

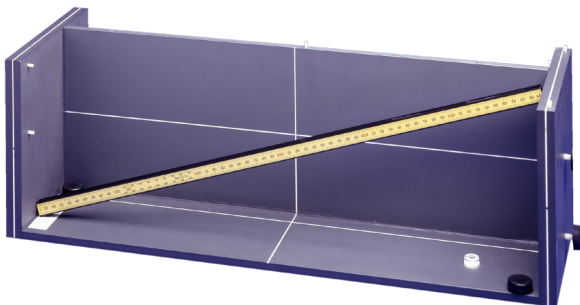
# Task Group 66 Resources

When using a CT scanner for radiation therapy simulation, the AAPM recommends testing in accordance with Task Group 66 (TG 66). These tests provide confidence in the alignments, electron density calibration, image quality, and imaging doses that contribute to a safe and effective treatment course.

Whether looking for a complete TG 66 solution, or just a few phantoms to round out your QC program, Sun Nuclear can support your CT simulation QC needs.

A typical TG 66 kit will contain:

- Laser Alignment Phantom (100a100)
- CT ACR 464 Phantom
- Advanced Electron Density Phantom
- CTDI Phantoms



## Laser Alignment Phantom (100a100)

Designed to provide maximum results and efficiency during the installation of Sun Nuclear lasers, this phantom is now available to end users for their routine QC needs. It meets all of the TG 66 specifications on laser alignments, from the daily verification of the CT imaging plane with the gantry lasers to the monthly checks of room lasers, distances, alignments, and orthogonality.

- Large 2D surfaces for precisely detecting all rotations (pitch, yaw, & roll)
- Thin paint lines for precise alignments
- Thin holes for precise localization within CT images
- Leveling feet
- Included mountable ruler
- Built-in bubble level



## CT ACR 464 Phantom

TG 66 requires an array of image quality tests for CT simulation. These range from daily tests of CT number accuracy, noise, and spatial integrity, to monthly tests like uniformity, to annual tests including low contrast detectability and spatial resolution.

- Constructed of the Original Solid Water (Zero HU Formulation) for confidence in water equivalence and homogeneity
- Covers all image quality tests necessary for TG 66
- Efficient phantom design allows for simple setup, scanning, and analysis

## Advanced Electron Density Phantom

CT to electron density calibration is critical to the planning and delivery of radiation therapy. TG 66 recommends checking CT number accuracy at least monthly using 4-5 materials, and annually with an electron density phantom. The Advanced Electron Density Phantom meets all of these needs.

- Establish CT number vs. electron density
- Designed for volumetric, wide-beam and cone-beam CT scanners, the Advanced Electron Density Phantom includes 14 solid Tissue-mimicking inserts and 2 true water containers
  - Rod markers enable automated analysis
- Additional titanium, stainless steel, and aluminum rods available



## CTDI Phantoms (468)

The Computed Tomography Dose Index (CTDI) provides a standardized way to measure the dose of a CT scanner. Use of the Sun Nuclear CTDI Phantom can make these measurements simple and efficient – users report 50% time reduction in setup and teardown.

- Nested design for reduced weight
- Tongue-and-grooved edges for efficient setup and precise alignments
- Avoid slipping rods and dropping pieces with its easy-to-carry design
- Available in 2-piece configuration with adult body and adult head/pediatric body sizes, or in 3-piece configuration with additional pediatric head size

