O ARC QA™ PHANTOM

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VERSATILE ROTATIONAL QA

The ARC QA Phantom provides machine and patient QA for rotational treatment systems such as Varian RapidArc,[™] Elekta VMAT,[™] and TomoTherapy[®]

ARC QA Phantom

ECONOMICAL, 2D ARRAY ALTERNATIVE

The ARC QA Phantom is a 30 cm long x 20 cm diameter cylindrical phantom constructed of water equivalent Plastic Water[™] DT material. Perform absolute and relative dosimetry with confidence using proven film and traditional ion chamber detectors... no software or expensive detector equipment is required. Use familiar techniques to perform rotational QA tests, including evaluation of composite rotational dose distribution from individual arcs, gantry alignment accuracy, and rotational output rate uniformity. The ARC QA Phantom is not only useful for rotational QA, but for IMRT and IGRT QA as well.

MACHINE QA CAPABILITIES

Perform commissioning and test the capabilities of the treatment system with the included CT Volume Insert and Multiple Target Shapes and Densities QA Insert. By comparing known volumes and complex geometries between imager and treatment planning system(s), challenge and assess the TPS' reconstruction abilities and determine the cumulative uncertainties. Evaluate the ability of the TPS to include and avoid critical structures and use the included film insert to verify expected dose delivery. Use the 3D Target Shape Insert's multiple densities to check the CT density tables utilized by the components of the imaging and planning chain.

PATIENT QA CAPABILITIES

Obtain absolute dose, relative dose, and point dose dosimetry QA measurements at isocenter and at exact positions off isocenter, using standard ion chambers and film. Chamber plug system accommodates a classic Farmertype chamber, which can be positioned anywhere within a 13 cm diameter range on the axial face. Use the two included film inserts, positioned in the axial or the longitudinal orientation, which can be rotated freely in 360°.

ARC OA Phantom, partially disassembled, showing various inserts



ADVANCING RADIATION $\mathbf{Q}\mathbf{A}^{\mathsf{M}}$

Features

Facilitates Accurate Positioning

- Comprehensive laser alignment marks allow easy, repeatable positioning
- Digital Angle Gauge provides .1° precision for accurate placement and adjustments
- Positioning base provides consistent placement and easy handling with a gloss finish allowing the phantom to smoothly rotate in place

Included Accessories

- Film Insert (2 included) Holds a 5" x 5" sheet of GAF-CHROMIC® or radiographic film. Five film markers within the insert serve as registration markers and can be used to test known distances within the phantom.
- CT Volume Insert Has three known irregular volumes for evaluating the integrity of images moved from the imager to the treatment planning system
- Multiple Target Shapes and Densities QA Insert Has unique geometry inserts with alternate densities for assessing treatment planning system abilities
- Chamber Plug Supports a classic Farmer-type chamber profile such as the Exradin A19 Classic Farmer-type lon Chamber
- Bone Density Plug Made of bone density material for dose inhomogeneity testing
- Blank Plug (2 included) Used to fill air voids within the phantom when unused by the chamber or bone density plugs

Quality, Modular Construction

- Constructed of Plastic Water material, water equivalent within 1%
- Inserts can be placed in the axial and/or longitudinal planes and positioned in four 90° increments within each cavity
- Front and back sections of the phantom can rotate independently for additional flexibility
- Phantom is held together securely by large thumbscrews which also provide quick, tool-free disassembly

ARC QA Phantom, shown with CT Volume Insert and Multiple Target Shapes and Densities QA Insert



ARC QA PHANTOM (REF 92735) SPECIFICATIONS

DIMENSIONS

Main Phantom	Diameter Length	20 cm (7.87 in) 30 cm (11.81 in)
Inserts Overall Phanton	Length Width Height n Weight	13.7 cm (5.39 in) 13.7 cm (5.39 in) 0.8 cm (0.31 in) 9.71 kg (21.40 lbs.)
PRODUCT STANDARDS		CE

INCLUDED COMPONENTS

Main Phantom	
Positioning Base	
(2) Film Inserts	
CT Volume Insert	
Multiple Target Shapes and Densities QA Insert	
Chamber Plug (drilled for classic Farmer-type profile)	
Bone Plug	
(2) Blank Plugs	
Digital Angle Gauge	
(5) Thumbscrew	
Rotation Handle	





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