

The development and widespread use of such diagnostic-imaging technology as X-ray diagnostic equipment, X-ray CT scanners, magnetic resonance imaging (MRI), nuclear medicine equipment, and diagnostic ultrasound equipment makes possible early diagnosis and treatment with minimal invasiveness. Bringing to bear the high-technology strengths of the entire company, Toshiba continually works to meet the demands of the medical industry, providing total solutions such as picture archiving and communication system (PACS) and hospital information system (HIS) to medical institutions.

Aquilion™ Whole-body X-ray CT scanner



Aquilion™ whole-body X-ray CT scanner

Toshiba has developed a half-second real-time helical CT scanner, Aquilion™, which is the top system in Toshiba's series of helical whole-body X-ray CT scanners.

This system makes it possible to complete the scan within a single breathhold in a general thoracic examination, which has needed two breathholds for existing models, thus improving diagnostic capability and examination efficiency. The merits of this system are shown below.

- 0.5s high-speed scan
The system ensures clear image acquisition in areas near the heart, which are susceptible to severe motion artifacts when using existing models.
- Large-capacity X-ray tube and generator
Toshiba has developed a large-capacity high-voltage generator, ensuring sufficient X-ray irradiation to obtain high-quality images during fast scanning, and an X-ray tube with extremely high cooling efficiency. Continuous scanning can therefore be performed without having to take into consideration the limitations of the X-ray tube, resulting in simpler and more efficient system operation.
- Patient-friendly design to minimize patient discomfort

The reduced scanning time permits a larger area to be scanned during a single breathhold. And the circular design of Aquilion™'s gantry is less threatening to the patient, minimizes claustrophobia, and improves patient access.

- Ease of operation
In the design stage, an intuitive human interface was carefully researched in order to develop an easy-to-use graphical user interface (GUI). The system also conforms with the DICOM standard, the current standard for electronic communication in diagnostic imaging.



Operation window of Aquilion™

Infinix™ CB Cardiac Biplane Angiography System

The Infinix™ CB cardiac biplane angiography system from Toshiba is designed to support high-level interventional cardiac procedures, including a percutaneous transluminal coronary angioplasty (PTCA).

This new system, with a floor-mounted C-arm and ceiling-suspended Ω-arm, provides multi-directional imaging by a single injection of contrast medium. It is particularly useful in pediatric examinations where there are limits in the use of contrast medium.

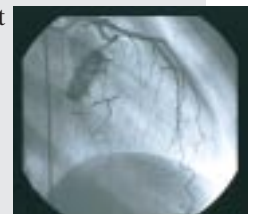
- The Infinix™ CB features:
- Biplane positioning can be performed at a maximum speed of 10°/s (25% faster than conventional systems), significantly improving examination through-put.
 - Wide clearance between both arms and the lateral X-ray beam vertical movement make it possible to set to complex angle projections such as long axial view required in pediatric study.
 - The ergonomically designed table-side console "Hyper Handle™" allows the physician to operate this biplane system intuitively with one hand.
 - The arm-to-arm collision prevention function, which warns the physician of possible interference between the C-arm and the Ω-arm, helps to ensure that biplane operations are performed safely.
 - The overframing display which enlarges the I.I. output image by 1.2 times to use the display area more effectively, thus improving image visualization during examination.



Infinix™ CB cardiac biplane angiography system



Hyper-handle™



Overframing display of cardiac image