RADIOTHÉRAPIE

peo MEDICAL

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PATIENT POSITIONING SOLUTIONS

peo MEDICAL

Guangzhou Renfu Medical Equipment Co., Ltd is a leading provider of precision positioning and immobilization solutions for radiotherapy, offering a comprehensive range of products designed to enhance patient comfort and treatment accuracy. Their portfolio includes thermoplastic masks, vacuum cushions, and carbon fiber baseplates, all engineered to meet the rigorous demands of modern radiotherapy practices.

Product offering

Meicen Positioner Bar for Vacuum Bag Acrylic Material

Baseplate Lock-Bar for Varian System

Baseplate Lock-Bar for Elekta System

Baseplate Color Head Cushion for Radiotherapy Immobilization

Head Support Adapter for Baseplate For C-series Baseplate

Carbon Fiber Baseplate Head Cushion for Radiotherapy Immobilization

Meicen T-Shaped Vacuum Bags

Meicen S-Shaped Vacuum Bag

Meicen Indexed & Non-indexed Rectangular Vacuum Bags

Meicen Non-Rectangular Vacuum Bags

Meicen Violet Imrt S-Shaped Openface Head Mask

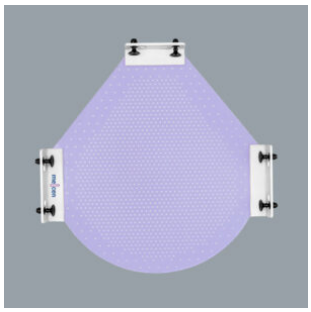
Meicen Violet S-Shaped Openface Head Mask Pin-Lock

Meicen Violet S-Shaped Head Mask Lengthened 5cm Radiotherapy Thermoplastic Mask

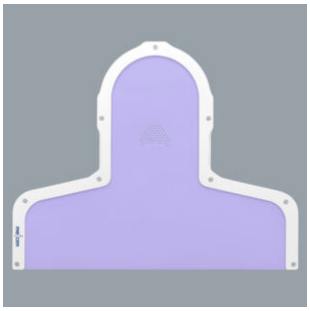
Meicen Violet Breast & Pelvic Thermoplastics

E-Type Violet Thermoplastics

Other Type Masks

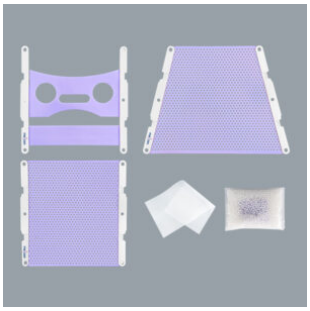


V-Typed Masks

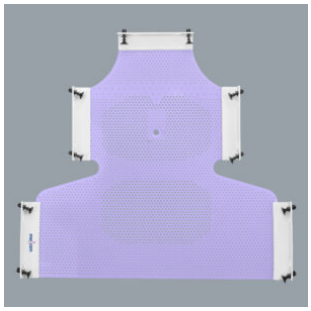


Chest & Pelvic Violet Masks

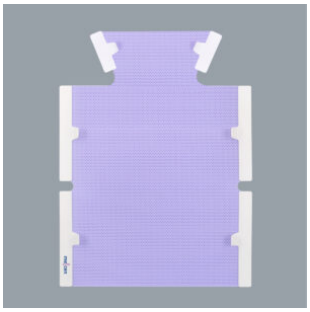
X-Knife Type Masks



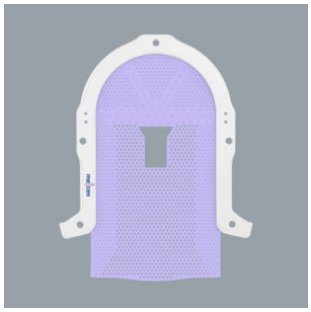
P Type Masks



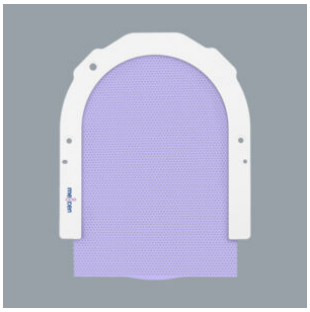
L Type Masks



S-Type Masks



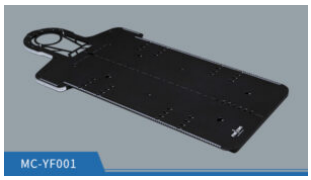
U Type Masks



Meicen MR-Supine Breast Board

Meicen Prone Breast Board

Meicen Y-Series AIO Baseplate



Meicen P-Series Head, Shoulder, and Breast Baseplate

Meicen C-Series Pelvic Baseplate

Meicen C-Series Head,Shoulder, and Breast Baseplate

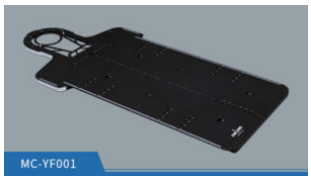
Meicen MR C-Series AIO Baseplate

Meicen A-Series Pelvic Baseplate

Meicen A-Series Head-Shoulder-Breast Baseplate

Meicen A-Series Aio Baseplate

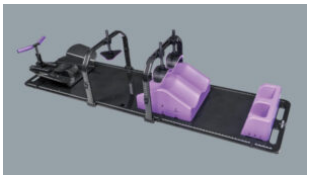
Meicen Y-Series Baseplates



Meicen C-Series Aio Carbon Fiber Baseplate

SRS Immobilization System

SBRT Immobilization System



Meicen Positioner Bar for Vacuum Bag Acrylic Material

Model NO.:R-VLC02
Trademark: Renfu
Origin: Guangzhou, China
Customized: Customized
Certification: CE, FDA
Material: Iron
Suitable for: Adult
Function: Positioning Systems

Baseplate Lock-Bar for Varian System

Model NO.:R-VLB01
Trademark: Renfu
Origin: Guangzhou, China
Customized: Customized
Certification: CE, FDA
Material: Iron
Suitable for: Adults
Function: Positioning Systems

Baseplate Lock-Bar for Elekta System

Model NO.:R-ELB01
Trademark: Renfu
Origin: Guangzhou, China
Customized: Customized
Certification: CE, FDA
Material: Iron
Suitable for: Adults
Function: Positioning Systems

Baseplate Color Head Cushion for Radiotherapy Immobilization

Model NO.:R-AE05
Trademark: Renfu
Origin: Guangzhou, China
Customized: Customized
Certification: CE, FDA
Suitable for: Adults
Function: Positioning Systems

Head Support Adapter for Baseplate For C-series Baseplate

Model NO.:MC-HSA001
Trademark: Renfu
Origin: Guangzhou, China
Customized: Customized
Certification: CE, FDA
Material: Carbon Fiber
Suitable for: Adults
Function: Positioning Systems

Carbon Fiber Baseplate Head Cushion for Radiotherapy Immobilization

Model NO.:R-CHS6
Trademark: Renfu
Origin: Guangzhou, China
Certification: CE, FDA
Suitable for: Adults
Function: Positioning Systems

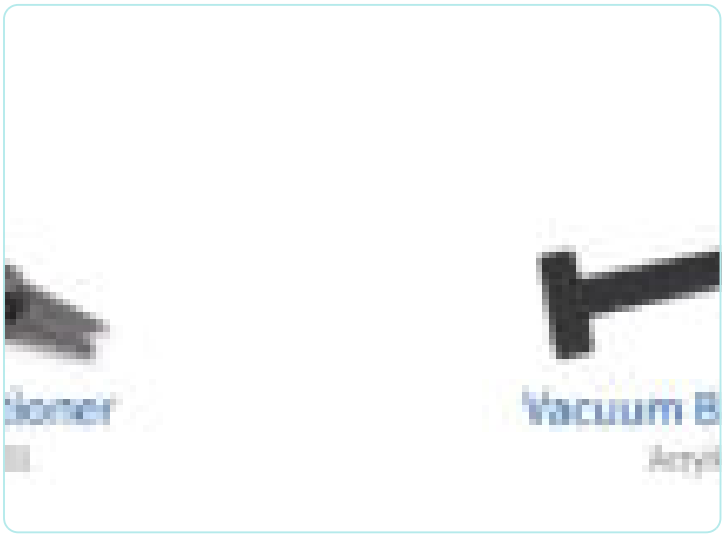
Meicen T-Shaped Vacuum Bags

Meicen Vacuum Bags provide patients with firm and stable support. They are shielded from rips and stains by the coated NyLon shell. Completely waterproof, leak-proof, and airtight, the vacuum bags can hold alternative density particles composed of polyamide. There are built-in lock bars and vacuum bags in various forms and sizes available.

Meicen Vacuum Bags

- ultra-durable, high-quality polyamide;
- Dark blue color distinguishable in optical imagers;
- MRSafe;
- Radio-translucent;
- Easyto clean;
- Cost-effective;
- Adapters are available for any manufacturer’s pump.

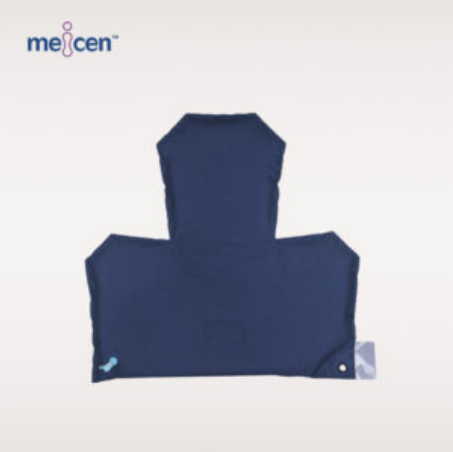

T-Shaped Vacuum Bag
with Open Headrest


Vacuum B


Type A
Type B with CPC

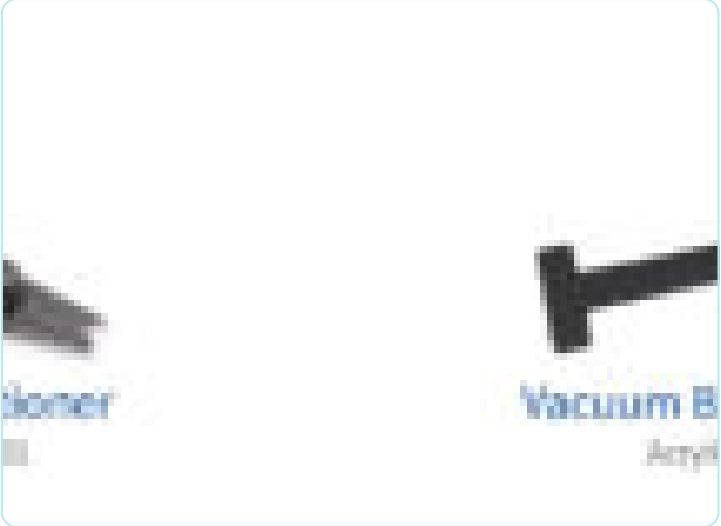
Meicen S-Shaped Vacuum Bag

Meicen Vacuum Bags provide patients with firm and stable support. They are shielded from rips and stains by the coated NyLon shell. Completely waterproof, leak-proof, and airtight, the vacuum bags can hold alternative density particles composed of polyamide. There are built-in lock bars and vacuum bags in various forms and sizes available.



Meicen Vacuum Bags

- ultra-durable, high-quality polyamide;
- Dark blue color distinguishable in optical imagers;
- MRSafe;
- Radio-translucent;
- Easyto clean;
- Cost-effective;
- Adapters are available for any manufacturer’s pump.




pter Type A
pter Type B with CPC

Meicen Indexed & Non-indexed Rectangular Vacuum Bags

Meicen Vacuum Bags provide patients with firm and stable support. They are shielded from rips and stains by the coated NyLon shell. Completely waterproof, leak-proof, and airtight, the vacuum bags can hold alternative density particles composed of polyamide. There are built-in lock bars and vacuum bags in various forms and sizes available.

Meicen Vacuum Bags

- ultra-durable, high-quality polyamide;
- Dark blue color distinguishable in optical imagers;
- MRSafe;
- Radio-translucent;
- Easyto clean;
- Cost-effective;
- Adapters are available for any manufacturer’s pump.

Indexed Rectangular Vacuum Bags

R-E4430-TS-2	100cm x 70cm vacuum bag, 30L, indexed
R-E4401-TS-1	70cm x 70cm vacuum bag, 20L, indexed
R-E4532-TS-2	120cm x 80cm vacuum bag, 38L, indexed
R-E4439-TS-2	100cm x 75cm vacuum bag, 30L, indexed
R-E4530-TS-2	120cm x 75cm vacuum bag, 35L, indexed
R-E4543-TS-2	150cm x 75cm vacuum bag, 45L, indexed

Non-Indexed Rectangular Vacuum Bags

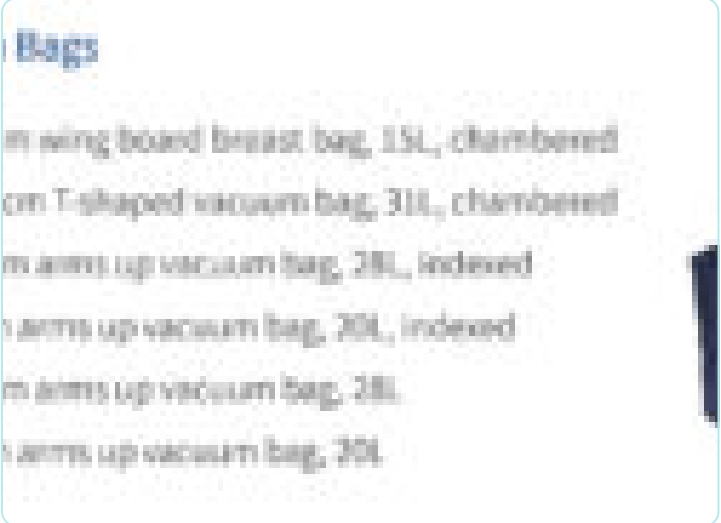
R-E4430-TS	100cm x 70cm vacuum bag, 30L
R-E4401-TS	70cm x 70cm vacuum bag, 20L
R-E4532-TS	120cm x 80cm vacuum bag, 38L
R-E4439-TS	100cm x 75cm vacuum bag, 30L
R-E4530-TS	120cm x 75cm vacuum bag, 35L
R-E4543-TS	150cm x 75cm vacuum bag, 45L

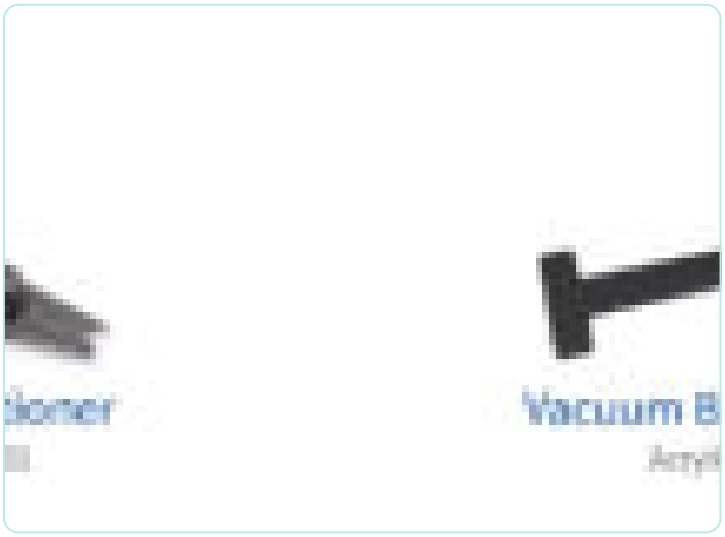
Meicen Non-Rectangular Vacuum Bags

Meicen Vacuum Bags provide patients with firm and stable support. They are shielded from rips and stains by the coated NyLon shell. Completely waterproof, leak-proof, and airtight, the vacuum bags can hold alternative density particles composed of polyamide. There are built-in lock bars and vacuum bags in various forms and sizes available.

Meicen Vacuum Bags

- ultra-durable, high-quality polyamide;
- Dark blue color distinguishable in optical imagers;
- MRSafe;
- Radio-translucent;
- Easyto clean;
- Cost-effective;
- Adapters are available for any manufacturer’s pump.




Vacuum B


Type A
Type B with CPC

Meicen Violet Imrt S-Shaped Openface Head Mask

Model NO.: RF-C101P-2004W
Trademark: Meicen
Type: Radiotherapy
Material: Pcl
Certification: CE, FDA
Origin: Guangzhou, China
Suitable for: Adults

Meicen S-Type Violet Thermoplastics

Model: RF-C101P-2004W Thickness: 2.4 mm

Model: RF-C101P-2004W Thickness: 3.0 mm

Reinforced Open Face , Pin-Lock

Meicen Violet Thermoplastics

Meicen Violet Thermoplastics have a non-stick surface, a very low shrinkage rate, and are made of a brand-new, premium thermoplastic substance that was scientifically engineered for the best molding time and patient comfort. Throughout the entire process, our goal is to provide patients with an excellent experience. To satisfy the baseplate compatibility requirements of various manufacturers, special designs are available upon request.

Meicen Violet S-Shaped Openface Head Mask Pin-Lock

Model NO.: RF-C101P-2007W
Trademark: Meicen
Type: Radiotherapy
Material: Pcl
Certification: CE, FDA
Origin: Guangzhou, China
Suitable for: Adults

Meicen S-Type Violet Thermoplastics

Model: RF-C101P-2007W Thickness: 2.4 mm

Model: RF-C101P-3007W Thickness: 3.0 mm

Meicen Violet Thermoplastics

Meicen Violet Thermoplastics have a non-stick surface, a very low shrinkage rate, and are made of a brand-new, premium thermoplastic substance that was scientifically engineered for the best molding time and patient comfort. Throughout the entire process, our goal is to provide patients with an excellent experience. To satisfy the baseplate compatibility requirements of various manufacturers, special designs are available upon request.

Meicen Violet S-Shaped Head Mask Lengthened 5cm Radiotherapy Thermoplastic Mask

Model NO.: RF-C101P-2501W
Trademark: Meicen
Type: Radiotherapy
Material: Pcl
Certification: CE, FDA
Origin: Guangzhou, China
Suitable for: Adults

Meicen S-Type Violet Thermoplastics

Model: RF-C101P-2501W Thickness: 2.4 mm

Model: RF-C101P-3501W Thickness: 3.0 mm

Perforation: 22% , Pin-Lock

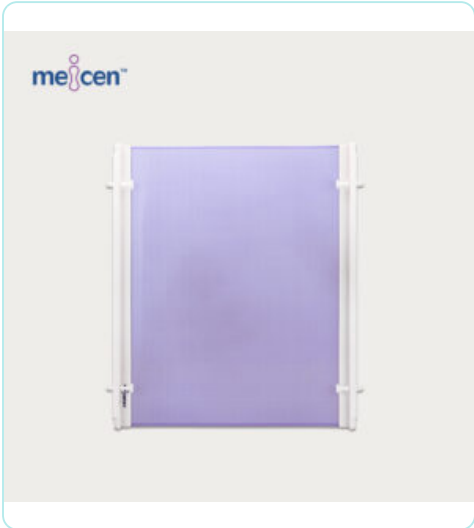
Meicen Violet Thermoplastics

Meicen Violet Thermoplastics have a non-stick surface, a very low shrinkage rate, and are made of a brand-new, premium thermoplastic substance that was scientifically engineered for the best molding time and patient comfort. Throughout the entire process, our goal is to provide patients with an excellent experience. To satisfy the baseplate compatibility requirements of various manufacturers, special designs are available upon request.

Meicen Violet Breast & Pelvic Thermoplastics

A brand-new, premium mask for patient placement and immobilization during radiation therapy is the Meicen violet thermoplastic mask.

All common clamp-baseplastes from Meicen's C and B series, as well as those from other manufacturers, fit Meicen Violet Breast and Pelvic Thermoplastics.



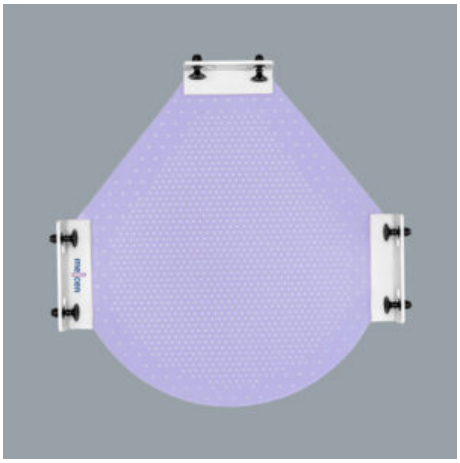
E-Type Violet Thermoplastics

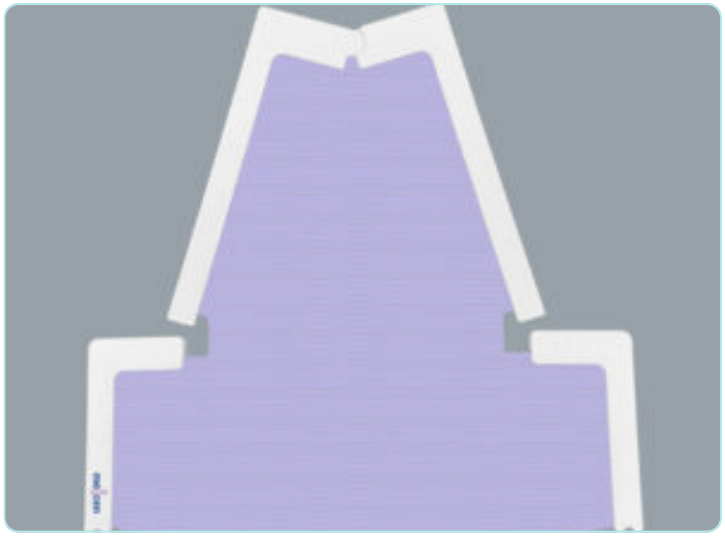
Meicen Violet Thermoplastics have a non-stick surface, a very low shrinkage rate, and are made of a brand-new, premium thermoplastic substance that was scientifically engineered for the best molding time and patient comfort. Throughout the entire process, our goal is to provide patients with an excellent experience. To satisfy the baseplate compatibility requirements of various manufacturers, special designs are available upon request.

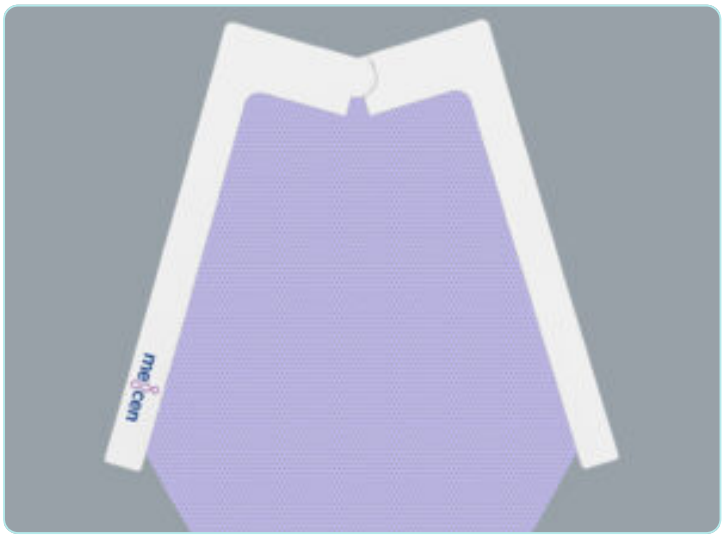
Other Type Masks

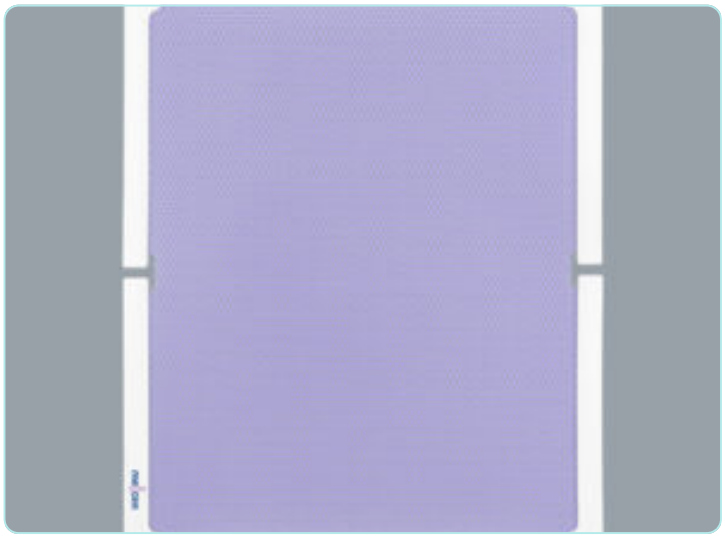
The masks have better immobilization and shaping capabilities, and their surface is not sticky. Various perforation patterns and sizes are available to suit your needs.

- Compatible with Elekta Gamma Knife®Icon™, Fraxion™, and HeadStep & HipStep™ Systems
- Available with an open face and Reinforced design
- Can be heated in the water bath or oven





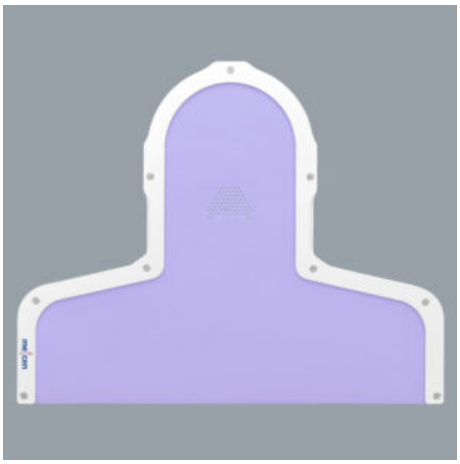


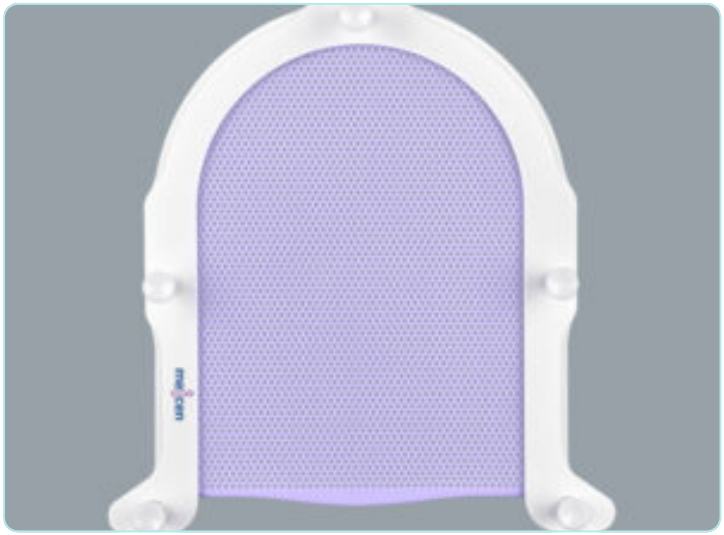


V-Typed Masks

Violet masks with the V shape help reduce patient anxiety. Depending on your demands, masks for the head alone, head necklines, and head and shoulders are available. The pins are silent, secure, and simple to put in and take out of our frame, which features an emarginated design for effortless removal. For your needs, mask thicknesses of 2.4 and 3.0 mm are available.

- Compatible with Bionix VersaBoard System
- Available with an open face and Reinforced design
- Pediatric Masks are available
- Can be heated in the water bath or oven





Chest & Pelvic Violet Masks

The pins on the chest & pelvic violet masks are quiet, safe, and simple to put on and remove. Treatment for lung tumors, esophageal tumors, and breast tumors is compatible with the Neck, Shoulder, and Breast Mask. Various perforation patterns and sizes are available to suit your needs.

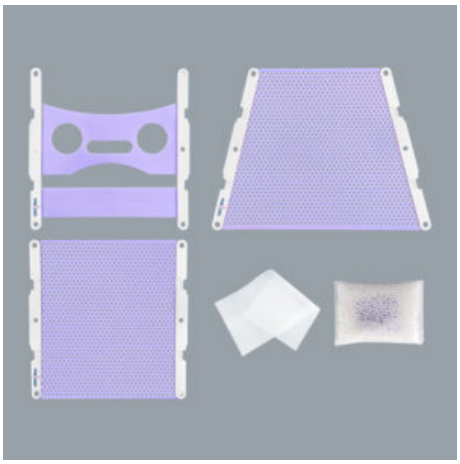
- Compatible with Meicen C-Series Baseplate
- Reinforced designs are available
- Can be heated in the water bath or oven

X-Knife Type Masks

Meicen X-Knife Violet Masks are made of a brand-new, high-quality thermoplastic material that was created especially to provide the best possible patient comfort thanks to its remarkable rigidity and incredibly minimal shrinking.

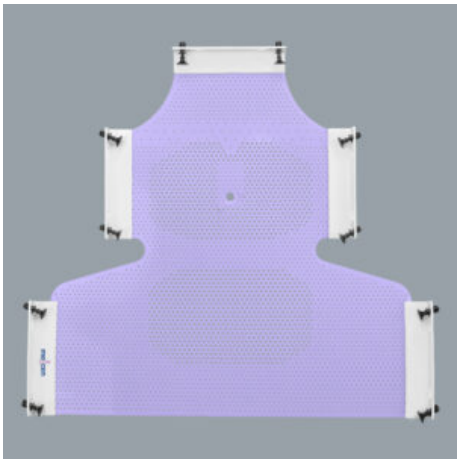
The patient-facing mask surface of Meicen X-Knife Violet Masks has a non-sticky coating put to it, preventing the masks from sticking to the patient’s hair, beard, etc.

- Compatible with Brainlab System
- Adhesive layers
- Easy to manipulate and shape

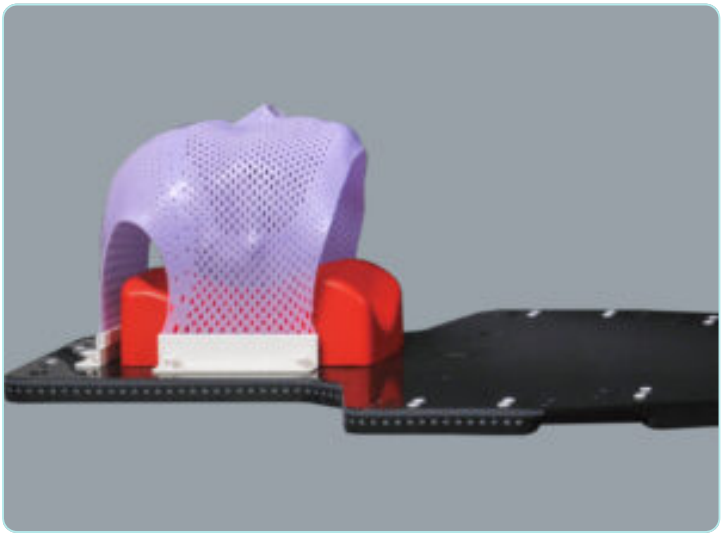


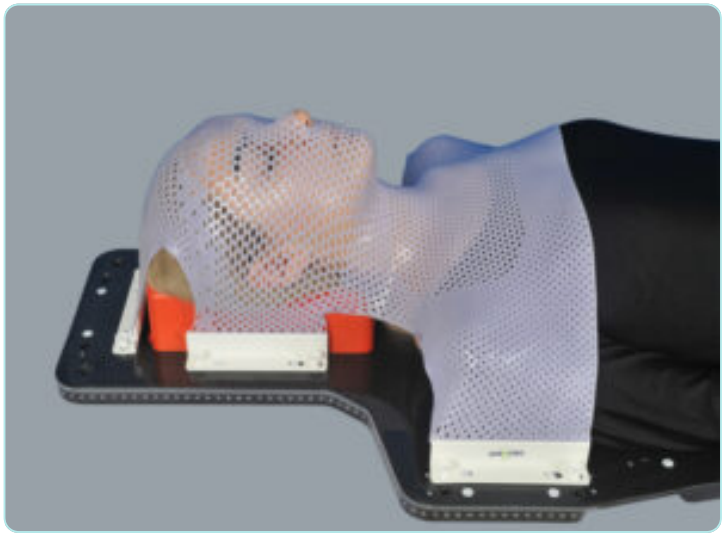
P Type Masks

Violet P-type Improved immobilization and shaping capabilities make masks less sticky on the outside. Various perforation patterns and sizes are available to suit your needs. For your needs, mask thicknesses of 2.4 and 3.0 mm are available.



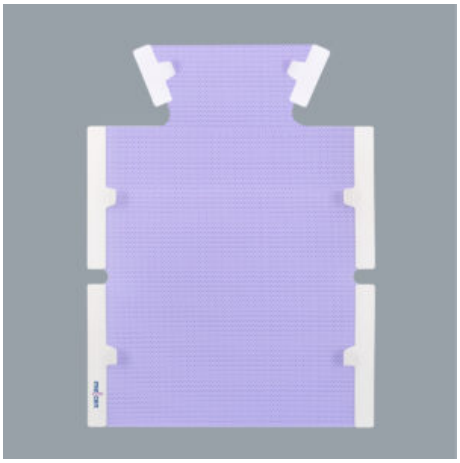
- robust fastening pins
- compatible with baseplates from CIVCO, Meicen P-Series, and other manufacturers
- accessible with a strengthened construction and an open face
- Can be heated in the water bath or oven



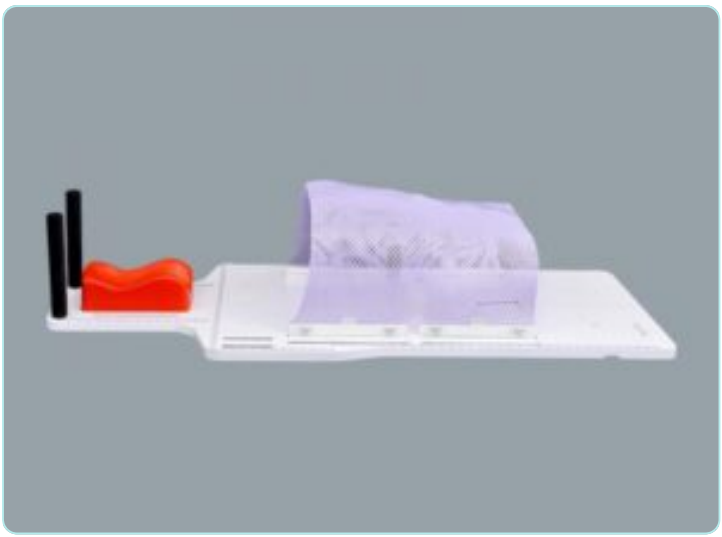


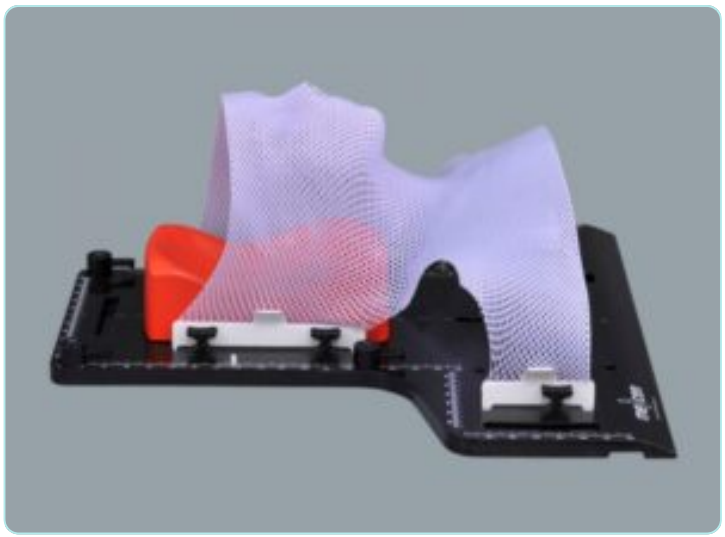
L Type Masks

L-Style Violet Improved immobilization and shaping capabilities make masks less sticky on the outside. Various perforation patterns and sizes are available to suit your needs. For your needs, mask thicknesses of 2.4 and 3.0 mm are available.



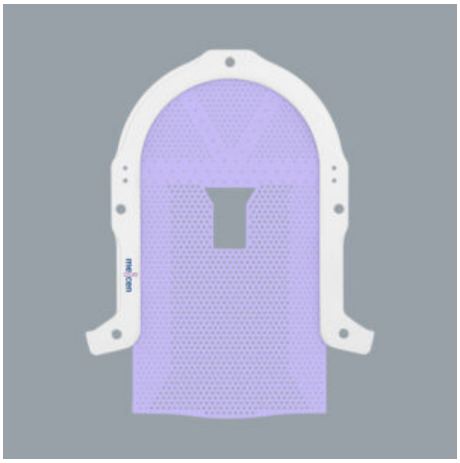
- It is simpler to put on and take off handle clamps
- compatible with baseplates from Meicen A-Series, Orfit, and other manufacturers
- accessible with a strengthened construction and an open face
- Can be heated in the water bath or oven





S-Type Masks

Violet masks of the S type help reduce patient anxiety. Depending on your demands, there are masks for the head alone, the head extended (5 or 9 cm), and the head and shoulders. The pins are silent, secure, and simple to put in and take out of our frame, which features an emarginated design for effortless removal. For your needs, mask thicknesses of 2.4 and 3.0 mm are available.



- compatible with Meicen C-Series and Y-Series bases, as well as all common S-type bases
- Pediatric masks are offered
- Open face and reinforced construction are available
- Can be heated in a water bath or oven

U Type Masks

U-Frame Violet Masks come in two frame options: regular and thin. For patients with larger heads, the slim frame offers a wider facial area. For your needs, mask thicknesses of 2.4 and 3.0 mm are available. It can be extended by 5 or 9 centimeters to increase the immobilizing force.

- suitable with Meicen U-Frame Baseplates and any conventional U-Frame Baseplates
- accessible with a strengthened construction and an open face
- Can be heated in a water bath or oven

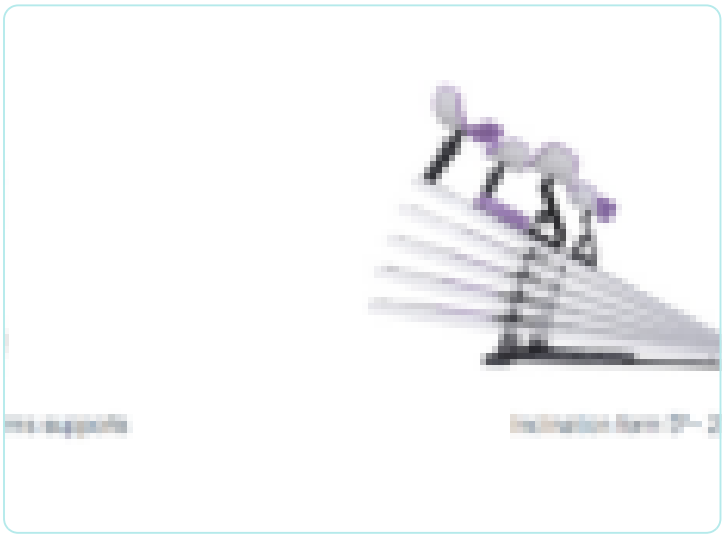
Meicen MR-Supine Breast Board

Meicen Supine Breast Board (MRI-Compatible):

An economical, lightweight setup designed for rapid, easy, and successful patient positioning. The Breastboard offers an IGRT treatment zone with minimal attenuation and maximum homogeneity and stability by utilizing a coreless, glass fiber treatment zone.

Meicen Supine Breastboard Compliant with MRI:

- Completely scalable to suit varying statures and dimensions;
- Easy-to-customize settings for patient clearance and comfort;
- Easy-to-lock reinforced bottomstop and contoured lumbar area;
- Admits to steady, repeatable supraclavicular treatments using an S-type head mask;
- Accepts thermoplastic breast implants.



Meicen MR-Supine Breast Board Plus

- Model: MC-RX002
- Size: 1325 (length) x 445 (width) mm

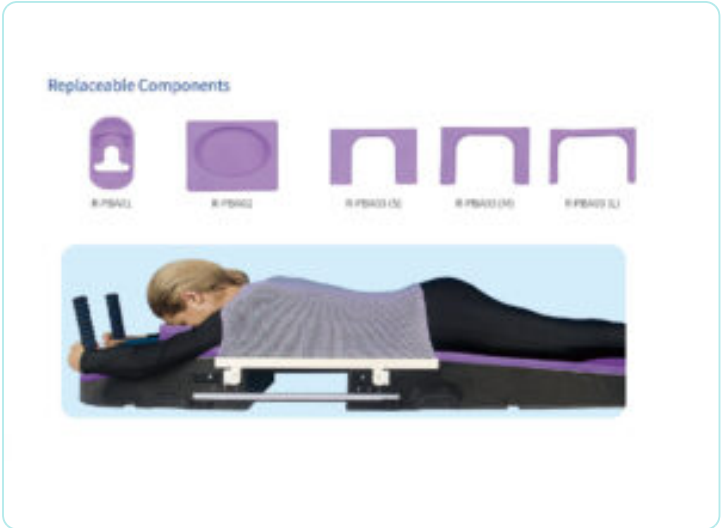
Meicen MR-Supine Breast Board Pro

- Model: MC-RX002
- Size: 1325 (length) x 445 (width) mm

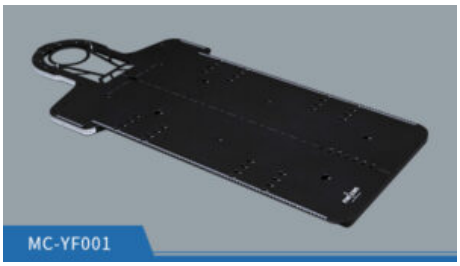
Meicen Prone Breast Board

Meicen Prone Breast Board immobilization is a straightforward, pleasant, and repeatable method. It is particularly enhanced in the following ways:

- A reversible breast section allows for the treatment of either breast.
- Variable-aperture openings accommodate different breast sizes.
- Multiple heterolateral wedge sizes assist with patient tilt.
- An adjustable massage-style face cushion is provided.
- Scale rulers make it easy to verify the patient's longitudinal and lateral positions.



Meicen Y-Series AIO Baseplate



The Meicen Y-Series AIO Baseplate has a pin-lock design for uncomplicated operation and provides a customizable positioning solution for head, shoulders, pelvis, and full-body insertion. It is suitable with all S-Type and Meicen pin-lock thermoplastic masks. The baseplate indexes the headrests using conventional Silverman pins. The baseplate is designed to accommodate both adult and pediatric patients. It is compatible with the Overhead Arm Support R-CFA02, Leg Positioner Cushions, and the SRS Cradle MC-CR001. It also includes an optional groove lock for trunk masks.

The Meicen Y-Series AIO Baseplate is an affordable, straightforward, and useful baseplate. It can be paired with a belly bridge, a knee bridge, and leg positioning cushions to create an SBRT positioning system.

Features:

- Contoured design for patient comfort
- Compatible with narrow-shoulder S-type masks
- Configured for multiple treatments

Meicen P-Series Head, Shoulder, and Breast Baseplate

Meicen P-type thermoplastics are compatible with Meicen P-Series Head, Shoulder, and Breast Baseplates. The baseplate can be used to immobilize the head, neck, shoulder, and thorax and is customized for numerous treatments. There is also an expanded version available for whole-body treatment.

Model: MC-PF002

Meicen C-Series Pelvic Baseplate

The Meicen C-Series Pelvic Baseplate is a multi-treatment slide-type device that can be used to immobilize the pelvis in preparation for radiation therapy.

Meicen C-Series Pelvic Baseplate (Carbon Fiber):

- Comfort-enhancing contoured design
- Scale that can be adjusted for varying body widths
- Inbuilt groove lock for improved alignment
- Combined with vacuum bags and masks for precise positioning

Model: MC-CF003 (with the option of MRI-safe)

Size: 850 x 575 mm in length and breadth

Meicen C-Series Head,Shoulder, and Breast Baseplate

Meicen C-Series baseplates are slide-type items that can be used for both targeted and whole-body irradiation. They are designed for numerous treatments and can be used to immobilize the head, neck, shoulders, thorax, and pelvis.

Meicen C-Series Baseplate for the Head, Shoulders, and Breasts

- scalable to accommodate varying body sizes
- side margination for easy handling and installation
- suited for a variety of therapies
- suitable with all S-type thermoplastic masks and vacuum bags
- There is an MRI-safe option

Model: MC-CF002

Size: 1000 (length) x 606 (width)/mm

Meicen MR C-Series AIO Baseplate

All Meicen series baseplates are MRI compatible and made of robust glass fiber, ensuring hardness and user comfort. Contact us for additional information about MRI-compatible baseplates.

Model: MC-MRC01

Size: 1300 (length) x 606 (width) mm

Meicen A-Series Pelvic Baseplate

Our slide-type product, the Meicen A-Series Pelvic Baseplate, can be used to immobilize the pelvis for radiotherapy and is configured for various treatments.

A-Series Pelvic Baseplate (with an option for MRI safety)

- Shaped form for comfort of patients
- Scales that can be adjusted to fit varying body sizes
- Sides and margins for easy carrying and assembly
- Vacuum bags and thermoplastic mask options are offered

The MC-AF003 model

Meicen A-Series Head-Shoulder-Breast Baseplate

Meicen A-Series Baseplates are slide-type items that can be used for radiation immobilization of the head, neck, and shoulders. They are configured for numerous treatments.

A-Series Baseplate for the Head, Shoulders, and Breasts (MRI-safe variant available)

- Comfort for patients through contoured design
- Modifiable scales to accommodate varying body shapes
- Sides and margins for easy handling and assembly
- Vacuum bag and thermoplastic mask options are offered

The MC-AF002 model

Meicen A-Series Aio Baseplate

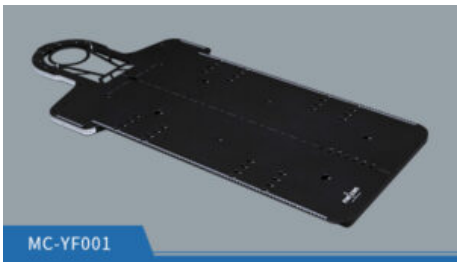
Meicen A-Series Baseplates are slide-type items that can be used for both targeted and whole-body irradiation. They are designed for numerous treatments and can be used to immobilize the head, neck, shoulders, thorax, and pelvis.

A-Series Aio Carbon Fiber Baseplate (available with MRI safety option)

- Contoured shape for patient comfort
- Scales that can be adjusted to fit a range of body sizes
- Sides and margins for easy carrying and installation
- A selection of vacuum bags and thermoplastic masks.

The MC-AF001 model

Meicen Y-Series Baseplates

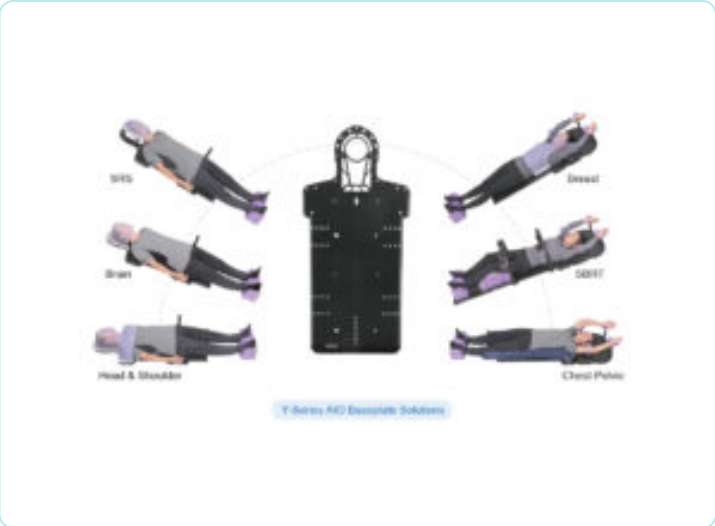


With its pin-lock design for simple operation, the Meicen Y-Series AIO Baseplate offers a flexible mounting option for head, shoulders, pelvis, and full-body installation. All S-Type and Meicen pin-lock thermoplastic masks are compatible with it. Standard Silverman pins are used by the baseplate for headrest indexing. For both adult and pediatric patients, the baseplate has two configurations. It can work with the SRS Cradle MC-CR001, Leg Positioner Cushions, and Overhead Arm Support R-CFA02. For trunk masks, an optional groove lock is included.

A simple, affordable, and useful baseplate is the Meicen Y-Series AIO Baseplate. To create an SBRT positioning solution, it can be paired with leg positioning cushions, a knee bridge, and a belly bridge.

Qualities:

- Configured for many treatments;
- Compatible with narrow-shoulder S-type masks;
- Comfortable, contoured design for patients.



Meicen C-Series Aio Carbon Fiber Baseplate

Meicen C-Series baseplates are slide-type items that can be used for both targeted and whole-body irradiation. They are designed for numerous treatments and can be used to immobilize the head, neck, shoulders, thorax, and pelvis.

Meicen AIO Baseplate, C-Series

- A scale that may be adjusted for varying body widths
- Sides emargination for easy carrying and installation
- Set up for various treatments
- Compatibility: All S-type thermoplastic masks and vacuum bags

The MC-CF001 model

Size: 1300 mm in length by 606 mm in width

SRS Immobilization System

The SRS Masks Set, Elastic Headrest, and SRS Cradle make up the Meicen SRS Immobilization System. In patients undergoing stereotactic radiosurgery for head cancers, it can more effectively address the clinical requirements of fixation and precise body postures.

Qualities:

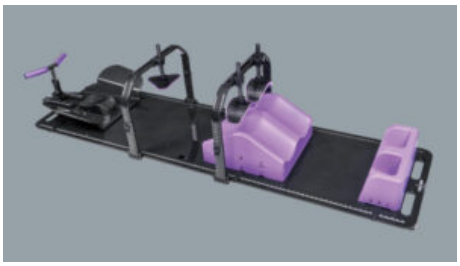
- hollowed-out and streamlined design to reduce ray blockage;
- solidity and durability are ensured by integration;
- tiny and small, storing it is simple;
- High adaptability, suitable for a range of baseplates.

A powerful, well-fitting SRS mask set is included with the Meicen SRS System. More precise fixing is made possible by the upper and bottom double layers. Together, the SRS Masks Set and the Elastic Headrest can help patients achieve a more customized occipital profile and a stronger supporting structure.


Recommended Solution

SBRT Immobilization System

The Meicen SBRT System is highly accurate, multi-functional, and user-friendly for SBRT patient setups with low ray attenuation. The carbon fiber baseplate is adaptable to any manufacturer's couchtop. The height of the Belly and Knee Bridges can be adjusted and locked quickly, and the bridges lock and unlock without fuss. The system features a single-size adjustable respiratory bridge to fit all patients that is constructed of carbon fiber to minimize image artifacts and beam attenuation.

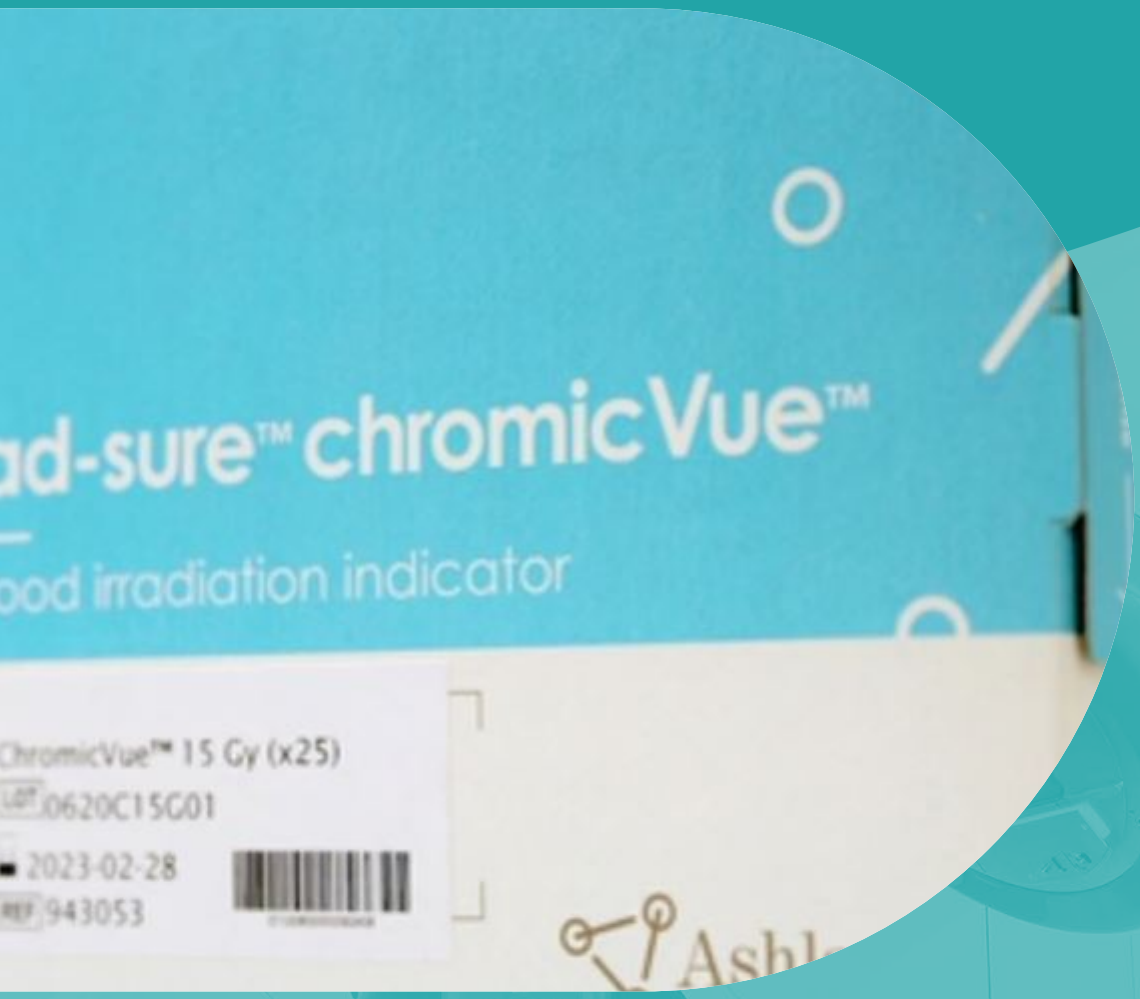


Included Components:

- 200x53cm Baseplate
- Belly Bridge
- Knee Bridge

- Wing Board T Grip
- Knee & Foot Cushion
- SBRT Vacuum Bag
- One Headrest
- Three SBRT Indexing Bars
- Two Vacuum Bag Positioners

BLOOD IRRADIATION INDICATORS

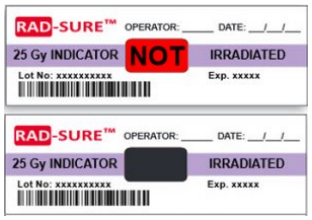


peo MEDICAL

Ashland is a global leader in specialty materials, offering innovative solutions that enhance safety, precision, and patient outcomes across various medical disciplines. Their portfolio supports healthcare providers in radiation therapy, diagnostic imaging, wound care, and regenerative medicine.

Product offering

Rad-Sure™ Blood Irradiation Indicators



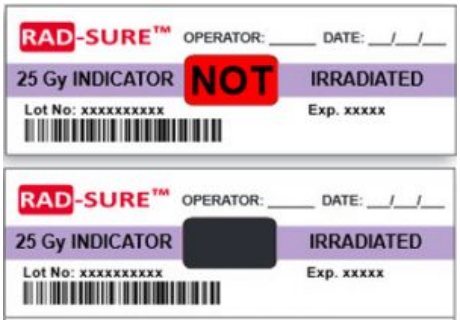
Rad-Sure™ ChromicVue™

Rad-Sure™ Blood Irradiation Indicators

chemistry: radiochromic film

look for the NOT

Rad-Sure™ is a blood irradiation indicator that provides positive visual verification of irradiation at the minimum specified dose. Rad-Sure™ is available in two types: Gamma and X-Ray. Gamma is compatible with Cesium-137 or Cobalt-60 radiation sources and X-Ray is compatible with x-ray irradiators that utilize x-rays generated from 160kVp sources that are filtered through 0.38 mm of copper, or 150kVp sources that are filtered through 1 mm of aluminum. Manufactured from Gafchromic™ film, the world's highest resolution dosimeter, Rad-Sure is the standard for blood irradiation indicators for over 25 years.



When attached to blood products, Rad-Sure™ blood irradiation indicators show whether the blood products have been irradiated. Before a blood product and its attached indicator are irradiated, the indicator reads "NOT IRRADIATED". After the blood product and its attached indicator are irradiated, the word "NOT" is obscured and the indicator reads "IRRADIATED".

Product Features:

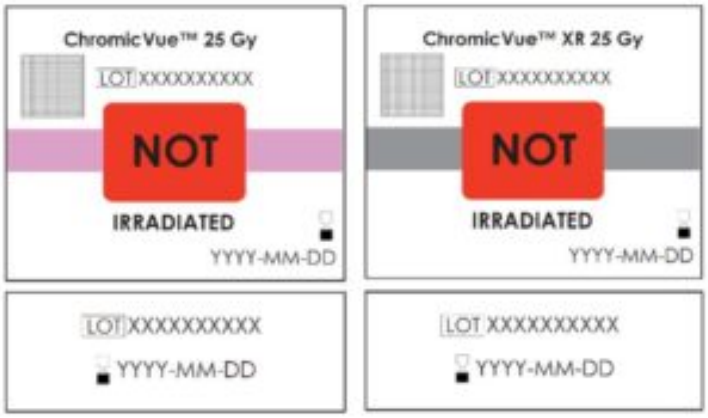
- indicators can now be stored at room temperature!
- meets cGMP requirements
- easy to use: just peel, stick, irradiate, and read!
- ISBT 128 bar-coded lot numbers
- minimum dose of 15 Gy or 25 Gy available
- Rad-Sure™ indicators adhere to AABB standards and hold the AABB seal of compliance


RADIATED
RAD-SU

Rad-Sure™ ChromicVue™

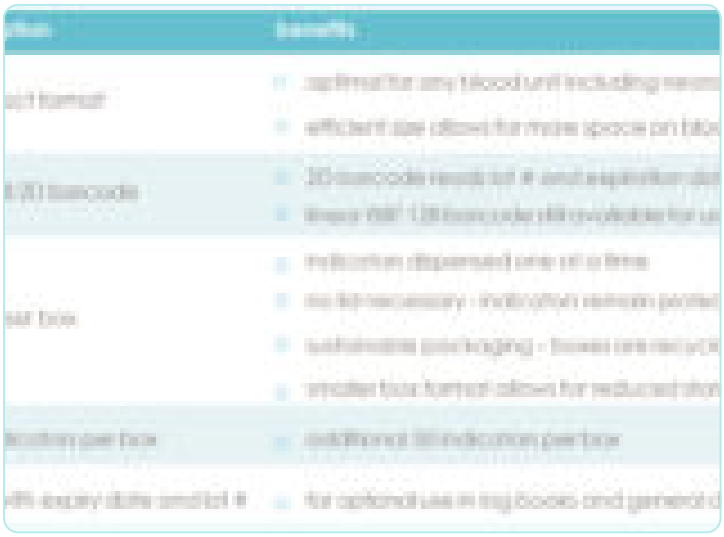
Rad-Sure™ ChromicVue™ blood irradiation indicators provide all the dependable features of the traditional Rad-Sure indicators in a compact size and new dispenser box to improve your ease of use. Rad-Sure™ ChromicVue™ introduces new features to improve your workflow, such as ISBT-128 2D barcodes, and labels containing lot number and expiration date for optional use in log books and documentation purposes. Rad-Sure™ ChromicVue™'s smaller format is ideally designed for use with standard blood bags, neonatal syringes and aliquot bags.

Rad-Sure™ ChromicVue™ indicators provide positive, visual verification of irradiation at the minimum specified dose. Manufactured from Gafchromic™ film, the world's highest resolution dosimeter, Rad-Sure™ has been the standard for blood irradiation indicators for over 25 years. Before a blood product and its attached indicator are irradiated, the word "NOT" is visible and the indicator reads "NOT IRRADIATED". After irradiation, the "NOT" is obscured and the indicator reads "IRRADIATED".



dependable features:

- film-based indicator – made with highly accurate Gafchromic™ film used in radiation oncology centers around the world
- less subjective – the product has been properly irradiated when the "NOT" is completely obscured
- indicators can be stored at room temperature
- Color-blind friendly – no need to match colors
- 30 years of reliable film technology



DOSIMETRY

peo MEDICAL

Partner 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.

Product offering

SunSCAN™ 3D

SNC 600c™ Reference Ion Chamber

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

SNC350p™ Reference Ion Chamber

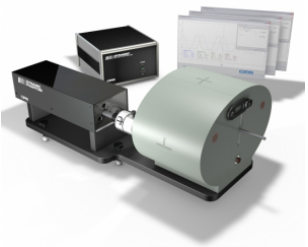
SNC125c™ Reference Ion Chamber

3D TPR™ – Sun Nuclear

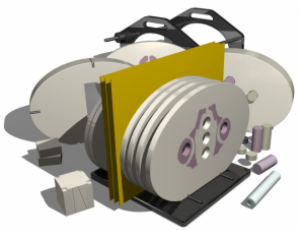
EDGE Detector – Sun Nuclear

Reference Detector – Sun Nuclear

Model 008P Dynamic Pelvis Phantom – CIRS

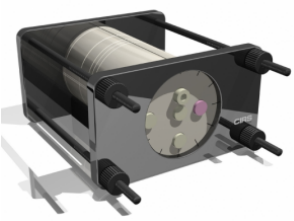


Model 002PRA Pelvic 3D Phantom – CIRS

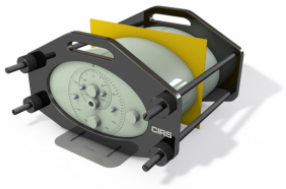


Model 002LFC IMRT Thorax Phantom – CIRS

Model 002HN IMRT Head and Neck Phantom – CIRS



Model 002H9K IMRT Head and Torso Freepoint Phantom – CIRS



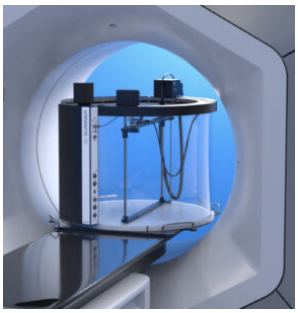
WaterProof Profiler – Sun Nuclear

ArcCHECK 4D – Sun Nuclear

PC Electrometer – Sun Nuclear

1D Scanner Water Tank – Sun Nuclear

Cylindrical 3D Water Tank Scanner – Sun Nuclear



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

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

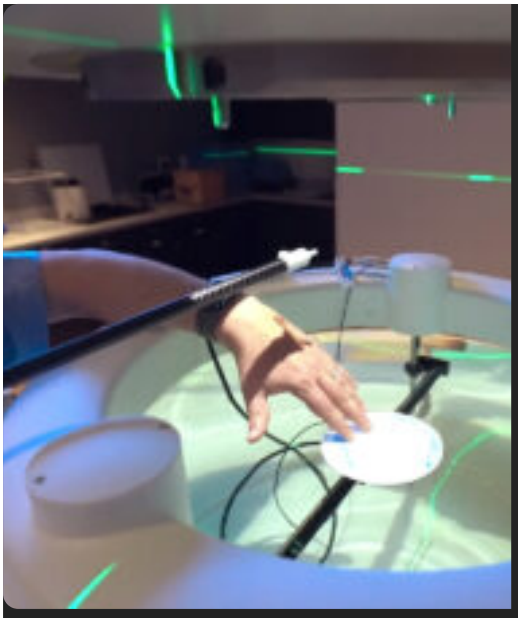
Enhanced SRS & SBRT Accuracy

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.

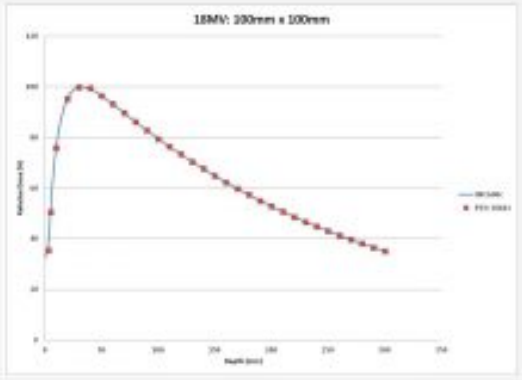
SNC 600c™ Reference Ion Chamber

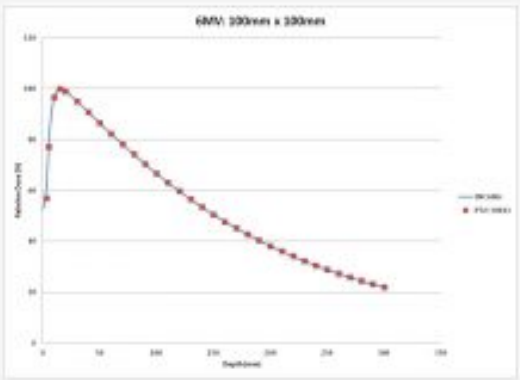
SNC600c for Photon and Electron Reference Dosimetry
SNC600c is a reference class dosimeter based on the classic Farmer Chamber design.

- 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

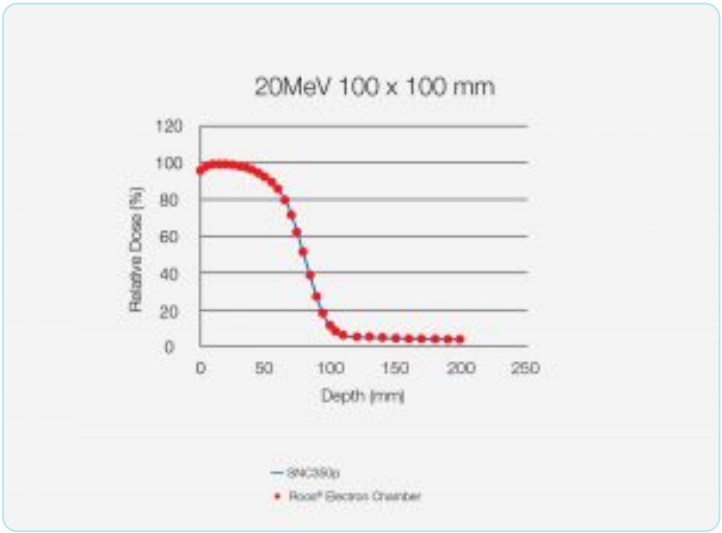
SNC350p™ Reference Ion Chamber

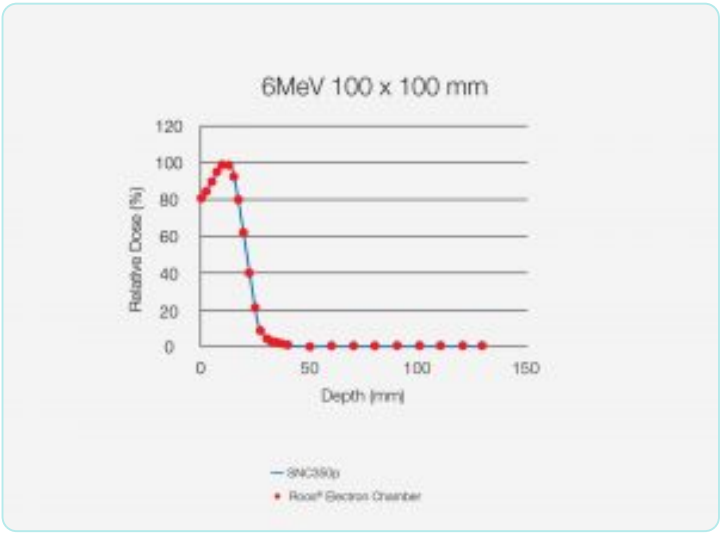
SNC350p for Electron Reference Dosimetry
This parallel-plate ion chamber is well-guarded to minimize perturbation effects for reference, field, and scanning dosimetry of therapeutic electron beams, and TDD/TPS commissioning and QA.

- 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.





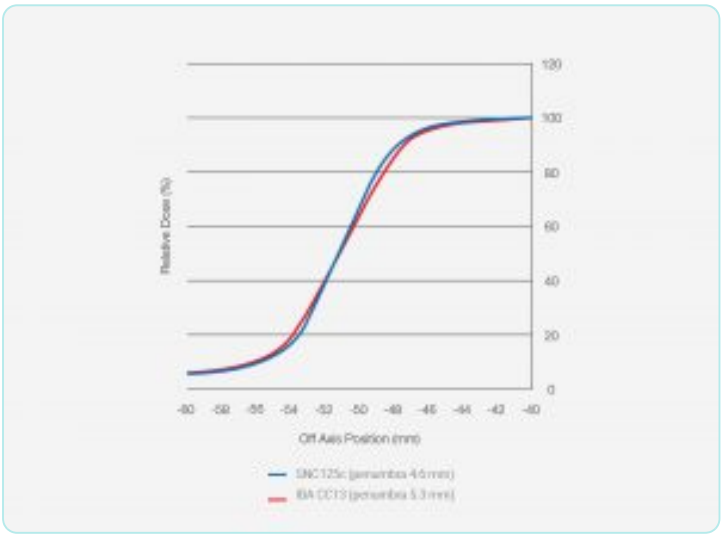
SNC125c™ Reference Ion Chamber

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

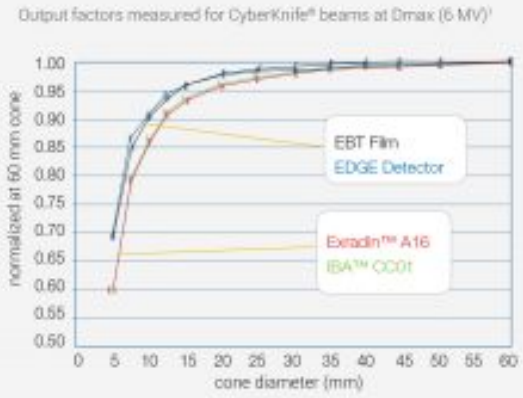
EDGE Detector™ characterizes penumbra more precisely and with less averaging than ion chambers, making it the preferred detector for small field beam modeling and QA.

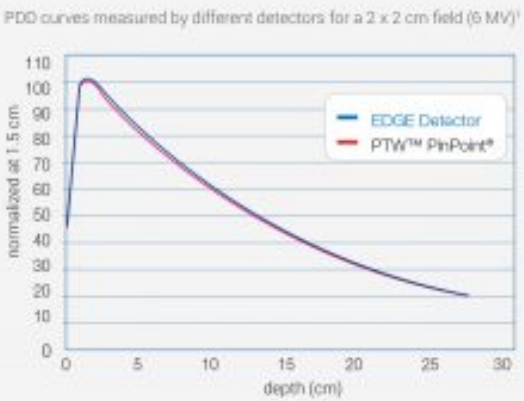
Waterproof and highly accurate, it works with all common water phantoms for SRS and IMRT beam modeling and TPS commissioning.

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

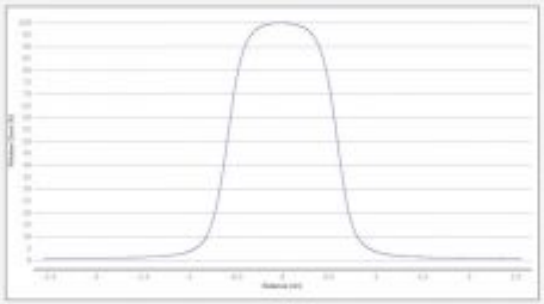
Interference-Free Dosimetry Scanning

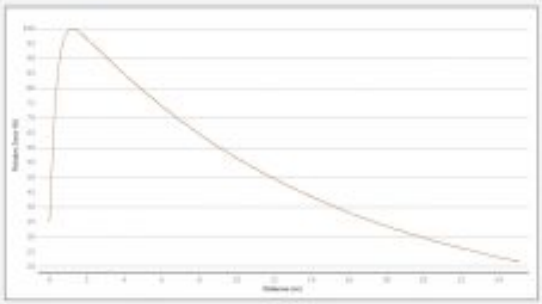
Reference Detector is a patented, out-of-field detector that uses linac head leakage to obtain a reference signal during water tank scanning of photon energies.

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.

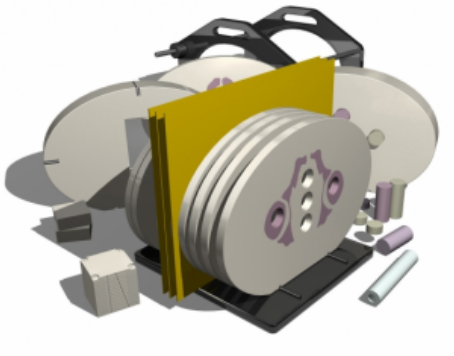
Model 008P Dynamic Pelvis Phantom features:

- 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.

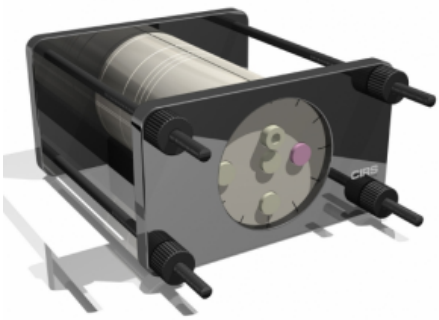
Model 002LFC IMRT Thorax Phantom features:

- 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.

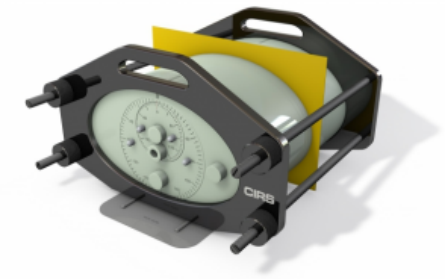


Model 002HN IMRT Head and Neck Phantom features:

- 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

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.

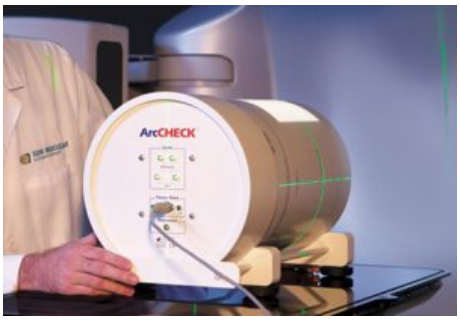
WaterProof Profiler features:

- 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

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.

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)

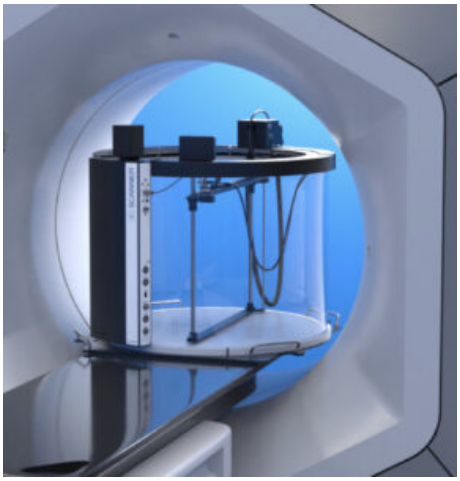
Read more about the 1D Scanner Water Tank at the Sun Nuclear Website.

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™.

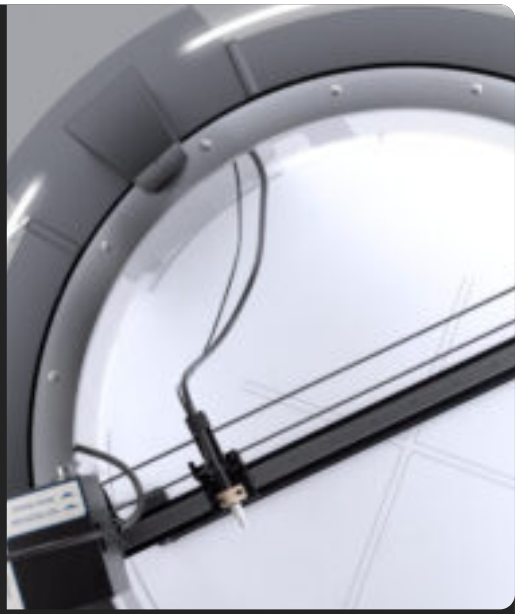
First, the machine's water sensor measures water surface relative to the scanning mechanism at three points and automatically adjusts the water tank levelling. After that, the device measures a 10 x 15 beam to determine the center of the beam, and align the center of the scanner with the beam center. 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

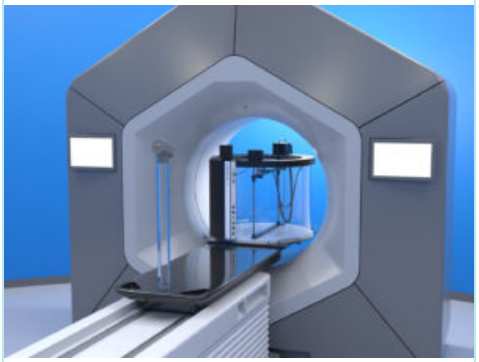
For more info on the scanner, read our article!

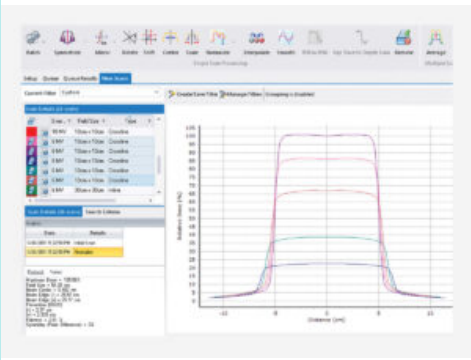
GO ANYWHERE

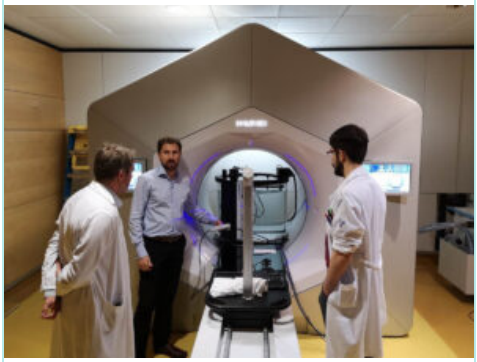
The 3D MiniLift is specially designed for transporting the 3D SCANNER. The lift is part of a convenient and portable 3D SCANNER system. The lift is easily stored, easy to use, small and fits through standard doors.

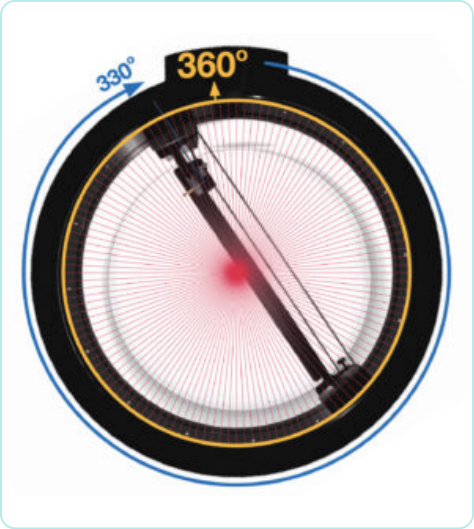
The MiniLift enables you to easily take the 3D SCANNER from room to room when necessary. It is 57 cm high, 95 cm in length and weighs 105 kg.

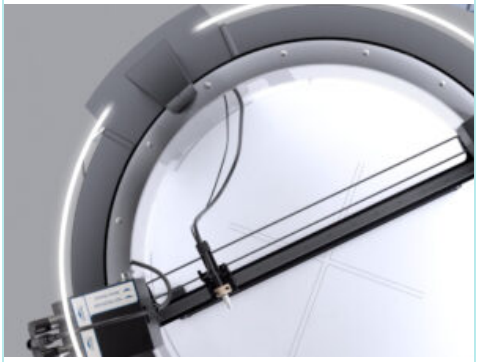
If you want to know more about the 3D SCANNER an the MiniLift, visit our partner's website!



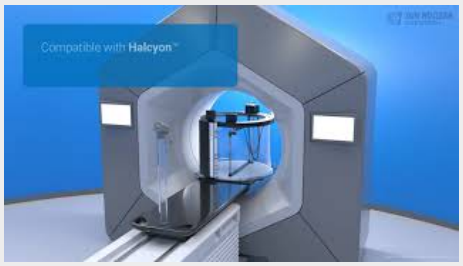








3D SCANNER™ from Sun Nuclear https://youtu.be/B6EEZokqZ8k



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

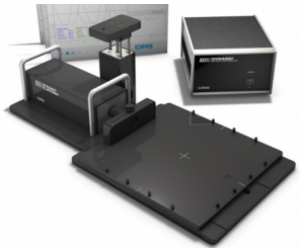
The standard model 038 includes:

- 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

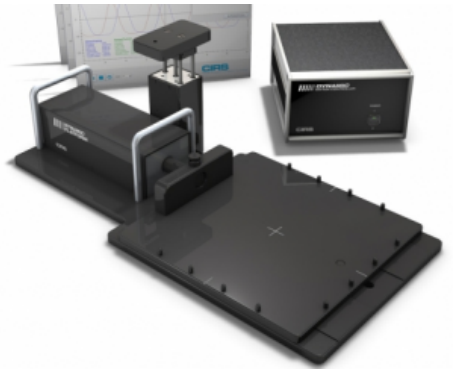
Product offering

Model 008PL Dynamic Platform for Phantom Motion - CIRS



Model 008PL Dynamic Platform for Phantom Motion – CIRS

The Model 008PL Dynamic Platform for Phantom Motion provides an convenient, economical, solution for the intricate tasks correlated with tumor motion and patient positioning in radiation therapy. The platform enables precisely controlled inferior-superior motion up to 50 mm for any phantom up to 32 kg.



The Model 008PL Dynamic Platform for Phantom Motion is operated with CIRS Motion Control Software, a graphical user interface that can be installed on any computer running Windows XP.

Model 008PL Dynamic Platform for Phantom Motion features:

- phantom and motion independently and fully programmable
- easy to move, set-up and operate
- surrogate breathing platform accommodates numerous gating devices

among others compatible with CIRS:

- Model 002H5 IMRT Phantom for Film and Ion chamber Dosimetry
- Model 002H9K Head and Torso Freepoint Phantom
- Model 002HN IMRT Head and Neck Phantom
- Model 002LFC IMRT Thorax Phantom
- Model 002PRA IMRT Pelvic 3D Phantom
- Model 036A-CVXX-XX SBRT Phantom

Read more about the Model 008PL Dynamic Platform for Phantom Motion on the CIRS website

Brochure Model 008PL Dynamic Platform for Phantom Motion CIRS

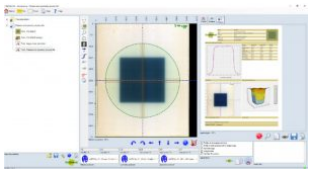
GAFCHROMIC FILM QA

peo MEDICAL

Ashland is a global leader in specialty materials, offering innovative solutions that enhance safety, precision, and patient outcomes across various medical disciplines. Their portfolio supports healthcare providers in radiation therapy, diagnostic imaging, wound care, and regenerative medicine.

Product offering

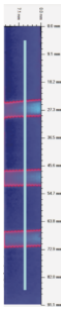
FilmQA Pro™ Software version 7 – Ashland



Gafchromic EBT-XD

Gafchromic EBT-4 Dosimetry Film – Ashland

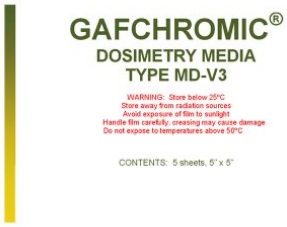
Gafchromic LD-V1 Film



Gafchromic XR-M2 Dosimetry Film – Ashland

Gafchromic XR-QA2 Dosimetry Film – Ashland

Gafchromic MD-V3 Radiochromic Film – Ashland



Gafchromic EBT-3 Dosimetry Film – Ashland

Gafchromic HD-V2 Radiochromic Film – Ashland

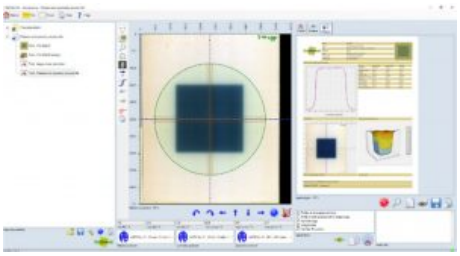
Gafchromic RTQA2 Radiochromic Film – Ashland

Gafchromic EBT-XD Dosimetry Film – Ashland

FilmQA Pro™ Software version 7 – Ashland

a sophisticated, quantitative analysis tool for Gafchromic™ Film

FilmQA Pro™ software is a sophisticated, quantitative analysis tool specifically designed to simplify and streamline the intensity-modulated radiation therapy quality assurance (IMRT QA). Our software is also effective for QA of SRS, SBRT and VMAT procedures. It allows you to scan or open images of exposed film and calculate the optimized dose maps.



FilmQA Pro™ software uses proprietary multi-channel dosimetry which eliminates or mitigates film and scanner artifacts by detecting whether errors are being made during scanning. In addition,, the software also has the one-scan analysis feature which combines calibration and plan verification in a single scan. The one-scan protocol requires only the patient film, a reference patch, and an unexposed patch. This protocol eliminates error sources such as interscan variability, which enables you to reduce errors to within 2 percent.

With FilmQA Pro™ software, you can get your results in minutes, post-exposure growth no longer is an issue and there is no waiting overnight for changes in the film to diminish. You can do an analysis any time you want, even at a moment's notice. The software delivers gamma passing rates ≥ 95 percent at 2 percent at 2 mm instead of using 3 percent at 3 mm.

key features and benefits

- lateral scan correction: apply a correction to compensation for lateral artifacts that can show in the scan
- new user friendly interface with a quick start menu
- one-scan protocol: fast and efficient method to achieve dose accuracy within 2%
- triple-channel dosimetry: use three color channels to optimize accuracy of dose calculations
- accurately calibrate: an entire lot with just four strips of film using our film-specific mathematical function
- quick-start screen: easily access the module you need at start-up
- dose error recognition: ability to identify accuracy of delivered dose
- superior resolution: get 100 percent of the picture from millions of measurements instead of just 0.1 percent
- no angular dependence: shoot the film from all angles, an entire plan on a single Gafchromic™ film, and validate the plan in the same way that the patient receives it

FilmQA Pro™ Software carries a CE Mark

Gafchromic EBT-XD

The Gafchromic EBT-XD Dosimetry Film from Ashland has been developed for the measurement of absorbed doses of ionizing radiation specifically suited for high-energy photons.

The dynamic range of this film is particularly designed for best performance in the dose range from 0.4 to 40 Gy. This makes it best suited for applications such as SRS and SBRT.

The incorporation of a yellow marker dye, when used in conjunction with an RGB film scanner and FilmQAPro™ software, the EBT-XD film enables all the benefits of multi-channel dosimetry.

Advantages

- high spatial resolution
- develops in real time without post exposure treatment
- excellent uniformity
- near tissue equivalent

Characteristics

- energy dependence: minimal response difference from 100keV into the MV range
- dynamic dose range: 0.1 Gy to 200 Gy
- optimum dose range: 0.4 Gy to 40 Gy
- stable at temperatures up to 60°C

Would you like to know more about the EBT-XD Dosimetry Film?

Download the EBT-XD datasheet or contact one of our product specialists.

Stay informed about product news, which is related to your field of expertise. Go to the PEO news sign up form and select your areas of interest.

Gafchromic EBT-4 Dosimetry Film – Ashland

Gafchromic™ EBT4 is designed for the measurement of absorbed doses of ionizing radiation. It is particularly suited for high-energy photons.

The dynamic range of
this film is designed for best performance in the dose range from 0.2 to 10 Gy, making it suitable for many applications in IMRT, VMAT and brachytherapy.

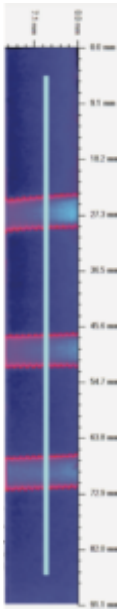
For measurement of doses substantially greater than 10 Gy EBT-XD or MD-V3 are preferred while the use of HD-V2 is indicated for still higher dose measurement.

product	format	product code
EBT4 8×10	8”x10”, 25 sheets per box	973857
EBT4P 8×10	8”x10”, 25 sheets per box	973858
EBT4 – 1417	14”x17”, 10 sheets per box	973882
EBT4 8×10 unlaminated	8”x10”, unlaminated 25 sheets per box	973860
EBT4 ballcube I	10 pr	973883
EBT4 ballcube II	10 pr	973884
EBT4 AQA	100 sheets per box	973885
EBT4 mini ballcube	10 pr	973886
EBT4 XLT	10 pr	973887

Key technical features of gafchromic™ EBT4 include:

- optimum dose range: 0.2 Gy to 10 Gy, best suited for applications such as IMRT and VMAT
- develops in real time without post-exposure treatment
- energy-dependence: minimal response difference from 100 keV into the MV range
- near tissue equivalent
- high spatial resolution – can resolve features down to 25 µm, or less
- proprietary new technology incorporating a marker dye in the active layer
  - enables non-uniformity correction by using multi-channel dosimetry
  - decreases UV/visible light sensitivity
- stable at temperatures up to 60 °C

Gafchromic LD-V1 Film



The new, low-dose Gafchromic LD-V1 film from Ashland provides superior spatial resolution to give you added confidence during your critical QA analysis. The LD-V1 replaces the XR-QA2 Gafchromic film.

LD-V1 film now includes better contrast and imaging detail. This provides instant calibration results which are easy to read with data that is even easier to understand.

The launch of this film is geared specifically as a QA tool for radiology in a processor-less environment. But the film is also suitable for security x-ray applications, non-destructive testing, and machine QA for dental equipment.

This film is available in two sizes: 8”x10” or 10”x12”. But you can cut the film sheets into different sizes and handle them in room light. One package contains 10 sheets of film.

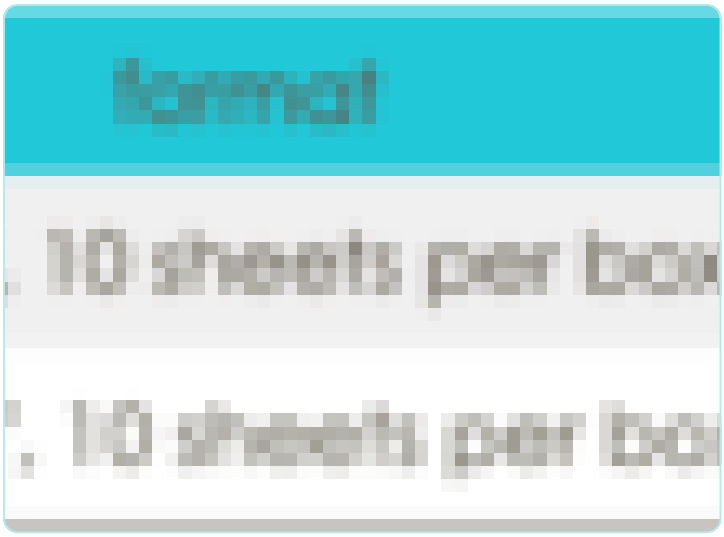
- Dose range of 2 cGY to 20 cGY
- Energy range of ~20 keV to ~200 keV.

For more information, go to our partner’s website!

Or for our other Gafchromic film, go here!

Gafchromic LD-V1 Benefits

- High spatial resolution and contrast
- Excellent tool for the processor-less environment
- Easy to use film
- Can be handled in room light
- Water resistant
- No electronic components
- U.S. FDA listed medical device



Gafchromic XR-M2 Dosimetry Film – Ashland

XRM2 Dosimetry Film is especially developed for mammography QA testing. With a single film strip you can determine the location of the radiation field, light field and the position of the detector with respect to each other.

The film has a dose range of 0,1 cGy to 20 cGy.

XRM2 DOSIMETRY FILM FEATURES

- 50 pc. in a package
- The size of a strip is 1″x3,5″ (2,54 cm x 8,89 cm)
- Instant calibration results
- Real-time self-developing
- User-friendly
- Energy range of 20 KVp to 200 KVp

Read more at our partner's website!

Do you have any questions?

Contact PEO!

Gafchromic XR-QA2 Dosimetry Film – Ashland

This product is not available anymore. The renewed version of XR-QA2 can be found HERE.

Ashland designed Gafchromic XRQA2 dosimetry film specifically as a QA tool for radiology. You can cut the film into different sizes and you can handle it in room light.

IMAGING DETAIL WITH HIGH RESOLUTION & CONTRAST

This radiology film assures consistent and reliable high contrast result because of the state-of-the-art quality production techniques. The images have a quality greater than 5.000 dpi, so you can easily read and understand the results. There are two different sizes:

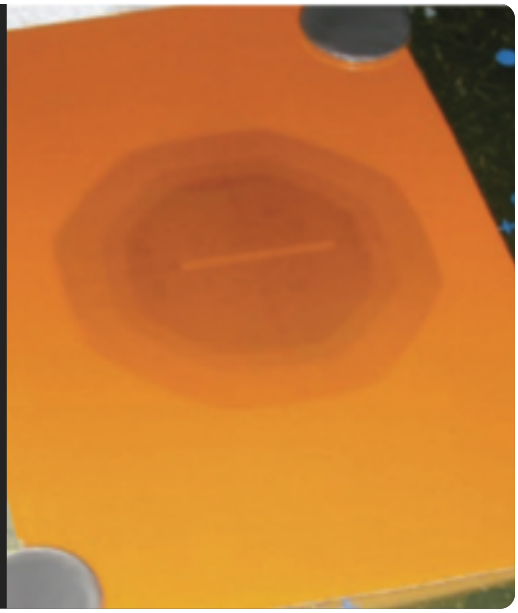
- *25,4 cm x 20,48 cm (10″x 12″)*
- *20,32 cm x 25,4 cm (8″ x 10″)*

The film has a dose range from 0,1 cGy to 20 cGy.

GAFCHROMIC XRQA2 DOSIMETRY FILM BENEFITS

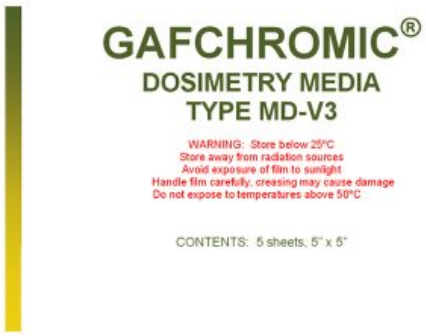
- *No processor required*
- *Instant calibration results*
- *High data integrity*
- *Improved contrast*
- *Two convenient film sizes to choose from*
- *Cost effective*
- *User-friendly*
- *Can be handled in room light*

For more information about Ashland's radiology film, visit our partner's website!



Gafchromic MD-V3 Radiochromic Film – Ashland

The Gafchromic MD-V3 Radiochromic Film (Ashland) can be used for the measuring absorbed dose of ionizing radiation particularly suited for high-energy photons.



Gafchromic MD-V3 Radiochromic Film features:

- 1 Gy to 100 Gy (dose range)
- no post-exposure treatment, develops in real time
- near tissue equivalent
- no darkroom needed
- mitigates lateral response dependence
- stable at temperatures up to 60°C
- eliminate Newton’s rings
- energy-dependence: minimal response difference from 100keV into the MV range
- high spatial resolution
- size: 5” x 5”, 12,7 cm x 12,7 cm
- quantity: 5 sheets (box)

Gafchromic EBT-3 Dosimetry Film – Ashland

Ashland designed Gafchromic EBT-3 Dosimetry Film specially for medical physicists and dosimetrists working in radiotherapeutic departments. You use this gafchromic film to measure absorbed doses of ionizing radiation and it's especially suited for high-energy photons.

It perfectly meets the needs of external beam radiotherapy and supports the processor-less environment of the modern hospital. This product is suitable for many applications because of the optimum dose range of 0.2 Gy to 10 Gy.

This gafchromic film is very easy-to-use, especially in combination with Ashland's FilmQA Pro software.

FEATURES & BENEFITS:

- Helps avoid Newton's rings
- Symmetrical
- Optimum dose range of 0.2 Gy to 10 Gy
- Dynamic dose range of 0.1 Gy to 20 Gy
- Near tissue equivalent
- Water resistant (so it can be used with water phantoms)
- User-friendly
- No need for a darkroom
- Density changes stabilise fast
- Withstands temperatures up to 60°C
- Supports all RT technologies
- Large measurement area
- High spatial resolution
- Reduces scattered radiation

If you want to know more about this film

Go here!

Gafchromic HD-V2 Radiochromic Film – Ashland

Gafchromic HDV2 radiochromic film is designed for quantitative measurement of absorbed doses of high-energy photons. This self-developing film is perfect for a processorless environment.

Because this film doesn't require post-exposure processing, there are no chemicals to dispose of and you don't need a dark room.

To get the most accurate dosimetric measurement with this film, you can combine it with Ashland's FilmQAPro™ software.

This film comes in boxes of 5 pc. with sheets of 20,32 cm x 25,4 cm (8" x 10").

GAFCHROMIC HDV2 RADIOCHROMIC FILM BENEFITS

- Dynamic dose range from 10 Gy to 1.000 Gy
- Develops in real time without any post-exposure treatment
- Near tissue equivalent
- High spatial resolution
- Active coating exposed for detection of low energy photon and electron
- Marker dye in the active layer
- Stable at temperatures up to 60°C
- No dark room needed

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

Gafchromic RTQA2 Radiochromic Film – Ashland

RTQA2 film is a self-developing film designed for commissioning and quality assurance of radiotherapeutic modalities.

This is a high performance film with exceptional accuracy and outstanding cost effectiveness. This gafchromic film is real-time self-developing, so your results are available in only seconds (0,5-2.0 sec.). Without need of a darkroom or chemicals. So, this film is not only user-friendly, but also environmentally friendly.

This film is specifically developed for light and radiation field alignment, precision star shots, position verification and autoradiography.

BENEFITS

- Dynamic range from 0,02 Gy to 8 Gy
- Large measurement area
- Real-time self-developing
- Near tissue-equivalent
- High spatial resolution
- Can be handled in room light
- Water resistant (useable with water phantoms for example)
- Withstands temperatures up to 70°C
- No processor or darkroom needed
- Convenient to handle and easy to cut
- Easily noted on with marker

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

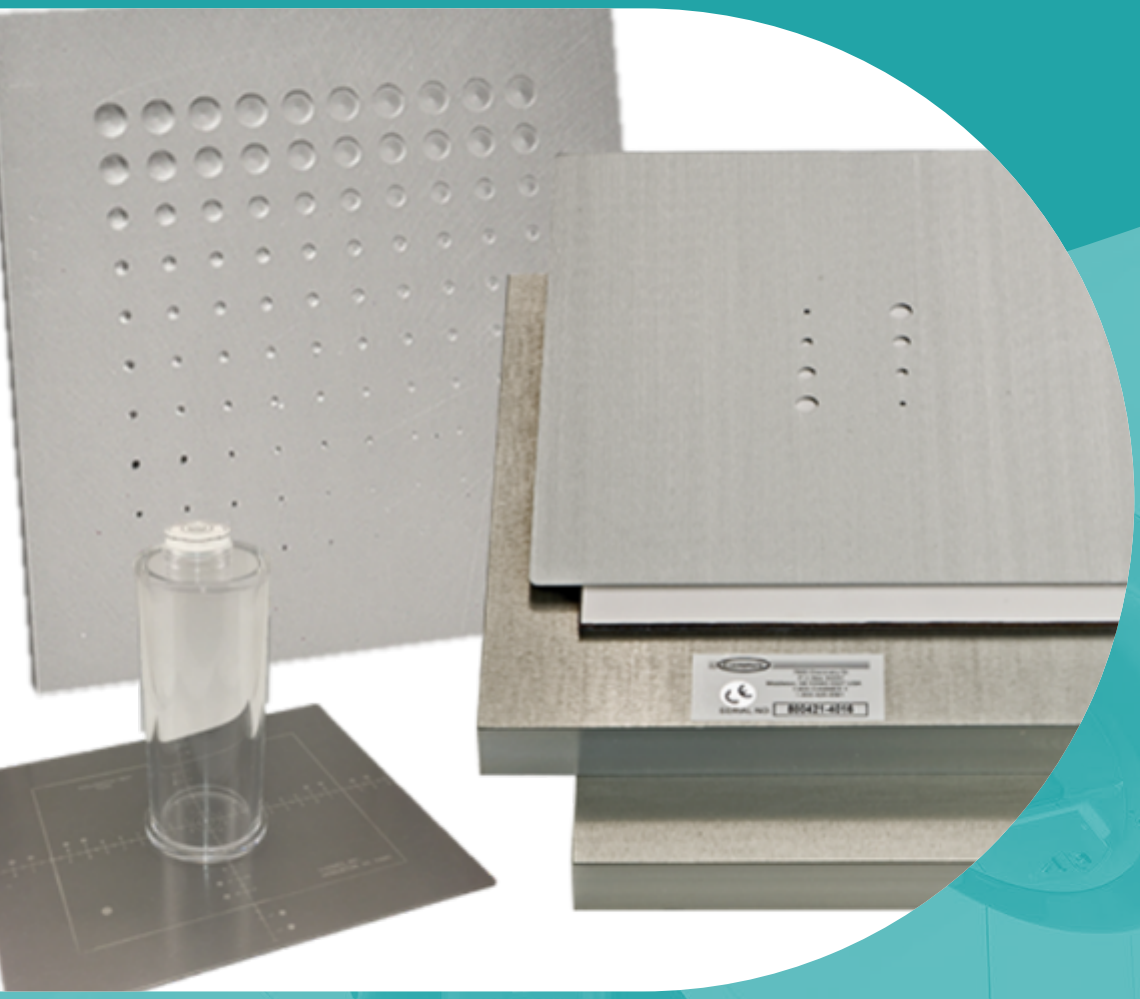
Gafchromic EBT-XD Dosimetry Film – Ashland

The Gafchromic EBT-XD Dosimetry Film (Ashland) has been developed for the measurement of absorbed doses of ionizing radiation specifically suited for high-energy photons.

Gafchromic EBT-XD Dosimetry Film features:

- energy dependence: minimal response difference from 100keV into the MV range
- high spatial resolution
- develops in real time without post exposure treatment
- dynamic dose range: 0.1 Gy to 200 Gy
- optimum dose range: 0.4 Gy to 40 Gy
- excellent uniformity
- stable at temperatures up to 60°C
- proprietary new technology incorporating a marker dye in the active layer
- enables non unformity correction by using multichannel dosimetry
- near tissue equivalent
- size: 20,32 cm x 25,4 cm (8” x 10”)
- quantity: 25 sheets (box)

MISCELLANEOUS & ACCESSORIES



peo MEDICAL

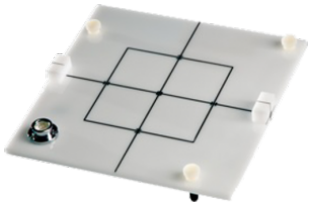
Partner Sun Nuclear Corporation

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.

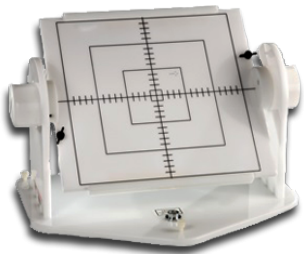
Product offering

Model 440 – Couch / Laser Alignment Tool – Sun Nuclear

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



Model 442-R – Isocentric Rotation Plate – Sun Nuclear



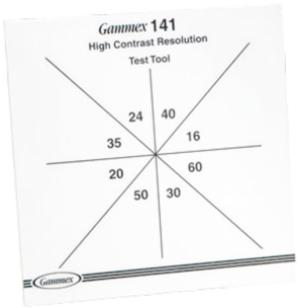
Model 142D / 143D – Film / Screen Contact Test Tools – Sun Nuclear

Model 132 – Tomographic Test Tool – Sun Nuclear

Model TM-99A – Digital Thermometer – Sun Nuclear

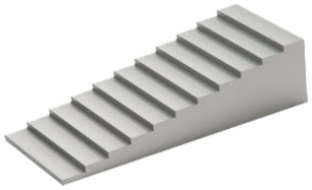
Model 151 – Fluoroscopic Dose Rate and Low Contrast Resolution Test Tool Kit – Sun Nuclear

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

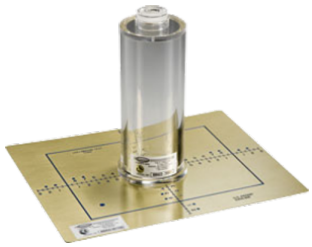


Model 144 – Grid Alignment Test Tool – Sun Nuclear

Model 117 – Radiographic Aluminum Stepwedge – Sun Nuclear



Collimator and Beam Alignment Test Tools – Sun Nuclear



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

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

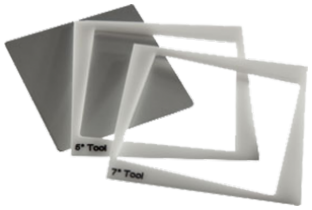
Model 175 – Universal Test Stand – Sun Nuclear

Model 185D – Processor QC Kit – Sun Nuclear

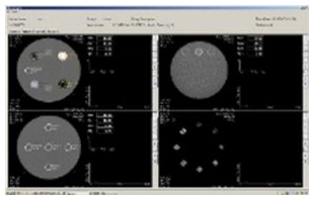
Model 184D – Radiographic / Fluoroscopic Kit – Sun Nuclear

Model 622 – Light Field Ruler – Sun Nuclear

Model 617 – Edge Tool and Software – Sun Nuclear

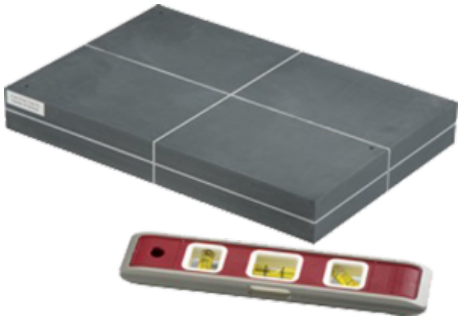


Model 464-Acts – Software for the ACR CT Accreditation Phantom – Sun Nuclear



Model 112B – Focal Spot Test Tool – Sun Nuclear

Model 440 – Couch / Laser Alignment Tool – Sun Nuclear

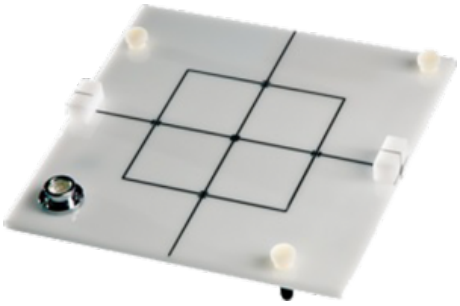


The Couch / Laser Alignment Tool from Sun Nuclear (formerly Gammex) can be used with all stationary laser systems to assure proper beam alignment.

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.

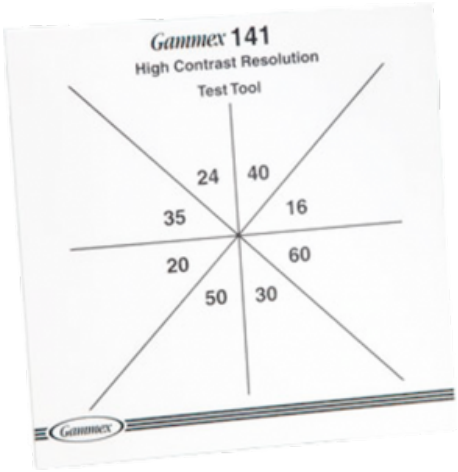
The kit permits monitoring of low contrast readings with less than 2% reading variance.

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.

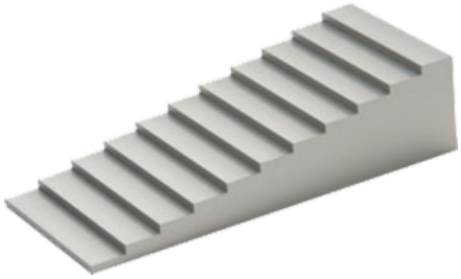
Grid Alignment Test Tool features:

- 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.

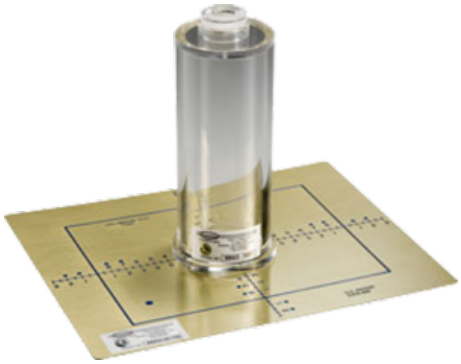
Radiographic Aluminum Stepwedge features:

- 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

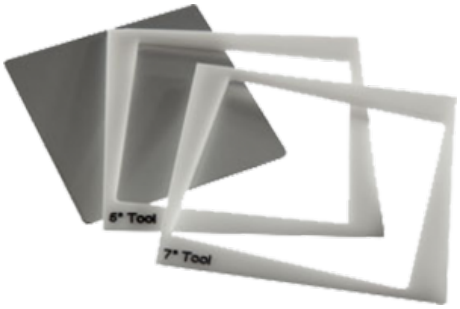
This Light Field Ruler tool from Sun Nuclear (formerly Gammex) is a tool to measure the coincidence of the light and radiation fields of analog or digital flat plate/film X-ray units including mammography systems.

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



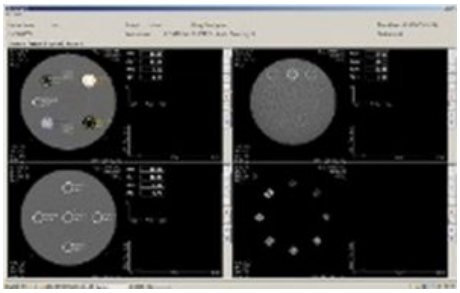
The Edge Tool and Software from Sun Nuclear (formerly Gammex) is designed to evaluate the imaging performance of Digital Radiography (DR) and Computed Radiography (CR) systems. The phantom and software together will measure the Modulation Transfer Function (MTF), the Noise Power Spectrum (NPS) and the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

Product offering

HV BiasNIM Power Supplies and Bins

HV BiasNIM Power Supplies and Bins

Types of Power Supplies

ORTEC offers two types of HV BiasNIM Power Supplies and Bins for use with NIM instrumentation: power supplies that provide operating voltages for a detector (more properly called detector bias supplies) and power supplies that provide the necessary operating voltages for electronic instruments. Most detectors used with pulse processing instrumentation require a high-voltage bias supply for operation. Care must be taken in the selection of a detector bias supply to ensure that it has sufficient voltage and current ratings for the detector (or detectors) with which it is to be used.

Read more about the HV Bias/NIM Power Supplies and Bins in the catalog or go to the ORTEC website.

PLAN VERIFICATION

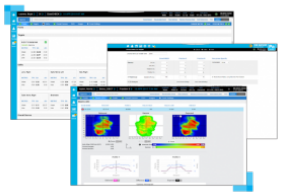
peo MEDICAL

Partner 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.

Product offering

PlanCHECK™ – Sun Nuclear Corporation

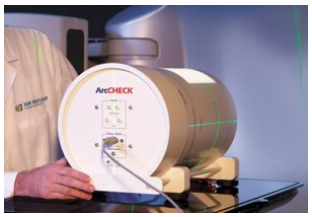


MapCHECK®3 – Sun Nuclear

SRS MapCHECK – SunNuclear

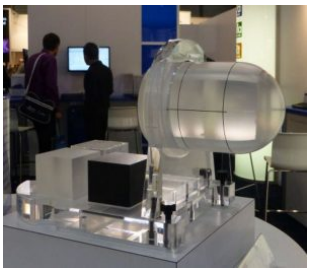
SunCHECK™ Patient

ArcCHECK 4D – Sun Nuclear



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

StereoPHAN Phantom – Sun Nuclear



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.

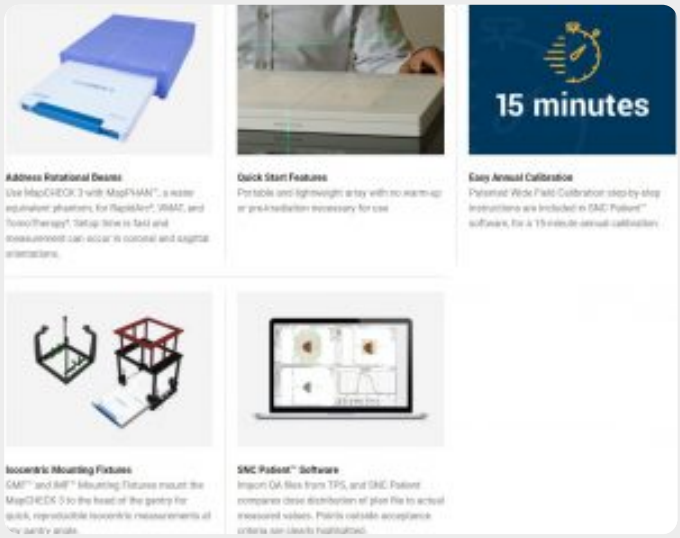
It offers the highest detector density, highest sensitivity, and largest field size of 2D arrays. Plus, it’s uniquely TG 218-compliant.

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

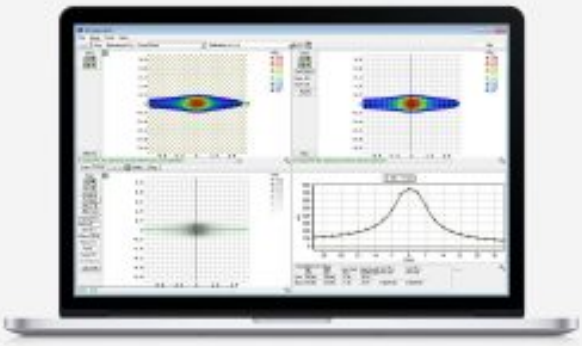
MapCHECK is proven to efficiently detect output factor, MLC, and grid size errors. SRS MapCHECK prevents the most common sources of SRS treatment errors.

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

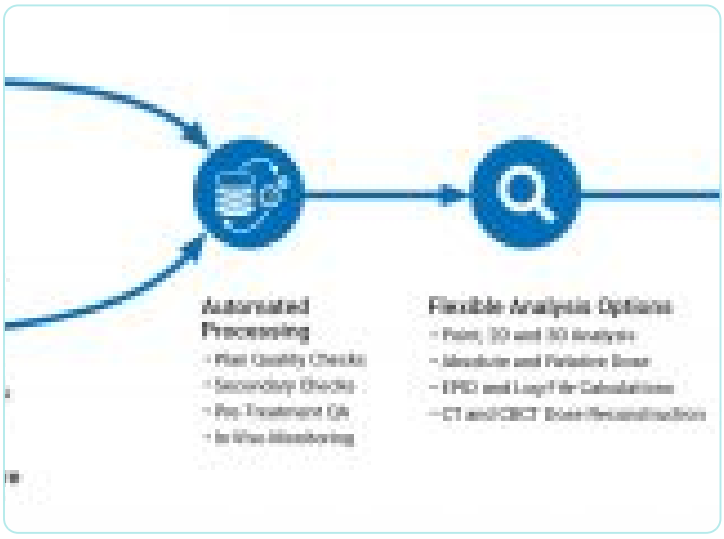
Independent Patient QA in a Single Workflow

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.

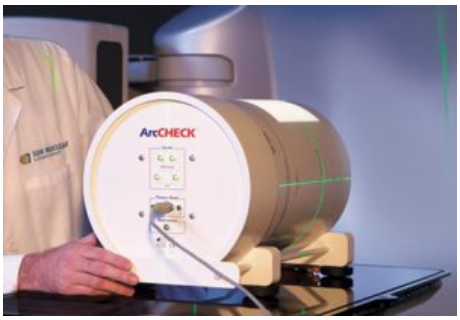


“Because this system is fully automated so that no physicist time is required for data acquisition and evaluation, daily patient treatment QA is feasible.”

- 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:

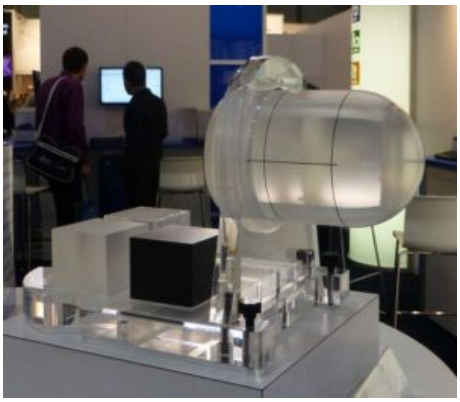
- Linac
- SRS/SBRT
- Bore-based Linacs
- Cyberknife
- TomoTheraphy
- Imaging

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

Partner 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.

Product offering

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

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.

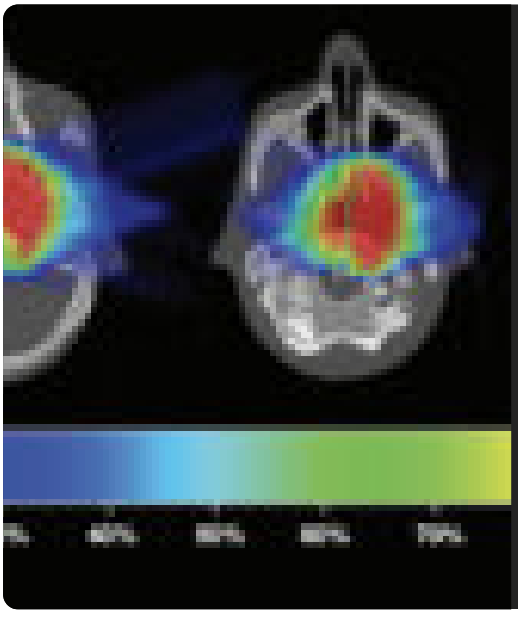
This phantom is ideal for treatment plan evaluation in high density gradient locations. This is because of the tissue equivalency of detailed internal structures. The internal structures include brain, bone with cortical and trabecular distinction, larynx, trachea, fully-open sinus cavities, nasal and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

Ashland is a global leader in specialty materials, offering innovative solutions that enhance safety, precision, and patient outcomes across various medical disciplines. Their portfolio supports healthcare providers in radiation therapy, diagnostic imaging, wound care, and regenerative medicine.

Product offering

Gafchromic HD-V2 Radiochromic Film – Ashland

Gafchromic HD-V2 Radiochromic Film – Ashland

Gafchromic HDV2 radiochromic film is designed for quantitative measurement of absorbed doses of high-energy photons. This self-developing film is perfect for a processorless environment.

Because this film doesn't require post-exposure processing, there are no chemicals to dispose of and you don't need a dark room.

To get the most accurate dosimetric measurement with this film, you can combine it with Ashland's FilmQAPro™ software.

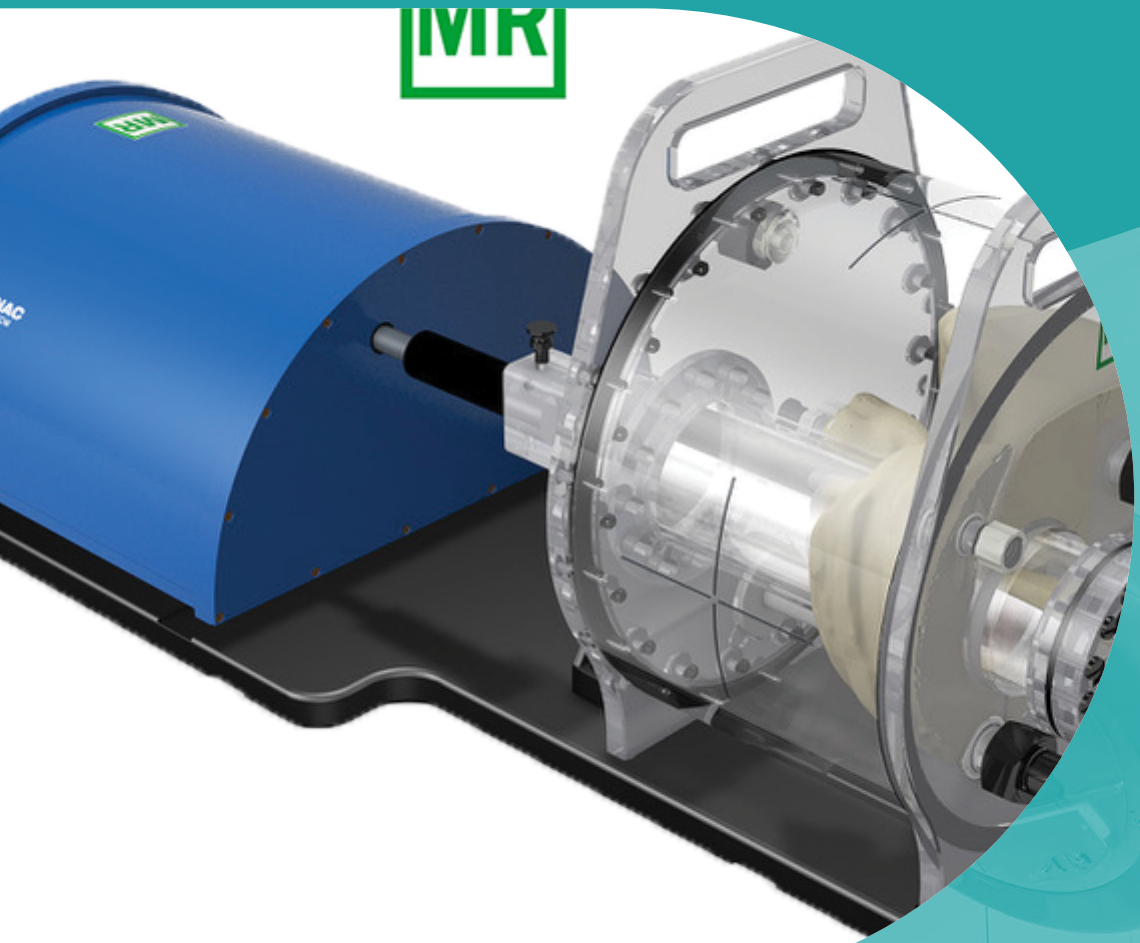
This film comes in boxes of 5 pc. with sheets of 20,32 cm x 25,4 cm (8" x 10").

GAFCHROMIC HDV2 RADIOCHROMIC FILM BENEFITS

- Dynamic dose range from 10 Gy to 1.000 Gy
- Develops in real time without any post-exposure treatment
- Near tissue equivalent
- High spatial resolution
- Active coating exposed for detection of low energy photon and electron
- Marker dye in the active layer
- Stable at temperatures up to 60°C
- No dark room needed

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

QA PHANTOMS

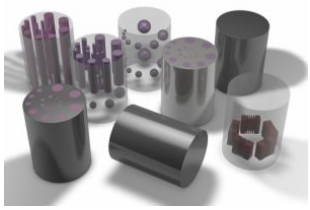


peo MEDICAL

Bertin Technologies is a global provider of advanced radiation detection and environmental monitoring solutions, specializing in handheld monitors, personal electronic dosimeters, environmental monitoring systems, and waste & recycling management technologies. Their instruments are designed to meet the rigorous demands of nuclear facilities, emergency response teams, and environmental agencies.

Product offering

Model 700-QA CT Imaging QA Kit for Atom & CT Dose Phantoms – CIRS



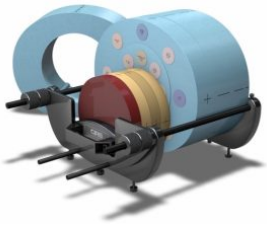
Model 061 Helical CT Phantom – CIRS

Model 610 AAPM CT Performance Phantom – CIRS

Model 026 DEXA Phantom – CIRS

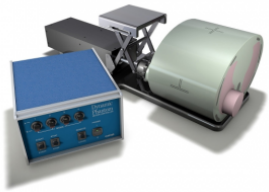
Model 600 3D Sectional Torso Phantom – CIRS

Model 062MQA CBCT Electron Density & Image Quality Phantom – CIRS



Models 090, 091 & 092 MicroMouse & Water Filled Mouse Phantoms – CIRS

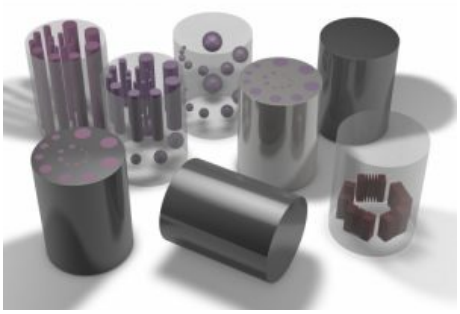
Models 18023 & 18043 Xsight Lung tracking Phantom Kit & 4D Planning Phantom – CIRS



Model 007TE Tissue Equivalent CT Dose Phantoms – CIRS

Model 004 CT Simulator for Bone Mineral Analysis – CIRS

Model 700-QA CT Imaging QA Kit for Atom & CT Dose Phantoms – CIRS



The Model 700-QA CT Imaging QA Kit for Atom & CT Dose Phantoms has been designed for evaluating CT performance in anthropomorphic phantoms.

Model 700-QA CT Imaging QA Kit for Atom & CT Dose Phantoms features:

- can be used in ATOM or CIRS 007TE phantoms
- 3 soft tissue inserts
- determines low contrast detectability
- evaluates spatial resolution
- 1 lung insert

Read more about the Model 700-QA CT Imaging QA Kit for Atom & CT Dose Phantoms on the CIRS website

Model 061 Helical CT Phantom – CIRS

The Model 061 Helical CT Phantom has been designed to test scanning protocols to verify that small low contrast lesions will be detected. The phantom contains a CT disk with clinically-relevant spherical targets that are 5, 10 and 20 HU above the background matrix.

Model 061 Helical CT Phantom features:

- usable on all standard and helical scanners
- compact
- valid contrast at all energy settings

Read more about the Model 061 Helical CT Phantom on the CIRS website

Model 610 AAPM CT Performance Phantom – CIRS

The CIRS Model 610 AAPM CT Performance Phantom: a single test object that measures ten distinct CT performance parameters.

Model 610 AAPM CT Performance Phantom features:

- contrast test object is adhered to the bottom of the tank that includes two rows of cavities from 1 to 0.125″ diameter
- design is based on the guidelines presented in Report 1 of the American Association of Physicists
- CT number linearity insert, high contrast resolution insert and slice width insert are housed in an 8.5″ diameter PMMA water tank

measurement capabilities:

- spatial resolution and line spread function
- noise
- slice thickness
- size independence
- HU linearity
- detectability/sensitivity
- beam hardening
- radiation dose
- spatial uniformity
- mechanical alignment

Read more about the Model 610 AAPM CT Performance Phantom on the CIRS website

Model 026 DEXA Phantom – CIRS

The Model 026 DEXA Phantom is a quality control tool for Dual-Energy X-ray Absorptiometry (DEXA) instruments, which features an acrylic-embedded calcium hydroxyapatite (CHA) step-wedge.

Model 026 DEXA Phantom features:

- no water bath needed
- realistic soft tissue mimic
- checks a range of densities
- FDA compliant
- universal Axial DEXA instrument compatibility
- Edge-Detection Challenge
- easy to carry and can be scanned in the bag

Read more about the Model 026 DEXA Phantom on the CIRS website

Model 600 3D Sectional Torso Phantom – CIRS

The Model 600 3D Sectional Torso Phantom has been designed for providing an accurate simulation of an average torso (22 cm posterior-anterior thickness) for medical imaging and dosimetry applications.

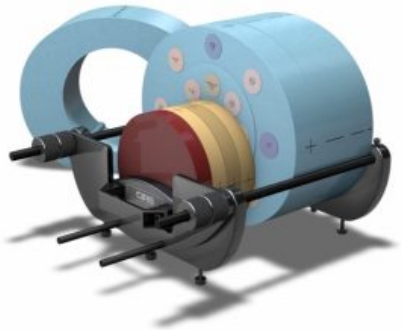
Model 600 3D Sectional Torso Phantom features:

- can be configured to accommodate a multitude of dose measurement media
- usable on any X-ray imaging or treatment device
- includes internal organ structures
- ideal for calibration, QA and training purposes when specific internal organs are of interest

Read more about the Model 600 3D Sectional Torso Phantom on the CIRS website

Model 600 3D Sectional Torso Phantom CIRS

Model 062MQA CBCT Electron Density & Image Quality Phantom – CIRS



The Model 062MQA CBCT Electron Density & Image Quality Phantom is an instrument that can be used for image quality assessment and electron density calibration of Cone Beam CT systems integrated in radiation therapy devices.

Model 062MQA CBCT Electron Density & Image Quality Phantom features:

- position simulated tissue materials in CT & CBCT energy range at 17 different locations
- uses ionization chambers for dose measurements
- optimized for volumetric imaging
- performs all CT Image QA tests for AAPM TG Report 1
- calibrates electron density in multi-slice CT and Cone Beam CT
- performs off-set and central axis measurements

Read more about the Model 062MQA CBCT Electron Density & Image Quality Phantom on the CIRS website

Models 090, 091 & 092 MicroMouse & Water Filled Mouse Phantoms – CIRS

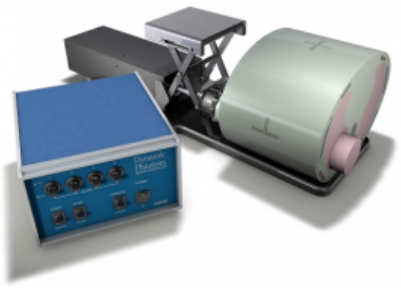
The Models 090, 091 & 092 MicroMouse & Water Filled Mouse Phantoms have been developed for providing standard of reference for micro CT scanners.

Models 090, 091 & 092 MicroMouse & Water Filled Mouse Phantoms features:

- solid or liquid filled
- lung, muscle and adipose
- water-filled Mouse Phantom contains 11 rods in a water-tight, polycarbonate housing
- provide tools for quantifying calcium and bone density with respect to X-ray attenuation and absorption properties
- 25 mg/cc – 750 mg/cc HA targets

Read more about the Models 090, 091 & 092 MicroMouse & Water Filled Mouse Phantoms on the CIRS website

Models 18023 & 18043 Xsight Lung tracking Phantom Kit & 4D Planning Phantom – CIRS



The Models 18023 & 18043 Xsight Lung tracking Phantom Kit & 4D Planning Phantom have been designed for QA and E2E testing on Cyberknife systems.

Models 18023 & 18043 Xsight Lung tracking Phantom Kit & 4D Planning Phantom features:

- validated and verified by Accuray (Cyberknife)
- execute E2E software analysis of the films (without CT number adjustment)
- visualize 4D treatment optimization using the MultiPlan System
- display detected respiratory motion of tissue-simulated lung, torso tumor and critical structures with Synchrony System
- use Xsight Spine Tracking System for initial phantom alignment

Xsight Lung tracking Phantom:

- represents an average human thorax in proportion, shape and composition
- pre-programmed motion controller, surrogate platform and motion actuator box for linear target motion
- 3D anthropomorphic spine with cortical and trabecular ribs, bone and lung lobes
- Lung Ball Cube Rod with tumor-simulating target and radiochromic film

4D Planning Phantom:

- rotating (manual) trabecular bone-equivalent spine with film insert
- can be interchanged with the XLT body and connected to the motion actuator box
- modified phantom body with lung lobes and spine
- high-density Lung Ball Cube Rod with tumor-simulating target and radiochromic film

Read more about the Models 18023 & 18043 Xsight Lung tracking Phantom Kit & 4D Planning Phantom on the CIRS website

Model 007TE Tissue Equivalent CT Dose Phantoms – CIRS

The CIRS Tissue Equivalent CT Dose Phantoms (model 007TE) accurately simulate the patient's anatomy in the range of sizes from small infants to large adult patients rendering more accurate and reliable CT dose data.

The phantom bodies are made from proprietary epoxy formulations that faithfully mimic the scatter properties and X-ray absorption of water or soft tissue within 1% in the diagnostic energy range.

Available are 4 head, 8 thorax and 8 abdominal phantoms of different sizes and ages.

Model 007TE Tissue Equivalent CT Dose Phantoms specifications:

- can be used on all CT scanners;
- inside hole sized for standard CT Dose probes, 1.30 cm diameter;
- simulates patient abdominal, thorax and head regions;
- from infant to large adult, size-specific options;
- made from tissue equivalent epoxy.

Read more about the Model 007TE Tissue Equivalent CT Dose Phantoms on the CIRS website.

Model 004 CT Simulator for Bone Mineral Analysis – CIRS

The Model 004 CT Simulator for Bone Mineral Analysis takes into account all the known sources of variance affecting the measurement of density in the vertebral area. The model 004 simulates the average patient's anatomy in terms of density and shape. Also materials are used which are essentially equivalent to human tissues as far as X-ray interactions are concerned, this includes age-related variations in vertebral composition.

Model 004 CT Simulator For Bone Mineral Analysis features:

- special scanner software is not required
- for mineral content and marrow fat: age related variable corrections
- accurate correlation for quantitative studies
- measure calcium hydroxyapatite content directly
- directly usable on any CT scanner
- simulation of the CT density, shape and size of human tissue
- effects monitoring of therapy on trabecular structure

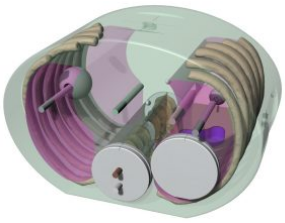
Read more about the Model 004 CT Simulator for Bone Mineral Analysis on the CIRS website.

Partner Sun Nuclear Corporation

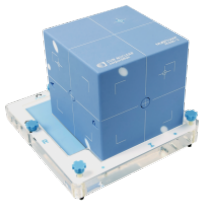
Sun Nuclear is a leading provider of comprehensive Quality Management solutions for radiation therapy and diagnostic imaging. Their portfolio encompasses positioning systems, dosimetry tools, QA phantoms, detectors, dose rate monitoring devices, analysis software, and training phantoms. These solutions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

Product offering

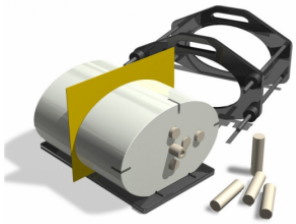
Model 036S-CVXX-xx E2E SBRT Phantom – CIRS



MultiPHAN™



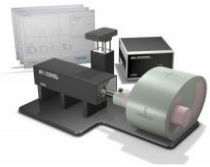
Model 002H5 IMRT Phantom for Film and Ion chamber Dosimetry – CIRS



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

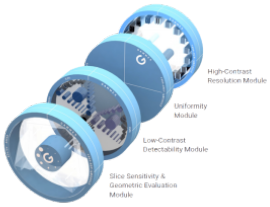
Shoulder, Head and Neck End-to-End Verification Phantom (SHANE)

Model 008A Dynamic Thorax Phantom – CIRS



Multipurpose & Endoscopic Phantom (Model ATS 570) – CIRS

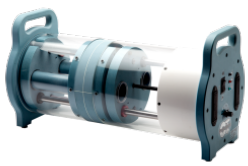
Advanced iqModules™ – Sun Nuclear



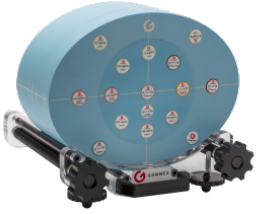
CTDI Phantoms – Sun Nuclear

Mercury 4.0 Phantom – Sun Nuclear

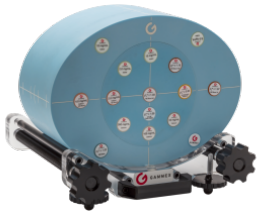
CT Perfusion Phantom – Sun Nuclear



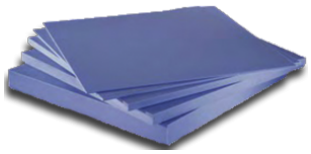
Advanced Electron Density Phantom – Sun Nuclear



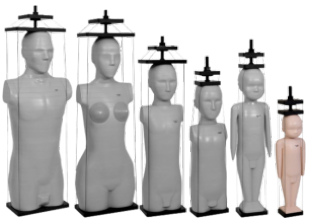
Multi Energy CT Phantom – Sun Nuclear



Solid Water HE – Sun Nuclear



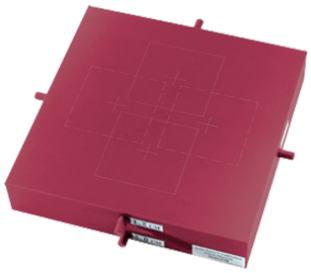
Model 701-706 ATOM Dosimetry Verification Phantoms – CIRS



Model 457-CTG – Sun Nuclear

Model 457, Standard Grade Solid Water – Sun Nuclear

Model 458 – Calibration Check Phantom – Sun Nuclear



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

Model 430 – Beam Alignment Test Instrument – Sun Nuclear

Model 432 – CT Perfusion Phantom – Sun Nuclear

Model 472 – Dual Energy Characterization CT Phantom – Sun Nuclear

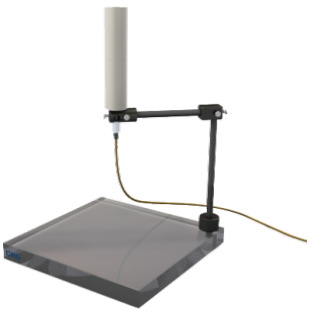
Model 461A – Head / Body CT Phantom – Sun Nuclear

CT ACR 464 Phantom – Sun Nuclear

Model 464 – ACR CT Accreditation Extension Plates – Sun Nuclear

Model 602 3-Dimensional Torso Phantom – CIRS

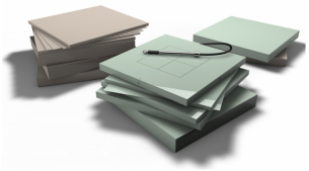
Model 670 & 670S Water Equivalent Mini Phantom – CIRS



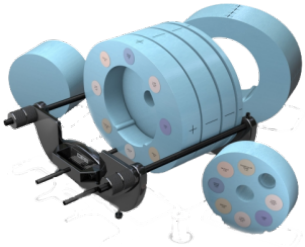
Model 800 NEMA PET Scatter Phantom – CIRS

Model 801-P Virtually Human Male Pelvis Phantom – CIRS

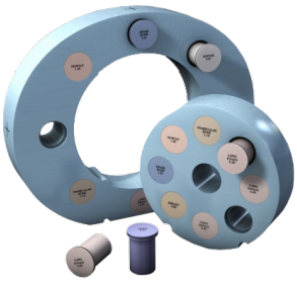
Model PW Plastic Water – CIRS



Model 062MA CBCT Electron Density Phantom – CIRS



Model 062M Electron Density Phantom – CIRS

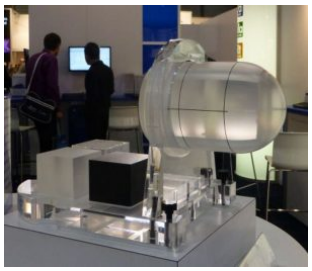


Model 038 STEEV Steriotactic End-to-end Verification Phantom Patient

Model 023 ISO Cube Daily QA Phantom – CIRS

Model 009 Cube 20 Phantom – CIRS

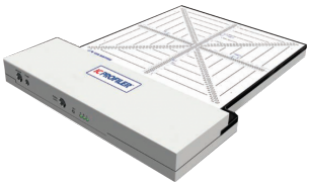
StereoPHAN Phantom – Sun Nuclear



SRS Profiler – Sun Nuclear

TomoDose Scanning System – Sun Nuclear

IC Profiler – Sun Nuclear



Model 007 & 007A CT Dose Phantoms – CIRS

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

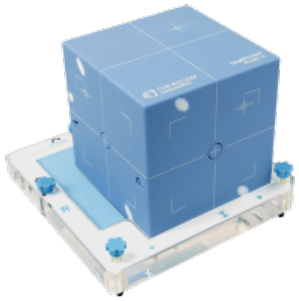
The E2E® SBRT Phantom with Removable Spine is a single tool for end-toend commissioning and routine QA. The anthropomorphic, tissue-equivalent
thorax phantom contains articulated spine, ribs, and lungs. All materials are
suitable for use in kV and MV energies.

- 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

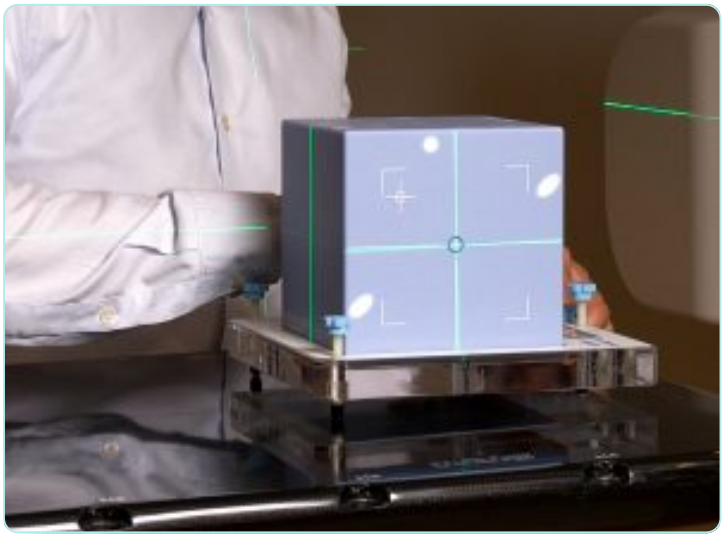
MultiPHAN is simple, yet comprehensive, and can validate alignment of:

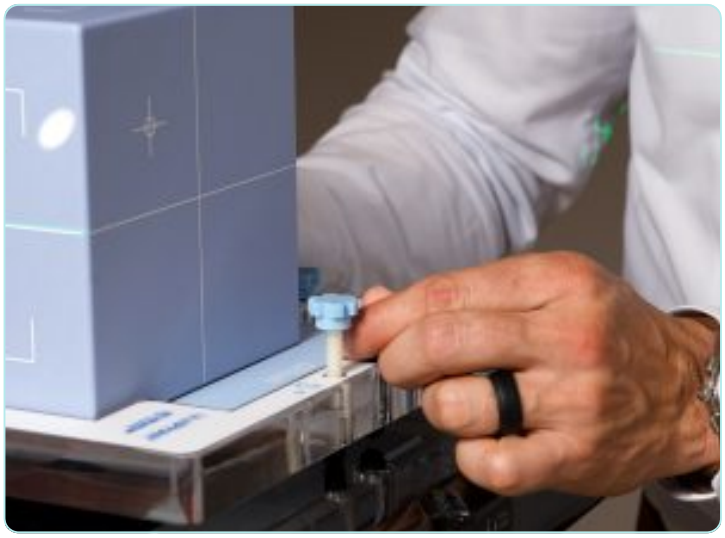
- Treatment beam isocenter
- Light field
- Field sizes
- Lasers
- kV CBCT
- MV CBCT
- MV EPID
- TomoTherapy® MVCT
- Treatment couch
- Optical Guidance systems

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.

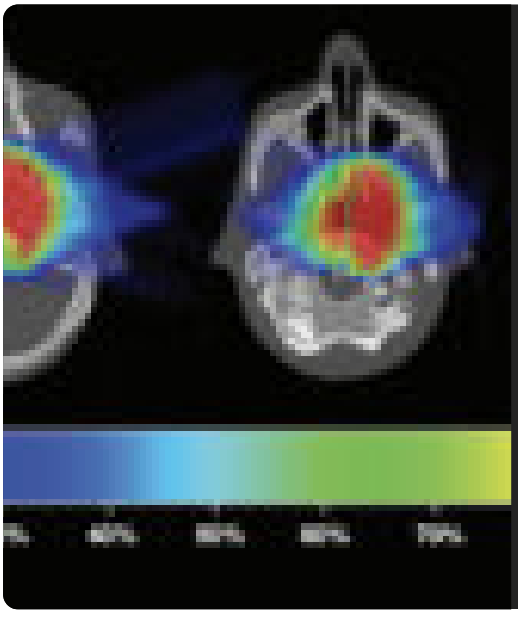
This phantom is ideal for treatment plan evaluation in high density gradient locations. This is because of the tissue equivalency of detailed internal structures. The internal structures include brain, bone with cortical and trabecular distinction, larynx, trachea, fully-open sinus cavities, nasal and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

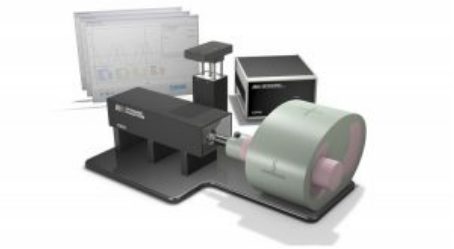
The high-fidelity anthropomorphic design contains complex internal anatomy that provides a realistic clinical simulation to evaluate the challenging effects of intra- and extracranial anatomies.Head and shoulder portions are manufactured as a single piece to enable use with various fixation devices. 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.

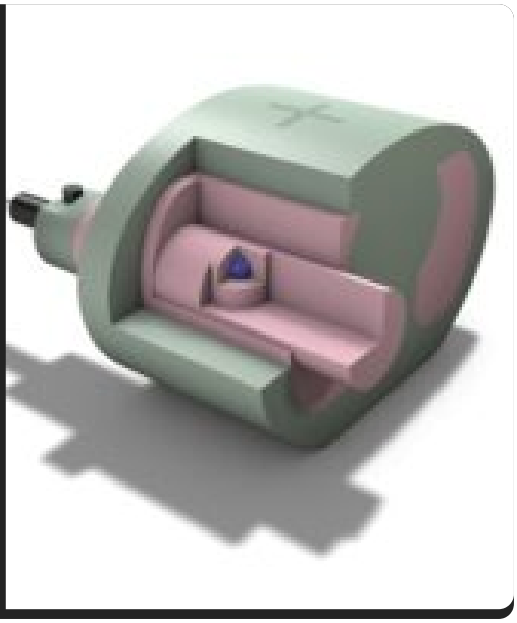
The phantom body represents an average human thorax in shape, proportion and composition.

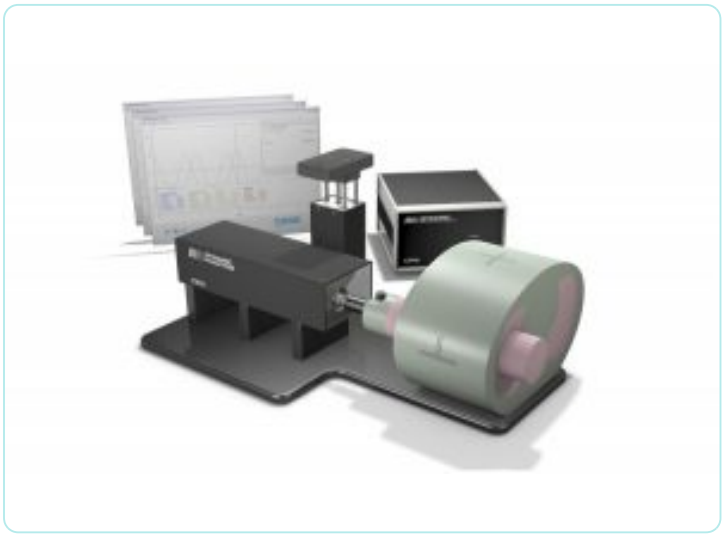
You can control the target and surrogate motion independently with the CIRS Motion Control Software. The graphical user interface provides an unlimited variety of motions while simplifying the operation of the phantom.

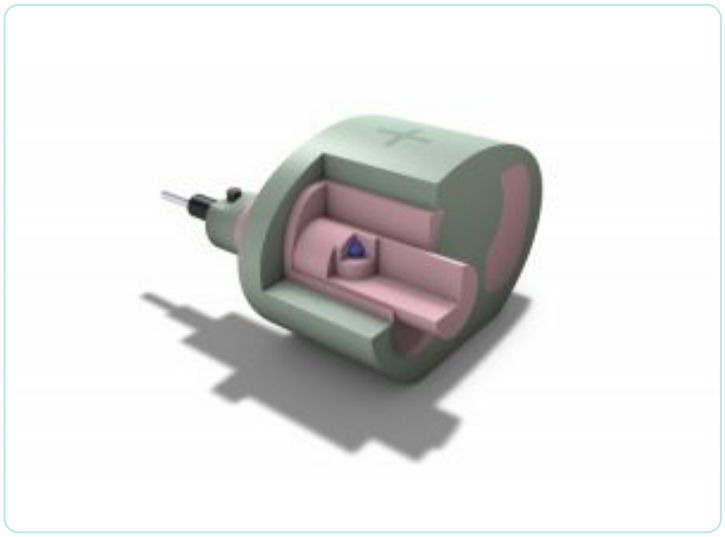
DYNAMIC THORAX PHANTOM FEATURES

- 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

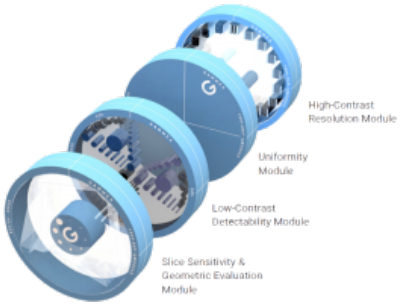
- Testing uniformity
- Depth of penetration
- Beam profile, focal zone, lateral response width
- Vertical measurement calibration linear
- Axial and lateral resolution
- Horizontal measurement calibration sector
- Contrast resolution
- Greyscale contrast sensitivity
- Dead zone assessment

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/

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

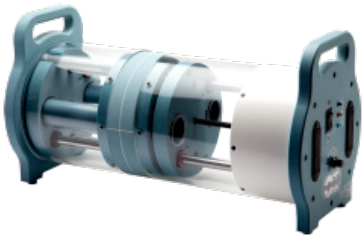
Collect and analyze data for advanced CT testing recommended by AAPM Task Group 233:

- 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!

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

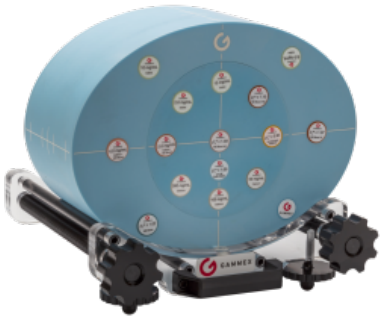
CT ACR-464 Phantom link – https://www.sunnuclear.com/products/ct-acr-464-phantom

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

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

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

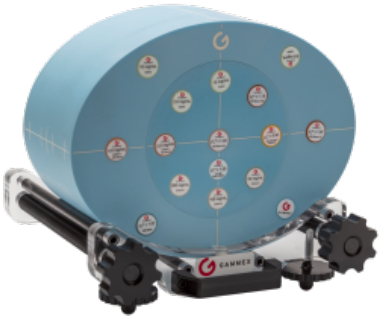
RapidCHECK Diagnostic QA Software – https://www.sunnuclear.com/products/rapidcheck-software

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:

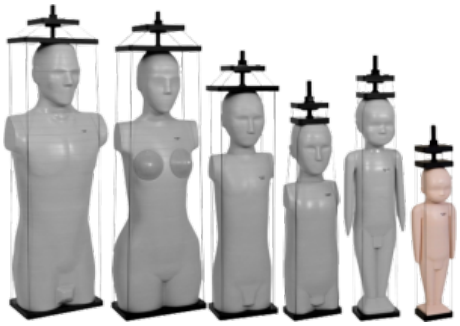
- wide range of sizes and dimensions.
- moldable material for custom requests
- rigid construction eliminates broken ion chambers
- wide range of applications and uses
- standard ranges of thicknesses from 0.1 to 6.0 cm
- ion chamber cavities free from air pockets or voids
- economical

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.

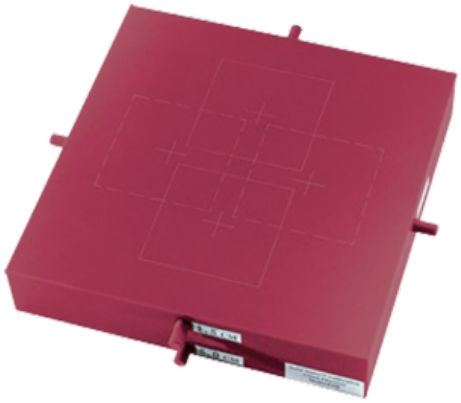
Gammex has the ability to provide ion cavities in slabs of 2.0 cm thickness or greater to accommodate most commercially available ion chambers.

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.

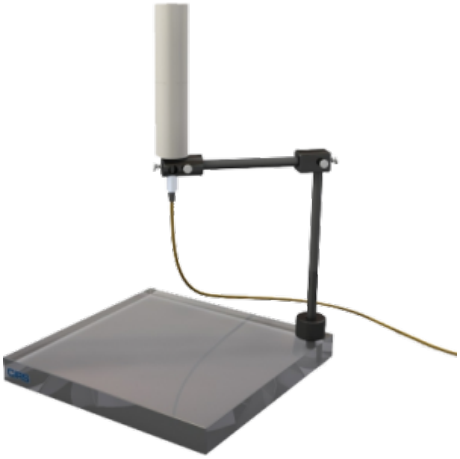
Model 602 3-Dimensional Torso Phantom features:

- 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.

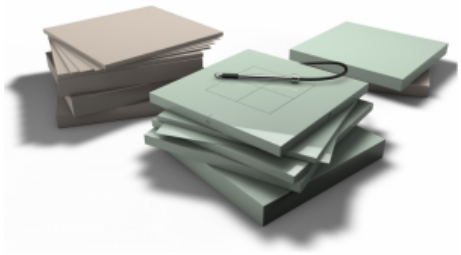
Model 801-P Virtually Human Male Pelvis Phantom features:

- 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

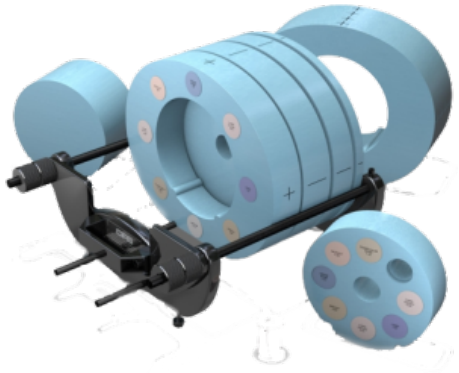
CIRS water equivalent materials specific energy ranges:

- 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

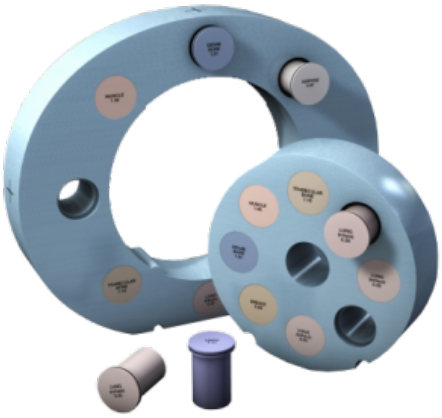
Brochure CBCT Electron Density & Image Quality Phantom System

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

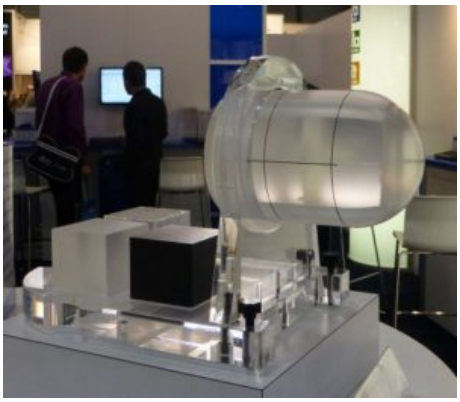
The Model 009 Cube 20 Phantom has been designed for routine QA in RT and IMRT applications where quick set-up and ease of use are important. The cube is manufactured from Plastic Water DT which mimics the linear attenuations of water within 1% from 50 keV to 15 MeV.

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

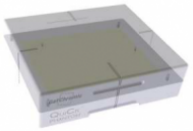
Read more about the Model 007 & 007A CT Dose Phantoms on the CIRS website.

Partner Ashland

Ashland is a global leader in specialty materials, offering innovative solutions that enhance safety, precision, and patient outcomes across various medical disciplines. Their portfolio supports healthcare providers in radiation therapy, diagnostic imaging, wound care, and regenerative medicine.

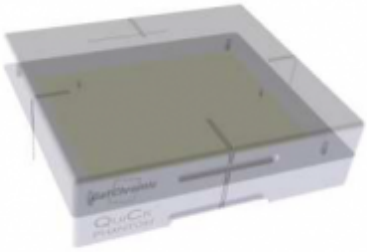
Product offering

Gafchromic Quick Phantom – Ashland



Gafchromic Quick Phantom – Ashland

The Gafchromic Quick Phantom (Ashland) is used for accurate and fast radiation therapy QA procedures. The device works with Gafchromic EBT-3 film.



Gafchromic Quick Phantom features:

- dimensions: 29 x 32 x 5 cm³
- two-pin indexing bar
- provides accurate, quick and repeatable positioning of the phantom on both treatment couches and CT
- phantom body: two slabs of CIRS Plastic Water water-equivalent to within 1% from 150 keV to 25
- accurate and quick setup

QA MEASUREMENT SYSTEMS

peo MEDICAL

Partner Bertin Technologies

Bertin Technologies is a global provider of advanced radiation detection and environmental monitoring solutions, specializing in handheld monitors, personal electronic dosimeters, environmental monitoring systems, and waste & recycling management technologies. Their instruments are designed to meet the rigorous demands of nuclear facilities, emergency response teams, and environmental agencies.

Product offering

ZEUS: MRGRT MOTION MANAGEMENT QA PHANTOM (Model 008Z) – CIRS

ZEUS: MRGRT MOTION MANAGEMENT QA PHANTOM (Model 008Z) – CIRS

IMAGE ACQUISITION • TREATMENT PLANNING • DOSE DELIVERY

The integration of MR imaging in radiation therapy facilitates real-time motion management. The CIRS Zeus MRgRT Motion Management QA phantom is designed to address such needs. Zeus is MR Safe due to the use of piezoelectric motors and non-ferromagnetic materials. The two piezoelectric motors move a cylindrical insert, which contains a tracking target, through a gel/liquid fillable body by rotating it inde-pendently from the motion in the Inferior-Superior direction.

The moving insert contains an organic shaped target (tumor) filled with gel, which is surrounded by the same background gel used to fill the body. The body represents a heterogenous background due to simulated lungs, liver, kidney, and spine. The simulated organs are anatomical in shape and have a life-like spatial relationship. They are filled with gels that provide contrast in CT and MR versus the background gel, which fills the void between the organs. Be-sides imaging, all organs, except for the lungs, offer ion chamber dosimetry cavities, which allow for completing an entire QA process; from imaging to planning to verification of dose delivered.

ZEUS

Zeus is designed as a single unit with a piezo actuator fixed permanently to a base plate on which the MRI body “snaps”. This allows for quick setup, removal, filling, and storage purposes. The phantom’s base plate has machined slots on the bottom, which allow for the use of indexing bars for precise and repeatable/reproducible phantom-MRI (MRI-Linac) alignment.

CIRS Motion Control software drives this phantom as well as the other phantoms from the CIRS dynamic family. In addition to multiple built-in motion profiles, which are more appropriate for commissioning and routine QA, the software allows for the import of complex patient-specific respiratory waveforms. The user can edit the waveforms for amplitude, sample rate, cycle time, phase shift, and baseline position. It also allows the setup of independently controllable waveforms for linear and rotation motion of the insert. Zeus’ can gate Inferior-Superior motion of the insert/moving target based on amplitude to allow verification of beam latency. The motion controller box provides an interface (BNC physical input type) for the Beam-on Beam-off signal, which is read by the Motion Control software to calculate the Beam Latency specific to hybrid MRI-Linac systems.

Motion Management QA Phantom Features:

- Piezoelectric motors, non-ferromagnetic materials => MR safe
- Allows for positioning within magnet bore due to piezoelectric motors
- Easy setup, removal, alignment, positioning
- Organic shaped Organs at Risk and moving target
- Can be imaged in MRI, CT, PET and hybrid systems
- Ion chamber dosimetry in Liver, Kidney, Spine and moving target

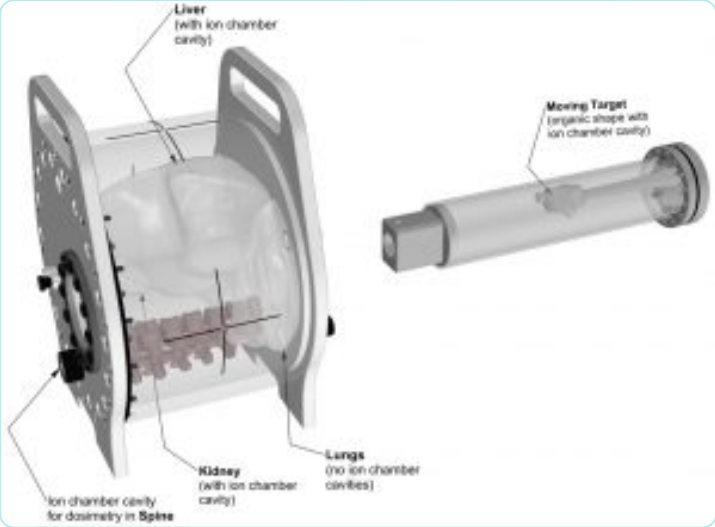
- 3D tissue equivalent Spine for bone landmark
- Two independently programmable motions for the moving target
- Import, edit, and save patient specific breathing waveforms in addition to built-in QA waveforms
- Calculate beam latency from beam-on, beam-off signal

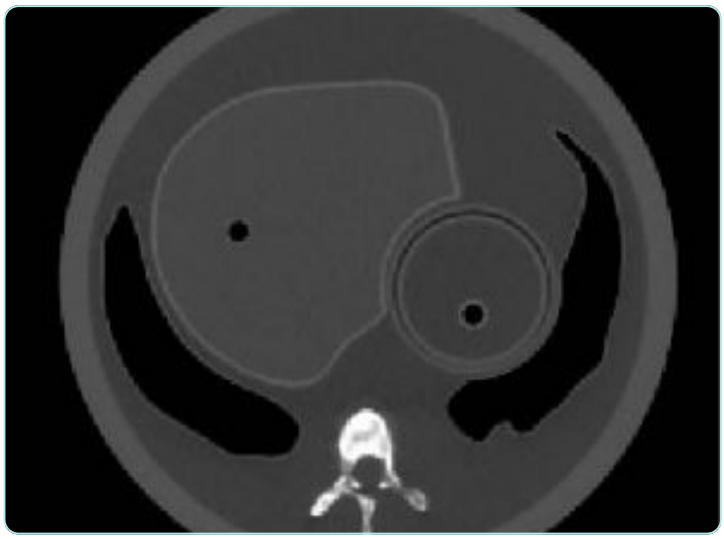
NOTE: *This product or an optional accessory of this product requires a CIRS dosimetry cavity code before an order can be placed. Please refer to the Dosimetry Cavity Codes document to identify the CIRS code for the probe you intend to use with this product.*

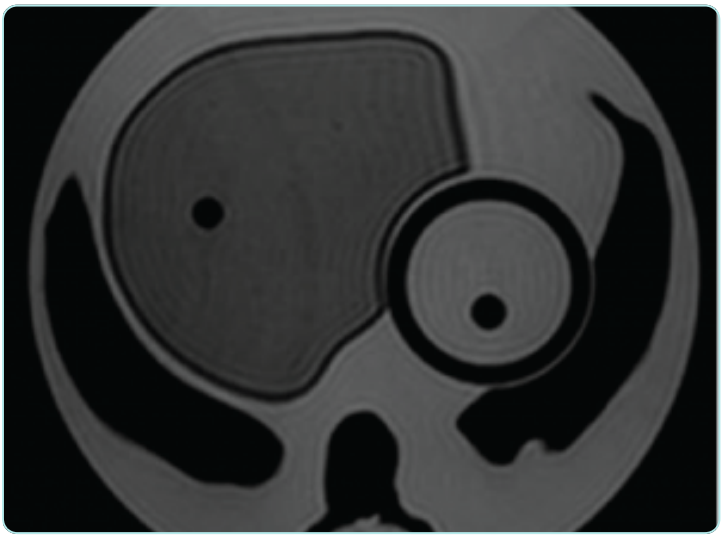
If you want to read more about this phantom, read this PEO article.

https://youtu.be/JHoB828shRQ

SCAN TO VIEW VIDEO







References

Snyder, Jeffrey E; St-Aubin, Joël; Yaddanapudi, Sridhar; Boczkowski, Amanda; Dunkerley, David AP; Graves, Stephen A; Hyer, Daniel E; 'Commissioning of a 1.5 T Elekta Unity MR-linac: A single institution experience'. *Journal of Applied Clinical Medical Physics*. 2020; 21 (7): 160-172. View

Schneider, Sergej 'Inter-and Intrafraction Motion Management for MR guided Proton Therapy of Pancreatic Carcinoma'. 2020; View

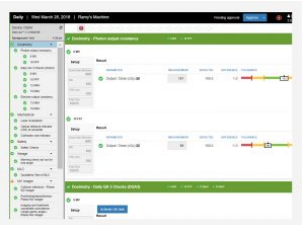
Lamb JM, Ginn JS, O'connell DP, et al. Dosimetric validation of a magnetic resonance image gated radiotherapy system using a motion phantom and radiochromic film. J Appl Clin Med Phys. 2017;18(3):163-169. View

Partner 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.

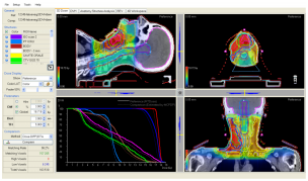
Product offering

SunCHECK™ Machine – Sun Nuclear



SunCHECK™ Platform – Sun Nuclear

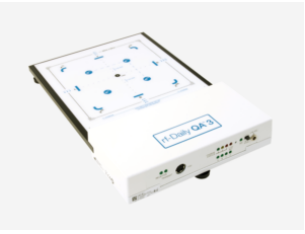
3DVH Software for Patient QA – Sun Nuclear



MapCHECK®3 – Sun Nuclear

SRS MapCHECK – SunNuclear

Daily QA 3 – Sun Nuclear

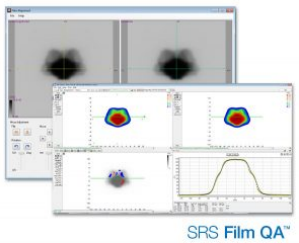


EDGE Detector – Sun Nuclear

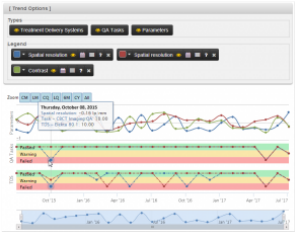
SunCHECK™ Patient

DoseCHECK – Sun Nuclear

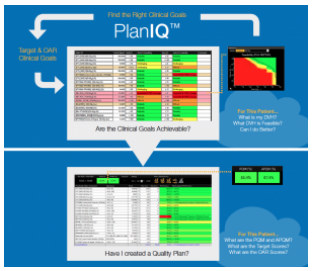
SRS Film QA Software – Sun Nuclear



SNC Machine Software – Sun Nuclear

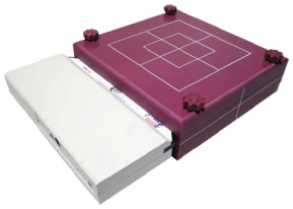


PlanIQ Software – Sun Nuclear



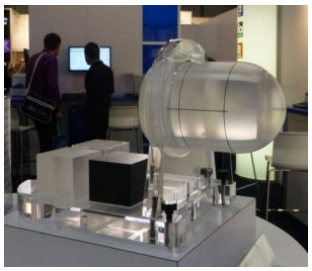
Respiratory MotionSim (RMS) – Sun Nuclear

MapPHAN – Sun Nuclear

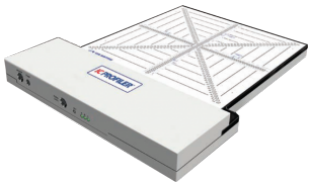


ArcCHECK 4D – Sun Nuclear

StereoPHAN Phantom – Sun Nuclear



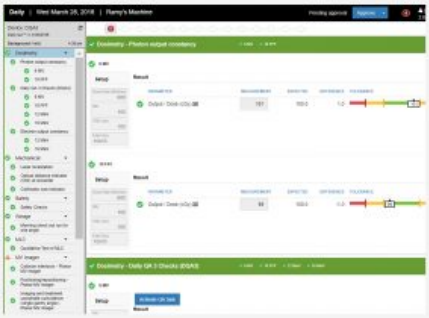
IC Profiler – Sun Nuclear



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,

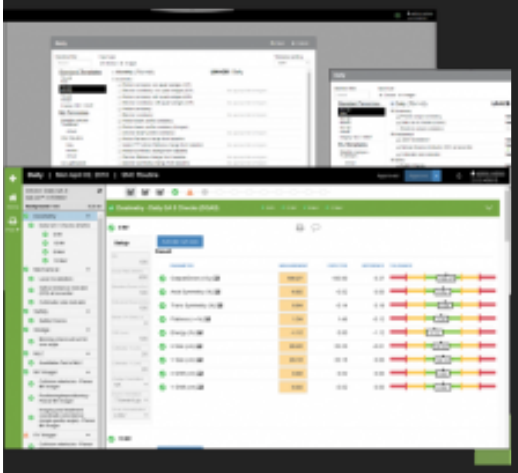
Hamilton Medical Center

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

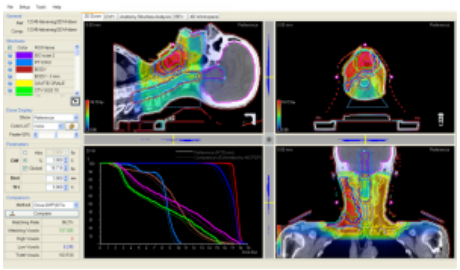
SunDEPLOYS™

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.

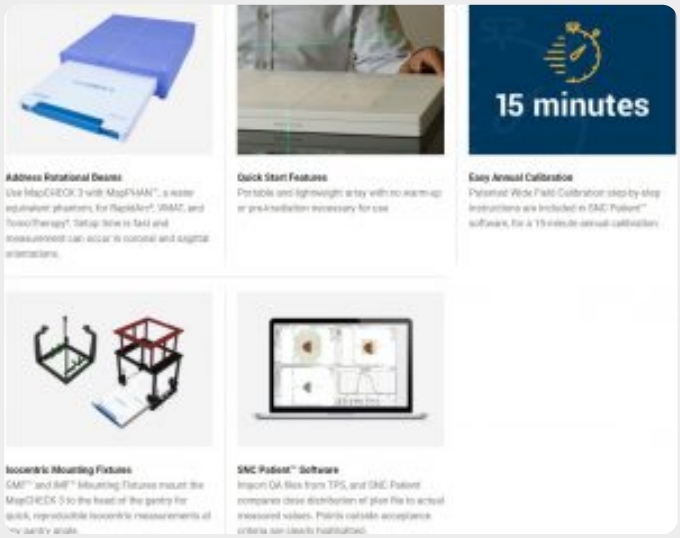
It offers the highest detector density, highest sensitivity, and largest field size of 2D arrays. Plus, it’s uniquely TG 218-compliant.

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

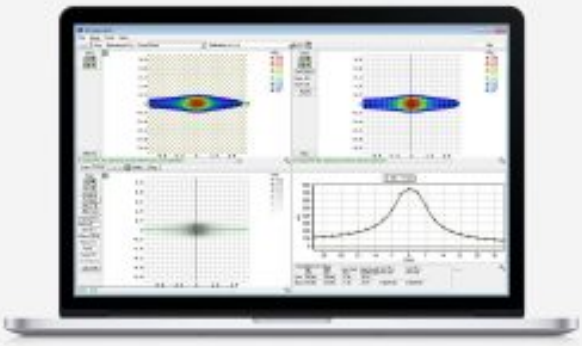
MapCHECK is proven to efficiently detect output factor, MLC, and grid size errors. SRS MapCHECK prevents the most common sources of SRS treatment errors.

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.

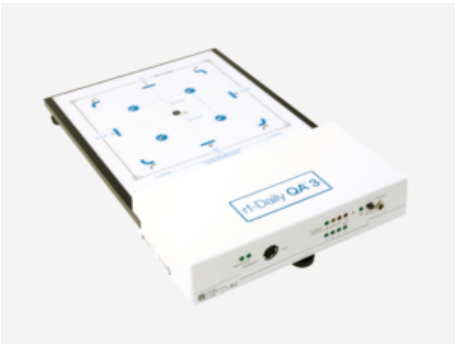
Would you like to know more?

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

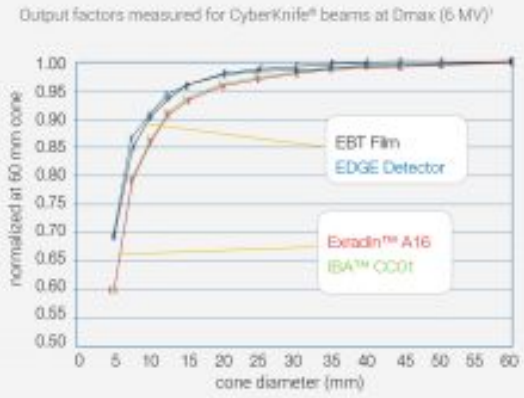
EDGE Detector™ characterizes penumbra more precisely and with less averaging than ion chambers, making it the preferred detector for small field beam modeling and QA.

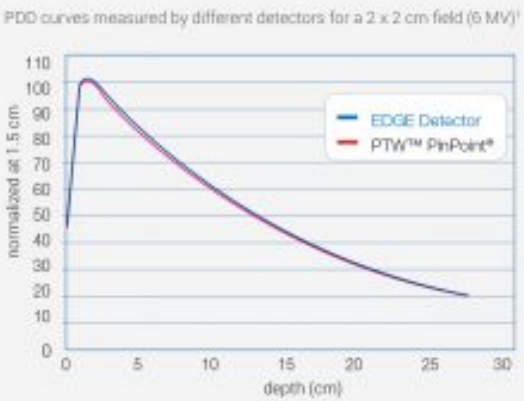
Waterproof and highly accurate, it works with all common water phantoms for SRS and IMRT beam modeling and TPS commissioning.

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

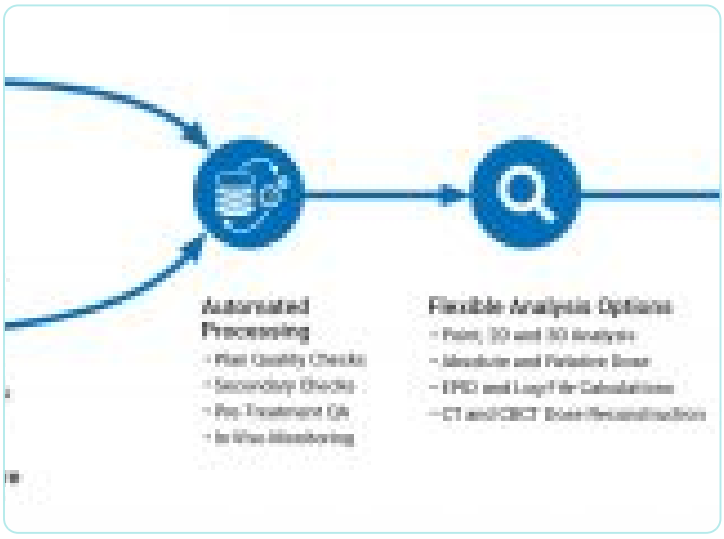
Independent Patient QA in a Single Workflow

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

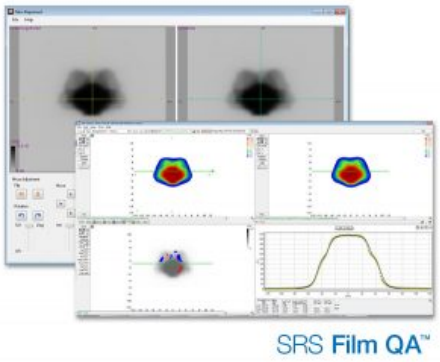
Version 1.0 includes support for:

- 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:

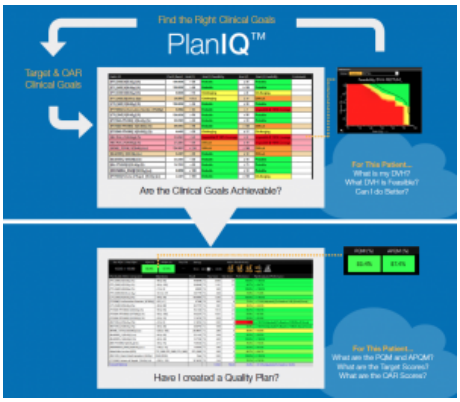
- Sun Nuclear: MV-QA, kV-QA, FS-QA, WL-QA
- Phantom Laboratory: CatPhan 503, 504, 600
- Varian: Las Vegas Phantom
- Gammex: 464
- Standard Imaging: PipsPro Phantoms
- Leeds: TOR 18FG

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.

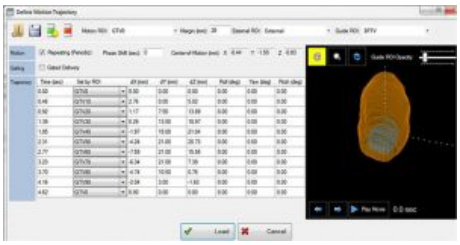


PlanIQ Software features:

- 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.

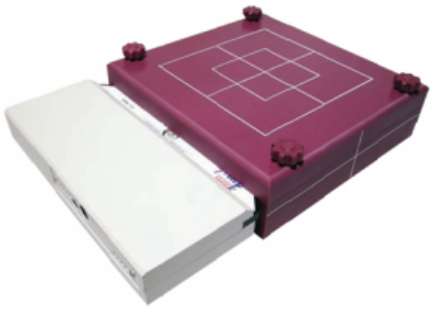
Respiratory MotionSim features:

- 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.



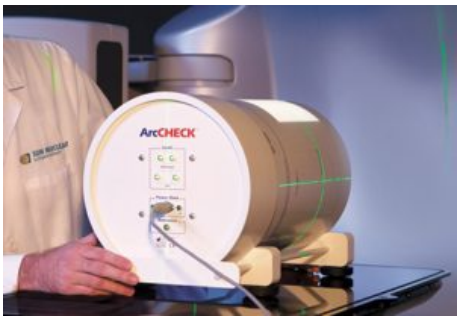
MapPHAN features:

- 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:

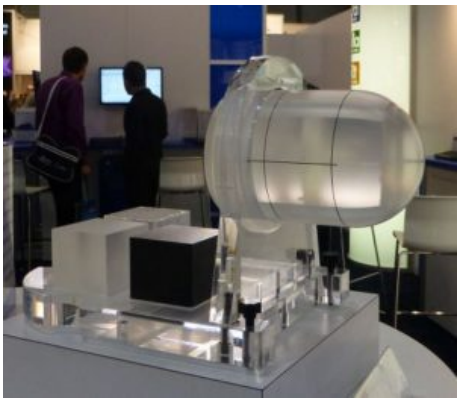
- smallest available detectors for accurate measurements
- BEV is consistent regardless of gantry angle
- 3D and DVH Analysis
- Flattening Filter Free (FFF)
- easy setup and lightweight (16kg)
- measure both composite and per control point
- real-time updates (50ms)

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

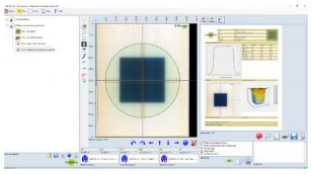
Read more about the IC Profiler Scanning System on the Sun Nuclear website

Partner Ashland

Ashland is a global leader in specialty materials, offering innovative solutions that enhance safety, precision, and patient outcomes across various medical disciplines. Their portfolio supports healthcare providers in radiation therapy, diagnostic imaging, wound care, and regenerative medicine.

Product offering

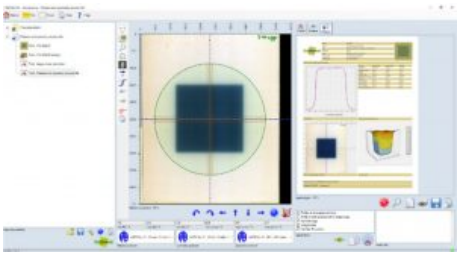
FilmQA Pro™ Software version 7 – Ashland



FilmQA Pro™ Software version 7 – Ashland

a sophisticated, quantitative analysis tool for Gafchromic™ Film

FilmQA Pro™ software is a sophisticated, quantitative analysis tool specifically designed to simplify and streamline the intensity-modulated radiation therapy quality assurance (IMRT QA). Our software is also effective for QA of SRS, SBRT and VMAT procedures. It allows you to scan or open images of exposed film and calculate the optimized dose maps.



FilmQA Pro™ software uses proprietary multi-channel dosimetry which eliminates or mitigates film and scanner artifacts by detecting whether errors are being made during scanning. In addition,, the software also has the one-scan analysis feature which combines calibration and plan verification in a single scan. The one-scan protocol requires only the patient film, a reference patch, and an unexposed patch. This protocol eliminates error sources such as interscan variability, which enables you to reduce errors to within 2 percent.

With FilmQA Pro™ software, you can get your results in minutes, post-exposure growth no longer is an issue and there is no waiting overnight for changes in the film to diminish. You can do an analysis any time you want, even at a moment's notice. The software delivers gamma passing rates ≥ 95 percent at 2 percent at 2 mm instead of using 3 percent at 3 mm.

key features and benefits

- lateral scan correction: apply a correction to compensation for lateral artifacts that can show in the scan
- new user friendly interface with a quick start menu
- one-scan protocol: fast and efficient method to achieve dose accuracy within 2%
- triple-channel dosimetry: use three color channels to optimize accuracy of dose calculations
- accurately calibrate: an entire lot with just four strips of film using our film-specific mathematical function
- quick-start screen: easily access the module you need at start-up
- dose error recognition: ability to identify accuracy of delivered dose
- superior resolution: get 100 percent of the picture from millions of measurements instead of just 0.1 percent
- no angular dependence: shoot the film from all angles, an entire plan on a single Gafchromic™ film, and validate the plan in the same way that the patient receives it

FilmQA Pro™ Software carries a CE Mark