

Radiology Department
DIAGNOSTIC X- RAY MACHINE

S.N.	Parameters	Technical Specifications	Remarks
1	Use	For X-ray diagnosis	
	System Configuration	X-RAY machine should be brand new and be high frequency generator. The Complete system operation with control of generator, X-ray tube and imaging system from a single integrated user interface should be possible. The system should be ISO and CE certified and valid documents should be submitted.	
2	Operational Requirements/Technical specifications	The System should have a floor mounted or ceiling mounted X ray tube support.	
		Generator should be of latest technology with High-frequency, multipulse generator with inverter principle.	
		The X-Ray system, operating softwares and all the accessories should be of latest model and manufacturing date should not be more than one year back.	
		The system should have output of minimum 30 kW or higher.	
		The system should have kV range of least 40 kV- 125kV or more.	
		Output at 100 kV should be 500 mA or more.	
		It should have digital display of kV, mAs and ms in the console.	
3	X-ray tube and Collimator:	The X-ray tube should be rotating anode with dual focus with CE/ FDA certified.	
		Collimator should have a rotation of up to a maximum of $\pm 90^\circ$, should have manual and motorized control and controllable using the organ programs.	
4	Tube column support:	Floor or Ceiling mounted tube support.	
		Tube rotation should be possible in the horizontal and vertical axis and tube rotation should be possible in inward and outward direction.	
		The system should have tube arm Rotation of $\pm 90^\circ$ and tube Angulation (craniocaudal) of $\pm 135^\circ$	
5	Vertical Bucky :	The unit should be provided with Vertical Bucky.	
		The vertical Bucky stand should accommodate cassette of size 35 cm X 43 cm or larger.	
		The minimum grid ratio of the moving grid on the vertical Bucky should be 8:1 or more.	
6	Patient Table:	The motorized table should be four way floating table top.	
		It should have flat top of carbon fibre or equivalent material	
		The bucky should of 8 : 1 grid ratio or more.	

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7	Accessories:	<p>a) The system should be provided with Two (2) 1.5 Ton AC with specification:</p> <ul style="list-style-type: none"> i) One for X- ray room, one for console room. ii) The system should have capacity of 3 KVA or more. iii) The system should be ISO certified. iv) The system should have Moisture Removal (L/hr): above 1.5 more. v) The system should be remote controlled. 	
		<p>b) The system should be provided with audio communication interface with specification :</p> <ul style="list-style-type: none"> i) The system should have direct connection of AC powered mic and speaker. ii) It should have at one way communication pathway (operator to patients) 	
		<p>c) Online UPS (3 KVA or more) with battery back up for console for minimum of 15 minutes or more .</p>	
		<p>d) All the accessories provided should be reputed brand and with manufacturing date not more than 1 year back.</p>	
		<p>e) The company should provide commitment for room redesign, flooring with carpet to ensure smooth and even surface for equipment install, false ceiling (if necessary) and painting to make the room a good working environment.</p>	
		<p>f) commitment to conduct radiation survey from professional medical physicist after the installation of the machine to ensure radiation safety.</p>	
		<p>g) The system should be supplied with necessary furniture.</p> <ul style="list-style-type: none"> i) <u>For CONSOLE:</u> <ul style="list-style-type: none"> 1) One table for workstation (40 " x 23 " or more) with 3 drawers on one side of the table. 2) Two (2) chairs with arm rest and wheels. ii) <u>for X - Ray room:</u> <ul style="list-style-type: none"> 1) One table (Approx. 50 " x 23") with 3 lockble drawer on one side. 2) One wooden stepwedge with 2 stairs. (each stairs 8" x 14" x 8"). 	
		<p>h) The machine should be provided with 2pcs of lead apron (0.5mm of lead equivalent) and thyroid lead shield (0.5 mm of lead equivalent).</p>	
		<p>i) The system should be provided with viewbox with specification as follow:</p> <ul style="list-style-type: none"> i) uniformly LED illuminiscence. ii) auto light on/off functioning. Iii) viewbox should be large enough to hold 3 or more 14 " x 17 " size film at one time. 	

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8	Documentation	User (Operating) manual in English.	
		Service (Technical / Maintenance) manual in English along with softcopy.	
		List of important spare parts and accessories should be listed with their part numbers and costing.	
		original catalogue (if necessary datasheet) of the quoted model should be submitted.	
9	Training	on site training to hospital end user and maintenance staff	
10	Standard & Safety Requirement	ISO and CE / FDA certified.	
11	Warranty and Authorization	Should provide warranty and guarantee including spare parts for period of 2 years on free of cost.	
		Spare parts must be available for 8 years from the date of installation.	
		Authorized sales agent and after sales service must be locally or nationally available.	

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