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## Pro-CT AAPM

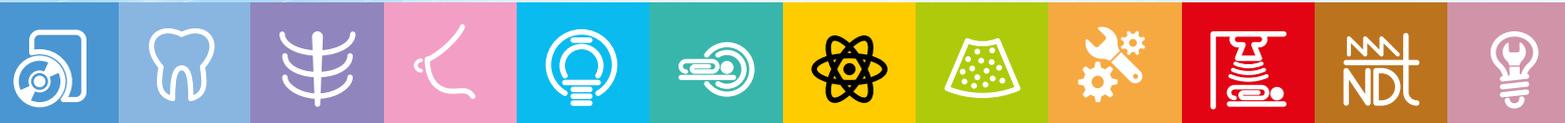


The Pro-CT AAPM phantom may be used for **carrying out tests of computed tomography systems** according to **Report no. 1 of the AAPM** (American Association of Physicists in Medicine).

### Technical data

**(can be modified to customer specifications):**

- PMMA water tank:
  - inside cylinder diameter: 214 mm
  - outside cylinder diameter: 220 mm
  - lid has quick disconnect valves for ease of filling and draining
  - aluminum alignment pin (6.3 mm  $\varnothing$  x 76 mm) or a polystyrene TLD insert (for dose measurements) can be attached to the lid
- low contrast section:
  - placed at one end of the water tank
  - 12 fillable cavities 40 mm deep
  - two pieces of each cavity with diameters: 25.4, 19.0, 12.7, 9.5, 6.4 and 3.2 mm
  - spaced twice their diameter apart from the centerline
  - cavities can be easily filled from the outside with dextrose or sodium chloride solutions of various concentrations
- bone insert:
  - PTFE annulus
  - wall thickness 6.4 mm, 70 mm long
  - fits over all inserts to harden the beam
- CT number linearity insert:
  - five 25 mm rods
  - material: polyethylene, PMMA (acrylic), polycarbonate, polystyrene and nylon
  - density values (g/cm<sup>3</sup>): 0.95, 1.19, 1.20, 1.05 and 1.1 respectively
- resolution insert:
  - eight sets / rows of air thru holes (five holes per set)
  - diameters of holes: 1.75, 1.5, 1.25, 1.00, 0.75, 0.61, 0.50 and 0.40 mm
  - distance between each hole is equal to the hole diameter
  - distance between rows 5 mm
  - 0.2 mm stainless steel wire positioned longitudinally for calculation of line-spread function





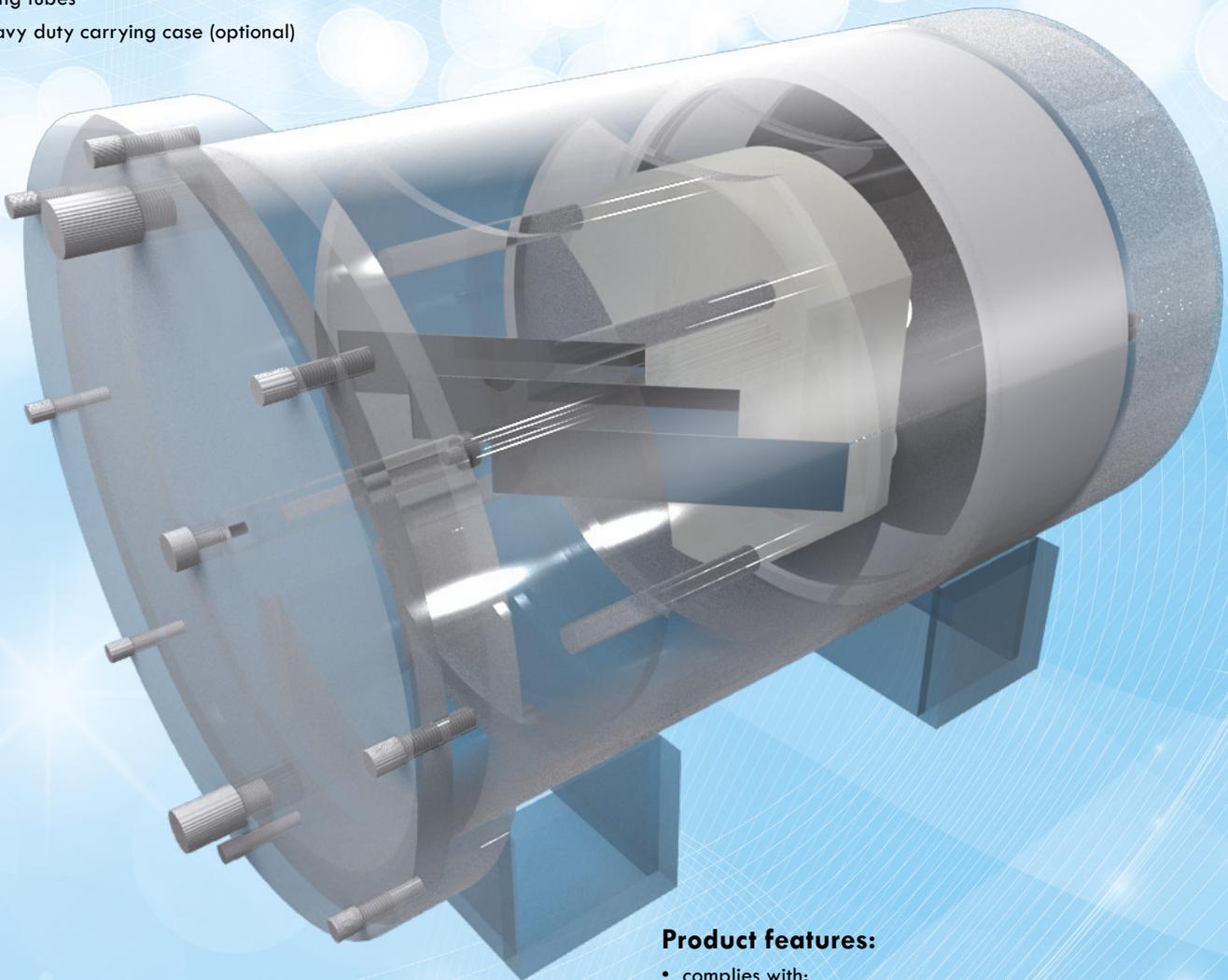
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- slice thickness insert:
  - three aluminum strips, 0.5 mm thick and 25 mm wide angled at 45°, positioned at the centre and aligned vertically
- geometry insert (optional):
  - contains two pairs of aluminium wire ramps whose slope angle tangent is equal to 0.5
  - middles of ramps intersect on the same plane allowing for very precise evaluation of the slice location
  - contains two sets of four PMMA rods (ø10 mm) placed in vertexes of two squares (sides 100 mm long)
- triple low contrast insert (optional):
  - contains three groups of low-contrast objects. In each group, there are rods of the same density, 20 mm in height and with a diameter ranging from 2 to 15 mm. Density difference between groups and surrounding material is exactly 0.3%, 0.6% and 1.0%
  - made of PMMA
- filling tubes
- heavy duty carrying case (optional)



**Product features:**

- complies with:
  - Report no. 1 of the AAPM (American Association of Physicists in Medicine)
  - IEC 61223-3-5
  - IEC 61223-2-6
- CE certified
- the Manual provides detailed guidelines for carrying out each test, results assessment and registration

