

# Low-cost computed tomography scanner

Country of origin | China

## Health problem addressed

The Computerized Tomography Scanner is a front line modality for general imaging of multiple anatomical organs like brain, chest, abdomen, spine, blood vessels, and joints etc. It offers high spatial resolution along with the ability to complete a scan within seconds in most use cases that is vital to imaging time critical patients such as trauma and stroke.

## Product description

This low-cost innovation is a compact 16-slice CT scanner designed to provide exceptional image quality for all routine CT imaging needs and support advanced applications such as CT Angiography, Colonoscopy and Perfusion. With 0.35mm isotropic resolution and an array of dose reduction technologies the scanner delivers detailed visualization of patient anatomy and pathology at lower patient dose. The scanner is equipped with a console computer and dual monitors that hosts a simple user interface and essential advanced applications for 3D visualization, post processing, filming, and reporting.



## Developer's claims of products benefits

With Emergency Mode & Digital Tilt technologies, operators can position and scan patients much quicker on a CT385 scanner. Compared to previous designs, this CT scanner with digital tilt can be up to 23% faster for brain CT scans. Higher spatial resolution helps doctors see more detail and improve their diagnostic confidence. With a small footprint and minimal siting requirement of 10.1m<sup>2</sup>, this is one of the most compact 16-slice CT design systems and 16% smaller than previous 2-slice CT. An ecomagination rated product with Energy Save mode helps reduce power consumption by up to 41%. Lower powers input requirement by 20% compared to previous generation of 16-slice CT scanners. Remote service tools allow global service engineer online access to diagnose up to 30% of issues in a timely manner.

## Suitability for low-resource settings

The compact, 16-slice CT scanner that can fit in a minimal site space of 10.2m<sup>2</sup>. This is lower than previous generation and other 16-slice CT systems. A ecomagination rated product that consumes 40% lower power using an Energy Save mode. With broadband network the CT system can be connected to a remote service center for expert service engineers and applications support.

## Operating steps

This CT scanner has a one time power-up procedure after which patients are loaded on the patient table and operator positions the patient using the gantry control panel. The CT host computer allows the operator to select a scan, set scan parameters and complete the scan. The console software also allows viewing, post-processing, and reporting.

## Regulatory status

CE Compliant (IEC 60601-1-2), ROHS compliant, Japan Ministry of Health Approved, Regulatory clearance for sale in 146 countries as of July 2014

## Future work and challenges

The business strategy is continued investment in developing more affordable CT scanners through new technical advancements in areas like detector, power electronics, and gantry mechanical design to name a few. In addition, we continue to address ease of use through simpler user interface and workflow development working with target users in tier II/III areas of emerging markets.

## Use and maintenance

**User:** Physician, Technician or Radiologist

**Training:** Initial training by manufacturer, and operator manuals

**Maintenance:** Requires regular maintenance 3 times annually by trained engineer, technician or manufacturer

## Environment of use

**Setting:** Intended to be used in secondary or tertiary levels of Health Care Facility

**Energy requirements:** Continuous power supply of 420V

**Facility requirements:** The CT scanner room temperature requirement is 18C to 26C and 30% to 60% RH. The scanner room size and shielding for X-rays should be as per local regulations

**Software Requirements:** The system includes standard operating software that is installed on a control computer. There are several software clinical applications that are optional and individual licenses are sold based on customer need.

## Product specifications

**Weight (kg):** 1700

**Dimensions:** 1783mm x 1741 mm x 921mm

**Retail price (USD):** 300 000

**Other features:** The user interface and workflow software is available in several regional languages. Dutch, French, German, Italian, Norwegian, Spanish, Swedish, Portuguese, Korean, Japanese, Turkish

**Year of commercialization:** 2012

**Currently sold in:** Many countries. Emerging market countries include Egypt, Morocco, Nigeria, Rwanda, Pakistan, Philippines, India, Myanmar, Cambodia, Vietnam, Bangladesh, Indonesia, Afghanistan, Turkey, Mexico, Columbia, Argentina, Ukraine (partial list)