Notice Inviting e-Tender

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Supply and Commissioning of 01(one) unit of 128 Slice CT Scan Machine for the Department of Radiology, Medical College, Kolkata

(Submission of Bid through *online*)

(2nd call of Bid Reference No.: WBMSCL /NIT-821/2025, Dated–25.09.2025)

Bid Reference No.: WBMSCL /NIT-920/2025	**Dated–13.11.2025**

AMENDMENT-I

Revised Technical Specification

of 128 Slice CT Scanner

The offered model should be launched after January 2021 or later (tolerance 2 months) with latest software and hardware available at the time of supply.

Sl. No.	Features (A)	Essential Specification (B)
1. Gantry		
1.1	Aperture	≥70cm
1.2	Scan field	≥50cm
1.3	Gantry Tilt	Minimum tilt of 20 degree on either side (physical/digital).

Sl. No.	Features (A)	Essential Specification (B)
1.4	Integrated display panel	Integrated display panel Gantry front OR Tablet based on mobile workflow showing patient information, an ECG, breath- holding and scan guidance.
2. Single Source Dual Energy		With basic applications like renal Calculus Characterization and Gout imaging.
3. X-Ray Generator		
3.1	Output Capacity (actual and not effective)	70kw or more
3.2	mA range	20-600 mA or more
3.3.	Kv	80-130 kVp (±10) for both the numerical values
4. Tube Assembly		
4.1	Tube Voltage	80-130 kVp (±10) for both the numerical values
4.2	Tube current	600 mA or more
4.3	Anode heat storage capacity	≥7 MHU or direct cooling tube
4.4	Anode heat dissipation rate	≥1 MHU per minute
4.5	Focal spot	Please specify
5. Patient Table		
5.1	Maximum load capacity	≥200 kg
5.2	Scannable range	≥1750 mm
5.3	Longitudinal table speed	≥100mm per sec
6. Scanning Modes		
6.1	Spiral scanning	
6.1.1	Spiral exposure	At least 100 sec or more
6.1.2	Scan time for full 360 degree rotation in all modes	≤0.35 sec in all modes
6.2	Axial Scanning	
6.2.1	Slice Thickness (Axial mode)	0.625-5mm variable
6.2.2	Dynamic Multi-scan	It must be possible to do dynamic multi scan for any body part
7. Data Acquisition System- Latest Detector		
7.1	Number of acquired / generated slice per rotation in all modes	Minimum 128 acquired / generated slices in all modes
7.2	Dynamic cerebral CTA	Enabling 4D CT DSA, time resolved perfusion with a minimum range of not less than 8 cm.
7.3	CT fluoroscopy intervention scan mode	CT - guided intervention with CT fluoroscopy technique should be available

Sl. No.	Features (A)	Essential Specification (B)
7.4	Number of Physical rows of detectors	Minimum 64 physical rows of detectors must be available
8. Patient Communication		
8.1	Integrated patient intercom	There should be integrated patient intercom
8.2	Automatic patient instruction	A standard set of commands for patient communication before, during, and after scanning should be available.
9. Patient Registration		
9.1	Pre-registration	It should be possible to do pre-registration of patient at any time prior to scans
9.2	Emergency registration	Special emergency registration should be possible
9.3	HIS & RIS integration	It should be capable of fetching patient information from departmental existing HIS & RIS
9.4	PACS/HIS/RIS	It should be capable of transferring examination information from scanner into departmental HIS & RIS.
10. Operator Console with Table		
Computer System & Image		
10.1	CPU Processor	Minimum quad core processor, 1TB hard disc, 32 GB RAM. The best available option to be quoted by the vendor
10.2	Display	One large minimum 19" high resolution LCD monitor with a display on 1K X 1K or more
10.3	Software	Should perform the functions like scanning, image reconstruction, film documentation, MPR,CPR,CT angiography, MIP, 3D VRT, 3D SSD, Fly through, readymade/Automatic perfusion for stroke imaging
10.4	4D Work flow	4D workflow with direct generation of axial, sagittal, coronal or double-oblique images from standard scanning protocols
10.5	CT Angiography and Automated bone removal	Protocols to do CT angiography of anybody region including heart and variable heart rate & accurate presentation of subtracted CTA data sets. Complete package for CT coronary angiography analysis
11. Image Post processing		
11.1	Architecture	A Client Server Architecture based solution (Intellispace portal/ AW Server / Syngo Viaetc)
11.2	Server Hardware	Server Hardware details: Intel Gold CPU 8-core, 64 GB RAM, 3TB storage with separate disks for system SW, Win Server 2022 edition /Linux & NVIDIA® 8GB GPU. Mandatory hardware replacement the server, client PCs and medical grade monitors to the latest available and compatible version after 5 years from installation
11.3	**Independent Client hardwares (2 units) specification for each client station**	
11.3.1	Medical Grade Monitors (19" or more)	One monitor per client, each monitor of 2 Megapixels or more, mouse, Online continuous UPS of at least 2kVA along with 1 Desktop and printer (Latest version) for reporting purpose
11.3.2	CPU Unit	CPU unit with dual core processors, Minimum 16 GB (8 GB X 2) RAM, NVIDIA® 1 GB or equivalent, 1TB hard drive and 256 GB SSD

Sl. No.	Features (A)	Essential Specification (B)
Server S/W		
11.4	**Basic capabilities (2 or more concurrent users for all applications)**	
11.4.1	MPR	Real-time multi-planar reconstruction (MPR) of secondary views, with viewing perspectives in all planes including curved & orthogonal MPR.
11.4.2	ROI evaluation	Parallel evaluation of multiple ROI in circle, irregular and polygonal forms.
11.4.3	Statistical Evaluation	Image annotation and labelling, Angle measurement and Distance measurement
11.4.4	2D	2-D, including image zoom and pan, image manipulations, reversal of grey-scale values
11.4.5	3D	MIP, Min IP, SSD, VRT and other advanced 3D applications and color- coding for different issues
11.5	**Advanced applications (2 numbers of concurrent license)**	
11.5.1	CT Angio	Automatic table and bone subtraction in CT angiography, Single click bone removal, manual vessel tracking, ability or a bone free visualization of the selective highlighting of high contrast structures, Vessel tracking, single click Stenosis measurement and coronary vessel tracing. Complete package for CT coronary angiography analysis.
11.5.2	CT Neuro perfusion	Software for advanced cerebral perfusion study with stroke protocol and summary maps of the perfused area. CT Neuro perfusion Software for advanced cerebral perfusion study with CBV, CBF, TIP etc.
11.5.3	Colonography	Non invasive evaluation of the entire colon. Carbon dioxide insufflation pump set for CT colonography with facility for delivery of appropriately heated carbon dioxide and automatic regulation of flow rate and pressure with a high degree of precision. Accessories like tubings (no.10) and carbon dioxide cylinders (no.5) to be provided.
11.5.4	Fly Through	External and internal (endoscopic) views using multiple-color surface shaded display blended with 3D volume-rendered image
11.5.5	Dental	Prepare dental images with CT imaging for implant planning
11.5.6	Cardiac Function and Ca scoring	left Ventricular Analysis (LVA), left ventricular wall analysis and Automated left ventricular segmentation
11.5.7	Advanced applications	Lung nodule assessment and lung segmentation, liver assessment and segmentation, Oncological imaging evaluation package, bone removal software, Metal Artifact reduction software, Bolus tracking software and Virtual Endoscopy software must be available.
11.5.8	Integrated fusion	Multi-modality fusion- fusion between PET-CT, CT-MR
11.5.9	Neuro DSA	For evaluating cranial arteries by single click bone subtraction
11.5.10	CT Fluoroscopy	CT Fluoroscopy Guided Biopsy with near real time needle visualization with Monitor of 18" or more, Cart for carrying monitor and Footswitch.
11.5.11	Advanced VRT	High resolution rendered 3D views

Sl. No.	Features (A)	Essential Specification (B)
12. Image Reconstruction		
12.1	Recon speed	Minimum 35 images/sec
12.2	Recons Field of View	5 to 50 cm continuous
12.3	Recon Matrix	512 X 512 or higher
12.4	Real time display	Real-time display (1K X 1K) during spiral acquisition
13. Image Quality		
13.1	High contrast Spatial Resolution for entire width of the detector	≥15Lp/cm @ cut-off
13.2	Low-contrast resolution	At least 5 mm at 3.0 HU. Measurement to be based on 20 cm CATPHAN (Specify the Low-contrast resolution)
14. Dose Reduction Techniques		
14.1	Radiation dose	There should be radiation dose calculation and display during the procedure; DICOM structured dose report, dose notification, dose alert
14.2	Pre-Patient collimation	There should be pre-patient collimation to reduce unnecessary dose to the patient
14.3	Latest Iterative reconstruction Technique	Iterative reconstruction technology for all imaging a protocol which reduces dose while simultaneously improving low contrast detect ability & spatial resolution and reduces image noise.
14.4	Paediatric & infant protocol	Dedicated paediatric / infant protocols to be offered by the vendor
15. Certification		
15.1	AERB type approved, and the copy of e-LORA Listing should be submitted along with bid. If the quoted model has not been yet installed in India, vendor should submit NOC from AERB. The model should not be a refurbished or Gold Seal model.	
15.2	Regular QA according to AERB norms will be responsibility of bidder during warranty and CMC period	
16. Dose Performance Data (Using iec Standard Phantoms)		
16.1	Head	Not more than 20 mGy / 100 mAs (Specify the value)
16.2	Body	Not more than 10 mGy / 100 mAs Specify the value)
17. Networking		
17.1		DICOM Storage (Send/Receive)
17.2		DICOM Modality Work list User
17.3		Modality Performed Procedure Step (MPPS)
17.4		DICOM Print User
17.5		Query / Retrieve User and Provider
17.6		DICOM3 compliance

Sl. No.	Features (A)	Essential Specification (B)
17.7	Integration with department RIS	Integration with departmental RIS and PACS and institution HIS must be done. Any licenses or software needed for the same is to be provided
18. Archiving		
18.1		Fully DICOM 3.0 compliant including capability from HIS- RIS interface
18.2		Service Class User & Provider (CT, MR, NM, Secondary Capture)
18.3		Storage Commitment User
18.4		Removable Media
18.5		DVD/ROM archive
19. Dual Head Pressure Injector		
19.1	Dual Head pressure injector	Dual head pressure injector with dual flow with 100 nos. of Syringes & 200 sets of tubings. It should be CDSCO product.
20. Dry Laser Camera with printer		
20.1	Resolution	16 bits / 500 dpi
20.2	Port	Min 2
20.3	Number of film trays	Minimum 3
20.4	Support film sizes	17 X 14 and 10 X 12
20.5	Supply of film	Minimum 500 films (17X14) and 500 films (10X12)
20.6	Supply of DVD	Minimum 100 discs
20.7	External Hard disc	Minimum 2 TB supplied with the machine
21. Online UPS (Reputed Make)		UPS with Maintenance free batteries capable of 30 minutes backup to run the entire CT, Computers, Dry chemistry camera, Work Stations etc.
22. Multiparameter Monitor		
22.1	Monitor	Multi Para monitor 10(Ten) inch monitor, ECG, SPO2, NIBP module of a reputed make for monitoring vital parameters. It should be CDSCO Certified product.
22.2	Anaesthesia Workstation with Ventilator	Anaesthesia Workstation having CDSCO Certified product Certified product-1 no.
23. Miscellaneous		
23.1	Lead Aprons & Hangers	LIGHT WEIGHT lead Aprons (0.25 mm lead equivalent)-6 Nos. & hangers- 2 Nos.
23.2	Lead Glass	Lead Glass of 2ft X 4ft as per AERB Norms
23.3	Lead Apron Stand	Lead apron stand-1No.
23.4	Thyroid shield	Thyroid Shields - 2nos.
23.5	Gonad Shield	Gonadal Shields - 2 nos.

Sl. No.	Features (A)	Essential Specification (B)
23.6	Standard Patient positioning accessory and restraining device	All standard Accessories pertaining to patient comfort and desired study like patient restraint kit, coronal head rest, table pad, cushions and pads
23.7	Remote Diagnostic Service	Software for Remote Diagnostics Service over a telephone line. The broadband line will be provided by end consignee.
23.8	Training	Onsite Training for a period of 60 days in a phase manner during warranty and CMC period as and when required.
24. Warranty		
2(Two) Years for CT Scanner System including X-Ray Tube & Local accessories.		
25. Delivery Timeline		
90 days from date of Work Order / opening of LC, whichever is later. Procurement license from the AERB should be ready by the equipment supplier in the mean time.		
Turnkey Work (site preparation including interiors) will be made to the Supplier on completion of satisfactory performance for 90 days after installation, commissioning of the goods and issue of final acceptance certificate in the prescribed format given at Form-3 stating "satisfactory functioning of the equipment for 90 days after commissioning" by the Consignee. The final acceptance certificate shall be signed by the facility / end user and issued after joint visit by authorized official(s) from WBMSCL and the facility / end user.		
The bidder/ OEM should have valid CDSCO Certificate/Registration/License for both the manufacturer(s) and importer(s) as applicable		

128 SLICE CT SCAN:

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 should be done by the selected agency. **Pest**, termite and rodent control from authorized agency for the warranty & CMC period. The agency should submit certificate after the treatment.

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 (600 x 600) mm. Antistatic **P V C** floor for CT room

b) **Ceiling:** Powdered coated Aluminium Grid Ceiling **and Gypsum board false ceiling wherever required.**

c) **Wall:** should be of premier quality double charged joint less Glazed ceramic tiles of size (600 x 300) mm up to ceiling high. Wall specification should be as per BARC norms

d) **Door for CT Room**: Wooden / Heavy duty double leaf Steel Main Entrance door with locking facility with lead shielding as per AERB norms) for CT Scan Door. Metal UPS room door with 2 hour fire rating to be provided.
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 (if split AC is used) rating having appropriate capacity to bring down and maintain room temperature up to 22° 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/Daikin/Bluestar**

5. High quality room **L E D** lighting (up to 400 LUX of illuminance)
6. Ambient light interior during treatment period.
7. Gas Pipelines etc **with 2 terminations – one at patient waiting area & other at Gantry room –** imported terminals to be supplied.
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. 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**: 4(Four) nos. Copper plate earthing as per PWD schedule.
12. Dress Changing room with mirror and storage shelf as per requirement.
13. Provision for 1 Toilet facility (plumbing – kohler / jaquar / grohe / roca and sanitary cera / hindware / parryware – tornedo technology).
14. Provision for 1 complete Toilet facility (plumbing – kohler / jaquar / grohe / roca and sanitary cera / hindware / parryware – tornedo technology).
15. Misc supply items: 3 nos - 80 liter Waste bin Set as per color code to be provided.
16. Fire Alarm & Detector: Fire Alarm (along with new / existing panel) should be provided in all rooms, wherever site modification is being carried out. Fire alarm shall comprise of fire panel, smoke / heat detectors.

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)	Crash Cart: 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 three films - 2 Nos
i)	Patient trolley with mattress with O2 Cylinder facility: 1 No.
j)	3 Seater patient waiting chair and magazine racks (Godrej / featherlite)-6 nos.
k)	PA system with FM/USB facility (Sony/Philips/Bose)- 1 No.
l)	Night vision CCTV camera with proper coverage of patient waiting area, entry gate, console & UPS room with storage capacity of 15 days
m)	24x7 online dehumidifier-2 Nos.
n)	Fire sensors as per manufacturer specification (Honeywell / jonson or equivalent) and hand held Co2 extinguisher 3 kg – 6 nos.
o)	Desktop Computer system with scanner and printer (B/W Laser) for reporting purpose. The system should be supplied with online UPS and necessary furniture.
	Note: The items mentioned above are indicative in nature