

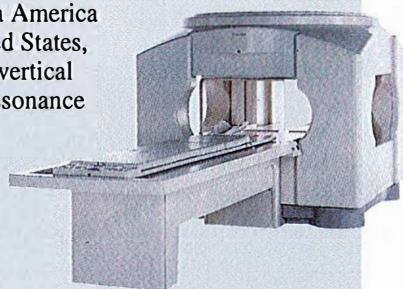
The development of diagnostic imaging equipment, ranging from X-ray equipment to X-ray computed tomography (CT), magnetic resonance imaging (MRI), nuclear medicine and ultrasound, makes possible early diagnosis and treatment, as well as less invasive treatment procedures. Toshiba continues to apply the most advanced technologies from throughout the company to meet demand in all fields of medicine.

OPART™ Superconducting Open MRI System

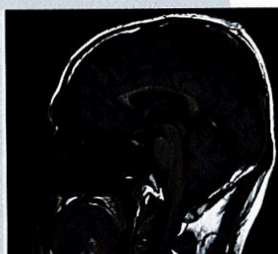
Developed by Toshiba America MRI, Inc. of the United States, OPART™ is the first vertical field open magnetic resonance imaging (MRI) system to use a superconducting magnet. The innovative magnet features a large 55cm vertical aperture and is open on all four sides, facilitating patient access from all directions. Conventional open MRI systems use permanent or resistive magnet technology. The advantages of the superior superconducting magnet technology offered by OPART™ include a higher field strength, improved magnet homogeneity and larger aperture. In addition, OPART™'s unique, high-efficiency refrigeration system permits non-cryogenic operation, eliminating the need for liquid helium.

Superconducting power and performance offer improved image quality and the ability to perform a wide range of clinical applications. The 0.35T (tesla) magnetic field strength supports advanced pulse sequences such as fast advanced spin echo (FastASE) and many of the clinical applications developed on Toshiba's 0.5T FLEXART and 1.5T VISART MRI systems.

OPART™ uses an RISC-based computer architecture with an icon-driven smart user interface for streamlined productivity, ease of use and single user operation. The OPART™ MRI system combines the siting and patient access advantages of conventional open MRI systems with the higher field strength and improved performance of superconducting MRI.



OPART™ superconducting open MRI system



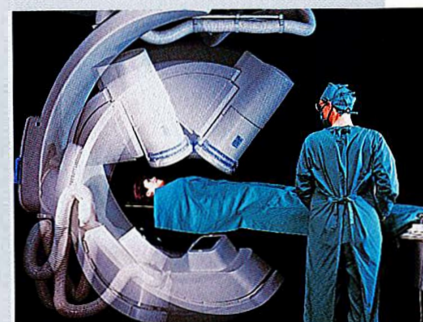
Sagittal brain image

CAS-8000V/cx Cardiovascular X-Ray System

The CAS-8000V/cx cardiovascular X-ray system has been developed for diagnosis of cardiac diseases, such as myocardial infarction, and coronary treatments using catheters, such as a percutaneous transluminal coronary angioplasty (PTCA).

The features are as follows:

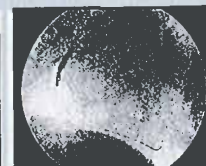
- The C-arm, in which the X-ray tube and the image intensifier (I.I.) are mounted, is 1.5 times faster than the previous system.
- The ceiling-mounted C-arm can move away from the patient quickly when there is a sudden change in the patient's condition.
- A lateral as well as longitudinal field of movement allows one-touch fluoroscopy when inserting a catheter from the arm.
- The X-ray collimator is 20 percent smaller than the previous model.
- The compensation filters used to reduce halation of the lungs can be adjusted for adult or pediatric patients.
- An X-ray filter for beam hardening is attached to the collimator to reduce the patient's exposure to radiation.
- Cooling time has been reduced by half using a newly developed water-cooled X-ray tube. This facilitates speedier testing and lowers the noise level in the examination room, reducing patient stress.



CAS-8000V/cx cardiovascular X-ray system



Before expansion (arrow)



During expansion



After expansion

Expansion of coronary artery by a catheter (PTCA)