



Notice Inviting e-Tender

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SUPPLY & INSTALLATION OF 128 Slice CT SCANNER & 16 SLICE CT SCANNER MACHINE IN THE MEDICAL COLLEGE AND HOSPITAL OF GOVERNMENT OF WEST BENGAL.

(Submission of Bid through *online*)

Bid Reference No.: WBMSCL/NIT-214/2018

Dated-12.10.2018

Amendment-II

REVISED TECHNICAL SPECIFICATION

128 SLICE CT SCAN:

Parameter / Feature	THRESHOLD LIMIT/RANGE
DETECTORS	
capable of producing slices per 360 degree rotation	128 or more
No. of rows of detectors	64 or more
No. of elements in each detector row	650 or more
Z axis coverage in mm	35 or more
Minimum no. of detectors along Z axis	64 or more
Generator	
Output power in KW	70 or more
Tube current in mA	600 or more

KV selection range	(80 to 130)or more
XRAY TUBE	
Heat dissipation rate in KHU/min	1000 or more
Heat storage capacity in MHU	7 or more
GANTRY	
Aperture diameter in cm	70 or more
Tilt in degree on either side	30 or more
Scan field view (FOV) in acquisition mode (cm)	(20 to 50) or more
MATRIX SIZE	
Display matrix	1024× 1024 or more
reconstruction matrix	512× 512 or more
PATIENT COUCH	
Metal free scannable range in cm	150 or more
Load bearing capacity in kg	170 or more
Table top height from floor level in cm	35 or more
Vertical range in cm	40 or more
Table speed in mm/sec	90 or more
OPERATOR CONSOLE	
RAM in GB	16 or more
CPU in Bit	64 or more
Monitor size in inch	19 or more
HELICAL/ AXIAL AQUISION	
Continuous scan time in spiral mode (sec)	100 or more
Scan length in cm	100 or more
IMAGE QUALITY PARAMETER	
Spiral resolution of the system	
High contrast and spatial resolution in lp/cm	15 or more
Low contrast detection ability at 3 HU difference using 20 cm CATPHAN in mm	4 or less
SCAN TIME	
Rotation time in second for complete 360 degree	0.4 or less
SLICE THICKNESS IN SPIRAL MODE	
Slice thickness in mm	0.65 or less
POST PROCESSING WORK STATION	
Monitor size in inch	19 or more
Displaying matrix	1024 × 1024
IMAGE PROCESSOR	
CPU speed in GHz	2.6 or more

Hard disc storage in TB	1 or more
Image reconstruction rate (image/sec)	20 or more
Dry Camera	
Throughput (number of film printing) per hour	70 or more
Print Resolution	16 bits and 500 dpi
MUST HAVE SPECIFICATION	
Parameter / Feature	Yes/No
DETECTORS	
Solid state detector	
XRAY TUBE	
Dual focal spot	
X-ray tube cooler unit in built in the Gantry	
GANTRY	
Ability to perform both in spiral and axial modes	
3D positioning LASER	
PATIENT COUCH	
Carbon fibre table top with adjustable horizontal and vertical movement	
In case of power failure manual movement of table	
Standard remote UP/DOWN,FWD/BWD	
Patient restrain kit, coronal head rest support, table extension head holder, table pad, arm rest, IV pole, cushions etc	
OPERATOR CONSOLE	
Multitasking and menu driven platform	
Storage of raw data on external media	
2 nos. of Medical grade colour monitors with flat screen	
Image reconstruction	
curved MPR	
CT angiography	
VRT	
Continuous CT fluoroscopic guided biopsy	
Additional work station from OEM with license for each	
HELICAL/ AXIAL AQUISITION	
Facility to monitor contrast enhancement and automatically commence scanning(Bolus trigger technique)	
Multiple ROI	

Artifact reduction algorithm	
Tilt spiral scan	
Dual energy application with Renal Calculi Characterization and Gout imaging	
DOSE REDUCTION TECHNIQUE	
Model based iterative reconstruction for dose reduction technique	
mA modulation in routine and cardiac mode	
POST PROCESSING WORK STATION	
Work station with software	
All Function available at operating console is available in additional independent work station	
IMAGE PROCESSOR	
3D volume rendering	
MIP	
CT angio (colour display)	
Virtual endoscopy	
CT perfusion	
prospective ECG gated scan	
Dental study	
MPR	
CPR	
MIP	
MinIP	
ROI	
VOLUME CALCULATION	
CT NUMBER DISPLAY	
TOPOGRAM DISPLAY	
Cine DISPLAY	
HRCT LUNG	
DYNAMIC Scan	
QUINTITATIVE VESSEL ANALYSIS	
Cardiac scan attachment with ECG gated segmental recon	
calcium score	
Plaque analysis cardiac function	
Flythrough in coronary arteries	
Automatic display of MPR image after scan	
Bolus triggered brain perfusion study(at least 3 levels) with automatic CBF,CBV, MTT, TTP maps, ROI placing and comparing and saving	

maps	
Neuro DSR with auto bone removing software	
low dose protocol for lung nodule assessment and follow up	
Complete cardiac package with ECG gated studies	
One touch volume rendering of whole heart	
ECG gated dose modulation	
Calcium scoring	
Coronary angio reporting	
Volume rendering technique with axial cross reference imaging along with measurement tools on VR 2D & 3D images and small volume measurement package	
MIP slab viewer	
CD/DVD/Archival/ DICOM viewer	
CT colonography	
CT body perfusion	
CT bronchoscopy	
Urology package	
CT fluoroscopy	
Volume package(including liver volumetry)	
ACCESSORIES	
Dual head pressure injector (300 psi)	
separate work station	
STANDARD & SAFETY CERTIFICATION	
US FDA and European CE	
AERB type approval	
Other	
Model launched in 2014 or after	
Note: Any other combination of Heat dissipation & Heat storage capacity of X-Ray tube which has the same output in term of long term exposure will also be accepted	

Specifications for Turnkey Work

Site preparation including interiors and Air-conditioning

- 1. Area to be prepared including interiors:** Carpet area of 1000 sq. feet approx. The area should have properly lead shielded wherever required as per BARC norms.
(Only covered space would be provided to the supplier)

Necessary brick work for compliance (thickening of wall) with AERB requirement should be done by the selected agency. Damp proof treatment wherever required. Paste, termite and rodent control from authorized agency for the warranty & CMC period. The agency should submit certificate after the treatment. Regular cleaning and weekly deep cleaning for entire unit

2. **Height of the room (up to false ceiling):** 3.0 m and above
3. **General**
 - a) **Floor:** Floor (except of CT room) should be of premier quality double charged joint less Glazed ceramic tiles of size (800 x 800) mm. Antistatic floor for CT room
 - b) **Ceiling:** Aluminium Composite panel board + Powdered coated Aluminium Grid Ceiling
 - c) **Wall:** should be of premier quality double charged joint less Glazed ceramic tiles of size (450 x 300) mm up to ceiling high. Wall specification should be as per BARC norms
 - d) **Door for CT Room:** Wooden (with lead shielding as per AERB norms)
 - e) **Paint:** 2 coats synthetic enamel paints over 2 coats primer over wall putty (if required)
 - f) **Viewing Window:** Size of the Lead window should be at least 2" (H) X 4" (W)
4. **Air-conditioning machine:** The entire carpet area should be air-conditioned with AC machines of appropriate tonnage and with 100% back up. AC machines with 5 star rating having appropriate capacity to bring down and maintain room temperature up to 16° Celsius as per requirement. There should be sufficient number of the AC machines to run the service round the clock and uninterrupted in case of breakdown of any of the AC machine(s).
A/C ducting to prepare, if required.
Indicative AC Make: O General/ Hitachi/ Mitsubishi
 5. High quality room lighting (up to 350 LUX of illuminance)
 6. **Ambient light interior during treatment period.**
 7. Gas Pipelines etc.
 8. The bidders to submit drawing layout plan of the interior. At least 15 -20 patient holding positions has to be mentioned in the drawing layout plan. Sufficient furniture to be supplied for the console room and patient waiting.
 9. **Movable Skylight at ceiling**
 10. **Wiring System:**
 - a) Light, Fan, 5 Amp Plug: 3 X 1.5 sq. mm copper conductor FRLS wire should be provided.
 - b) Power Plug (15 Amp): 2 X 2.5 + 1 X 1.5 sq. mm copper conductor FRLS wire should be provided.
 - c) Split AC wiring: 2 X 4 + 1 X 2.5 sq. mm copper conductor FRLS wire should be provided.
 11. **Earthing:** Two nos. Copper plate earthing as per PWD schedule
 12. Dress Changing room

Note: The items mentioned above are indicative in nature

Furniture to be supplied:

a)	Executive revolving chair with arm rest: 6 Nos. (Godrej/ Featherlite)
b)	Steel Almirah with Rack: 3 Nos. (Godrej)
c)	Wooden Shoe Rack: 2 Nos (Godrej)
d)	Crush Card: 1 No. (Godrej/ Janak)
e)	i) Console table -1 No. ii) Additional Table for workstation size of (1200 x 800) mm- 1 No.(Godrej/ Featherlite)
f)	Mirror in change Room with small storage rack and clothes Hook, Curtain with SS rods and Hooks- 1 No
g)	Wheel chair: 1 No
h)	LED view box for two films - 2 Nos
i)	Patient trolley with mattress with O2 Cylinder facility: 1 No.
j)	PA system with FM/USB facility (Sony/Philips/Bosch)- 1 No.
k)	Night vision CCTV camera with proper coverage of patient waiting area, entry gate, console & UPS room with storage capacity of 15 days
l)	24x7 online dehumidifier-2 Nos.
l	Note: The items mentioned above are indicative in nature