurement setup
- geometric accuracy; optical and geometric isocenter, laser alignment, indexed table positioning alignment and positioning coordinates, CBCT and MV/kV isocenter alignmenent

Read more about the StereoPHAN Phantom on the Sun Nuclear website

PROTON

peo MEDICAL

Proton Therapy Dosimetry Head (Model 731-HN) – CIRS

The CIRS Proton Therapy Dosimetry Head is an anthropomorphic head phantom designed for commissioning and treatment planning system (TPS) verification with any conformal or IMRT Proton Therapy system1.

The phantom consists of CIRS tissue-equivalent materials. The proton therapy head is suitable for all standard IMRT procedures.

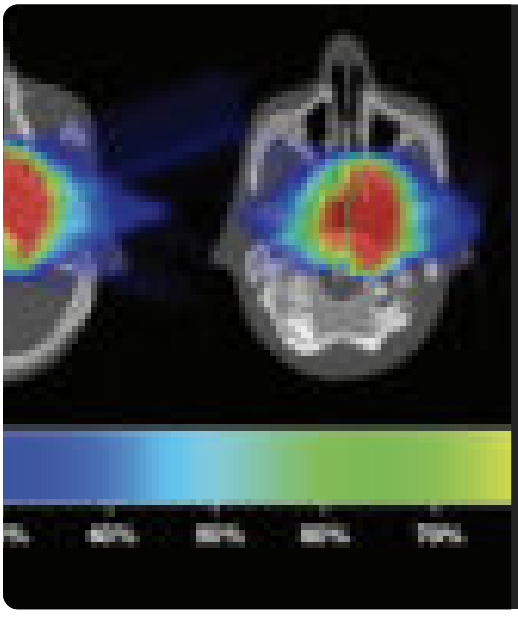
This phantom is ideal for treatment plan evaluation in high density gradient locations. This is because of the tissue equivalency of detailed internal structures. The internal structures include brain, bone with cortical and trabecular distinction, larynx, trachea, fully-open sinus cavities, nasal and mouth cavities, and teeth with distinct dentine, enamel and root structure.

This model approximates the average male human head in both size and structure to allow for intuitive set up with any patient positioning or fixation device.

PROTON THERAPY DOSIMETRY HEAD FEATURES

- Detailed internal anatomy including bone and air
- Three film locations in sagittal direction
- Tissue equivalent for protons and photons
- Dental filling and spine prothesis

If you want to read more about this phantom, take a look at our partner's website!

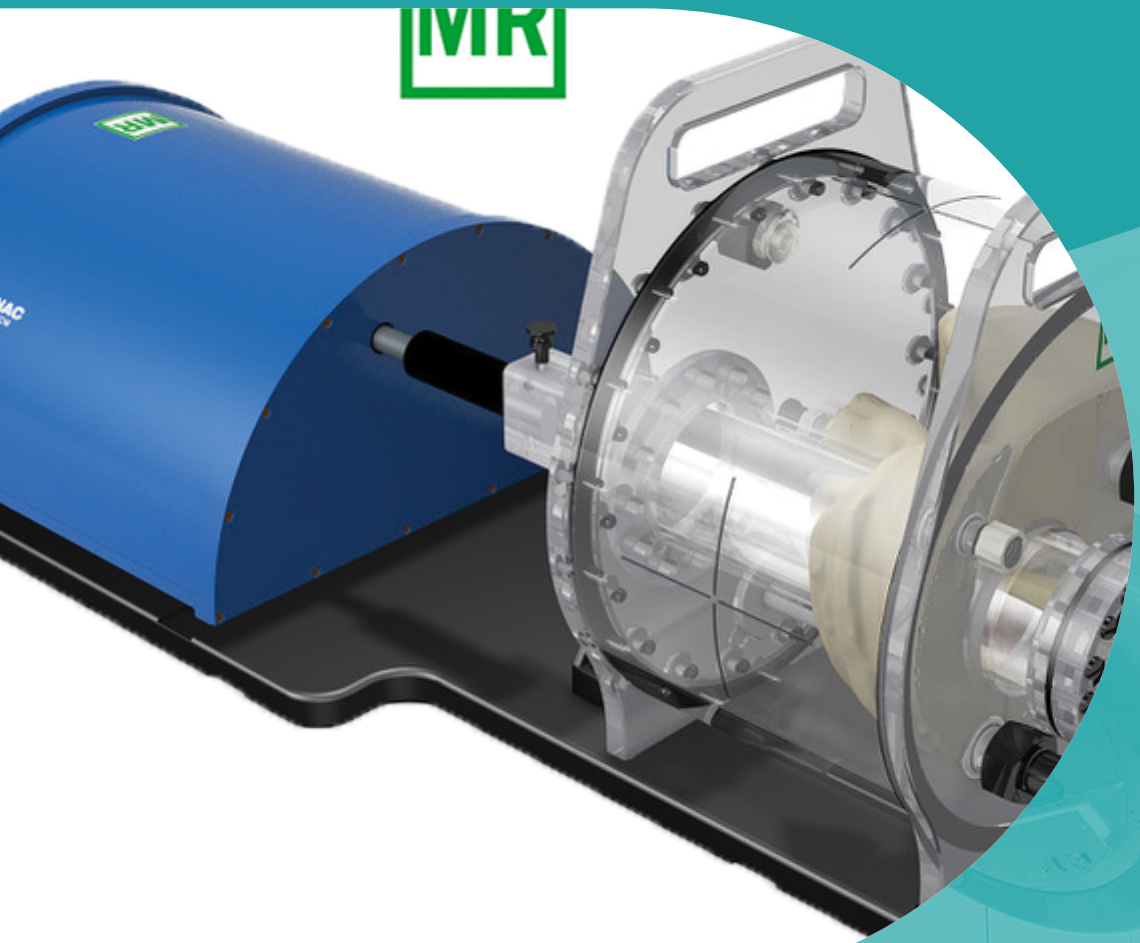


PROTON THERAPY DOSIMETRY HEAD FEATURES

- Detailed internal anatomy including bone and air
- Three film locations in sagittal direction
- Tissue equivalent for protons and photons
- Dental filling and spine prothesis

If you want to read more about this phantom, take a look at our partner's website!

QA PHANTOMS



peo MEDICAL

Model 036S-CVXX-xx E2E SBRT Phantom – CIRS

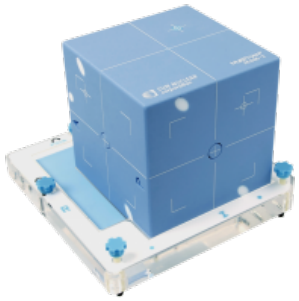
The E2E® SBRT Phantom with Removable Spine is a single tool for end-toend commissioning and routine QA. The anthropomorphic, tissue-equivalent
thorax phantom contains articulated spine, ribs, and lungs. All materials are
suitable for use in kV and MV energies.

- High Resolution Anthropomorphic Characteristics
- Tissue-Equivalent from 50 keV to 15 MeV
- Thorax with articulated spine, ribs and lungs
- Center point fiducial and offset target for daily system checks
- Optional Abdomen with spine
- Optional Abdomen accommodates image-quality insert

MultiPHAN™

Daily Isocenter Checks Made Easy

Ensure isocenters match from lasers to EPIDs to CBCT. MultiPHAN™ is a practical, cost-effective tool for Radiation Therapists to perform daily isocenter checks and meet TG-142 requirements.



Efficient Daily Alignment Verification
Comprised of deliberately placed rods, two low-Z ceramic beads and scribe lines, MultiPHAN supports efficient daily verification of the alignment of imaging modalities, lasers, and surface-guided alignment systems.

Smart design features, such as a positioning stand, allow easy and precise shifting from isocentric alignment to the offset target, and enact rotations to test registration and 6 Degrees of Freedom couch repositioning.

Verify All Daily IGRT Alignments in Support of TG-142

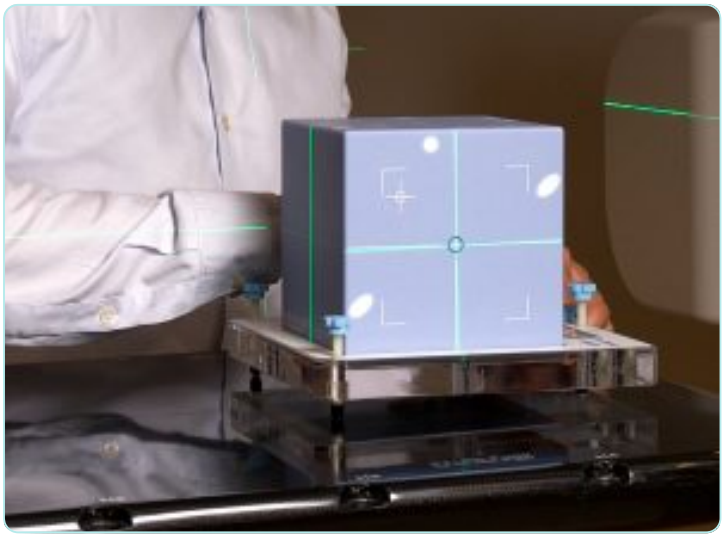
MultiPHAN is simple, yet comprehensive, and can validate alignment of:

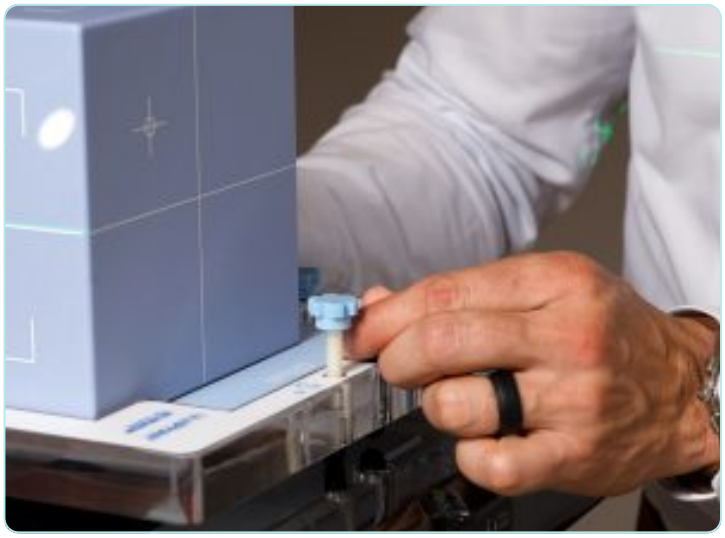
- Treatment beam isocenter
- Light field
- Field sizes
- Lasers
- kV CBCT
- MV CBCT
- MV EPID
- TomoTherapy® MVCT
- Treatment couch
- Optical Guidance systems

Start at the CT Scanner
Simply align the MultiPHAN with lasers and collect MVCT images. Register and re-align as necessary, and confirm shifts are within tolerance. Repeat this process with kV portal images, CBCT images, light field and ODI.

Move to the Treatment System
At the treatment system, shift the MultiPHAN from an aligned phantom. Image and determine offsets in the shifted position.

Use couch or other correction mechanism to move the phantom back to the original position. Image the phantom and confirm it’s back in the original position.





Model 002H5 IMRT Phantom for Film and Ion chamber Dosimetry – CIRS

The Model 002H5 IMRT Phantom for Film and Ion chamber Dosimetry has been developed to address the complicated issues surrounding commissioning and comparison of treatment planning systems while delivering an easy and reliable method for the verification of individual patient plans and delivery.

Model 002H5 IMRT Phantom for Film and Ion chamber Dosimetry features:

- calibrate film with ion chamber quickly verifies individual patient treatment plans
- dose measurements in multiple planes
- checks 2D dose distributions (3D distributions optional)

Read more about the Model 002H5 IMRT Phantom for Film and Ion chamber Dosimetry on the CIRS website

Proton Therapy Dosimetry Head (Model 731-HN) – CIRS

The CIRS Proton Therapy Dosimetry Head is an anthropomorphic head phantom designed for commissioning and treatment planning system (TPS) verification with any conformal or IMRT Proton Therapy system1.

The phantom consists of CIRS tissue-equivalent materials. The proton therapy head is suitable for all standard IMRT procedures.

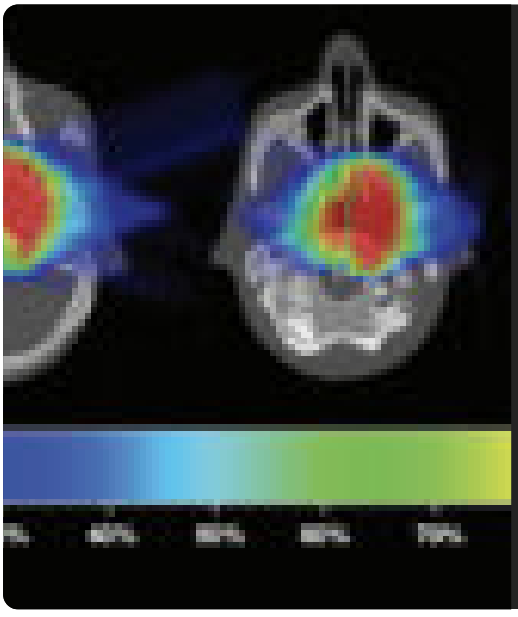
This phantom is ideal for treatment plan evaluation in high density gradient locations. This is because of the tissue equivalency of detailed internal structures. The internal structures include brain, bone with cortical and trabecular distinction, larynx, trachea, fully-open sinus cavities, nasal and mouth cavities, and teeth with distinct dentine, enamel and root structure.

This model approximates the average male human head in both size and structure to allow for intuitive set up with any patient positioning or fixation device.

PROTON THERAPY DOSIMETRY HEAD FEATURES

- Detailed internal anatomy including bone and air
- Three film locations in sagittal direction
- Tissue equivalent for protons and photons
- Dental filling and spine prothesis

If you want to read more about this phantom, take a look at our partner's website!



PROTON THERAPY DOSIMETRY HEAD FEATURES

- Detailed internal anatomy including bone and air
- Three film locations in sagittal direction
- Tissue equivalent for protons and photons
- Dental filling and spine prothesis

If you want to read more about this phantom, take a look at our partner's website!

Shoulder, Head and Neck End-to-End Verification Phantom (SHANE)

The CIRS Shoulder, Head and Neck End-to-End Verification Phantom (SHANE) is designed for end-to-end testing of treatment planning systems. The phantom can be used for every step in this process from imaging acquisition to dosimetry verification and patient-specific QA during head-and-neck VMAT and IMRT procedures.

High fidelity simulation

The head and shoulders are cut in the coronal plane to receive large radiochromic or radiographic film for treatment plan verification. The phantom also receives ion chambers or other detectors, which can be positioned in four parallel holes drilled through the phantom in Inferior-Superior direction.

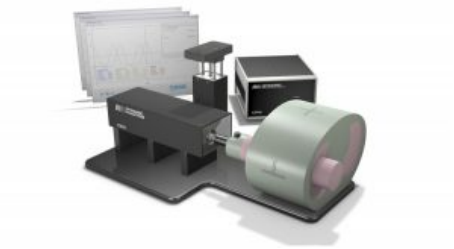
The high-fidelity anthropomorphic design contains complex internal anatomy that provides a realistic clinical simulation to evaluate the challenging effects of intra- and extracranial anatomies.Head and shoulder portions are manufactured as a single piece to enable use with various fixation devices. The shoulder portion contains thoracic vertebrae, which enable TPS verification to the level of T2 vertebra. Shoulders also include tissue inserts for electron density calibration.

Advantages

- High fidelity phantom-patient
- Suitable for use with various commercially available fixation devices
- Enables dose measurements in large regions of head and neck through use of radiographic film
- Allows dose measurements with ion chambers
- Performs Electron Density calibration in shoulders

Would you like to take a look at the specifics of this Verification Phantom?

Model 008A Dynamic Thorax Phantom – CIRS



The CIRS Dynamic Thorax Phantom (model 008A) is a precision instrument for investigating and minimising the impact of tumor motion inside the lung. It provides known, accurate and repeatable three-dimensional target motion inside a tissue-equivalent phantom. The phantom is perfect for comprehensive analysis of image aquisition, planning and dose delivery in image-guided radiation therapy.

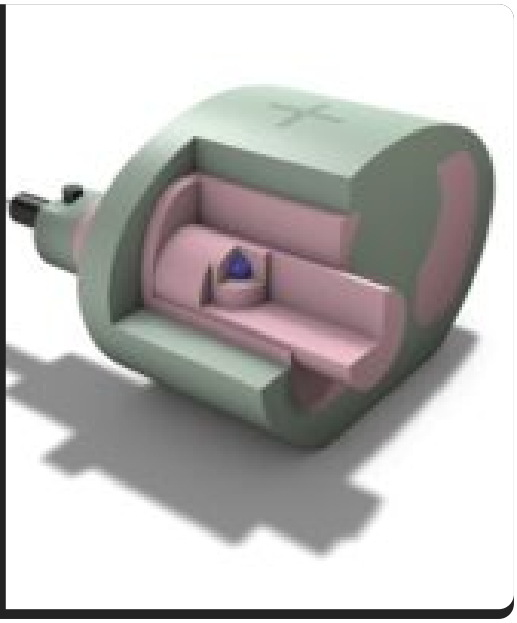
The phantom body represents an average human thorax in shape, proportion and composition.

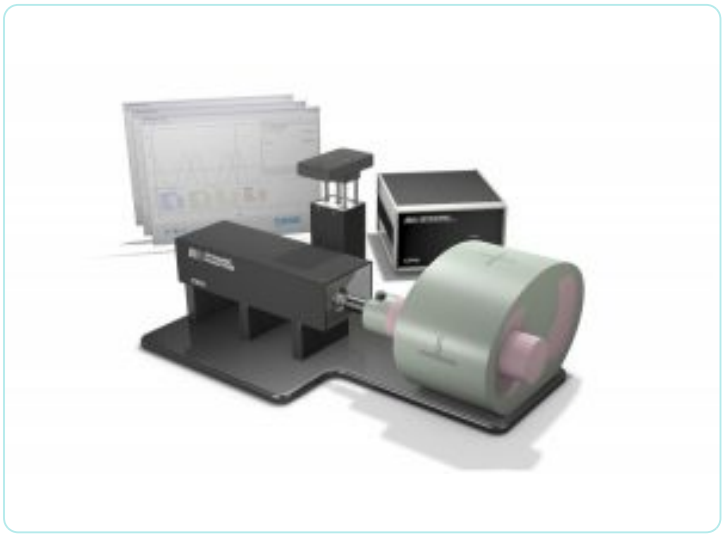
You can control the target and surrogate motion independently with the CIRS Motion Control Software. The graphical user interface provides an unlimited variety of motions while simplifying the operation of the phantom.

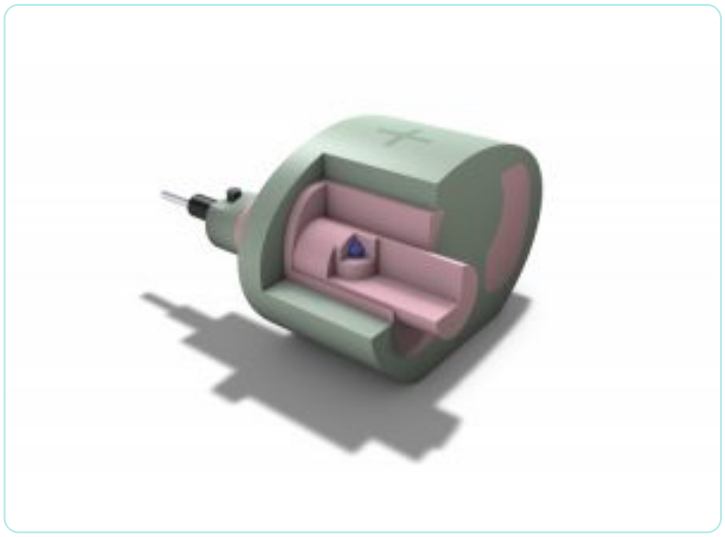
DYNAMIC THORAX PHANTOM FEATURES

- Complex 3D tumor motion within the lung
- Sub-millimeter accuracy and reproducibility
- Motion software enables different cycles, amplitudes and wave forms
- Tissue equivalent from 50 keV to 15 MeV
- Compatible with TLD, MOSFET, Dose Gel, micro-chamber, NanoDot OSL, PET/CT targets and film
- Surrogate breathing platform accomodates numerous gating devices

Read more about this phantom on our partner's website, or read our article.







https://youtu.be/zmWKzqxXFek

SCAN TO VIEW VIDEO

https://youtu.be/lhRXFOK_y2U

SCAN TO VIEW VIDEO

Multipurpose & Endoscopic Phantom (Model ATS 570) – CIRS

The Multipurpose and Endoscopic Phantom (Model ATS 570) is an easy, comprehensive means of evaluating imaging systems over the full range of clinical imaging frequencies (2 MHz to 18 MHz).

The phantom has a combination of monofilament line targets for distance measurements and tissue mimicking target structures of varying sizes and contrasts. Due to the acoustic similarity of the background material and the target structures, artifacts caused by distortion, shadowing and enhancement have been eliminated

Four grey scale targets ranging in contrast from +6 to -3 dB evaluate the system’s displayed dynamic range and grey scale processing performance. This model offers a new and improved scan surface design for easily accommodated endoscopic probes and mechanical sector probes.

MULTIPURPOSE AND ENDOSCOPIC PHANTOM TESTS

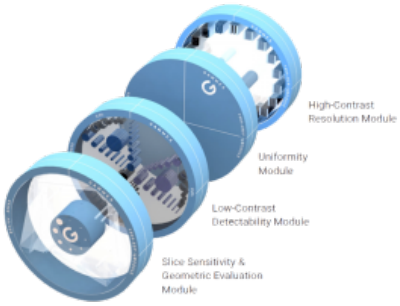
- Testing uniformity
- Depth of penetration
- Beam profile, focal zone, lateral response width
- Vertical measurement calibration linear
- Axial and lateral resolution
- Horizontal measurement calibration sector
- Contrast resolution
- Greyscale contrast sensitivity
- Dead zone assessment

If you want to read more about this model, take a look at our partner’s website!

Advanced iqModules™ – Sun Nuclear

Expanded Image Quality CT QA

Perform robust image quality testing of advanced CT systems with Advanced iqModules from Sun Nuclear (formerly Gammex). This set of 4 modules provides comprehensive testing of high-contrast resolution, low-contrast detectability, slice sensitivity, geometric evaluation, and uniformity.



Unmatched Image Quality Testing

Versatile and unique, the Advanced iqModules offer resolution up to 32 lp/cm, the widest range of test objects to evaluate low contrast detectability, and a broad range of methods to evaluate Slice Sensitivity.

Modular CT QA Support

Combine modules with the CT ACR 464 Phantom for expanded, independent CT QA. Or, combine them with the Advanced Electron Density Phantom or the Multi-Energy Phantom, to create a robust system for testing image quality and other parameters such as dose distributions concurrent with evaluating Multi-Energy CT performance and performing HU calibrations.

Low-Contrast Detectability Module

Use this module to test the low-contrast detectability of the most demanding CT scanners.

- Test performance across scanners and protocols with 3 different contrast levels

0.3%, 0.6%, and 1.0% (3 HU, 6 HU, and 10 HU)

- Ensure robustness against noise with multiple contrast objects

Sized from 1.5 to 25 mm with two of each size

High-Contrast Resolution Module

Use this module to expand your CT ACR 464 testing.

- Includes all resolutions from the CT ACR 464 Phantom, plus high resolution up to 32 lp/cm
- Large bar patterns offer easy visualization and analysis
- Zinc high-contrast material provides visibility without over-ranging scanners

Slice Sensitivity & Geometric Evaluation Module

Use this module to validate slice thickness, slice sensitivity profile, and system geometry.

- Measure slice thickness and slice sensitivity profile with an opposed pair of wire ramps and 2 opposed pairs of bead ramps
- Calculate Modulation Transfer Function with one-off vertical wire
- Check geometric accuracy with 8 acrylic spheres
- Perform MTF measurements with BBs of two different sizes

Uniformity Module

Use this module to assess CT number uniformity.

- Measure uniformity and noise
- Measure distance and calibrate pixel size using 2 embedded BBs spaced 100 mm apart
- Calculate MTF, NPS, and other noise-related metrics
- Doubles as an extension plate for use with the CT ACR 464 Phantom and other Advanced iqModules

Read the full specifications, benefits and scope in datasheet.

Links

Advanced Electron Density Phantom link – https://www.sunnuclear.com/products/advanced-electron-density-phantom

CT ACR-464 Phantom link – https://www.sunnuclear.com/products/ct-acr-464-phantom

RapidCHECK Diagnostic QA Software – https://www.sunnuclear.com/products/rapidcheck-software

View Sun Nuclear website: https://www.sunnuclear.com/products/multi-energy-ct-phantom

CTDI Phantoms – Sun Nuclear

This Computed Tomography Dose Index (CTDI) Phantom by Sun Nuclear (formerly Gammex) is used to measure absorbed doses and monitor scanner output for Dose Index QA with the this phantom.

Compliance Maintenance

The CTDI Phantom addresses 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).

Configurable to Your Needs

Offered as a 2-piece or 3-piece configuration, it includes nested modules to adapt the phantom to the size required by user protocol. The 2-piece configuration supports adult body and adult head/pediatric body sizes, and the 3-piece option offers an additional pediatric head size.

"*The clever phantom and case design allows me to setup and tear down the phantom in 50% of the time compared to my previous CTDI phantom.*" Nicholas Bevins, Ph.D., Henry Ford HospitalAdvantages CTDI-Phantoms

- Measure absorbed dose and monitor scanner output
- New, easy-to-use design available in two models

Links

Multi Energy CT Phantom – https://www.sunnuclear.com/products/multi-energy-ct-phantom

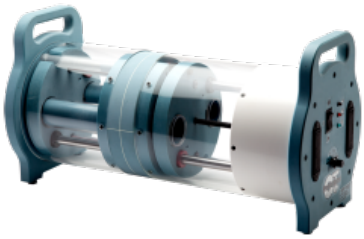
CT ACR-464 Phantom – https://www.sunnuclear.com/products/ct-acr-464-phantom

RapidCHECK Diagnostic QA Software – https://www.sunnuclear.com/products/rapidcheck-software

View Sun Nuclear website: https://www.sunnuclear.com/products/

CT Perfusion Phantom – Sun Nuclear

Sun Nuclear’s (formerly Gammex) CT Perfusion Phantom is designed to mimic the injection of a contrast bolus into a region of interest allowing you to generate precise time-attenuation curves.



Continuous Improvement for CT Perfusion Programs

Designed to mimic injection of a contrast bolus into a region of interest, this Phantom generates precise time-attenuation curves (TAC), of differing velocities, to better monitor your CT Perfusion program, and patients.

Benchmark perfusion rates and TACs for each system for better insights into if future measurements show a true change, or if follow-up results are within the precision error of the measurements.

Optimize to Image Gently

Use the dose port to optimize imaging and perfusion protocols and results at the lowest possible dose.

Advantages CT Perfusion

- An easy-to-use contrast simulation tool
- Help ensure your CT scanner and perfusion software are providing consistent results
- Generate precise time-attenuation curves (TAC)

Full specifications, benefits and scope in datasheet.

Links

Advanced iq modules link – https://www.sunnuclear.com/products/advanced-iqmodules

CT ACR-464 Phantom link – https://www.sunnuclear.com/products/ct-acr-464-phantom

RapidCHECK Diagnostic QA Software – https://www.sunnuclear.com/products/rapidcheck-software

View Sun Nuclear website: https://www.sunnuclear.com/products/

Mercury 4.0 Phantom – Sun Nuclear

This Advanced CT Performance Assessment Phantom makes it possible to characterize advanced CT features, including Automatic Exposure Control and Iterative Reconstruction, to support protocol optimization and proper dose management for your patients.

Characterization for Effective Dose Management

The Mercury 4.0 Phantom addresses performance and effectiveness of Automatic Exposure Control / Tube Current Modulation, and evaluates image quality for Iterative Reconstruction.

TG-233 Compliance

Meet AAPM Task Group 233 requirements for performance evaluation of CT systems.

Advanced CT Metrics

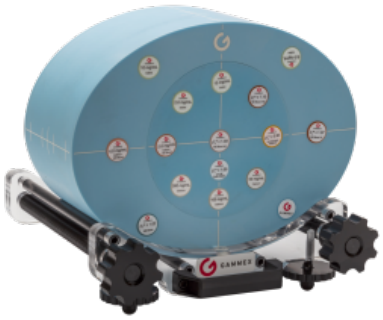
Collect and analyze data for advanced CT testing recommended by AAPM Task Group 233:

- Automatic Exposure Control
- Noise Power Spectrum
- Modulation Transfer Function & Task Transfer Function
- Detectability (d’)
- Cone-beam artifacts
- Superior-Inferior resolution

If you want to know more, take a look at our partner’s website!

Advanced Electron Density Phantom – Sun Nuclear

The Advanced Electron Density Phantom from Sun Nuclear (formerly Gammex) accurately converts CT values to HU or electron density values. It plays an important role in transitioning from diagnosis to a specific treatment protocol. With the Advanced Electron Density Phantom, ICRU-44 matched tissue equivalence, automation and smart design all serve to remove uncertainties from your energy conversions.



Automated CT-to-Density Analysis

Patent-pending rod markers uniquely identify each material in a CT scan and automatically generate CT-to-density tables with capabilities forthcoming in the RapidCHECK™ software. Rod markers eliminate the risk of misplaced rods, rotated phantoms, or incorrect selection of ROIs — further fool-proofing this analysis.

Sized for Wide-Beam Applications

A larger phantom body diameter supports evaluation of cone-beam CT and wide-beam CT scanners, with a removable section to support head and small body protocols.

Superior Tissue Equivalence

Phantom base and rods meet medical standards ICRU-44 and ICRP for human tissue densities, giving users additional assurance that the calculation of energy to be put into the patient is highly precise.

Highly Accurate CT-to-Density Conversion

Rods within the Advanced Electron Density Phantom mimic water, cortical bone, inner bone, and liver at a high equivalency to medical standards (ICRU-44 and ICRP) for human tissue densities, offering confidence that CT values will be optimally converted to treatment energy values.

Analysis Automation

RapidCHECK software forthcoming automatically identifies the rods in the CT scan and converts the values. Software image registration further removes human errors by uncovering any discrepancies in the phantom’s position (e.g., rotated or translated head, head rotated relative to the body).

Once completed, easily export results to CSV or Excel.

Features and Benefits

- Expanded Size
  – Extends 16.5 cm in the superior/inferiordirection

  – Full-length 16.5 cm rods, not just 5 cm
  – Oblate-shaped, 40 cm wide by 30 cm high
  – Removable 20 cm head section
  – Increases to 26.5 cm in length with optionalextension plates
- Proven Gammex Materials
  – Constructed from zero HU CT Solid Water® HE
  – Materials developed in accordance with ICRU-44 and ICRP specifications
- Automation
  – Patent-pending rod markers uniquely identify each material in a CT scan
  – Automatically generate CT-to-density tables with upcoming RapidCHECK™ software support
  – Rod markers remove risk of misplaced rods, rotated phantoms, and incorrect selection of ROIs
- Ease of Use
  – Single-pour, no-drop design simplifies transport and setup
  – Self-aligning rods and sections lie flush for fast and reliable positioning
  – Custom wheeled case and deluxe stand included

Links

Advanced iq modules link – https://www.sunnuclear.com/products/advanced-iqmodules

CT ACR-464 Phantom link – https://www.sunnuclear.com/products/ct-acr-464-phantom

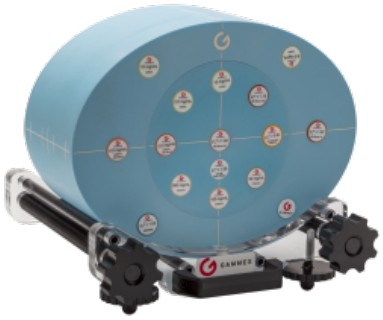
RapidCHECK Diagnostic QA Software – https://www.sunnuclear.com/products/rapidcheck-software

View Sun Nuclear website: https://www.sunnuclear.com/products/multi-energy-ct-phantom

Multi Energy CT Phantom – Sun Nuclear

To ensure the performance and consistency of your multi-energy scans, Sun Nuclear (formerly Gammex) developed the Multi Energy CT Phantom.

The phantom features 19 inserts representing different dimensions and concentrations of iodine, calcium, blood, adipose and other materials of particular interest to Multi-Energy CT (MECT). The phantom enables comprehensive tests of multi-energy CT performance.



AUTOMATED MATERIAL DISCRIMINATION

With this phantom, you can easily test material discrimination using solid rods representing iodine, calcium, blood, adipose, and more. Patented rod markers enable automated analysis to streamline this process.

ENSURE SCANNER EFFICACY & CONSISTENCY

But, you can also test the efficacy of your clinical protocols for multi-energy analysis and compare consistency and stability across different scanners

COMPREHENSIVE TESTING OF SCANNER PERFORMANCE

This CT phantom enables robust evaluation of the scanner's performance.

These features include:

- Material discrimination testing using solid rods representing iodine, calcium, blood, adipose, and more
- Ensuring efficacy of clinical protocols for multi-energy analysis
- Verifying quantitative accuracy of multi-energy scans
- Comparing consistency and stability across different scanners
- Checking for artifacts in an extended field-of-view
- Testing in head (20 cm) and body (40 cm x 30 cm) configurations
- Automating analysis with patent-pending rod marker technology

If you want to read more about this phantom, take a look at our partner's website or you can read our article about this phantom.

PRODUCT VIDEO | Multi Energy CT Phantom (GAMMEX) ft. Maarten Peters – PEO radiation 'radiology' https://youtu.be/BaOhc4hF_hs

SCAN TO VIEW VIDEO

If you have any questions...

Contact PEO!

Solid Water HE – Sun Nuclear

Solid Water HE from Sun Nuclear (formerly Gammex) is the next generation of solid water. It is designed for both therapy and imaging with improved uniformity and durability in mind. Solid Water®HE uses new nano-spheres to create homogeneous slabs while mimicking true water within 0.5% across a wide range of energies.

Each slab of Solid Water comes with a Certificate of Conformance which includes, measured density, measured thickness, ionization measurements, calculated electron densities, calculated effective atomic number and elemental composition.

Solid Water features:

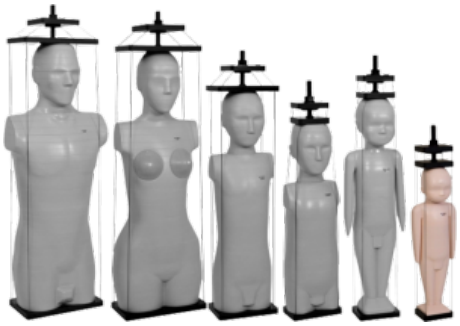
- wide range of sizes and dimensions.
- moldable material for custom requests
- rigid construction eliminates broken ion chambers
- wide range of applications and uses
- standard ranges of thicknesses from 0.1 to 6.0 cm
- ion chamber cavities free from air pockets or voids
- economical

Do you want to know more about the Solid Water HE?

If you want to continue your search for additional information on this product try this link.

Model 701-706 ATOM Dosimetry Verification Phantoms – CIRS

The CIRS Model 701-706 ATOM Dosimetry Verification Phantoms are a complete line of anthropomorphic, cross sectional dosimetry phantoms developed to examine whole body effective dose, organ dose and verification of delivery of therapeutic radiation doses.



Model 701-706 ATOM Dosimetry Verification Phantoms features:

- superior tissue simulation and lifelike imaging properties
- age appropriate references
- organ specific dosimetry with minimal detectors
- homogeneous bone
- optimized TLD locations specific to 21 inner organs
- tissue-equivalent epoxy

Read more about the Model 701-706 ATOM Dosimetry Verification Phantoms on the CIRS website

Brochure Model 701-706 ATOM Dosimetry Verification Phantoms CIRS

Model 457-CTG – Sun Nuclear

Certified Therapy Grade Solid Water® from Sun Nuclear (formerly Gammex) is a specially developed grade of Solid Water that is manufactured to the most exact quality assurance standards in the industry. It is designed for electron and photon beam measurements including relative ionization, depth dose and uniformity.

Each slab of CTG-Solid Water comes with a Certificate of Conformance which includes 1) a calculated elemental composition, 2) calculated mass, 3) volume electron densities, 4) electron and photon transmission characteristics and 5) measured physical dimensions.

Features:

- wide range of sizes and dimensions.
- moldable material for custom requests
- rigid construction eliminates broken ion chambers
- wide range of applications and uses
- standard ranges of thicknesses from 0.2 to 6.0 cm
- ion chamber cavities free from air pockets or voids
- economical

Model 457, Standard Grade Solid Water – Sun Nuclear

Standard Grade Solid Water from Sun Nuclear (formerly Gammex) mimics the absorption characteristics of water over a wide range of energies. Radiation beam calibration is made easier when using Solid Water. It is designed to scatter and attenuate radiation in the same way as water and can be easily machined to accommodate custom applications. Solid Water does not adhere to surfaces or other slabs and the rigid construction eliminates broken ion chambers.

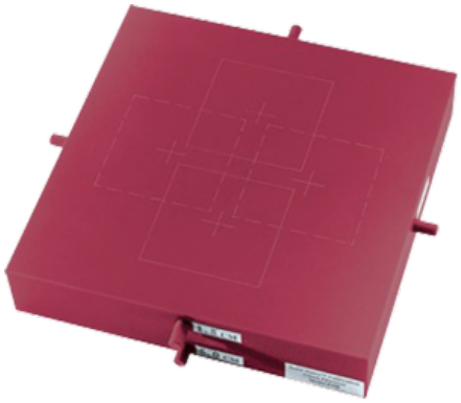
Gammex has the ability to provide ion cavities in slabs of 2.0 cm thickness or greater to accommodate most commercially available ion chambers.

Solid Water has been the industry standard for water mimicing material used by medical physicists for years.

Features:

- wide range of sizes and dimensions.
- moldable materialfor custom requests
- rigid construction eliminates broken ion chambers
- wide range of applications and uses
- standard ranges of thicknesses from 0.2 to 6.0 cm

Model 458 – Calibration Check Phantom – Sun Nuclear



The Sun Nuclear (formerly Gammex) model 458 Calibration Check Phantom is an excellent test tool for checking energy output from radiotherapy machines.

The phantom contains six cavities with corresponding plugs. This allows for measurements at depth of maximum dose deposition. Gammex technology also provides a custom adaptor to exactly match the ion chamber you use.

Calibration Check Phantom features:

- contains 6 cavities placed at 1.2, 1.5, 2.0 2.5, 3.2 and 5.0 cm distances.
- custom adaptor is provided for the ion chamber that you use
- inscribed squares on the top surface guides you in the setting of your light field for quick energy readings
- compact design for easy shipping and storage

Do you want to know more about the Calibration Check Phantom?

If you want to continue your search for additional information on this product try this link.

Model 450, 452, 453, 454, 455, 456, 481 and 482 – Tissue Equivalent Materials – Sun Nuclear

Tissue Equivalent Materials from Sun Nuclear (formerly Gammex) allow simple, convenient and accurate simulations for therapy dose determinations. Tissue Equivalent Materials (TEM) have a variety of uses for routine quality assurance and quality control in both diagnostic and therapeutic physics.

TEM are user friendly and provide adequate simulations for electron and photon applications between 0.01 and 100 MeV.

Tissue Equivalent Materials features:

- wide range of sizes and dimensions.
- moldable material for custom requests
- wide range of applications and uses
- standard ranges of thicknesses from 0.2 to 6.0 cm

Do you want to know more about the Tissue Equivalent Materials?

If you want to continue your search for additional information on this product try this link.

Model 430 – Beam Alignment Test Instrument – Sun Nuclear

The Sun Nuclear (formerly Gammex) 430 Beam Alignment Test Instrument is an instrument used to analyze the alignment of a linear accelerator.

It is recommended that beam alignment tests be completed at least once a year to determine problem situations such as:

- displaced focal spot,
- asymmetrical collimators,
- non-intersection of the collimator and gantry axes and
- lack of gantry arm support.

Beam Alignment Test Instrument features:

- acrylic design with lead blocks
- designed to accommodate standard size film
- compact design
- economical

Model 432 – CT Perfusion Phantom – Sun Nuclear

The Sun Nuclear CT Perfusion Phantom with Gammex technology is designed to mimic a perfusion study where traceable material is monitored as it travels through brain tissue. Software that is proprietary to the CT scanner is then used to determine blood flow rates curves and to compare them to known normals. This provides a reference baseline.

The proprietary rods and vessels are designed to mimic brain tissue, but are interchangeable with ones available in the future. The battery operated phantom has a delay built into the circuitry allowing the user to set the phantom up, and move out of the scanner room to the control.

CT Perfusion Phantom features:

- interchangeable tissue and vascular slots
- 5 discrete speeds to simulate different flow rates
- time delay On/Off switch
- battery operated
- compact design
- use with any manufacturer’s CT

If you want to continue your search for additional information on this product try this link.

Model 472 – Dual Energy Characterization CT Phantom – Sun Nuclear

The Sun Nuclear Dual Energy Characterization CT Phantom with Gammex technology provides users with the ability to perform Quality Assurance for Dual Energy CT analysis of Iodine and Calcium.

The Phantom consists of a Solid Water disk approximately the size of an average pelvis. A matrix of 16 holes in the disk hold interchangeable rods made of materials containing 7 different concentrations each of Iodine and Calcium. The rods can be positioned as the user chooses.

Scanning the phantom on a periodic basis provides data useful for the QA program related to the detectability range of the Dual Energy CT scanner.

The phantom uses the same base as the Gammex 467 Tissue Characterization Phantom, meaning owners of that phantom can take advantage of the interchangeability of the rods for the 2 products to provide a more economic approach to your Quality Assurance program

Dual Energy Characterization CT Phantom features:

- solid sample rods
- rods cover a wide concentration range for both Iodine and Calcium
- owners of the Gammex 467 phantom can upgrade by purchasing only the Dual Energy rods
- distance measurement holes to assist in measuring CT distance measurement accuracy
- includes a handy carrying case for storage and transportation
- proven Solid Water core design
- interchangeable rods permits positioning customization

Model 461A – Head / Body CT Phantom – Sun Nuclear

Sun Nuclear’s (formerly Gammex) model 461A Head/ Body CT Phantom provides a set of tools for evaluating CT image quality.

The Solid Water composed phantom permits use of the phantom without the need to fill it with water.

Head / Body CT Phantom features:

- the head module consists of uniform disc of Solid Water Material
- a Ring of Bone mimicking material that mounts around the head module is included
- a body scanning module; the body annulus is mounted on the head module
- the head has 5 tapered cavities which accept tapered inserts and the body annulus ring has 4 cavities, providing a total of 9 test positions
- the phantom comes in a durable case that is suitable for storage or shipping

CT ACR 464 Phantom – Sun Nuclear

The ACR CT Accreditation Phantom from Sun Nuclear (Gammex) is designed to be an integral part of the American College of Radiology (ACR) CT Accreditation Program. This voluntary program provides physicians with an opportunity for a comprehensive peer review of their CT facility, personnel qualifications, image quality and quality assurance programs.

The phantom can be used for initial QA assessment and routine monthly QA testing to help ensure that patients are receiving the lowest possible CT dose.

The Gammex ACR CT phantom is the only phantom authorized for use in the ACR CT Accreditation Program. Gammex submits the phantoms to rigorous quality control testing standards, as outlined by ACR, to assure users of the high level of performance and intergrity of each phantom.

ACR CT Accreditation Phantom features:

- designed to meet specifications of ACR for CT accreditation
- Solid Water construction
- made of 4 modules designed to measure a wide range of scanner parameters
- white scribed markings on the axial coronal and sagittal axis help ensure proper alignment
- measure
  - positioning
  - CT number accuracy
  - alignment
  - slice thickness
  - low contrast resolution
  - CT number uniformity
  - high contrast resolution

Do you want to know more about the ACR CT Accreditation Phantom?

If you want to continue your search for additional information on this product try this link.

Links

RapidCHECK Diagnostic QA Software – https://www.sunnuclear.com/products/rapidcheck-software

Advanced iq modules – https://www.sunnuclear.com/products/advanced-iqmodules

Multi Energy CT Phantom –

https://www.sunnuclear.com/products/multi-energy-ct-phantom

View Sun Nuclear
website: https://www.sunnuclear.com/products

Model 464 – ACR CT Accreditation Extension Plates – Sun Nuclear

Accurately represent scatter effects from widebeam CT scanners with the ACR 464 extension plates from Sun Nuclear (Gammex). Made from identical solid water materials, these extension plates allow images to begin and end in the same material to eliminate artifacts that may be introduced by scanning in air.

ACR CT Accreditation Extension Plates features:

- this kit includes two Extension Plates with an adjustable stand to accurately represent scatter effects from wide-beam CT scans. The extension plates allow images to begin and end in the same material to eliminate artifacts that may be introduced by scanning in air.
- Solid Water construction
- designed to work exclusively with the 464 CT Phantom

Do you want to know more about the ACR CT Accreditation Extension Plates?

If you want to continue your search for additional information on this product try this link.

Model 602 3-Dimensional Torso Phantom – CIRS

The Model 602 3-Dimensional Torso Phantom has been developed to deliver an accurate simulation of an average male torso for medical imaging applications. The removable organs enable flexibility in the placement of TLD’s, contrast agents, etcetera. The materials used for the phantom provide optimal tissue simulation in the 40 keV to 20 MeV energy range.

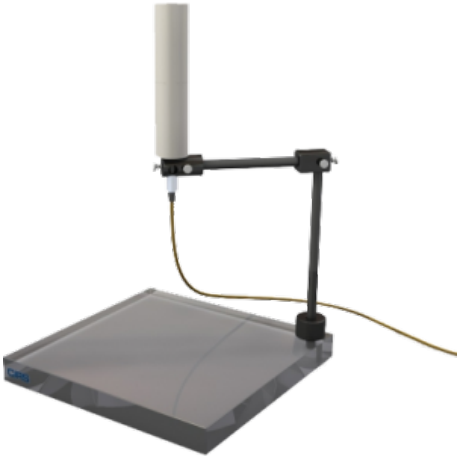
Model 602 3-Dimensional Torso Phantom features:

- physical density and linear attenuation within 2 percent of actual tissue
- interstatial voids fillable with water or blood-mimicking fluid
- removable lungs, heart, liver, pancreas, kidney and spleen
- phantom lower portion: soft bolus material, 30% adipose and 70% muscle

Read more about the Model 602 3-Dimensional Torso Phantom on the CIRS website

Model 670 & 670S Water Equivalent Mini Phantom – CIRS

The Model 670 & 670S Water Equivalent Mini Phantom is designed for precise evaluation of scatter. The Phantom provides an excellent tissue simulation and opportunity of true dose comparison with the 30 x 30 cm Plastic Water slab phantom.



Model 670 & 670S Water Equivalent Mini Phantom features:

- water-equivalent for photon beams (150 keV – 100 MeV)
- meets the requirements of ESTRO Booklet 3
- vertical or horizontal positioning
- three axis rotation

Read more about the Model 670 & 670S Water Equivalent Mini Phantom on the CIRS website

Model 800 NEMA PET Scatter Phantom – CIRS

The CIRS Model 800 NEMA PET Scatter Phantom has been designed for NEMA standard NU2-2007.

Model 800 NEMA PET Scatter Phantom features:

- the cylinder consists of three segments that are assembled during testing
- test count losses, scatter fraction and random measurements in accordance with NEMA-NU2-2007
- foam lined carry case included

Read more about the Model 800 NEMA PET Scatter Phantom on the CIRS website

Model 801-P Virtually Human Male Pelvis Phantom – CIRS

The Model 801-P Virtually Human Male Pelvis Phantom is the most realistic tissue equivalent phantom on the market. The phantom is used for radiation therapy and diagnostic radiology for demonstration applications and imaging dosimetry teaching.

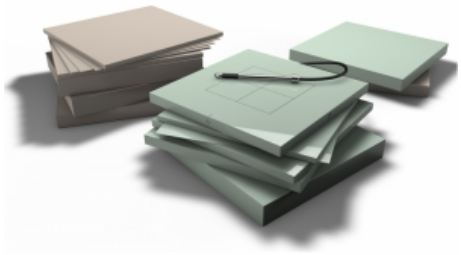
Model 801-P Virtually Human Male Pelvis Phantom features:

- is made from proprietary epoxy materials
- human tissue equivalent within 1% from 50 keV to 25 MeV
- accomodates a wide variety of detectors
- based on the Visible Human Project data set

Ream more about the Model 801-P Virtually Human Male Pelvis Phantom on the CIRS website

Model PW Plastic Water – CIRS

CIRS PW Plastic Water is a water equivalent for use with photon and electron beams within 0,5% of true water dose. It is flexible and resists breakage under impact.



Model PW Plastic Water features:

- easy to machine
- durable
- five year written warranty
- available in 1 mm thickness

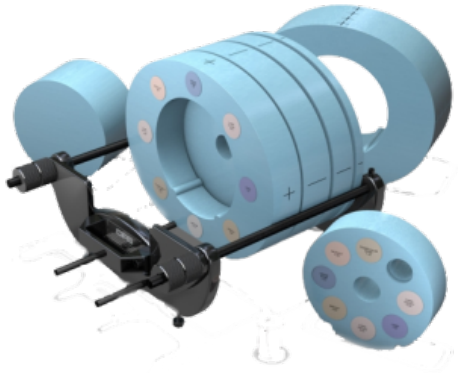
CIRS water equivalent materials specific energy ranges:

- Plastic Water – The Original – 150 keV – 100 MeV; permits calibration of photon and electron beams within 0.5% of true water dose (routine beam constancy checks)
- Plastic Water DT – 50 keV – 15 MeV; use for special applications requiring exposures to both diagnostic and therapeutic energies such as radiation therapy planning and dose verification in IMRT
- Plastic Water LR – 15 keV – 8 MeV; use for such things as dose evaluation for low energy brachytherapy sources or CT dose verification

Read more about Model PW Plastic Water on the CIRS website

Model 062MA CBCT Electron Density Phantom – CIRS

The Model 062MA CBCT Electron Density Phantom has been designed for Cone Beam CT Imaging systems. The Phantom is made of Plastic Water and covers geometries for imagers with dimensions of up to 40 cm x 40 cm.



Model 062MA CBCT Electron Density Phantom is an extension of the standard Model 062 Electron Density Phantom.

Model 062MA CBCT Electron Density Phantom features:

- special marker inserts enable quick assessment of distance registration
- can be used for multi-slice CT and Cone Beam CT
- tissue equivalent inserts can be positioned at seventeen different locations
- all materials accurately simulate indicated tissue within CT and Cone beam CT energy range
- can be configured for off-set and central axis measurements

Read more about the Model 062MA CBCT Electron Density Phantom on the CIRS website

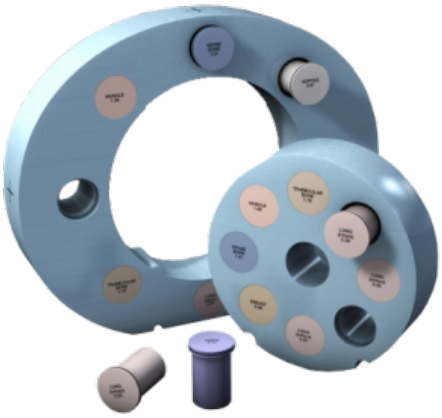
Brochure CBCT Electron Density & Image Quality Phantom System

Model 062M Electron Density Phantom – CIRS

CIRS designed this phantom for precise correlation of CT data to electron density of various tissues. The phantom consists of two disks made from Plastic Water® . The disks can represent both head and abdomen configurations.

Nine different tissue equivalent electron density plugs can be positioned at 17 different locations within the scan field. There is also a water vial plug that the user can fill with any fluid.

Physicists need accurate tools to evaluate CT-scan data and document the relationship between CT number and tissue density. This model is a great option if you want to improve the accuracy of your treatment planning.



PHANTOM FEATURES

- Evaluate CT-scan data
- Correct for inhomogeneties
- Document relationship between CT number and tissue electron density
- Simulate indicated tissue within the diagnostic energy range
- Quick assessment of distance registration

If you want to know more, you can take a look at our partner's website.

Ask us

Contact PEO!

Model 038 STEEV Steriotactic End-to-end Verification Phantom Patient

STEEV™ Phantom

The STEEV Phantom provides the most realistic clinical simulation to perform end-to-end testing of SRS QA systems in the most challenging anatomical regions.

The Model 038 STEEV Steriotactic End-to-end Verification Phantom Patient is used for comprehensive testing of stereotactic radiosurgery systems. The Phantom provides a means to check every step the patient will undergo in the treatment process from diagnostic imaging with MR, CT, and PET to treatment plan verification.

Model 038 STEEV Steriotactic End-to-end Verification Phantom Patient features:

- Performs IGRT QA procedure for X-ray and onboard kV and MV imagers including CBCT
- TPS Deformable Image registration algorithm accuracy QA
- Performs end-to-end testing for commissioning as directed by AAPM TG-101
- Verifies patient treatment plan in critical regions
- performs geometric machine QA Winston-Lutz isocenter verification tests and localization/repositioning with couch shift
- Verifies patient positioning using frame/frameless systems, head and shoulder masks or other positioning fixation devices
- Assesses image transfer QA, image fusion, accuracy verification and TPS testing with Multi-modality imaging capabilities (CT, MRI and PET)

Workflow step:

- Treatment planning
- Pre-Treatment delivery
- Commissioning & acceptance
- Monthly QA
- Annual QA
- Dosimetry
- End-to-End QA

Modality:

- Linac
- SRS/SBRT
- Bore-based Linacs
- Cyberknife
- TomoTheraphy
- Imaging

The standard model 038 includes:

- Phantom head and neck with external fiducials and markings
- Three brain equivalent spacers to fill rectangular intercranial cavity
- Two tissue-equivalent rods to fill cylindrical channels (one includes MRI/CT fiducial)
- MRI/CT/PET ISO Center Insert
- Neck alignment plate
- Foam-lined carry case
- User guide and warranty

Read more about the Model 038 STEEV Steriotactic End-to-end Verification Phantom Patient on the Sun Nuclear website

Model 023 ISO Cube Daily QA Phantom – CIRS

Target positioning through imaging guidance is critical for the accurate delivery of radiation treatment. Verifying that all of the imaging, localization and targeting systems are aligned with the true radiation isocenter is crucial. The ISO Cube provides a cost-effective, quick and accurate means of testing radiation isocenter coincidence with the isocenters of the image guidance systems.

Model 023 ISO Cube Daily QA Phantom features:

- unique fiducials produce sharp clear images in EPID, kV and CBCT imaging
- offset fiducial to check accuracy of couch corrections
- easy to use and fast
- checks: table height accuracy, light field size verification, laser alignment, CBCT process accuracy, radiation field/light field alignment, OBI accuracy and kV and MV imager coincidence

Read more about the Model 023 ISO Cube Daily QA Phantom on the CIRS website

Model 009 Cube 20 Phantom – CIRS

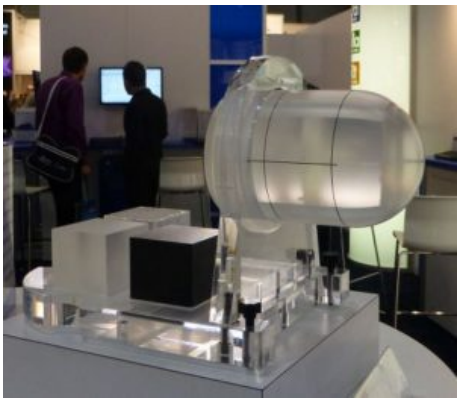
The Model 009 Cube 20 Phantom has been designed for routine QA in RT and IMRT applications where quick set-up and ease of use are important. The cube is manufactured from Plastic Water DT which mimics the linear attenuations of water within 1% from 50 keV to 15 MeV.

Model 009 Cube 20 Phantom features:

- MLC QA
- routine patient QA
- beam constancy checks
- suitable for head/neck and torso treatments

Read more about the Model 009 Cube 20 Phantom on the CIRS website

StereoPHAN Phantom – Sun Nuclear



StereoPHAN is designed for end-to-end commissioning and quality assurance testing on all parts of the SRS process. StereoPHAN inserts and configurations are quickly exchanged with no tools or change in setup. It's that simple, and that powerful.

StereoPHAN Phantom features:

- easy setup and assembly; no tools required for assembly, stand base can be mounted to a couch that uses the prevalent Lok-Bar system, phantom stand holds the inser ts, making them easily accessible during testing
- single cube insert tests CT and MRI imaging, including slice position, thickness and alignment
- target volumes in CT/MRI cube eliminate need for CT/MRI markers
- flat surface of ion chamber insert enables easier cross-calibration to water than the curved surface of a spherical geometry
- all components fit into a durable rolling case suitable for storage and air travel
- stereotactic (SRS/SRT/SBRT) end-to-end testing and patient-specific QA
- adapters for Head-Frames and CyberKnife
- quality assurance of image fusion algorithms for CT and MRI imaging modalities
- absolute, relative and point dose dosimetry QA measurements at isocenter with ion chambers; relative dose distribution using film
- dosimetry detector cabling remains outside of beam for interference-free dose measurement regardless of measurement setup
- geometric accuracy; optical and geometric isocenter, laser alignment, indexed table positioning alignment and positioning coordinates, CBCT and MV/kV isocenter alignmenent

Read more about the StereoPHAN Phantom on the Sun Nuclear website

SRS Profiler – Sun Nuclear

The SRS Profiler (Sun Nuclear) is a refined beam QA device for stereotactic radiosurgery areas measuring several beam parameters in a single exposure.

SRS Profiler features:

- SunPoint diode detectors (125)
- streamlines commissioning, acceptance testing and routine QA tests
- compatible with Accuray CyberKnife
- support FFF beam
- 0.64 mm2: smallest size
- 32.0 nC/Gy: highest sensitivity
- first QA array designed for cone based SRS
- update interval: 50 ms
- geometry: 4 axis
- one cable for data and power
- set-up requires only a few minutes
- user can self calibrate

Read more about the SRS Profiler on the Sun Nuclear website

TomoDose Scanning System – Sun Nuclear

The TomoDose (Sun Nuclear) is a two dimensional array for trouble-shooting and QA measurements of a TomoTherapy system.

TomoDose features:

- SunPoint diode detectors
- 53.0 cm x 9.8 cm field size
- delivers fast and accurate beam data acquisition
- no water tanks and electrometers are required
- few minutes set-up (single person)
- small detector size makes very precise dose measurement possible in fields of steep dose gradient
- data is immediately available after measurement
- detector temperature, beam time, and beam pulse detection measurement capable
- software included

Contact our product specialist or download the datasheet below.

IC Profiler – Sun Nuclear

The IC Profiler (Sun Nuclear) is an ionization chamber based solution for direct QA on linac. It can be seen as the perfect substitute for a water phantom. IC Profiler is a complete scanning system for field adjustments, Linac factory testing, and routine and service QA dosimetry. The ionization chambers on the Y, X and diagonal axes measure all beam profiles after a single beam delivery.

IC Profiler features:

- accepted and proven for clinical use and factory acceptance
- solid state, ion chambers, no moving parts (or water)
- total beam QA within 30 minutes
- high speed acquistion of field profiles
- universal cable for data and power
- 32 cm X and Y length and 45 cm diagonal length
- high dose rate limit >6000cGy per minute
- start/stop button for simple measurement control
- narrow chamber design of 2,9mm width minimizes ‘dose volume averaging’
- high speed data aquisition – fast set-up of radiation field
- multiple parameters: symmetry, beam center, flatness, field size, radiation coincidence and penumbra width
- applications: diagnostics, bundle steering, beam constancy and collimator and rotational sag QA

Read more about the IC Profiler Scanning System on the Sun Nuclear website

Model 007 & 007A CT Dose Phantoms – CIRS

Each section of the Model 007 & 007A CT Dose Phantoms can provide separate dose information. Users are able to measure minimum, mid-range and maximum values of the nominal tomographic section thickness when performing dose profile measurements.

A third nesting disk (10cm diameter) for pediatric head measurements is included in model 007A.

The model 007 & 007A comply with the FDA's performance standard, 21 CFR 1020.33 that details the measurement requirements.

Model 007 & 007A CT Dose Phantoms features:

- nesting PMMA disks minimize storage space
- PMMA disks and plugs with 1.19 g/cc density
- pediatric head, adult head, abdominal configurations
- holes sized for standard CT Dose probes, 13.1 mm diameter

Read more about the Model 007 & 007A CT Dose Phantoms on the CIRS website.

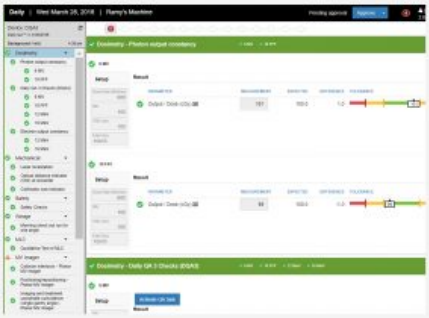
QA MEASUREMENT SYSTEMS

peo MEDICAL

SunCHECK™ Machine – Sun Nuclear

Complete Machine QA in One Streamlined Application

SunCHECK™ Machine integrates all Machine QA — from Daily Output checks to Annual QA tasks, and everything in between — with visibility for all stakeholders.



Standardize Daily, Monthly, Annual QA
Ensure standardization among clinics and machines with shared tolerances. Apply ready-to-use, yet customizable, templates for efficient QA. No more spreadsheets!

Streamline Machine QA with Device Connectivity and Control
Automate data collection with direct device integration to Daily QA™ 3, IC PROFILER™ and IC PROFILER™-MR — no need for additional software and transfer of data. Complete your entire TG-142 and DIN QA easily within SunCHECK.

Browser-Based Access
Access Machine QA and results from any networked computer. One point of access drives efficiency and critical consistency across locations, machines and staff.

Automate Imaging, MLC and VMAT QA
Deliver QA beams and SunCHECK Machine automatically captures, processes and analyzes the images or log files. Results are stored and, if necessary, notifications are sent, based on pass/fail status.

“I can do three times as much work in half the time with SunCHECK Machine. The IC PROFILER integration is amazing. You put on a Quad Wedge and you’ve done four tests in one exposure — output, beam energy, profile constancy and MU.”

Curtis Baker, M.S., DABR,

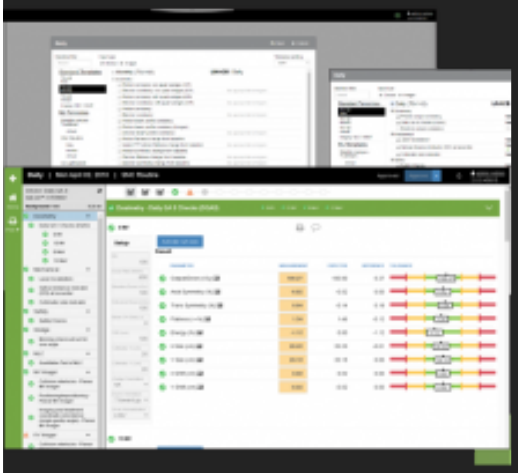
Hamilton Medical Center

IC PROFILER & Daily QA 3 Integration

With direct connectivity from IC PROFILER and Daily QA 3 to SunCHECK:

- Efficiently complete daily, monthly and annual QA – no manual data entry required.
- Deliver the test beam, then accept or reject results on your terms and timeframe.

Learn more about IC PROFILER >
Learn more about Daily QA 3 >



Proactive Machine Analysis
With SunCHECK Machine, get ahead of your team's asset management and compliance needs. Data trending tracks parameters approaching out-of-tolerance levels.

Report templates demonstrate compliance with accreditation bodies, and centralized storage makes report retrieval easy.

SunCHECK™ Platform – Sun Nuclear

INTEGRATED. INDEPENDENT.
One Platform for Your Patient and Machine QA

SunCHECK™ is integrated, independent Patient and Machine QA. Integrated QA provides standardization and workflow efficiency. Independent QA removes bias, assuring more treatment and machine issues will be caught.

Radiation therapy is complex. SunCHECK simplifies it — with a single QA interface and database, a centralized view of Quality Management, and greater opportunity to improve Patient Safety.

One Solution for Radiation Therapy QA
Manage all Patient and Machine QA in the same place to save time and reduce the likelihood of undetected errors.

Speed and Efficiency through Automation
Cut time consumed by manual tasks. Eliminate the need for multiple applications. Gain bandwidth for data analysis, clinical decisions and continuous improvement.

Access from Anywhere
Untether your team with secure, browser-based visibility to the insights they need to see, wherever they are.

Leverage EPID for Risk Management
Verify and track dose throughout the treatment course to catch the most common types of errors — patient setup errors, anatomy changes, and machine errors.

Seamless Clinical Integration
SunCHECK supports virtually every combination of OIS, TPS, linac and clinical implementation. Count on custom installation, with a quick start-up guaranteed.

SunCHECK™ Patient

Validate treatments are planned and delivered as intended, with a seamless workflow and holistic view of Patient QA.

PlanCHECK™ DoseCHECK™ PerFRACTION™

SunCHECK™ Machine

Understand your Machine QA needs at a glance, and automate image-based and templated tests. Directly connect your Sun Nuclear devices to pull in real-time measurements for further automation.

SunCHECK™ Machine | SNC Machine Software

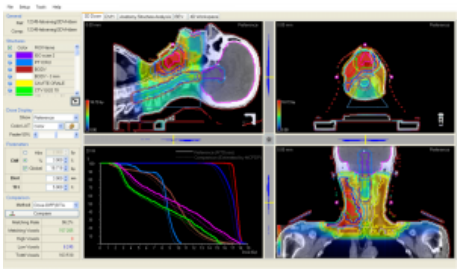
SunDEPLOYS™

SunCHECK Platform Implementation Support

From upfront requirements analysis and goal definition through clinical adoption, the SunDEPLOYS™ program ensures a successful SunCHECK Platform introduction.

Your dedicated SunDEPLOYS team works side-by-side with you to meet your clinical operational goals, from project management, site planning, and system preparation, all the way through training and go-live support.

3DVH Software for Patient QA – Sun Nuclear



3DVH Software transforms the field of per-patient dose QA by generating clinically-relevant and intuitive analyses of complex IMRT and VMAT plans. With proven accuracy, 3DVH estimates the 3D dose to the patient-specific geometry.

3DVH Software features:

- fast results with automated tools – Quick Stat Templates,
- quick Dose Profiles, DICOM compliant workflow
- no forward dose calculation into the patient CT
- no commissioning
- uses existing measurements and devices
- with optional Respiratory MotionSim module, analyze the dosimetric impact of a moving target
- transform 2D measurements to 3D dose volume for advanced analysis
- perform 3D dose and DVH QA analysis on patient – not phantom – geometry
- supports coplanar and non-coplanar beams
- identify TPS and beam delivery errors
- intuitive and familiar presentation of dose and DVH with statistics per anatomical structure

3DVH Software compatibility:

- hardware: ArcCHECK, MapCHECK 2
- software: SNC Patien, EPIDose
- rotational therapy: RapidArc, VMAT
- static gantry: IMRT
- treatment planning systems: Pinnacle, Eclipse, and most TPS systems that can export DICOM data
- FFF & non-FFF deliveries

Read more about 3DVH Software on the Sun Nuclear website

MapCHECK®3 – Sun Nuclear

The Benchmark for 2D IMRT QA

MapCHECK®3 is the gold standard for IMRT QA requiring large field measurements.

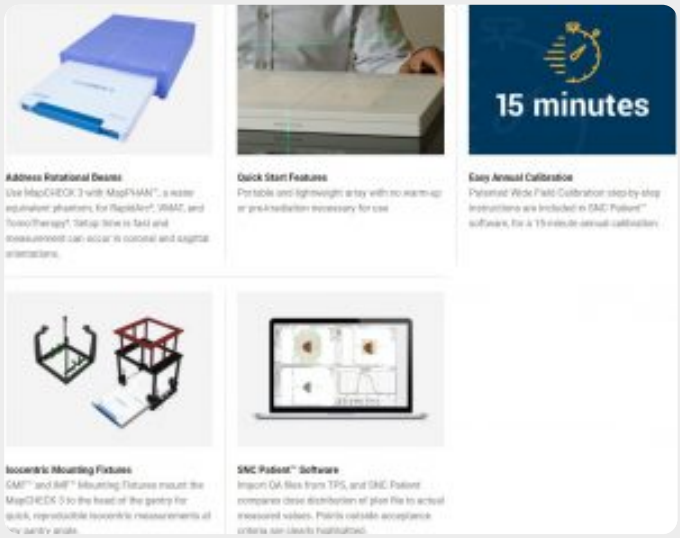
It offers the highest detector density, highest sensitivity, and largest field size of 2D arrays. Plus, it’s uniquely TG 218-compliant.

Built for Pre-Treatment IMRT QA

SunPoint® 2 Diode Detectors placed uniformly throughout the array offer high sensitivity and proven stability in a large active field size (26 cm x 32 cm). A real-time electrometer measures every pulse with 50-millisecond updates.

Easy Comparison Features

Simply import the QA files from your TPS, and let SNC Patient™ software compare dose distribution from the plan file to actual measured values. Measured points outside of acceptance criteria are highlighted for high and low dose.



SRS MapCHECK – SunNuclear

SRS PATIENT QA, NO FILM

SRS MapCHECK removes film and subjectivity from stereotactic QA, and offers efficient, electronic Patient QA and end-to-end testing.

It supports conventional linacs, CyberKnife® Systems, Varian HyperArc™ Systems, and vertex delivery beams to help prevent treatment errors.

But, most importantly, SRS MapCHECK's main objective is accuracy. Because of this product, patients will receive safe and accurate stereotactic radiotherapy. The treatments will also be more efficient and simple. MapCHECK can be used as a stand-alone 2D array, but it can also be used in combination with StereoPHAN.

MOVING BEYOND FILM

SRS MapCHECK takes the place of film and makes the workflow for time-sensitive patient QA more efficient. MapCHECK is a consistent and easy to maintain method for high-density, absolute dose measurements.

IRRADIATE FROM ANY ANGLE

In combination with the StereoPHAN, SRS MapCHECK uses a patented technique to account for angular dependence and correct when necessary. It also pairs this technique with field size and puls rate corrections to ensure accuracy from any angle, including vertex fields.

FLEXIBILITY, SPEED AND ACCURACY

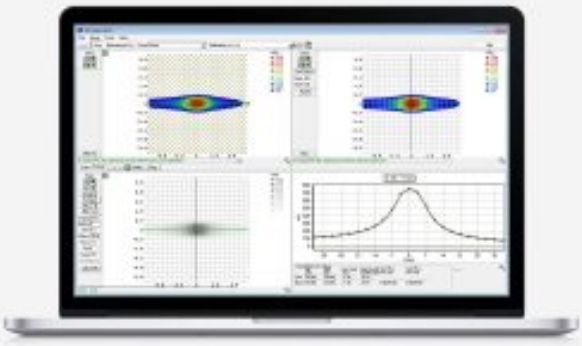
MapCHECK is proven to efficiently detect output factor, MLC, and grid size errors. SRS MapCHECK prevents the most common sources of SRS treatment errors.

NEW IN SNC PATIENT V8.4

The latest software update introduces the QA Setup Tool. This tool provides guidance for ideal setup of Single-Isocenter Multiple-Target (SIMT) plans, and simplified shifts for occasional larger fields.

SRS MAPCHECK FEATURES

- 2D array for SRS applications
- High resolution because of two diodes
- Relpaces film and standalone detector for efficiency
- Provides absolute and relative dose in a single measurement
- The QA setup tool in SNC Patient provides guidance for ideal setup
- Work with static, rotational and non-coplanar, CyberKnife®, FFF, cone and MLC fields
- In combination with the StereoPHAN, it supports irradiation at any angle



“This [array] gives us high-quality patient QA in minutes rather than hours and significantly enhanced patient throughput.”

- Brett Miller, University of Tennessee Medical Center
- Stereotactic QA: saving time, delivering outcomes, Physics World, July 2019

CLINICAL NOTE

Smaller, High Density Arrays vs. Larger, Lower Density Arrays for Stereotactic QA

Performing patient-specific stereotactic QA on plans with multiple targets and a single isocenter can be complex. Radiation therapy teams rely on arrays to ensure treatments will be delivered as expected. This clinical note explores the importance of detector density in arrays for measuring stereotactic patient QA.

For more information about SRS MapCHECK, take a look at this page from our partner.

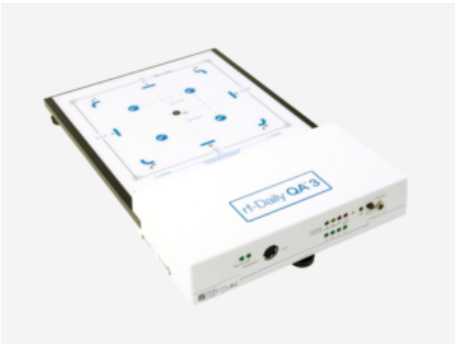
Would you like to know more?

Contact PEO!

Daily QA 3 – Sun Nuclear

Daily Beam Quality Analysis in One Measurement

Daily QA™ 3 sets the standard for efficient and powerful routine QA. A single beam measurement results in five beam quality checks. Accepted data is automatically written to a SQL database in real time, where it is available for trending, review and analysis



An Easy Handoff from Physicist to Therapist
Physicists are able to set up daily test templates for their modalities and machines which can then be used by a Therapist to easily conduct daily tests and automatically run pre-set templates.

Eliminate Back-and-Forth
Simply enter the linac vault, position the device, turn the beam on and start the pre-set tests in the software – no warm-up or pre-irradiation required, and no additional trips to the vault needed.

Easy Setup
Power Data Interface (PDI) is managed through Sun Nuclear's single-cable architecture.

Fast Daily Checks of Energy Constancy & Beam Quality
After daily test beam delivery, see results for:

- Dose output
- Beam flatness
- Beam symmetry
- Beam energy
- Light-radiation field coincidence
- Shape constancy and field size shift for FFF

Compare results to baseline values in the software to determine if intervention is needed before treating patients.

One Device, 25 Detectors
For optimal results, Daily QA 3 uses both ion chambers and SunPoint® diode detectors:

- 5 ion chambers for flatness and symmetry
- 4 ion chambers for electron energy checks

- 4 ion chambers for photon energy checks
- 12 diodes for light-radiation coincidence

Rotational and FFF beams are supported, with no warm-up or pre-irradiation required for testing.

Daily QA 3 Features & Benefits

- Five beam quality checks – Output, flatness, symmetry, field size, energy
- Supports rotational and FFF beams
- Shape constancy and field size shift for FFF beams
- No flipping or additional buildup required for any test or energy
- Wireless Option
- 13 ion chambers measure output, flatness, symmetry, energy
- 12 SunPoint® Diode Detectors measure lightradiation field coincidence
- Automatic temperature and pressure corrections
- Integrated buildup; no additional buildup required
- Daily test queue two-step operation – 'Start' to begin queue, and 'Record' to accept
- Real-time measurements – view data instantly
- Use different Daily QA 3 devices for a template without creating a new baseline
- Export PDF reports
- Interfaces with the IMF™ or GMF™
- MR version (DailyQA-MR) available
- SQL database for added security and access control

SunCHECK™ Integration

With direct connectivity from Daily QA 3 to the SunCHECK Platform:

- Pre-configured TG-142 tests, tolerances and categories enable significant efficiency gains for daily QA workflows.
  - Safety, MLC and imaging tests reside in same database as Daily Dosimetry tests.
- Connect your device and data is collected automatically – eliminating the possibility of manual data entry errors.
- Alerts for overdue or failed results allow you to put your Machine QA on autopilot.

PUBLICATION

Diagnosing Atmospheric Communication of a Sealed Monitor Chamber

Read about the findings of daily output variations as measured by two independent systems, as it relates to monitor chamber communication with atmospheric conditions.

EDGE Detector – Sun Nuclear

Ultimate Small Field Detector
for Precision 3D Dosimetry

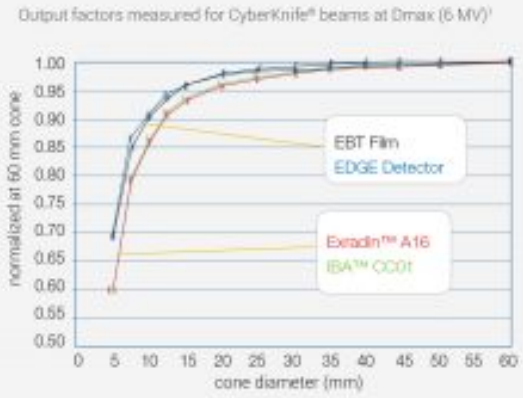
EDGE Detector™ characterizes penumbra more precisely and with less averaging than ion chambers, making it the preferred detector for small field beam modeling and QA.

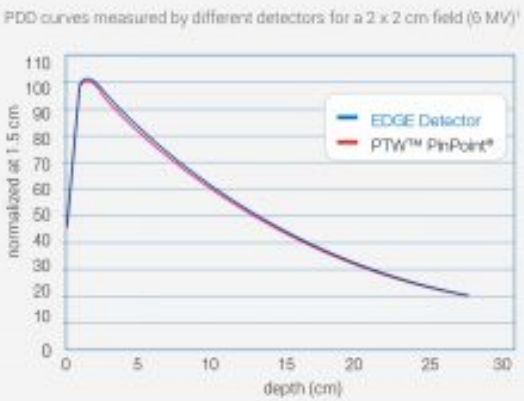
Waterproof and highly accurate, it works with all common water phantoms for SRS and IMRT beam modeling and TPS commissioning.

Well-Suited for Small Fields
EDGE Detector is comprised of a SunPoint® Diode Detector that is 842 times smaller, and has 100 times more signal, than micro ionization chambers. Its small size makes it ideal for accurate penumbra characterization and steep gradients for fields ≤10 cm.

Maintain Compliance
EDGE Detector supports compliance with TRS483 and precision dosimetry.

“The practical methods described can be used for commissioning an SRS system with small cones. New correction factors significantly improve agreement between different detectors.”
- E. Lief, et al
- Measurement of Output and Percent Depth Dose (PDD) for Small Stereotactic Radiosurgery (SRS) Cones Using Semiconductor and Microdiamond Detectors





SunCHECK™ Patient

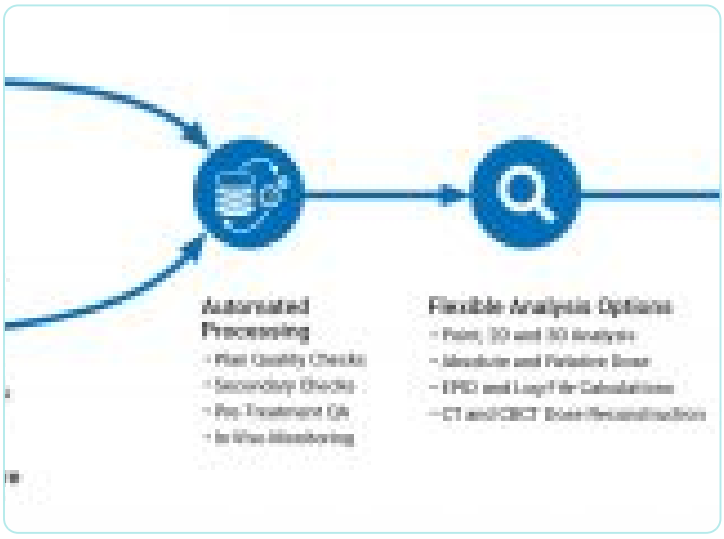
Independent Patient QA in a Single Workflow

SunCHECK™ Patient brings Plan Checks, Secondary Calculations, Pre-Treatment QA and In-Vivo Monitoring into a single workflow, on the same platform as your Machine QA.

Purposefully Automated
SunCHECK Patient streamlines data transfer and time-consuming tasks, enabling greater focus on improved treatment quality.

Common Analysis Tools & Centralized Storage of Results
In support of standardization, SunCHECK Patient provides common analyses across each Patient QA phase — and stores all results for easy retrieval and review.

Custom-Fit for Your Clinic
We optimize SunCHECK Patient for the planning and delivery technologies you use — and provide flexible, automated analysis options for every step. As updates occur and your needs evolve, SunCHECK Patient adapts.



“Because this system is fully automated so that no physicist time is required for data acquisition and evaluation, daily patient treatment QA is feasible.”

- Zhuang AH, Olch AJ.,
- *J Appl Clin Med Phys (2018)*

DoseCHECK – Sun Nuclear

DoseCHECK is the independent, secondary 3D dose calculation solution for today’s radiation oncology department. Sun Nuclear designed this solution to seamlessly fit your workflow and meet your clinical needs—with verification of the full patient dose volume.

It works with minimal user intervention, with no need to manually create, register or input patient plans into the system. Upon plan approval, simply push the DICOM files from your treatment planning system to the application.

FEATURES

- full, independent 3D volume generation
- efficient dose-to-dose evaluation
- seamless integration with PerFRACTION

SUPPORT

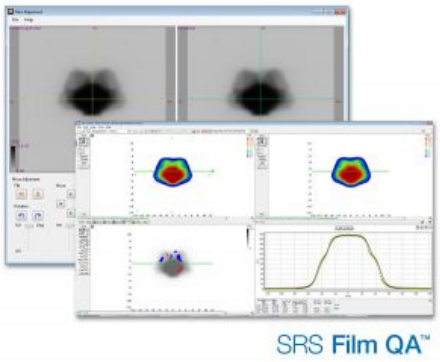
Version 1.0 includes support for:

- Elekta and Varian machines
- Monaco, Eclipse, Pinnacle, RayStation
- photon beams (conformal, IMRT, VMAT)
- SRS/SBRT plans
- 3D dose

If you want to read more about the SunCHECK platform, including PlanCHECK and DoseCHECK? Take a look at our partner’s website!

SRS Film QA Software – Sun Nuclear

SRS Film QA Software (Sun Nulcear) functions within SNC Patient Software to analyse and convert scanned film image data to dose for any stereotactic modality. Measured dose can be compared to an imported patient treatment plan.



SRS Film QA Software features:

- phantom fiducials are verified slice by slice
- usable with EBT film
- IMRT, VMAT and SRS beams
- H&D curve is not required
- extract any arbitrary plan from a 3D dose object
- analyzes film as if it were MapCHECK measured data

Contact our product specialist or download the datasheet below.

SNC Machine Software – Sun Nuclear

SNC Machine listens for and captures your QA files, processes and analyzes the files, and saves the results to the database. Simply login to SNC Machine and immediately view a dashboard of results. Accept results that pass, drill down into the analysis details for results that fail. Trend any piece of data against any other piece of data. It is that simple, and that powerful.

SNC Machine Software features:

- works with MOSAIQ, Varian, Aria and Elekta
- VMAT and TG-142 test libraries (19 different tests)
- test results can be visualized and trended against other test results

SNC Machine Software Tests:

- beam symmetry, field Size, beam flatness
- TG-142 imaging: kV Image Quality & Accuracy, CBCT Image Quality & Accuracy, MV Image Quality & Accuracy
- TG-142 mechanical: Light/Radiation Congruence, Winston-Lutz Radiation & Machine Isocenter, MLC Picket Fence, MLC Positioning & Leaf Speed, Gantry/Couch/Collimator Starshot

Phantoms compatible with SNC Machine Software:

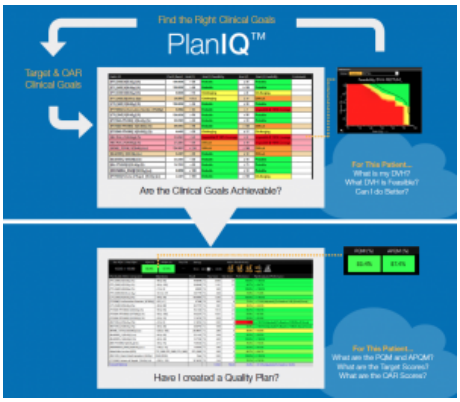
- Sun Nuclear: MV-QA, kV-QA, FS-QA, WL-QA
- Phantom Laboratory: CatPhan 503, 504, 600
- Varian: Las Vegas Phantom
- Gammex: 464
- Standard Imaging: PipsPro Phantoms
- Leeds: TOR 18FG

Do you want to know more about the SNC Machine Software?

If you want to continue your search for additional information on this product try this link.

PlanIQ Software – Sun Nuclear

Use PlanIQ as a patient-specific solution to both measure and improve plan quality. Get instant feedback on the feasibility of achieving established clinical goals, and know when they can be tightened to achieve what is possible for each patient. Quantitative scorecards measure treatment plan quality with easy to comprehend metrics that reflect your clinical goals. It’s that simple, and that powerful.

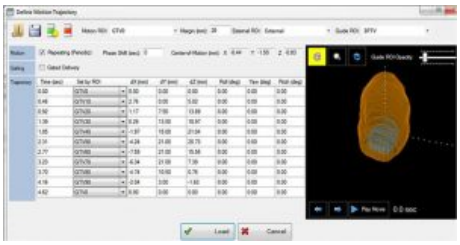


PlanIQ Software features:

- saves time and results in better plans
- uses sliding-scale metrics
- 70 customizable and site-specific protocol libraries
- patented adjusted PQM (APQM)
- compatible with Eclipse RapidPlan and Pinnacle3 Auto-Planning

Read more about the PlanIQ Software on the Sun Nuclear website

Respiratory MotionSim (RMS) – Sun Nuclear



Respiratory MotionSim (RMS) allows the clinician to simulate the dosimetric impact of target motion with proven accuracy. Extending the patented 3DVH 4D dose perturbation methodology, RMS allows the physicist to define motion trajectories and quantitatively evaluate the impact of organ motion on dose distribution. RMS is an important tool for clinicians committed to evidence-based decision making and quality assurance of highly-modulated radiation therapy treatments where organ motion is a concern.

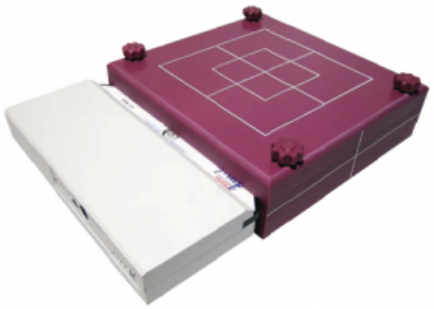
Respiratory MotionSim features:

- evaluate motion impacts on 3D Dose and DVH
- determine if motion management is necessary, and add to QA motion management plans
- use existing QA measurements and avoid bulky mechanical motion phantoms

Read more about Respiratory MotionSim on the Sun Nuclear website

MapPHAN – Sun Nuclear

The MapPHAN is a water equivalent phantom that adapts any MapCHECK2 for RapidArc, VMAT and TomoTherapy. Setup time is fast and measurement may occur in coronal and sagittal orientations.



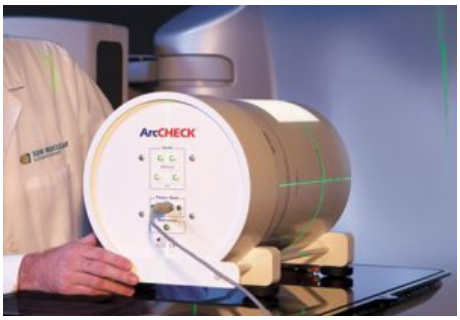
MapPHAN features:

- construction: Virtual Water
- available Depths (cm): 5.0, 10.0
- area: (cm2): 35.0 x 38.0
- weight without MapCHECK2: 5 cm MapPHAN 8.0 kg, 10 cm MapPHAN 21.0 kg

Read more about the MapPHAN on the Sun Nuclear website

ArcCHECK 4D – Sun Nuclear

ArcCHECK is the only true 4D array specifically designed for QA of today’s modern rotational deliveries. At its heart are over 1300 SunPoint Diode Detectors providing consistent and highly sensitive measurements for all gantry angles, with no additional hardware required. Independent absolute dose measurements enable the gold standard for stringent and efficient patient plan and machine QA testing.



ArcCHECK 4D features:

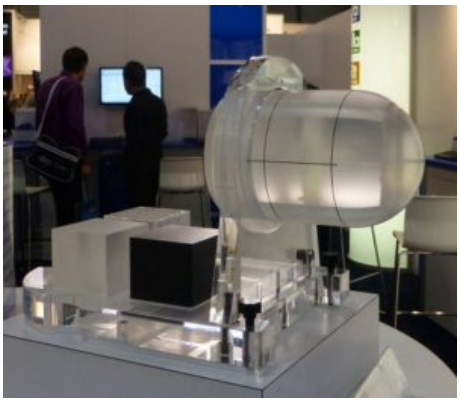
- smallest available detectors for accurate measurements
- BEV is consistent regardless of gantry angle
- 3D and DVH Analysis
- Flattening Filter Free (FFF)
- easy setup and lightweight (16kg)
- measure both composite and per control point
- real-time updates (50ms)

ArcCHECK 4D compatibility:

- rotational therapy: RapidArc, VMAT, TomoHelical
- static gantry: IMRT, TomoDirect
- treatment planning systems: Pinnacle, Eclipse, Monaco, iPlan, and any TPS system that can export DICOM data
- FFF and non-FFF deliveries

Contact our product specialist or download the datasheet below.

StereoPHAN Phantom – Sun Nuclear



StereoPHAN is designed for end-to-end commissioning and quality assurance testing on all parts of the SRS process. StereoPHAN inserts and configurations are quickly exchanged with no tools or change in setup. It's that simple, and that powerful.

StereoPHAN Phantom features:

- easy setup and assembly; no tools required for assembly, stand base can be mounted to a couch that uses the prevalent Lok-Bar system, phantom stand holds the inser ts, making them easily accessible during testing
- single cube insert tests CT and MRI imaging, including slice position, thickness and alignment
- target volumes in CT/MRI cube eliminate need for CT/MRI markers
- flat surface of ion chamber insert enables easier cross-calibration to water than the curved surface of a spherical geometry
- all components fit into a durable rolling case suitable for storage and air travel
- stereotactic (SRS/SRT/SBRT) end-to-end testing and patient-specific QA
- adapters for Head-Frames and CyberKnife
- quality assurance of image fusion algorithms for CT and MRI imaging modalities
- absolute, relative and point dose dosimetry QA measurements at isocenter with ion chambers; relative dose distribution using film
- dosimetry detector cabling remains outside of beam for interference-free dose measurement regardless of measurement setup
- geometric accuracy; optical and geometric isocenter, laser alignment, indexed table positioning alignment and positioning coordinates, CBCT and MV/kV isocenter alignmenent

Read more about the StereoPHAN Phantom on the Sun Nuclear website

IC Profiler – Sun Nuclear

The IC Profiler (Sun Nuclear) is an ionization chamber based solution for direct QA on linac. It can be seen as the perfect substitute for a water phantom. IC Profiler is a complete scanning system for field adjustments, Linac factory testing, and routine and service QA dosimetry. The ionization chambers on the Y, X and diagonal axes measure all beam profiles after a single beam delivery.

IC Profiler features:

- accepted and proven for clinical use and factory acceptance
- solid state, ion chambers, no moving parts (or water)
- total beam QA within 30 minutes
- high speed acquistion of field profiles
- universal cable for data and power
- 32 cm X and Y length and 45 cm diagonal length
- high dose rate limit >6000cGy per minute
- start/stop button for simple measurement control
- narrow chamber design of 2,9mm width minimizes ‘dose volume averaging’
- high speed data aquisition – fast set-up of radiation field
- multiple parameters: symmetry, beam center, flatness, field size, radiation coincidence and penumbra width
- applications: diagnostics, bundle steering, beam constancy and collimator and rotational sag QA

Read more about the IC Profiler Scanning System on the Sun Nuclear website