Daily ISO Phantom

Model 023

ACCURATE • ECONOMICAL • EASY TO USE

Accurate radiation dose delivery requires daily checks of the alignment between the true radiation isocenter and the isocenters of the imaging, localization and targeting systems. The CIRS Daily ISO Phantom provides a cost-effective, quick, and accurate means for testing isocenter coincidence.

Using the Daily ISO Phantom, LINAC lasers and light field can be "tuned" to the true radiation isocenter using the engraved markings on the phantom's exterior. The light field and radiation field alignment can be checked using built-in radiographic markers. More importantly, the isocenters of both the OBI and the EPID can be checked for true spatial alignment and coincidence with that of the treatment beam.

The Daily ISO Phantom contains a unique center point fiducial and an offset target. The offset target is used to ensure the table offset coordinates generated by kV/MV matching are accurate by locating the target, moving the table the determined amounts and verifying that the offset target has been positioned at the isocenter. The center fiducial and off-set target measure 6.35 mm in diameter and are made of ceramic. The exterior is machined with concentric circle targets to allow user to objectively assess all setup errors, including rotations, and to easily align the phantom to the true radiation isocenter. The Daily ISO Phantom is manufactured with machining tolerance of ± 0.02 mm. Target positioning accuracy is ± 0.1 mm.

Features

- Unique fiducials produce sharp clear images in EPID, kV and CBCT imaging
- Offset target fiducial checks the accuracy of couch corrections
- Perform the following tests:
  - Laser alignment
  - Light field size verification
  - kV and MV imager coincidence
  - CBCT process accuracy
  - OBI accuracy
  - Couch shift accuracy
  - Radiation field/ light field alignment

There are two platform supports available for use with the Daily ISO Phantom. The 6DOF ISO Base is designed to register with couch indexing bars and provide known phantom translations and rotations to check corrections made by 6DOF couches. The ISO Base is used to position and level the Daily ISO Phantom on 3DOF (conventional) treatment couches. Both platforms provide leveling legs and embedded markers for kV/MV pixel size computation using ISO Analyze™ software.

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CIRS
Tissue Simulation & Phantom Technology

DAILY ISO PHANTOM

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ALIGNMENT EXAMPLE

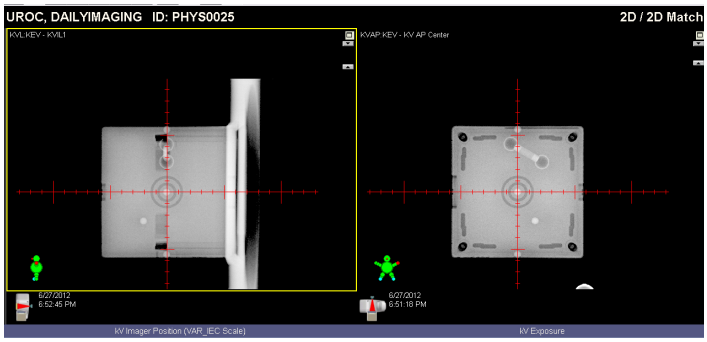


Figure 1. 2D/2D match of kV and DRR

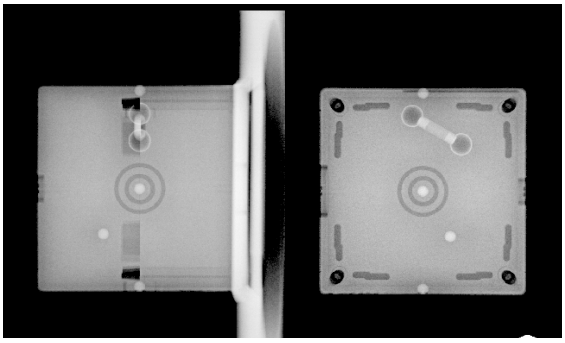


Figure 2. Concentric circles verify accurate alignment of ISO Phantom and establish true position of the kV radiation isocenter

SPECIFICATIONS

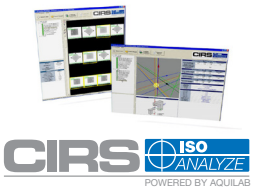
PHANTOM BODY	Dimensions: 12 cm x 12 cm x 12 cm Weight: 1.7 kg Material: Plastic Water®
FIDUCIALS	Qty: Four (1) Center Fiducial (1) Offset Target (2) Magnification Check Fiducials Material: Ceramic Diameter: 6.35 mm
OBI AUTO-REGISTRATION TARGET	Qty: One Material: Aluminum

MODEL 023 INCLUDES

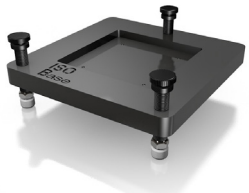
QTY	DESCRIPTION
1	Daily ISO Phantom
1	User Guide
-	60 Month Warranty

OPTIONAL ACCESSORIES

PART NO.	DESCRIPTION
023-03	ISO Analyze™ Image Analysis Software
023-04	ISO Base™ Alignment Platform
023-08	6DOF ISO Base™

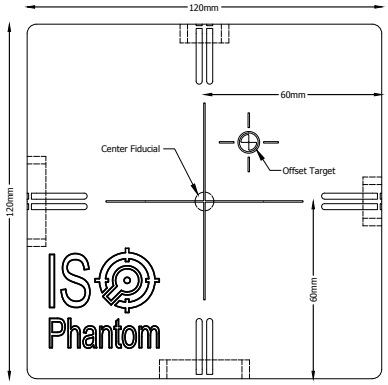


Software solution for auto image analysis of ISO phantom

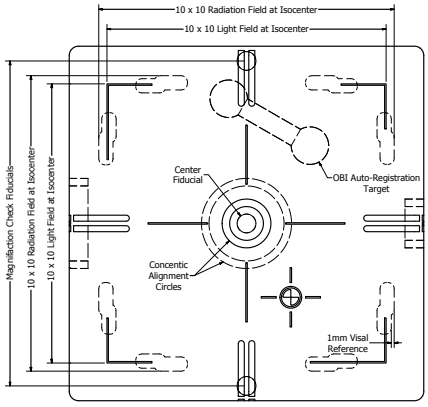


ISO Base™ Alignment Platform

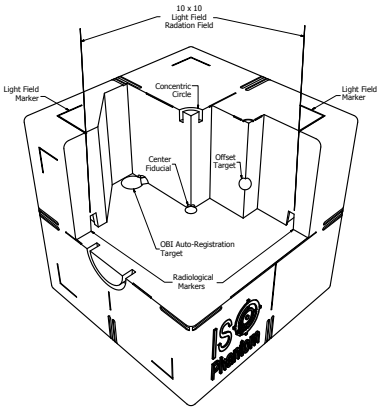
6DOF ISO Base™



Inferior / Superior View



Anterior / Posterior View



Interior View

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