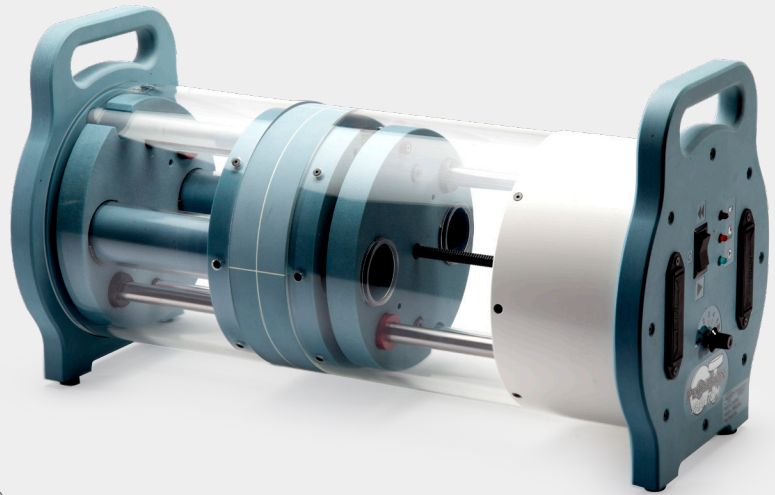


CT Perfusion Phantom

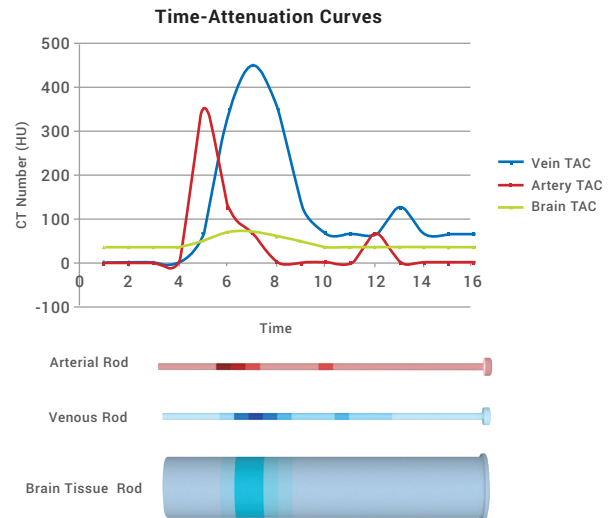
Optimize Imaging & Perfusion Protocols

- An easy-to-use contrast simulation tool
- Help ensure your CT scanner and perfusion software are providing consistent results
- Generate precise time-attenuation curves (TAC)



CT brain perfusion studies can play a key role in evaluating many disorders, including stroke, and help to identify patients who may benefit from thrombolytic therapies. The CT Perfusion Phantom helps ensure that your CT scanner and perfusion software are providing you consistent results.

The CT Perfusion Phantom is designed to mimic the injection of a contrast bolus into a region of interest allowing you to generate precise time-attenuation curves (TAC), of differing velocities, to better monitor your CT Perfusion program, and patients. Once you benchmark perfusion rates and TACs for each system using the phantom, you will be better positioned to know if future measurements show a true change, or if follow-up results are within the precision error of the measurements. Use the dose port to optimize imaging and perfusion protocols and results at the lowest possible dose.



Differing concentrations of simulated blood and contrast move from, arteries, to veins to brain tissue including contrast recirculation.

The CT Perfusion Phantom can help you stay compliant.

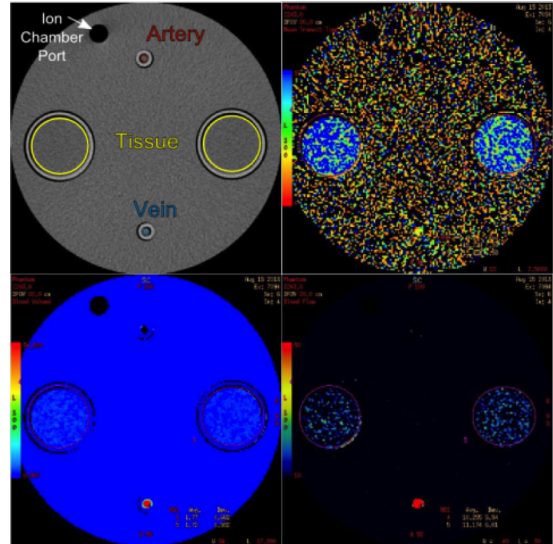
Examples of CT Perfusion Guidelines

ACR CT Perfusion recommendations¹

- Technique parameters affecting the radiation dose (kVp, mA and beam collimation) should be optimized for each scanner type so that diagnostic quality images and maps are produced at minimum radiation dose.

FDA recommendations for CT Perfusion studies²

- Review your radiation dosing protocols for all CT perfusion scans to ensure that the correct dose is planned for each study. Any change to the default protocol should be cleared through the facility's quality assurance program and be approved for image quality and dose by the radiologist and physicist.
- Implement quality control procedures to ensure that dosing protocols are followed every time, and that the planned amount of radiation is administered.



Example brain perfusion maps at phantom speed 3 (1.75 mm/sec)

Specifications

| | |
|--------------------------------|---|
| Covers and housings: | PVC, Acrylic |
| Dosimetry Port: | Standard CT Pencil Chambers up to 12.7 mm (0.5in) diameter |
| Central Scan Disk: | High Equivalency (HE) Brain Mimicking Material |
| Artery Rod: | 16 discrete sections of blood and contrast simulating materials to mimic arterial flow rates following a contrast bolus injection |
| Vein Rod: | 16 discrete sections of blood and contrast simulating materials to mimic venous flow rates following a contrast bolus injection |
| Tissue Rods (Qty 2): | HE Brain Mimicking Material of 16 discrete sections of brain tissue to mimic tissue uptake rates following a contrast bolus injection |
| Velocity settings (mm/second): | 1.31, 1.50, 1.75, 2.10, 2.63 +/- 2% |
| Rod Travel Distance: | 10.5 cm (4.1 in) |
| Dimensions(L/ W/H): | 55.5 x 25.4 x 30.5 cm (22 x 10 x 12 in) |
| Power: | 8 AA batteries (included) |
| Weight: | 13.6 kg (29.9 lbs) |

Accessories

- AA Batteries (included)
- Wheeled hard case with watertight seal



1. http://www.acr.org/~media/ACR/Documents/PGTS/guidelines/CT_Perfusion.pdf

2. From FDA Update 11/9/2010 <http://www.fda.gov/MedicalDevices/Safety/AlertsandNotices/ucm185898.htm>