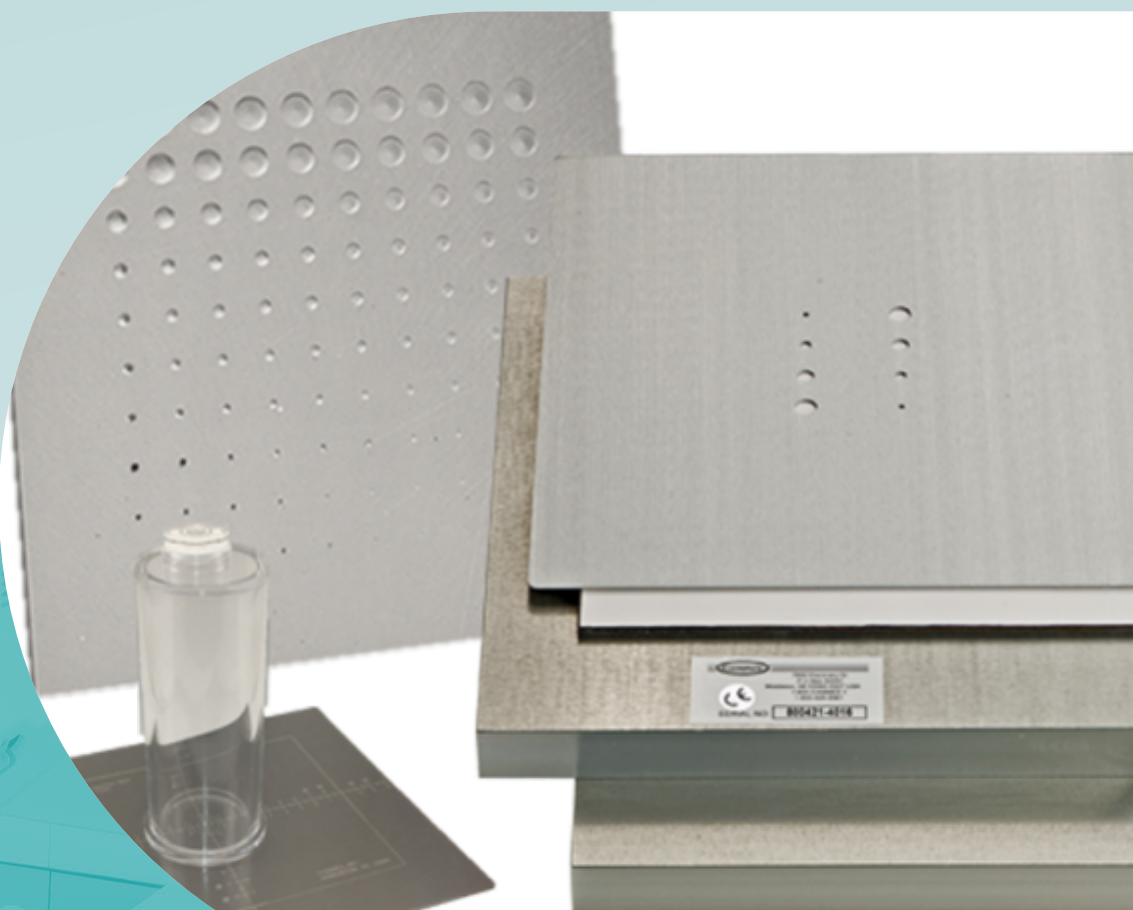


# DIVERSEN & ACCESSOIRES



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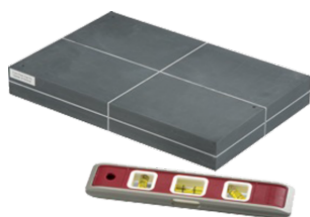
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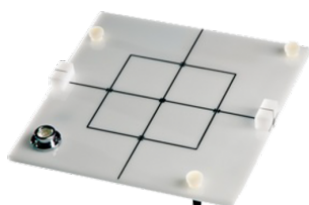
Sun Nuclear is a leading provider of comprehensive Quality Management solutions for radiation therapy and diagnostic imaging. Their portfolio encompasses positioning systems, dosimetry tools, QA phantoms, detectors, dose rate monitoring devices, analysis software, and training phantoms. These solutions 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**



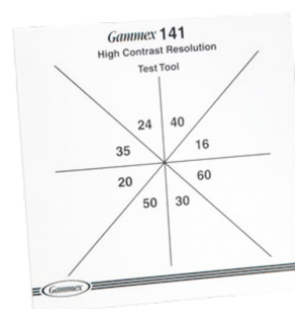
**Model TM-99A -  
Digital Thermometer -  
Sun Nuclear**



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



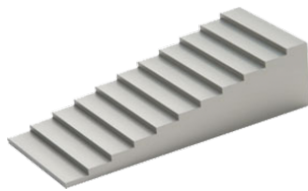
**Model 141 / 141H -  
High Contrast  
Resolution Test Tools  
- Sun Nuclear**



**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**



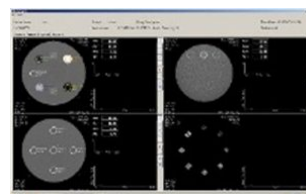
**Model 622 - Light  
Field Ruler - Sun  
Nuclear**



**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



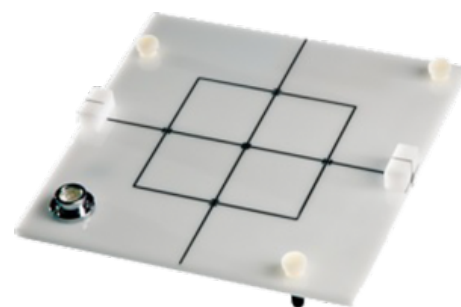
## Model 443 - Daily Laser and Light Field Plate - Sun Nuclear



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 measuring radiation 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 uniformity
- 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

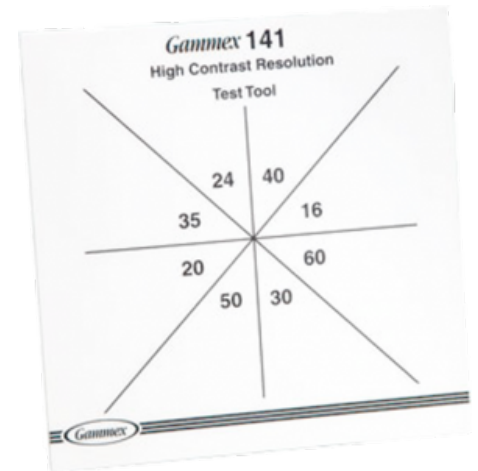
An important measure of your fluoroscopy system is its high contrast resolution. This test is used to assess the resolving power of your system and can be done easily with Sun Nuclear's model 141 and 141H High Contrast Resolution Test Tools with Gammex technology.

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](#).





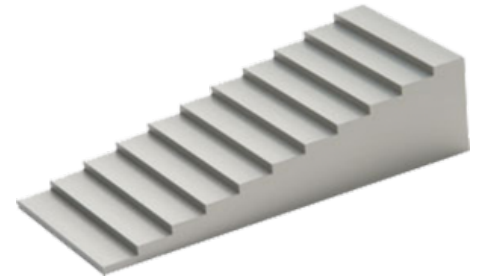
## Model 117 - Radiographic Aluminum Stepwedge - Sun Nuclear

The Radiographic Aluminum Stepwedge from Sun Nuclear (formerly Gammex) is the standard tool for evaluating the dynamic range (latitude) of a digital or 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

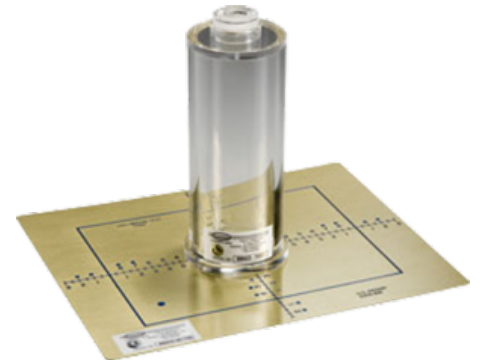




## Collimator and Beam Alignment Test Tools - Sun Nuclear

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](#).





## 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 accommodates 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 handbook 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 (7° 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

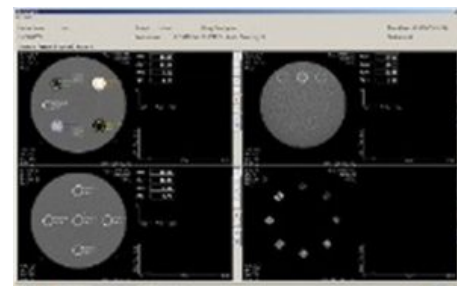


The Software for the ACR CT Accreditation Phantom is designed to be an integral part of the American College of Radiology (ACR) CT Accreditation Program. The software was developed as an option that can be used to greatly simplify the data recording, storage and comparison.

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](https://www.ortec-online.com).

