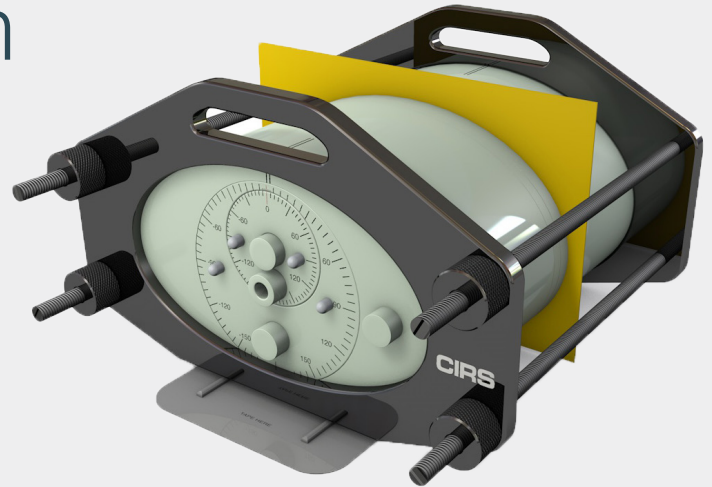


IMRT Head & Torso Freepoint Phantom

- Ionization chambers, TLD, MOSFET and Diodes easily positioned using interchangeable rods*
- Choose any point dose location by rotating the cylinders
- Use radiographic film dosimetry
- CT film markers ensure accurate film to plan registration
- Surfaces are etched with indices for precise alignment
- Configure with or without heterogeneities
- Calibrate film with ion chamber and other detectors
- Designed to accommodate additional, optional breast attachments



Complete QA from CT Imaging to Dose Verification

CIRS offers a variety of IMRT phantoms to match the most common IMRT treatment areas including prostate, head and neck, breast and lung. Once the only way to do IMRT/VMAT QA, phantoms like the 002H9K are used today for more intensive investigations especially during commissioning, research and end-to-end testing.

The Model 002H9K was designed in collaboration with David D. Loshek, Ph.D. With the H9K, choose any point dose location within a circular area with diameter of 11.2 cm by simply adjusting the two rotating cylinders. Lung and bone equivalent rods can be positioned at any location within the circular area for assessment of heterogeneity correction. Remove the center cylinder from the phantom body to simulate head and neck set-ups.

Tissue Equivalent Technology

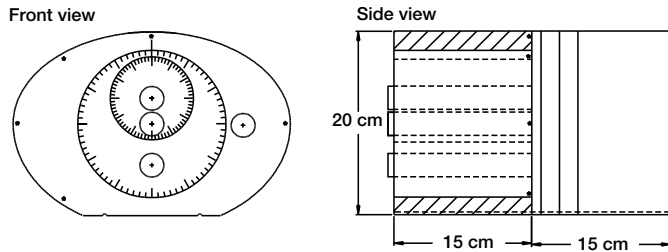
Our IMRT phantom is constructed of proprietary tissue equivalent epoxy materials. Linear attenuations of the simulated tissues are within 1% of actual attenuation for bone and water from 50 keV to 15 MeV. These unique materials eliminate the need for correction factors, thus improving accuracy and saving time. This phantom simulates the patient through the entire process from CT data acquisition and planning to delivery and dose verification.

¹The CIRS line of IMRT phantoms is compatible with the RIT 113 software for film to plan analysis. GafChromic® is a registered trademark of International Specialty Products, Wayne, NJ.

IMRT Verification and End-to-End Solution

CIRS IMRT phantoms are manufactured from tissue equivalent materials that mimic within 1% from 50 keV to 15 MeV for accurate simulation during all necessary steps of IMRT verification. The interchangeable rod design allows the phantom to accommodate many dose measurement devices such as ion chambers, TLD, diodes and MOSFET's in the same location within the phantom. Phantom cross sections accommodate GafChromic® film.

Body with the Head part for Chamber Dosimetry



Specifications

Dimensions	43.2 cm x 39.4 cm x 25.4 cm (17" x 15" x 9")
Weight	47 lbs (17.5 kg)
Materials	Phantom Body: Tissue Equivalent Epoxy Materials Inserts: CIRS Tissue Equivalent Materials (epoxy resin based)

Insert Options

Part No.	Description
002RW-CVXX-XX	Water equivalent rod insert with ion chamber cavity
002RB-CVXX-XX	Bone equivalent insert with ion chamber cavity

*Customers must complete their order with the purchase of at least one (1) insert option listed below. For best results, the full set is recommended. Refer to separate CIRS cavity and plug code list for available chamber cavities.

Items Included with CIRS Model 002H9K

Quantity	Description
1	Water equivalent homogeneous torso section with cylindrical inserts (15 cm)
2	2 cm spacer slab
1	1 cm spacer slab
1	10 cm spacer slab
4	Water equivalent solid rod inserts (002RW-S)
1	Bone equivalent solid rod insert (002RB-S)
1	Set of CT to film fiducial markers
1	Alignment base
1	Holding device
1	Coordinate transition program
1	User guide

Optional Accessories

Part No.	Description
002RL-CVXX-XX	Lung equivalent insert with ion chamber cavity
002BR-2PK	Set of 350cc breast attachments, predrilled in a 3 cm x 3 cm grid to accommodate 8 TLD detectors
002FC	Film Stack for small volume 3D image reconstruction
002HCV	Homogeneous section that accommodates 002FC or 002GC cassettes
002LCV	Thorax region section that accommodates 002FC or 002GC cassettes
002SPH	Water equivalent rods for TLD's (set of 5 rods length 5cm)
002ED	Electron density reference plugs, set of 4 (lung, bone, muscle, adipose)
002RL-S	Lung equivalent solid rod inserts
9501	Case for IMRT Phantoms (002H9K, 002LFC, 002PRA) when ordered with corresponding Cavity Slab (002HCV, 002LCV, 002PCV)
9502	Case for IMRT Phantoms (002H9K, 002LFC, 002PRA)