Notice Inviting e-Tender

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Supply and Commissioning of 01 (One) unit of 16 Slice CT Scan Machine at Kandi SDH, Murshidabad District

(Submission of Bid through *online*)

Bid Reference No.: WBMSCL /NIT-285/2025	**Dated–11.04.2025**

AMENDMENT-VI

REVISED TECHNICAL SPECIFICATION of 16 Slice CT Scan Machine

16 Slice CT Scanner with 16 Rows of Physical Detectors
The offered model should be latest one of state-of-the-art technology and launched not before 2020 (In case of offered Model launched earlier than 2020, hardware and software upgradation and necessary changes made in or after 2020 is a mandatory requirement. Necessary supportive documents need to be submitted. Refurbished – gold seal units will not be accepted. The total system should have valid CDSCO Certificate License for manufacturer and import licence from CDSCO for importers as applicable and system must be AERB type approved. Necessary supportive documents need to be submitted
Gantry:
The CT scanner should have low Voltage Slip Rings incorporated in the Gantry.
The Minimum scan time for a 360 Degree rotation should be 1.0 Second or less.
The gantry with digital tilt or mechanical tilt of ±30º standard.
The gantry should be provided with user control panel for easy positioning
CT Should have 16 rows or more physical Detector with each row having at least over 650 or more elements.
The Gantry should have 3D Positioning Laser lights is mandatory, with patient camera (optional) if possible.
The Scan field of view (FOV) should be 43 cm or more
Aperture should be of 65 cm or more in diameter or more.
X ray Tube:
The X ray Tube current should be 10 to 240 mA or more with increments in steps of not more than 10 mA.
The system should work combined with iterative reconstruction technique to avoid excess radiation.
Generator should be compact and inbuilt in the Gantry.

The System X ray power should be 32 KW or above.
Tube Voltage should be variable from 80 to 130 KVA
The X-ray Tube should have anode heat storage capacity of at least 3.5 MHU or more.
Tube should have dual focal spots (please specify) to adapt to various imaging needs.
The X ray tube Cooling Unit should be in built in the Gantry.
The System should be Equipped with Ultra Low Dose Technology, Specify the Technology with detailed Technical Data On it.
Detectors:
16 slices per rotation should be possible with the detectors in sub-mm mode. Detector should have minimum 16 rows of physical detectors with each row having at least over 650 elements.
In built mechanism for adapting the tube current during each scan. This should enable radiation dose reduction where body part thickness is less. Specify mechanism used in the system.
Specify the Fan Angle of the X-rays and the geometry The detectors should not require frequent calibration.
The detectors shall be large area detector with a Z axis coverage of 10 mm or more per rotation
Patient Table:
The patient table offered should have a minimum load bearing capacity of at least 150 kg or more with Forward, Backward, UP & DOWN facility.
The range of metal free scan should be at least 135 cm. or more Pitch factor = 0.5 to 1.5 sec or more
Specify the reproducing accuracy of the table.
Spiral / Helical Section:
The system offered should have Spiral Capability of at least 100 seconds & above continuous
The range of Spiral facility in Axial Direction should be specified.
The Image reconstruction Time should be specified.
Contrast Bolus triggered spiral acquisition must be possible
Slice thickness and range should be freely selectable.
Main Console Computer Section (Acquisition WorkStation) :
The main console CPU offered should be the Latest Multi tasking Processors and a menu driven platform with a RAM size of at least 16 GB
The Monitor should be medical grade with the latest Color of at least 24 inches or 19 inches OEM double monitors and flat screen. There should be Console (monitor) with One Monitor or OEM double monitors for console and one monitor having 24 inch or more for viewing.
The display matrix should be at least 1024 X 1024.
The Hard disk Capacity for both Image and Raw data should be more than 500 GB
It should have facility to store at least 1,00,000 Images
The Main Console / workstation should have standard software like 3D Volume rendering, MIP, CT Angio, Color Angio Display, 3D Artefact Suppressions, Preset 3D Reconstruction& Display Protocols, Auto Bone Removal, Endoscopy and Vascular assessment. Direct generation of axial, sagittal, coronal, or double-oblique images from standard scanning protocols. If any other latest software and application bidder shall provide at free of cost.
The following software should be offered as standard (MPR, ROI, VOLUME CALCULATION, CT NUMBER Measurement of between –10, 000 to + 25,000, WINDOW WIDTH, WINDOW LEVEL, TOPOGRAM DISPLAY, CINE DISPLAY, HRCT LUNG, DYNAMIC SCAN)
The system should be supported with archiving facility of DVD & CD, USB in Main Console.
DICOM facility to send, store, print, receive, Query / Retrieve, MWM, MPPS etc should be standard.
Resolution:
High Contrast Spatial Resolution should be 15 LP/cm or more.
The low contrast resolution should be 5mm at 3HU difference using 20cm CATPHAN (Please mention phantom, scan time, mA, filter for image reconstruction, scan field, dose, slice thickness)
Noise Suppression protocols to maintain LCR at low dose should be standard.
Special Software's (Like MA Modulation in Routine) to ensure Dose efficiency should be standard.
Specify the CT Dose Index
Additional Post Processing Workstation:
One Workstation with latest processor, 24 inches or more TFT active- matrix colour LCD/LED Medical Grade monitor with RAM of at least 16 GB & hard disc capacity of minimum 1TB, Image evaluation and processing software including for displaying 512 x512 matrix or more. Screen resolution SXGA or higher. Image archiving by USB, DVD should be available.
Workstation & image post processing software must be from original equipment manufacturer and user friendly

with all functions menu driven. It should be of modern user interface. Also, should provide 100 DVD. All functions should be available at the operating console and should be available in the working station cum reporting station.
The advanced vessel analysis, auto bone removal, small volume quantification, Automatic bolus tracking, MPR, MIP, CPR, SSD, CRT all standard measurements, paediatric protocols should be possible even on independent workstation. Filming capability facility should be available in the additional work station.
3D Advanced Volume rendering CT Should be available.
Dry laser camera & printer :
Compatible dry laser camera with double slot (minimum 500 dpi) accommodating 14" x 17" size films and 12"x10" size films – 1 no. 14"x17" film (minimum 125 films per packet) 4 packets should be supplied with the machine.
Patient Accessories:
All Patient positioning accessories including head-rest support, coronal head support, leg cushions should be included.
All Standard Accessories: -
Lead Glass of at least 2 ft x 4 ft
Compatible UPS of reputed make and suitable rating for the whole system with 30 minutes back-up to run the machine.
Dehumidifier: -2 nos.
Anaesthesia Workstation with Ventilator should be provided with the machine having the total system should have valid CDSCO Certificate License for manufacturer and import licence from CDSCO for importers as applicable
Single head pressure injector 1 unit (250 syringe along with tubing should be supplied. Injector monitor with remote injection control facility should be supplied in the console room. Whole equipment assembly should have valid CDSCO Certificate License for manufacturer and import licence from CDSCO for importers as applicable
LED X-Ray Film Viewer with adjustable brightness capable of holding 3 films of 14"x17" size: - 2 Nos.
Software for remote diagnostic service over internet connection. Broadband Connection will be provided by the Hospital authority.
One 5 parameter Patient Monitor (valid CDSCO Certificate License for manufacturer and import licence from CDSCO for importers as applicable), Emergency kit (ambu bag & laryngoscope).
Zero Lead Apron (Waist Type) 4 Nos.
Floor Mounted Lead Apron Hanger 2 Nos.
Patient Trolly along with Oxygen cylinder holder of A type (SS 304 Grade) with mattress (hydraulic) – 1 no.
Wheelchair (SS 304 Grade) patient bearing capacity should be 160 Kg. or more – 1 no.
Crash Cart (SS 304) CDSCO certified : - 1 No.
Warranty:
Two Years for CT Scanner System including X-Ray Tube & Local accessories including batteries .
Training:
On site clinical training of 1 week to be provided to Medical Technologists and Radiologist.

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):** 2.7 m and above
3. **General**

a) **Floor:** Floor (except of CT room) should be of premier quality double charged joint less Glazed vitrified tiles of size (600 x 600) mm. Antistatic **P V C** floor for CT room
b) **Ceiling:** Mineral fibre board of 2ft*2ft with metal 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 (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)/ Heavy duty double leaf Main Entrance door with locking facility and metal UPS room door with 2 hour fire rating.
e) **Paint:** 2 coats synthetic enamel / acrylic paints over 2 coats primer over wall putty (if required)
f) **Viewing Window:** Size of the Lead window should be at least 2 ft. (H) X 4 ft. (W)

4. **Air-conditioning machine:** The entire carpet area should be air-conditioned with AC machines of appropriate tonnage and with 100% back up. Combination of Ductable AC & Split AC or only Split AC machines having 5 star rating (if split AC is used) having appropriate capacity to bring down and maintain room temperature up to 19° Celsius as per requirement can be used. 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/Blue Star**

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. Static 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**: 2 (Two) nos. Copper plate earthing as per PWD schedule. 2 (Two) GI 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).
14. **Misc supply items**: 3 nos - 80 liter Waste bin Set as per color code and 6 nos 20 liter waste bins for the centre.
15. **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) Customized Additional Table for workstation size of (1200 x 800) mm- 1 No.
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-6 nos.
k)	PA system with FM/USB facility (Sony/Philips/Bosch/Ahuja)- 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 60L capacity each -2 Nos.
n)	Fire sensors as per manufacturer specification (Honeywell /Ahuja / jonson or equivalent) and hand held ABC extinguisher 2 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