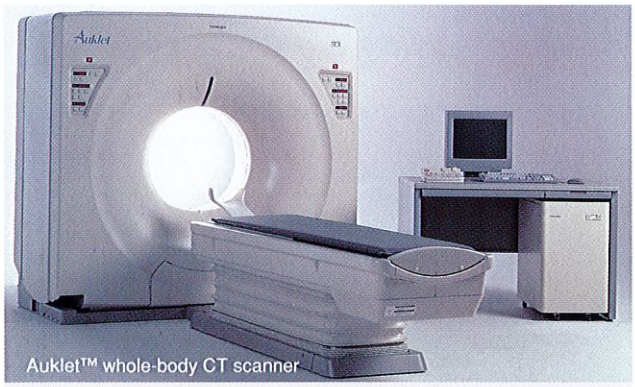
Medical Systems

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.

Auklet™ Whole-Body X-Ray CT Scanner

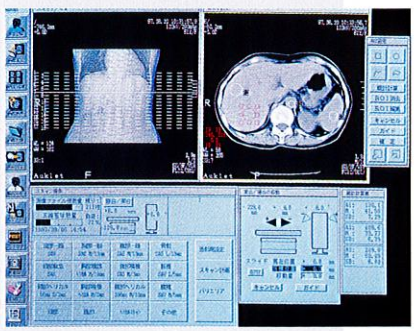

Auklet™ whole-body CT scanner

The introduction of helical scanning developed by Toshiba has led to many innovative clinical applications for X-ray CT scanners. Until now, helical scanning was available only in top-of-the-line CT systems. Toshiba's newly developed Auklet™ is the first CT system in a more affordable class to offer full helical scanning ability.

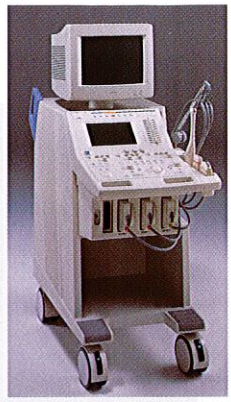
This system, which uses a slip ring for continuous rotation, is equipped with a 24kW large-capacity X-ray generator and an X-ray tube with a rapid cooling rate. These enhance the basic system performance essential for full utilization of helical scanning. Other features that contribute to the extraordinary ease of operation of the Auklet™ system include a large color monitor, a user interface that employs icons and pictograms in a mouse-controlled, multi-window environment and "eXam Plan" for automatic scan planning.

The highest spatial resolution for this class of CT scanner and a sophisticated image reconstruction algorithm produce high-quality images. Auklet™ also has a wide variety of clinical applications such as high-performance three-dimensional image processing.

Although the Auklet™ system is a compact CT scanner with a small footprint (18m²), its large gantry opening and wide couch top enhance patient comfort and facilitate system operation.


Auklet™ multi-window user interface

PowerVision™ 6000 Fully Digital Diagnostic Ultrasound System

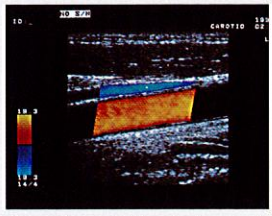

PowerVision™ 6000 diagnostic ultrasound system

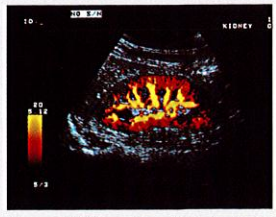
All circuits of Toshiba's newly developed PowerVision™ 6000 diagnostic ultrasound system, including the ultrasonic beam former, have been digitized using the most advanced manufacturing techniques. High resolution and miniaturization are achieved through high-speed digital functions such as parallel processing and waveform shaping. The PowerVision™ 6000 also offers excellent cost performance because software interchangeability allows low-cost application upgrades to a level equivalent to high-end systems.

The system employs fully digitized transmission and reception circuits, previously available only on top-of-the-line systems. The higher definition ultrasound beams and data processing technology available with fully digitized systems allow higher levels of both sensitivity and quality, which are traded off against each other in conventional systems. In addition, new technologies offer improved resolution (temporal, spatial and contrast), enhancing diagnostic capabilities.

Easier operation using the intelligent panel and software, as well as functions that maximize accurate and quantitative analysis, also contribute to higher throughput. The system's wide, non-interlace monitor reduces operator fatigue in long examinations.

The system is designed to accommodate all standard peripheral devices. Even with all these devices mounted, the system is only 520mm wide and can be used easily with full functions in bedside examinations.


Normal carotid flow (color mode)


Normal kidney flow (angio mode)