

<b>GENERAL FEATURES</b>	
Product Description	CT Scanners 16 Slice
UMDNS Name and Code	Scanning Systems, Computed Tomography - 13-469 Scanning Systems, Computed Tomography, Axial, Full-Body - 15-956 Scanning Systems, Computed Tomography, Axial, Head - 15-955 Scanning Systems, Computed Tomography, Spiral - 18-443
Other Names	Axial CT scanners, CAT scanners, cine CT scanners, computed tomography systems, EBT scanners, helical CT scanners, multislice CT scanners, spiral CT scanners, ultrafast CT scanners, volume CT scanners.
Scope	This Product covers computed tomography (CT) scanners used to obtain cross-sectional images without restriction to a particular anatomic region
Clinical Application	CT scanners produce thin cross-sectional images of the human body for a wide variety of diagnostic procedures. CT is a noninvasive radiographic technique that involves the reconstruction of a tomographic plane of the body (a slice) from a large number of collected x-ray absorption measurements taken during a scan around the body's periphery. The result of a CT study is usually a set of trans axial slices, which can be mathematically manipulated to produce sagittal or coronal image slices. With isotropic imaging, an image can be reconstructed in any arbitrary plane. CT is clinically useful in a wide variety of imaging exams, including spine and head, gastrointestinal, and vascular.
<b>TYPE</b>	
Type	Multislice
Number of slices per rotation	≥ 16
Number of Detector Rows	16
Number of acquisition channels	16
<b>DETECTOR ASSEMBLY</b>	
Minimum Field of view (standard)	40 centimeter
Extended Field of View (cm)	Not Applicable
Total detector width, z-axis (mm)	≥10 mm

Minimum Reconstructed slice width range	0.8 to 10 mm
Minimum Standard rotation time for full 360°	≤ 1 sec
<b>DETECTOR PERFORMANCE</b>	
Minimum High-contrast spatial resolution at 0% MTF with full FOV	14 lp/cm
Low-contrast resolution at 3 HU with 10 mm slice on 20 cm Catphan phantom	≤ 5 mm
Image Noise	≤0.5% at 25 mGy (2.5 rads)
<b>ADVANCED IMAGE ACQUISITION</b>	
Perfusion imaging	Yes
Extended coverage for 4-D imaging	No
Dual-energy acquisition	No
Contrast Based Dual energy acquisition	No
<b>GANTRY</b>	
Gantry Tilt Type	Digital
Gantry Tilt	± 30°
Minimum Gantry aperture	65 centimeter
Scan localizer	Laser
<b>X-RAY GENERATOR</b>	
Minimum kW output (kW)	28
kVp range	70-140 or better
<b>X-RAY TUBE</b>	
Minimum Anode Heat storage (MHU)	3.5
Anode Heat dissipation rate (kHU/min)	≥ 300 kHU/min
Tube cooling	Oil
Tube focal spots (mm)	Large: (0.6 x 1.3) ; Small: (0.4 x 0.7)
Max mA	≥ 250 mA
Max scan time	≥ 100 sec
<b>PATIENT TABLE</b>	
Table Top Material	Carbon Fiber
Table Type	Moveable
Range of movement - Vertical (cm)	40 -100 cm or better
Minimum Scannable range	125 centimeter

Maximum load capacity without restrictions (kg)	160 kg or more
<b>RADIATION DOSE</b>	
Dose-modulation technique (3D), x-y-z	Yes
Pediatric-specific dose control	Yes
Iterative image reconstruction for dose reduction	Yes
Overbeaming reduction sliding collimation	Yes
<b>CLINICAL APPLICATIONS AND FUNCTIONALITY</b>	
Virtual colonoscopy	Yes
Vessel analysis (noncardiac)	Yes
Auto bone removal	Yes
Denta Scan	Yes
Lung Analysis	Yes
Metal Artifact Reduction	Yes
Neuro DSA	Yes
<b>IMAGE RECONSTRUCTION</b>	
Reconstruction FOVs	≥ 50 cm
Reconstruction matrices	512 x 512, 1024 x 1024
Max reconstruction rate, (512 x 512), image/sec	10
Real-time image reconstruction	Yes
<b>SYSTEM INTEGRATION</b>	
DICOM	Yes
CT image storage SCU/SCP	Yes
Enhanced CT storage SCU/SCP	Yes
Modality worklist SCU	Yes
Query/retrieve SCU and SCP	Yes
Storage commitment SCU	Yes
DICOM work list license	Yes
<b>IMAGE PROCESSING</b>	
Image Processing Type	Standard
OEM postprocessing workstation with dual medical grade Monitor	Standalone



If it is server workstation, number of nodes to be provided	Not Applicable in case of standalone workstation
Number of Concurrent Licenses to be Provided	Not Applicable in case of standalone workstation
Minimum Rendering Capacity of Server	Not Applicable in case of standalone workstation
Remote access to raw image data	Yes
Remote access to clinical applications	Yes
DICOM 3-D image export	Yes
Image Processing Software	Review workstations - MPR, MIP, VRT formats , tools for stenosis measurement, Advanced vessel analysis, Automatic bone removal etc
<b>SERVER HARDWARE</b>	
Minimum Image storage capacity of Server	0 terabyte
Minimum Ram Size of Server	0 gigabyte
Size of Monitor of server	Not Applicable in case of standalone workstation
Type of Monitor for server	Not Applicable in case of standalone workstation
<b>WORKSTATION HARDWARE</b>	
Medical grade monitor and CPU	Yes
Type of monitor for Workstation	LCD/LED/TFT
Size of Monitor for Workstation	18 inch or more with 2 MP resolution or better
Minimum Ram Size for Workstation	16 gigabyte
Minimum Storage capacity for Workstation	1000 gigabyte
<b>WORKSTATION APPLICATIONS</b>	
Neuro DSA application in workstation	Yes
Cardiac Angio	No
Cardiac calcium scoring	No
CT angio	Yes
Filming	Yes
CT VRT Imaging	Yes
Perfusion imaging in workstation	Yes

### CONTRAST BASED DUAL ENERGY APPLICATIONS

Virtual Non-contrast imaging	No
Mono-energetic imaging	No
Direct Angio	No
Lung Perfusion	No
Gout Imaging	No
Calculi Characterization	No
Bone Marrow Imaging	No
Iodine mapping	No

### ACCESSORIES

Online UPS for full backup of at least 30 minutes	Yes
Lead Glass Setup to be provided	Yes
Lead aprons - 5 Nos with Hanger to be provided	Yes
Gonad and thyroid Shield - 5 No each	Yes
Pressure Injector	Single head
Color Printer	Yes
Head Holder	Yes
Patient table accessories	Yes
X-Ray Film Viewer	Yes
Variety of phantoms for quality control	Yes

### CERTIFICATIONS AND REPORTS

Availability of test report/QA and QC report during warranty and CMC as per AERB/NABH/JCI guidelines	Yes
Machine should be AERB type approved or NOC	Yes
Product certification	EU-CE,US- FDA
Product Certificate Number	US-FDA K191136, EU-CE SU-07200.01
Product Certificate Date	5-5-2019,10-12-2015
Product Certificate issuing authority	USFDA, EU-CE

Four digit number of notified body If product is EU-CE certified	SU-07200.01
Confirmity to Manufacturer's Certification	ISO 9001 & ISO 13485
Certification, performance and safety standards specific to the device	IEC 60601-2-44 or equivalent BIS
Submission of copies of all the certifications and test reports to the buyer along with supplies	Yes
In scope of Supplier to be registered in eLORA of quoted Model for Buyer	Yes
<b>PRE-INSTALLATION SITE REQUIREMENT</b>	
Recommended Room Size	As Per AERB Guide lines
Power Requirements	200/220/240/380/400/ 420/440/460/480 V nominal, 3-phase
Operating temp range (°C)	20-25
Humidity (%)	30-70
Pre-installation requirements including map should be provided by seller after inspecting the proposed site for installation	Yes
Preparation of CT Scan Room , console Room , Technical room, one wash room etc to be done by the seller in the area of approx 800 sq feet	Yes
Tile based false ceiling and floor tiling and wall tiling till false ceiling in rooms to be done by the seller	Yes



Necessary modification civil work, electrical , plumbing, furnishing, air conditioning in the given area to be done by the seller	Yes
Doors other than main CT room to be of good quality Aluminium doors and should be done by the seller	Yes
Site should be AERB Compliant	Yes
Power up to site should be provided by the user	Yes
Any other necessary work for system functioning like earthing , proper LED lighting power points etc to be done by the seller	Yes
Room shielding to be done by the seller	As Per AERB Guide lines
<b>INSTALLATION &amp; TRAINING</b>	
The system should be installed and handed over in working condition by the seller to the buyer	Yes
Training of users in machine operation, trouble shooting aspects and basic maintenance shall be provided	Yes
Availability of toll free facility for technical support maintained by OEM or authorized agencies	Yes
Contact details of manufacturer, supplier and local service agent to be provided	Yes
Service Support	Support within 24 hours of breakdown call

Number of installations of the CT in Central /State/PSU Govt Hospitals( Note: Seller should supply a performace certificate of the device to the buyer)	more than 3
The Principal Manufacturer must have direct Presence/approved service center In India	Yes
Seller shall ensure uninterrupted availability of all spares for 10 years	Yes
Uptime during warranty and CMC Period	Atleast 95%
<b>WARRANTY</b>	
Warranty in years (Option of comprehensive warranty is available through bidding only, which if opted will supersede normal warranty in the catalogue)	5
<b>DOCUMENTATIONS</b>	
User/Technical/Maintenance manuals to be supplied in English in hard and soft copy	Yes
Copies of all calibration certificates to be submitted at the time of Supply of Machine	Yes
List of essential spares and accessories, with their part numbers and cost to be provided	Yes