

# CT ACR 464 Phantom

Leverage a sophisticated design to comply with guidelines, and more.

- The only phantom needed to meet American College of Radiology (ACR) accreditation guidelines
- Versatility permits checking of multiple parameters, efficiently



With the CT ACR 464 Phantom, you gain a multi-functional resource for your department. Not only is it essential for compliance, it allows the testing of: positioning and alignment; CT number accuracy; slice thickness; low contrast detectability, image resolution; image uniformity; spatial resolution; inter and intra plane distance measurement accuracy; and more.

## Benefits

- Single phantom permits checking multiple parameters
- Compact design makes the phantom safe to store and easy to transport
- Automated software allows for fast and simple reporting of results

## Accessories

### CT ACR 464 Phantom Body Ring

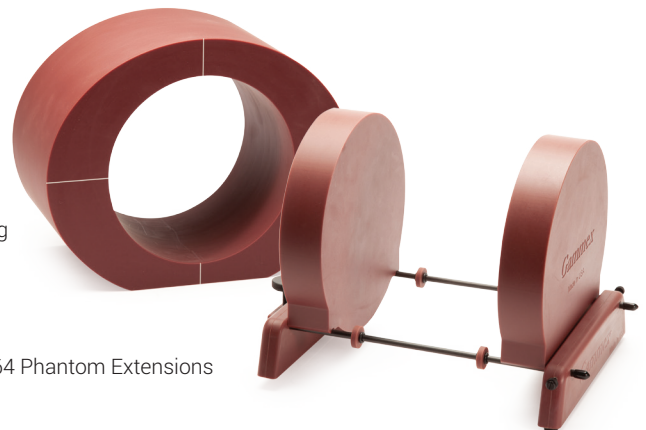
The CT ACR 464 Phantom can easily be inserted into the Body Ring adapter to permit fast imaging QA for a better indication assessment of a scanner's performance with large patients.

### CT ACR 464 Phantom Extensions

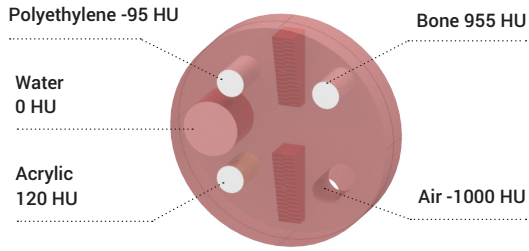
The CT ACR 464 Phantom Extensions accurately represent scatter effects from widebeam CT scanners, thus eliminating the need to add a water bolus or other material when measuring the CT ACR 464 Phantom.

CT ACR 464 Phantom Body Ring

CT ACR 464 Phantom Extensions

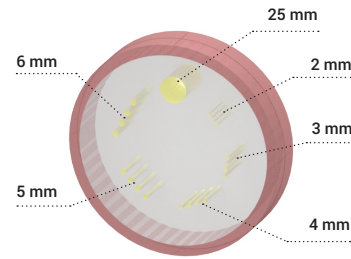


# CT ACR 464 Phantom modules



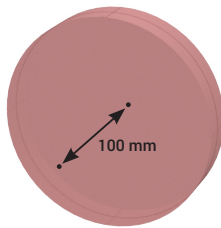
## MODULE 1

Positioning and alignment, CT number accuracy and slice thickness.



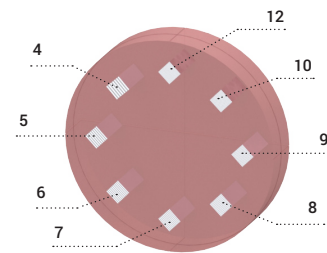
## MODULE 2

Low contrast resolution. Features a series of cylinders with different diameters, all at 0.6% (6 HU) difference from the background material.



## MODULE 3

CT number uniformity assessment. Includes two small targets for testing inplane distance measurement accuracy and more.



## MODULE 4

High contrast (spatial) resolution. Contains eight high contrast resolution patterns of 4, 5, 6, 7, 8, 9, 10 and 12 line pairs per cm.

## Specifications

|           |                      |
|-----------|----------------------|
| Material: | Zero HU Solid Water® |
| Diameter: | 20.0 cm (7.9 in)     |
| Length:   | 16.0 cm (6.3 in)     |
| Weight:   | 5.3 kg (11.7 lbs)    |

### Imbedded Test Objects

|                                 |  |
|---------------------------------|--|
| Water Equivalent Linearity Rod: | Solid Water, Zero HU   |
| Bone Equivalent Linearity Rod:  | Bone tissue equivalent material  |
| Acrylic Linearity Rod:          | Cast Acrylic   |
| Polyethylene Linearity Rod:     | Low Density Polyethylene   |
| Low Contrast Module Matrix:     | Ciba Geigy CB4 epoxy or equivalent   |
| Low Contrast Rods:              | Ciba Geigy CB4 epoxy (density adjusted to yield $6 \pm 0.5$ HU difference) or equivalent |

|                         |  |
|-------------------------|--|
| Tungsten Carbide Beads: | 0.28 mm (0.011 in) in diameter grade 25 tungsten carbide beads |
|-------------------------|--|

|                     |                               |
|---------------------|-------------------------------|
| Line pair Material: | 6061 Aluminum and Polystyrene |
|---------------------|-------------------------------|

|                                       |   |
|---------------------------------------|---|
| Steel Beads Intra-module Homogeneity: | The mean ROI values within any module, test objects excluded, can differ by no more than 2 HU |
|---------------------------------------|---|

|   |   |
|---|---|
| Intra-phantom homogeneity modules 1, 3 & 4: | The average CT number a module must meet the requirements of $0 \pm 5$ HU |
|---|---|

### Additional Accessories

|                             |
|-----------------------------|
| Phantom Stand               |
| Hard Case                   |
| Soft Case                   |
| Automated Analysis Software |