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ANX D TO
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DATED: 27 NOVEMBER 2025

DESCRIPTION OF TECHNICAL SPECIFICATION FOR CT SCAN MACHINE (256 MULTI SLICE DUAL SOURCE), QUANTITY-01, (DP-5)

(Tenderer must fill up this format without changing its basic structure)

Ser No	Description	Tech specifications/Feature	To be filled up by the Manufacturer/ Principal
(a)	(b)	(c)	(d)
1.	General Specification: General specifications are as under :		
	a. Nomenclature	CT Scan Machine (256 Multi Slice Dual Source)	
	b. Brand	To be mentioned.	
	c. Model	To be mentioned. Model should be latest.	
	d. Name of Manufacture with Complete Address	To be mentioned.	
	e. Name of Principal with Complete Address	To be mentioned.	
	f. Name of Local Agent with Complete Address	To be mentioned.	
	g. Year of Production	Not before the calendar year of contract.	
	h. Country of Origin & Manufacturer	Group-A: Bangladesh, Australia, Austria, Belgium, Brazil, Canada, Denmark, Finland, France, Germany, Indonesia, Ireland, Japan, Luxemburg, Netherlands, Norway, Singapore, Spain, Sweden, Switzerland, Turkey, UK, USA, South Korea & Italy.	
	j. Port of shipment	Same country of manufacture for Main System. Other Items/ Equipments/ Accessories and Local supplied item to be mentioned specifically.	
2.	Objective/Purpose: The system to be the latest generation multi-slice dual source CT scanner. Capable of acquiring 256 or more slices per 360 degree rotation for all types of scans and applications.		
3.	Basic Features Consisting of the Machine: Following purpose and basic features to be available with the CT Scan Machine/Systems.		
	a. Spiral CT Scanner with 64 slice protocols with 256 Slice Volume Scanning capability for the Whole body.		
	b. The system consisting of Gantry, Couch, Operating Console with preview station, Multi Modality Post-Processing, Workstation, Filming with DICOM, Compatible Dry Laser Imager, Color Laser Printer, Dual Head Injector etc and Radiologist workstation.		
	c. Image Storage in system of HD and image transfer through CD/DVD write facility to be available.		
	d. Dedicated pediatric CT protocols to be available.		
	e. The system must have DICOM & PACS (Latest version) on line data/image transfer capability to be available.		
	f. Rotating anode type X-ray tube and Ceramic detector to be available.		
	g. Voice link: Vocal instruction to the patient facility to be available.		
	h. An suitable/compatible online UPS to be provided for the complete system for power back up in case of mains power failure and fluctuation.		
	j. The system must have Dual Energy Imaging and analysis facility.		



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4.	<u>Technical Specification/Features/Facilities:</u>		
	a. <u>CT Functions/Procedures:</u> Following functions/facility to be available, related software to be provided with the Machine and clearly mentioned in the technical offer :		
	1) Contrast Media Tracking.		
	2) CT Angiography.		
	3) CT Pulmonary Angiography.		
	4) CT Coronary Angiography		
	5) Advance 3D analysis.		
	6) CT portal Venous Angiography		
	7) Dynamic Cerebral Perfusion Mapping.		
	8) Head CT.		
	9) Maxillo-facial CT.		
	10) Neck		
	11) Thoracic CT.		
	12) Abdominal CT.		
	13) CT Volumetric measurement porticoalapy liver volume		
	14) Pelvic CT.		
	15) Skeletal CT.		
	16) Interventional CT.		
	17) Cardiac CT.		
	18) Temporal Bone CT.		
	b. <u>Gantry & Scan Parameter:</u> Following technical parameter are to be available with the Gantry and Scan and clearly mentioned in the technical offer:		
	1) Low Voltage Slip Ring Technology: To be available		
	2) Scan Time for 360 degree rotation: Less than 0.25 second or less.		
	3) Scan Regions : Whole body.		
	4) Right and Left Gantry control facility: To be available.		
	5) Back and front Gantry control facility: To be available.		
	6) Scan field/FOV : 50 cm or more.		
	7) Gantry Aperture/Extended FOV : 78 cm or more.		
	8) Rotation Time : To be mentioned (Lower is preferred).		
	9) Recon Slice Thickness : Adjustable from 0.4 or less to 20 mm or more		
	10) Recon Time : To be mentioned (Lower is preferred).		
	11) Gantry Tilt : $\pm 30^\circ$.		
	c. <u>X-ray Generator:</u> Latest, State of the Art and Ultra Compact and built in the gantry. Following technical data to be available with the X-ray Generator and clearly mentioned in technical offer:		
	(1) X-ray generator: 2 x120 KW or more.		
	(2) X-ray generator type : High Frequency Inverter Type.		
	(3) X-Ray Exposure: Continuous.		
	d. <u>X-Ray Tube:</u> Following technical parameter to be available with the X-ray Tube and clearly mentioned in the technical offer:		
	(1) Computer controlled monitoring of anode temperature facility: To be available.		
	(2) X-Ray Tube Voltage :Adjustable from 70 to 150 KV or better (Initial lower KV acceptable).		



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	(3) X-Ray Tube Current : 40-2600 mA for double tube		
	(4) Anode Heat Storage Capacity : 2.7 MHU or equivalent or more.		
	(5) Peak Heat Dissipation rate of Anode: 800 KHU/min or more.		
	(6) X-Ray Tube Cooler unit to be inside the gantry: To be available		
	(7) Dose Filter : To be mentioned (6.8 mm Al equivalent).		
	e. X-ray Detector for Detection: The detector have at least 64 'physical rows'. Number of elements in each row to be specified. Following technical parameter to be available the device.		
	(1) Detector Type: Ultra Fast Ceramic Detector/Solid Detector with Microchips, Conductor etc directly integrated at the photodiode to reduce electronic noise coming from the detector.		
	(2) Number of detector row: 2 x 96 (for dual source), or more		
	(3) Number of slices/rotation: 2 x 192 (for dual source), or more.		
	(4) Number of Detector elements per row: 2 x 192 (for dual source), or more.		
	(5) High contrast resolution: To be mentioned (0.24 mm or less)		
	(6) Single detector length: To be mentioned.		
	(7) Acquisition Slice Width: 0.625 mm or less.		
	f. Patient Table: Following technical parameter/facilities to be available with the Patient Table and clearly mentioned in the technical offer.		
	(1) Remote control of the couch from console: To be mentioned.		
	(2) Table move vertically and the table top moves longitudinally facility: To be available.		
	(3) Motor driven couch top movement.		
	(4) Load capacity: 200 Kg or more.		
	(5) Scan range ability: 200 cm or more for whole body.		
	(6) Table feed speed: 10 mm/s or less-160 mm/s or more (2-450 mm/s is preferred) .		
	g. Spiral CT Capabilities: Following capabilities are to be available with the Spiral CT and clearly mentioned in the technical offer.		
	(1) Slice thickness: Minimum and maximum to be mentioned.		
	(2) Pitch factor (Volume pitch): To be mentioned with variable.		
	(3) Spiral length: To be mentioned.		
	(4) Single Continuous spiral-on time: To be mentioned.		
	h. Topogram/Scanogram:		
	(1) Scan Length and Scan Width Range: To be mentioned (Maximum is preferred).		
	(2) Scan Times: To be mentioned (Lower is preferred).		
	(3) Views: Feasible in Frontal and Lateral orientation facility to be available		
	(4) Possible to interrupt acquisition manually once the desired anatomy is obtained facility		
	j. Acquisition & Processing Workstation: High Performance Computer to be supplied with the System for data acquisition, image reconstruction and routine post processing. Following facility to be available with the Computer:		
	(1) Processor: 2 x Quad core 2.66 GHz or equivalent.		
	(2) Monitor : TFL/LCD 19" or more, with 1280 x 1024 resolution and 0.29 mm pixel size.	Or be mentioned which is compatible to machine as per FDA approval	
	(3) Main Memory (RAM): 8 GB or more.		
	(4) HDD : 140 GB or 250,000 uncompressed images.		
	(5) Raw Data Capacity: 3.8 TB or more.		



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	(6)Graphics Accelerator : For fast 3D processing.		
	(7)CD/DVD writer: CD (700 MB), DVD (4.7 GB).		
	(8)DICOM Viewer: Automatically included in every CD for viewing in PC		
	k. Softwares: Following application packages (software) to be from OEM (Original Equipment Manufacturer) and provided/supplied with the System (CT Scan Machine): MPR (Multi Planer Reconstruction), 3D SSD (Shaded Surface Display), VRT (Volume Rendering Technique) for advanced 3D application, CT Angiography, Video Capture & Editing Tool, Direct generation of axial, sagittal, coronal, or double-oblique images from standard scanning protocols, Bolus CT (CM-enhancement triggered data acquisition), Automatic metal artifact reduction, combining beam hardening correction, normalized sinogram inpainting and frequency split to reduce metal artifacts caused by metal implants, cardiac acquisition using prospective and retrospective ECG-gating, Neuro volume perfusion, automatic segmentation, 4D noise reduction, MTT, TTP, CBF, TTD and permeability, 3D Evaluation of brain tumors, automatic best systolic and diastolic phase selection, total and relative calcium scoring, Artificial intelligence (AI) should be in cooperated.		
	l. Advanced Multi-Modality Post-Processing Server Workstation for Radiographer: High Performance Server based Computer for advanced multimodality post processing facility available and Software to be provided with the System (CT Scan Machine) from OEM (Original Equipment Manufacturer) . Price to be quoted separately. Following technical data to be available with the Computer :		
	(1)Processor: 2 x Xeon 3.6 GHz.		
	(2) Monitor : TFL/LCD 22" or more, with 1280 x 1024 resulation and 0.29 mm pixel size.	Or to be mentioned which is compatible to machine as per FDA approval	
	(3)Main Memory (RAM): 48 GB or more.		
	(4) HDD : 500 GB or more.		
	(5) Graphics Accelerator : For fast 3D processing with additional 2 GB image memory.		
	(6) CD/DVD writer : CD (700 MB), DVD (4.7 GB).		
	(7) DICOM Viewer : Automatically included in every CD for viewing in PC		
	m. Dedicated Processing Softwares for Multi-Modality Workstation		
	n. 2 Nos Client PC's for Radiologists Room: Clint PC at radiologist room with the necessary software capability to work as a client of post-processing workstation. The Client must work in parallel to post-processing workstation without interfering and shall have the same post-processing capability. The PC must be of a renowned brand with at 2.3 MP diagnostic quality 24" LCD monitor.		
5.	Accessories: (1) Dual head Injector (Brand, Model, Country of Origin & Manufacturer are to be mentioned). (2) Dry Laser Imager (Brand, Model, Country of Origin & Manufacturer are to be mentioned). (3) Color Laser Printer (Brand, Model, Country of Origin & Manufacturer are to be mentioned). (4) UPS: 400 KVA True on-line UPS for 20-miniutes backup of the whole system (Group A Country) (Brand, Model, Country of Origin & Manufacturer are to be mentioned). (5) Lead glass: 150 cm x 100 cm lead glass between machine room and control room for radiation protection.		



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	(6) 07x 2 Ton AC (3 for Machine room, 3 for Electronics room & 1 for console room) (Brand, Model, Country of Origin & Manufacturer are to be mentioned). (7) 05x Dehumidifier (30L) (Brand, Model, Country of Origin & Manufacturer are to be mentioned). (8) Earthing system																		
6.	Optional accessories (if any): To be mentioned																		
7.	Power Supply	380-420VAC ± 10%, 50 Hz, 3 (Three) Phase AC.																	
8.	<u>Complete BOQ/BOM.</u> All Foreign & Local supplied items to be listed separately for full range of operation of the equipment as per following table:																		
	<table><tr><th>Ser</th><th>Name of item</th><th>Qty</th><th>Brand</th><th>Model</th><th>Country of Origin</th><th>Country of Manufacturer</th><th>Remarks</th></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>	Ser	Name of item	Qty	Brand	Model	Country of Origin	Country of Manufacturer	Remarks										
Ser	Name of item	Qty	Brand	Model	Country of Origin	Country of Manufacturer	Remarks												
9.	<u>Foreign Training:</u>																		
	a. Operational Training	02 x Radiologist for 5 days (without journey period) at Manufacturing Country.																	
10.	<u>Local Training:</u>																		
	a. Operational Training	Application training of Radiographer for 02 weeks after installation																	
	b.Repair/Maintenance Training	04x EM Technician for 02 weeks																	
11.	Warranty	07 (Seven) years warranty from the date of issuance Inspection Note (I/Note)																	
12.	After sales service	10 (Ten) years from the date of installation.																	
13.	Certificate of quality	FDA & EC Certificate must be submitted with offer.																	
14.	Books and Publication	Following books and publication will be supplied in English along with the stores free of cost. a. Operational manual – 03 Copies (01x Original & 02x Photocopies) b. Repair/Maint/Service manual including details circuit/Schematic diagrams– 03 Copies (01x Original & 02x Photocopies) c. Parts Catalogue/Master Parts list– 03 Copies (01x Original & 02x Photocopies) d. 100% Spare Parts list with price – 02 x Original copies Note: In addition to hard copy, a soft copy CD/DVD containing all books and publications will be supplied by the supplier free of cost.																	
15.	<u>Comprehensive Maintenance Contract (CMC):</u> The supplier will submit a price offer for Comprehensive Maintenance Contract (CMC) for 05 (Five) years which will be applicable after the warranty period. Non stopping service shall be provided by manufacture authorized local agent/vendor. Terms & Conditions as per Government policy.																		
16.	If other feature/items not listed above but required for full range of operation of the offered equipment to be mentioned and to be supplied free of cost with main equipment.																		

