

Technical specification

1. Line frequency X-Ray System

S.N.	Purchaser's Specification	Bidder's Offer
	Line frequency X-Ray System	
	Manufacturer	
	Brand	
	Type/Model	
	Country of Origin	
1.	Technical Specifications	
1.1	X-RAY GENERATOR <ol style="list-style-type: none"> 1. Type : Full wave rectified 2. Max KVp: 125 3. Max mA: 300 4. Should have 300mA at 125KV 	
1.2	X-RAY TUBE <ol style="list-style-type: none"> 1. Type: Rotating anode 2. Focal spot: Dual 0.6/0.6 mm and 1.2/1.2mm 3. Anode heat capacity: (115-240)KHU 4. Anode speed: Min 2000 RPM at 50 Hz. 	
1.3	RADIOGRAPHY <ol style="list-style-type: none"> 1. KV range: 40 – 125 2. mA range: Small focus- 50 to 100 mA 3. Large focus- 100 to 300 mA 	
1.4	CONTROL PANEL <ol style="list-style-type: none"> 1. Digital display of all radiographic parameters 2. Major and minor KVp control. 3. Electronic timer with range of 0.01 to 5 sec in at least 24 steps. 4. Automatic tube over load protection. 	

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28/5/20
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	5. Line voltage compensator for coarse and fine adjustment.	
1.5	<p>TABLE SPECIFICATION</p> <ol style="list-style-type: none"> 1. The table should be horizontal type 2. Table top should be radiolucent with negligible x-ray absorption, stain free, break resistant and water proof. 3. Bucky should be movable grid type. 4. Grid should be aluminum interspaced with minimum ratio of 6:1 and 60 lines/inches. 5. Bucky should travel the entire length of the table. 6. Cassette tray should be of stainless steel, with cassette lock and should be capable to accommodate 14"x17" 	
2.	Accessories, spares and consumables:	
	<ol style="list-style-type: none"> 1. Lead apron min 0.5mm lead equivalence with thyroid guard – 1 no. 2. Should be supplied with chest stand 	
3.	Mechanical Specification	
	<ol style="list-style-type: none"> 1. Floor to ceiling tube stand 2. Fully counter balanced 3. Easy to move and handle 4. Light beam diaphragm collimator. 5. One pair of high voltage cables at least 6 meters long. 6. Tube head should be rotated 360 deg. 7. Extendable hand switch with cable for x-ray exposure. 	
4.	Operating Environment	

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4.1	The system offered shall be designed to be stored and be operated normally under the conditions of the purchaser's country. The conditions include Power supply, Climate, Temperature, Humidity, etc.	
4.2	Power supply: 380 to 440Vac, Three phase, 50/60 Hz.	
5.	Standards & Safety Requirements:	
5.1	Must submit ISO13485 or equivalent Certification for Medical Devices.	
5.2	Or submit CE	
6.	User Training	
6.1	The supplier shall conduct user training for this equipment to enable operators to use the equipment properly. The training shall include the use of operational functions of the equipment, as well as routine checks and maintenance expected by users.	
7.	Warranty	
7.1	The warranty period for this item shall be 12 months from date of installation.	
8.	Maintenance Service During and after Warranty Period	
8.1	During the warranty period supplier must ensure planned preventive maintenance (PPM) along with corrective/breakdown maintenance whenever required.	
8.2	After warranty supplier should supply spare parts for minimum 5 years.	
9.	Installation and Commissioning	
9.1	It shall be Installed and commissioned by the Supplier at the final destination(s).	

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10.	Documentation	
	10.1 It must be supplied with detailed operating and maintenance manuals of technical information in the English Language.	

2. Digital X-Ray CR system

S.N.	Purchaser's Specification	Bidder's Offer
	Digital X-Ray CR System	
	Manufacturer	
	Brand	
	Type/Model	
	Country of Origin	
1.	Technical Specifications	
1.1	<u>CR Digitizer Unit:</u> <ul style="list-style-type: none"> - Minimum 45 plates/hour (14x17 inch size) - At least 2 resolution modes - Gray scale rating must be at least 12 bits. 	
1.2	<u>CR Console:</u> <ul style="list-style-type: none"> - Multi-functional console with quality assurance (Main Workstation) - High resolution 17" LCD Monitor - Adequate Image Capacity(1 TB hard drive or more) 	

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	<ul style="list-style-type: none">- CD/DVD burning facility.	
1.3	<p><u>Image Manipulation/Post Processing Software:</u></p> <ul style="list-style-type: none">- Multi Patient Viewing and Printing- Stitching options for stitching the images should also be provided.- PIP (Picture in Picture) option should be provided for viewing each part in a conventional way.- Image magnification feature.- Cropping and masking of CS3 image (Standard Software)- Distance and Angle Measurement- Provision of images to be exported in BMP, JPEG and AVI Formats on DICOM and Non-DICOM.	
1.4	<p><u>Dry Printer:</u></p> <ul style="list-style-type: none">- More than 40 sheets per hour.- Film print sizes: 14x17; 10x12; 8x10- Single tray option with any film size printing option with changing tray.- Pixel size less than 100 Micron- DICOM Compatible.	
1.5	<p><u>Image Memory:</u></p> <ul style="list-style-type: none">- 256 MB or more	
1.6	<p><u>Film loading:</u></p> <ul style="list-style-type: none">- Daylight Film Loading	

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2.	Accessories, spares and consumables:	
2.1	<u>CR Cassette and Image Plate:</u> <ul style="list-style-type: none"> - 14" x 17" = 2 pcs. - 10"x12" = 1pcs 	
2.2	<ul style="list-style-type: none"> - All standard accessories/consumables/parts required for the proper operation of the above item shall be included in the offer. - Bidders shall specify, in a separate Excel worksheet, the quantity and details of any items included in this offer which have not been specified in this Technical Specifications Form. 	
2.3	<ul style="list-style-type: none"> - All standard maintenance tools and cleaning/lubrication materials where applicable shall be included. - Bidders shall specify, in a separate Excel worksheet, the quantity and details of any items included in this offer which have not been specified in this Technical Specifications form. 	
3.	Operating Environment	
3.1	The system offered shall be designed to be stored and be operated normally under the conditions of the	

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	purchaser's country. The conditions include Power supply, Climate, Temperature, Humidity, etc.	
3.2	<u>Power supply:</u> 220-240 VAC, 50Hz fitted with appropriate plug. The power cable must be at least 3 meters in length.	
4.	Standards & Safety Requirements:	
4.1	Must submit ISO 13485 or equivalent certification for Medical Devices.	
4.2	Must submit CE or US FDA certification	
5.	User Training	
5.1	The supplier shall conduct user training for this equipment to enable operators to use the equipment properly. The training shall include the use of operational functions of the equipment, as well as routine checks and maintenance expected by users.	
6.	Warranty	
6.1	The warranty period for this item shall be 12 months from date of installation.	

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7.	Maintenance Service During and after Warranty Period	
7.1	During the warranty period supplier must ensure planned preventive maintenance (PPM) along with corrective/breakdown maintenance whenever required.	
7.2	After warranty supplier should supply spare parts for minimum 5 years.	
8.	Installation and Commissioning	
8.1	It shall be installed and commissioned by the Supplier at the final destination(s).	
9.	Documentation	
9.1	It must be supplied with detailed operating and maintenance manuals of technical information in the English Language.	

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