

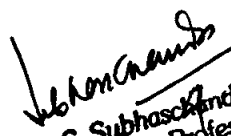
Technical Specification of 16 Slice CT Scanner

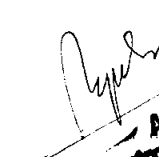
Operational requirement

The spiral CT Scanner system for high resolution whole body scanning. The instrument must be capable of acquiring minimum 16 slice per 360 degree rotation. The system have latest iterative reconstruction technique in raw data space.

Sl.No.	Technical Specification
1.	Scan Time
	The scan time for one gantry of complete 360 degree rotation should be 0.9 sec or less
2.	Scanning Capability
i.	paediatric and infant base protocols shall be available based on the infant weight. 70 KV Station must be offered.
ii.	Real time contrast monitoring acquisition with auto scan initiation protocol and with auto injector trigger.
iii.	High Contrast Resolution should be at least 15 lp/cm for axial and spiral scant at 0% MTF
iv.	Low contrast resolution should be at least 3 mm at 3%.
3.	Gantry
i.	Aperture of 65 cm or more
ii.	Auto Positioning Lights
iii.	Should have FOV of at least 45 cm or more
iv.	Digital Remote Gantry tilt of +/- 30 degree or more must be provided
4.	Detectors
	Data acquisition system capable of acquiring 16 slice or more per 360 degree rotation with 16 or more rows of detector. Total coverage of the detectors must be 12 mm or more
5.	Slice thickness
	16 slice acquisition with minimum thickness of 0.85 mm or less
6.	Pitch Factor (Volume pitch)
	Should be variable between 0.5 – 1.5 or better and should be user selectable or automated. Specify all possible pitch selections
7.	Scan Time and length in Spiral/Helical Technique
	Should be at least 100 sec continuous
8.	X-Ray Generator
	Hugh frequency time Power output: 26 KW or higher Voltage Selection : 70-130 or wider


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	mA Range: 230 mA or more (with incremental steps of 1 mA)
9.	X-Ray Tube Anode Heat Storage Capacity – Minimum of 3.5 MHU or more Anode Heat Dissipation: Minimum of 2.4 KW or more with latest technology
10.	Patient Table Carbon Fiber Table Top with Load carrying capacity 150 kg with 1mm positioning accuracy. Horizontal Table speed preferably 100 mm/sec Metal free scan able range of 120 cm or more Facility of positioning aid for horizontal Iso-centric positioning of the patient.
11.	Image Reconstruction Reconstruction Field of View Range: 5-45 cm Reconstruction Matrix: 1024 x 1024
12.	Image Display Image Area Matrix Dimension : 1024 x 1024
13.	Image Reconstruction Image reconstruction capability should be at least 10 image/sec. Image Storage Capacity 500 GB or more
14.	Operator Console i. It should have a large 18" of more high resolution LCD monitor ii. The system should be user friendly with all functions menu driven. It should be modern user interface. iii. All function including scanning image reconstruction, film documentation, archiving, transferring. MPR Angiography maximum intensity projection, 3D volume rendering, 3D SSD, CT Angio, CT Urography, vessel analysis, should be possible on console MIP, CT Angio software with quantitative vessel analysis must be provided.
15.	Computer System & Image Processor i. 64 Bit/32 Bit main CPU with at least 6 GB RAM memory or better. ii. High speed CPU using Pentium IV or better running at 3.0 GHz or better iii. Hard Disc of 500 GB or more. iv. Image storage in 512 x 512 matrix for storage of 7, 00, 000 image or more v. DVD/CD archive capacity. vi. Image Processor: Operating system shall be windows based. vii. The image reconstruction time should be at least 8 images/sec or better for all types of acquisition modes including Cone Beam Correction, Neuro Imaging studies.
16.	Software i. Should have DICOM 3.0 compatibility ii. Volume rendering technique with axial cross reference imaging along with measurement tools on volume rendered image 3D, 3D small volume measurement

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	package MIP slab viewer.
17.	Patient Communication System
	An integrated intercom and Automated Patient Instruction System (API) should be provided.
18.	Others
i.	System should have PACS interface ready without any new hardware or software.
ii.	Fully DICOM 3.0 compliant including <ul style="list-style-type: none"> a. DICOM Modality works list, with automatic procedure selection b. Capability from HIS-RIS interface c. A Barcode reader for entering patient data from HIS RIS must be possible
19.	Dose saving protocols
	Latest dose saving protocols must be available
20.	CT Fluoroscopy for Biopsy: (Optional)
	Continuous CT(CCT) biopsy mode to enable the clinician to perform scans from the gantry room using a foot pedal and view the images on a cart-mount, in-room monitor for guidance planning and monitoring. Each scan exposure is a 240 degree axial. Reconstruction images may be viewed as one image or three images.
21.	Accessories
i.	Lead Glass of size 100 x 150 cm
ii.	Pressure Injector (300psi) with 100 syringe
iii.	Patient Trolley
iv.	Full system UPS from reputed manufacturer having at least 15 minutes back with appropriate KVA for the full system.
v.	The equipment should be new and unused. The manufacturing date should not be more than 180 days when it would reach the consignee address.
vi.	All patient positioning accessories including head rest
22.	Standard & Safety
	Should be of US FDA & CE ("Conformite Europeene"), AERB approved
23.	Warranty will include the following: 5 years warranty
i.	The equipment including all other accessories and ancillaries as given in the specifications of the equipment including, UPS, UPS Battery, X-Tube of CT Scanner, etc.
ii.	All the accessories and ancillaries including Air conditioning machine required for the site preparation and interiors.

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