



Running Contract Details	
Equipment Name	Digital Radiography System Model A
Running Contract Valid Till	27-05-2026
Tender Ref No	KMSCL/EP/T504/34A/2023
Tendered Quantity	10
Supplier Name	M/s Kirloskar Technologies Private Limited
GST No	07AABCK4267H1ZI
Installation & Delivery Period	12 Week(s)
Up-time / PM vist	95% & 4 Visits per year
Warranty period	3 Years

Supplier`s Details		
Address	Contact Details	
B 58 First Floor Defence Colony Bhisham Pitamah Marg New Delhi-110024	Contact Person	Ram Chander Sah
	Phone	41403967/43523125
	Mobile No	9313644211
	Email	mktg@kirloskarmedical.com

Item-wise Price Details				
#	Item Details	Unit Rate (Incl.all taxes & charges)	Service Charges (Through KMSCL)	Grand Total
1	Digital Radiographic System Type A <i>Model & Make : GC85/Samsung Electronics Co Ltd.</i>	12353920.32 Incl.GST :12%	911101.62	13265021.94
2	Dry Imager with 3 online trays	89600 Incl.GST :12%	6608	96208
3	Additional Detector (Rate fixed for three years from the date of price bid opening)	2240000 Incl.GST :12%	165200	2405200
4	Light weight Lead apron with thyroid gaurd (Taken for evaluation)	9440 Incl.GST :18%	660.8	10100.8
5	Additional workstation	196000 Incl.GST :12%	14455	210455
6	Fully automated image stitching on table & vertical bucky. Necessary hardware & software	672000 Incl.GST :12%	49560	721560

Item-wise Price Details							
7	X-ray View box double film			35400 Incl.GST :18%	2478	37878	
8	Cost of one Viewing station (hardware) with necessary software and UPS (Not taken for evaluation)			295000 Incl.GST :18%	20650	315650	
9	Branded personal computer with printer			177000 Incl.GST :18%	12390	189390	
				16068360.32	1183103.42	17251463.74	
Annual / Comprehensive Maintenance Charges (Exl.Tax)							
Rate	4 th Year	5 th Year	6 th Year	7 th Year	8 th Year	9 th Year	10 th Year
Digital Radiographic System Type A							
Labour	3,00,000.00	3,00,000.00	3,00,000.00	3,00,000.00	3,00,000.00	3,00,000.00	3,00,000.00
Comprehensive	6,00,000.00	6,00,000.00	6,00,000.00	6,00,000.00	6,00,000.00	6,00,000.00	6,00,000.00

Other terms & conditions

1. The supplier shall execute an agreement with the purchaser as per tender conditions (agreement format is given in the tender document).
2. The supplier shall submit performance security amounting to 5.00% of the value of the supply order.
3. The labour & comprehensive charges of equipment after the completion of warranty period is finalized by KMSCL as mentioned above.
4. Since discount rate is not applicable for equipment under Running Contract of KMSCL, purchase/supply order can be issued directly to supplier at the given rate with tax & other charges (exclusive of KMSCL service charges).
5. If purchase/supply order is issued directly to the supplier, KMSCL service charge need not be paid. But the copy of the said order may be forwarded to KMSCL for information.

Technical Specification

Equipment :Digital Radiographic System Type A

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- I. Should be a digital Radiography system with single / two flat panel detector(s), capable to take digital images in horizontal, vertical and oblique positions of all skeletal body including spine and chest

II. Generator

1. Generator should be of high frequency inverter technology for constant output of at least 100 Khz.
2. Should have at least 80KW power
3. The KV range from 40 to 150KV
4. Should have 800mA or more at 100KV
5. Should have automatic exposure control device
6. Should have anatomical programming for radiography

7. Should have over load protection feature
8. Should have a digital display for KV and mAs

III. X-Ray tube and collimator

1. Should be a high speed rotating anode dual focus tube compatible with the generator
2. Should have focal spot sizes of 0.6mm (small) and 1.2 mm (Large) or less
3. Should have a multi leaf collimator having halogen/bright light source with auto shut provision for the light, auto collimation
4. Should have over load protection
5. Should have an anode heat capacity of 350KHU or more.

IV. Ceiling suspended tube

1. Should be ceiling suspended type with auto-tracking with detectors
2. It should have movements in all directions i.e.3D 140cm or more
3. All movements should have electromagnetic brakes with fully counter balanced mechanism and should have sensors for collision protection.
4. It should have facility to display FFD/SID,image preview, set exposure parameters.
5. It should have provision for auto positioning, auto tracking, auto synchronization and auto centering with vertical bucky and table.
6. Tube rotation at vertical axis +180 /-135 degree and horizontal axis ± 120 degree

V. X-Ray Table

1. Should be a carbon fibre/equivalent motorized fixed 6 way movement floating table having a weight carrying capacity of 200kgs.
2. The detector tray for the table should be movable to accommodate any body part of patient
3. It should have automatic exposure control with at least 3 fields
4. Should have tracking with X-Ray tube.
5. Should have controls for auto centering, auto tracking and collimation.

VI. Vertical detector stand

1. Should be capable to take images in horizontal, vertical and oblique positions with suitable motorized movements for all skeletal body including spine and chest
2. It should have provision to do chest radiography without grid
3. It should have automatic exposure control with at least 3 fields
4. Should be supplied with grids suitable for horizontal and vertical imaging
5. The detector should be capable of rotating on its axis across +90 to -15 degrees.
6. The vertical detector should have motorized movement to take images under the table and for chest position. Should have bucky rotation.
7. Should have controls for auto centering, auto tracking and collimation.

VII. Digital detector

1. The detector should be removable and wireless and should be compatible for the X-ray table and vertical stand
2. The detector should be a flat panel detector of Amorphous silicon with Cesium Iodide Scintillator.
3. The size of the detector should be 41cm x 41cm or more
4. Should have spatial resolution of 3 lines pair / millimeter or better
5. Detector Quantum Efficiency (DQE) should be 70% or more @ Zero lines pairs (near zero)
6. The active matrix size should be 2.8K x2.8K or more
7. Should have a minimum image depth of 16 bit.
8. The rate of one detector shall be offered along with the machine.

VIII. Image acquisition, image processing

1. The digital workstation should be based on the latest high speed processors of at least 64 bit with 19 inch 2 megapixel medical grade monitor or more. The table of the manufacturer for the main workstation shall be provided / customized console table shall be provided.
2. It should have the possibility of acquiring the image from the detector system. Should have preview time 5 seconds or better

3. It should have image storage of 500 Gigabyte or more/ 10000 images or more
4. The system should have DICOM 3 (or newer) ready interface and networking capability with RIS/HIS/PACS.
5. Post processing function must be available
6. DVD – R/W drive and USB storage facility shall be provided

IX. Accessories

1. On line UPS with 30 minutes back up for both work station and for the imager and 100KVA automatic servo stabilizer for the main equipment
2. Lead glass of size 80cms x 120cms
3. 2 way patient communication system with microphone and speakers
4. Table and Two chairs for main console shall be provided.

X. Optional Accessories – separate rate to be offered

1. Additional detector as per specification clause VII. Price shall be fixed for three years from the date of price bid opening. (Rate taken for evaluation)
2. Light weight Radiation protection lead Apron with thyroid guard of 0.5 mm lead equivalence, AERB approved. (Rate taken for evaluation)
3. Dry imager camera with at least 3 online film trays, 500 dpi or more for printing the digital images.
4. Fully automated source tilting full length image stitching on table & vertical bucky. Necessary hardware & software to be provided.
5. One additional workstation with i7 (or equivalent) processor, 1 TB HDD or more, at least 16GB RAM, 19 inch 2 megapixel medical grade monitor with all required software. Data sheet to be provided with the technical bid.
6. X-Ray view box (LED Type) Double.
 - a. Should have double film size(14" x 17") capacities.
 - b. The equipment should have high level of control luminance, without flicker, from a unit that is easy to clean and maintain.
 - c. The X-Ray viewing screen illumination should dimmable LED of minimum 60000 hours life and shall works on single phase power supply.
 - d. Should have minimum 10000 Lux output adjustable.
 - e. Should have individual brightness & ON/OFF controls.
 - f. The front panel diffuser should be of a glare free type.
 - g. Should have clipless mechanism to hold & secure the X-Ray negative film when in use.
 - h. LED Lamps should provide a uniform level of illumination across the entire front panel diffuser and should be controlled by electronic step-less dimming controls to provide flicker free dimming from maximum brightness to off.
 - i. Individual light controls for each plates.
 - j. Equipment shall be elegant & compact.
 - k. Body should be made up of mild steel powder coated
 - l. Should be grounded properly.
7. Four viewing station (hardware) with necessary software and UPS.â€œ
9. Should have noise cancellation
10. Should have pediatric imaging

XII. OTHERS

1. X - ray tube , X - Ray generator, console software and Detector any of these two items shall be from the same manufacturer of DR machine.
2. All components including detector, X-ray generator, X-ray tube should be covered under warranty and CAMC.
3. The offer should be accompanied by original product data sheet/brochure of the product and AERB type approval certificate or valid No Objection Certificate (NOC) for the model offered should be submitted along with the technical bid. In case of NOC valid type approval certificate has to be submitted prior to submission of invoice for payments.
4. There shall be no separate licensing fee for the use of software (software by the bidder or third party) supplied by the bidder for the entire life of the machine.
5. All equipment provided shall be of current production, new and should have spare support for at least ten years.
6. Remote diagnostic capabilities must include the ability to remotely connect the system on a regular basis to retrieve information about the system and to correct any software problems.

7. The quoted model should have CE issued by a notified body registered in European Commission, US FDA 510K certificate and FDA (US) Certifications.

Note:

1. If CDSCO (Central Drugs Standard Control Organization) certification is required for the import and marketing of the equipment, then the same shall be submitted along with the technical bid
2. Warranty exclusions if any shall be discussed at the time of prebid meeting else the tender condition as per clause 6.31.20 shall prevail.