

StereoPHAN™

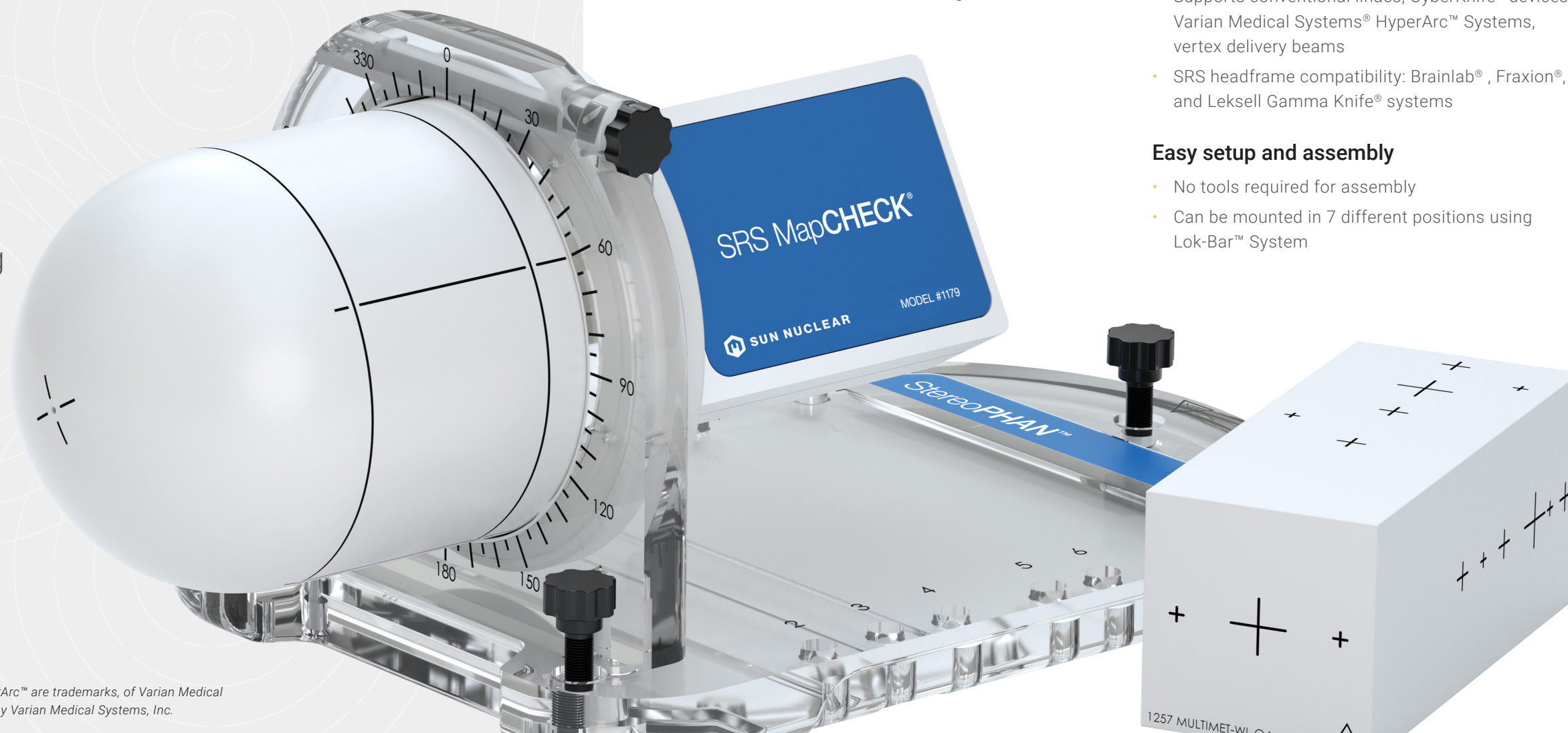
End-to-End Stereotactic
Commissioning & QA



SUN NUCLEAR
A MIRION MEDICAL COMPANY

Versatile, Complete Stereotactic QA

StereoPHAN™ streamlines stereotactic end-to-end testing and QA. It's easy and efficient to use — no tools required for setup across tests — and it works with a variety of detectors (ion chambers, arrays, film, and accessories).



Perform testing on all aspects of stereotactic planning and delivery – MRI/CT image fusion, CT to linac patient alignment, and treatment planning QA.

Confident Program Commissioning

- Test all aspects of stereotactic planning and delivery
- MRI/CT image fusion, CT to linac patient alignment, and treatment planning QA
- Rotate phantom up to 360° and combine with inserts for sagittal, coronal and transverse plane measurements within 0.1 mm accuracy
- Absolute, relative and point dose dosimetry QA measurements at isocenter with ion chambers; relative dose distribution using film

Versatile End-to-End Stereotactic QA

- Use with SRS MapCHECK® array for film-less, patient-specific QA for challenging small field and MLC-based SRS cases
- Use with MultiMet-WL Cube for Single-Isocenter Multiple-Target (SIMT) off-axis verification
- Use with AVa™ Phantom for Surface-Guided Radiotherapy (SGRT) positioning and repositioning

Multi-Modality Compatibility

- Supports conventional linacs, CyberKnife® devices, Varian Medical Systems® HyperArc™ Systems, vertex delivery beams
- SRS headframe compatibility: Brainlab®, Fraxion®, and Leksell Gamma Knife® systems

Easy setup and assembly

- No tools required for assembly
- Can be mounted in 7 different positions using Lok-Bar™ System

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SRS MapCHECK®

SRS Patient QA, No Film

Designed to insert into the StereoPHAN, the SRS MapCHECK supports patient-specific QA for linac-based and CyberKnife treatment machines.

- Replaces film, providing absolute and relative dose measurement in a single measurement.
- Detector spacing and resolution specifically designed for stereotactic applications
 - Array size: 77 mm x 77 mm
 - Measures field sizes as small as 5 mm
 - 5 diodes in 5 mm cone
- Easy-to-use and efficient software

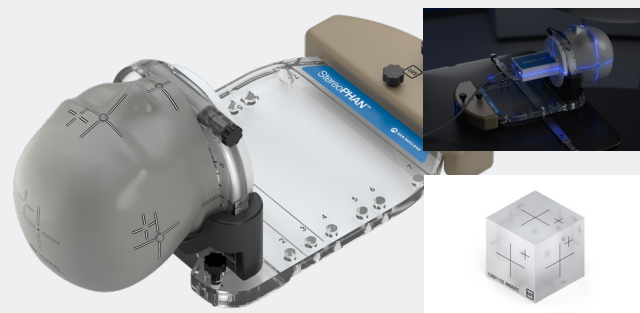


AVa™ Phantom

SGRT Alignment Verification

An accessory to the gold standard StereoPHAN™, the AVa phantom enables comprehensive tracking for surface-guided radiation therapy (SGRT) applications.

- Visible and trackable by SGRT systems
- Fiducials and markers for IGRT alignment and verification, including offset positions
- 3-Axis Off-Set StereoPHAN Insert with hidden fiducials matching the position of AVa's external ones for couch and reference point positioning verification with IGRT systems



Patent pending

MultiMet-WL Cube

Targeting Accuracy Check for MultiMet SRS

Treat off-axis targets with improved certainty during Single-Isocenter Multiple-Target (SIMT) SRS delivery. The MultiMet-WL Cube efficiently measures the precision of targets up to 7 cm off-axis, to within 0.1 mm accuracy.

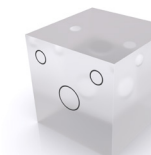


StereoPHAN Inserts



MultiMet-WL Cube

Identifies off-axis and rotational sources of error – Gantry, Couch or Collimator – in 6 degrees of freedom



CT/MRI

Verifies accuracy of an image fusion algorithm



MRI Signal Generator

Aids in MRI image acquisition (optional)



Ion Chamber

Measures dose with active volume positioned at geometric center of the phantom; drill to fit Ion Chambers as specified.



Universal Spacer

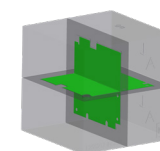
Precisely positions the measurement inserts in phantom cylinder



Multi-Film/Film

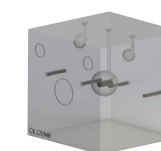
Measures dose profiles and relative dosimetry at a single or multiple planes

StereoPHAN Inserts for CyberKnife® Support



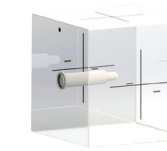
Perpendicular Film

Measure dose profiles and features 24k fiducial markers and orientation marks (same film as Accuray® Phantom)



CT

Verifies accuracy of CT/MRI image fusion algorithm using three varying size cavities filled with mineral oil



Chamber

Measures dose at the geometric center of the phantom.



Brainlab®



Elekta Fraxion®

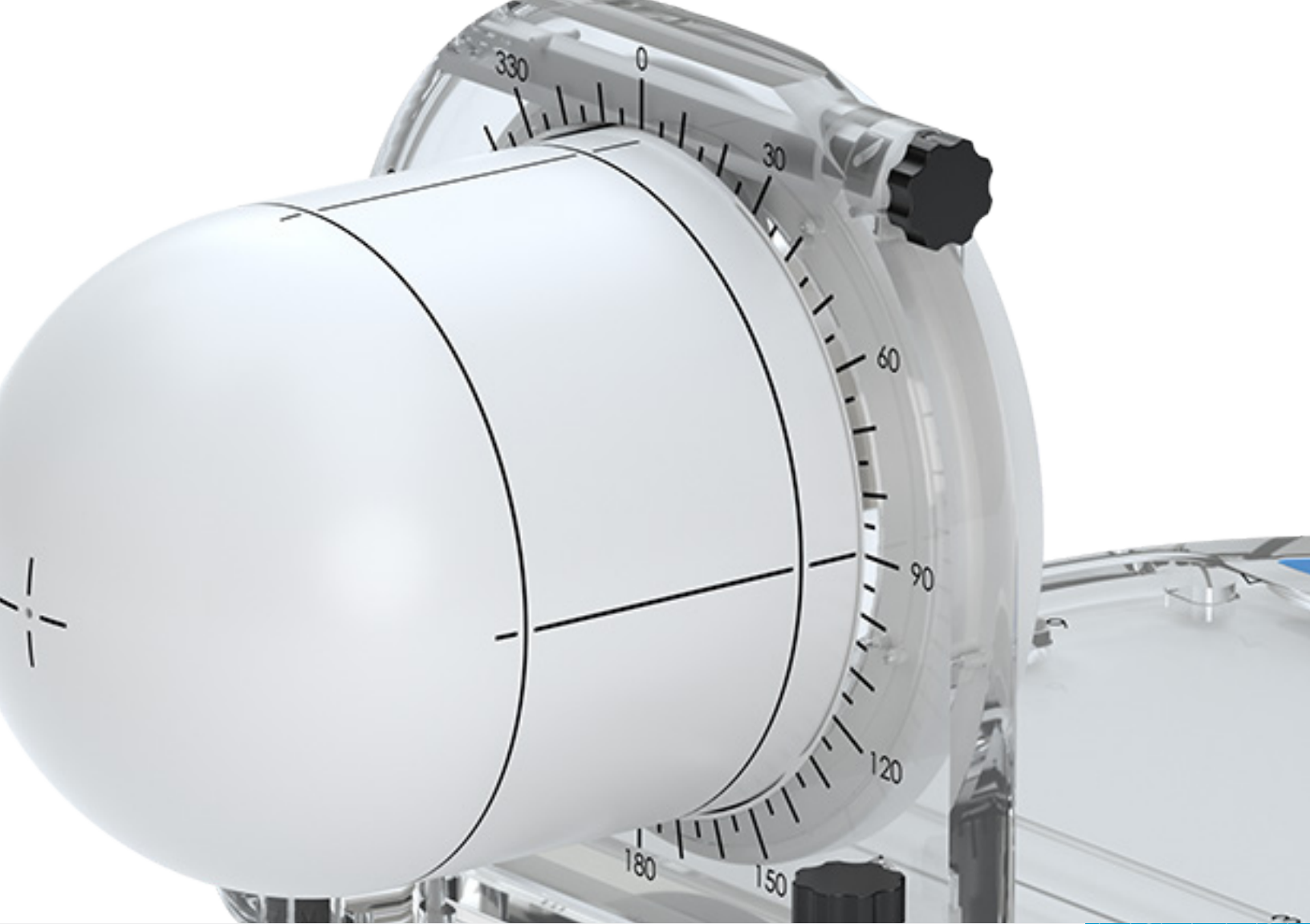
Gamma Knife® Extend™

StereoPHAN Specifications

Material:	Polymethyl methacrylate (PMMA)
Weight (cylinder, stand, slide):	6.6 kg (15 lbs)
Measurement cubes (mm):	85 x 85 x 85
Dimensions - L x W x H (mm):	522 x 276 x 229

SRS MapCHECK Specifications

Detector Type:	SunPoint® 2 Diode Detectors
Detector Quantity:	1,013
Detector Spacing (mm):	2.47
Detector Resolution:	0.48 mm diameter
Array Size (mm):	77 x 77



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