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Corrigendum-I

Bihar Medical Services and Infrastructure Corporation Limited (BMSICL) had invited E-Bids from the interested parties for the procurement, rate contract and the supply of medical equipment for different Govt. Institutions of Bihar vide Notice Inviting Tender No.- BMSICL/2025-26/ME-455. After Pre-bid meeting various suggestions were received from different prospective bidders regarding amendment in technical specification of equipment which were discussed and deliberated on by the experts. On the basis of their recommendations certain amendments in the technical specification of the equipment have been made which are annexed as **Annexure-I** of this corrigendum. In order to facilitate maximum participation of bidders tender schedule is being revised as following:-

Tender Reference No.	BMSICL/2025-26/ME-455
Last date and time of submission of online bids	03rd November 2025 till 17:00 Hrs.
Last date and time of submission of original documents of EMD, Tender Fee and Document.	04th November 2025 till 14:00 Hrs.
Date, Time and Place of opening of Technical Bid	04th November 2025 (at 15:00 Hrs.) on the website of https://eproc2.bihar.gov in the office of BMSICL
Date and time of opening of financial Bids	To be announced later on https://eproc2.bihar.gov

**Sd/-
GM (Procurement)
BMSICL**

Annexure-I

1. Name of Equipment:- C-Arm Machine		
Sl. No	Technical Specification as per tender	Final Amendment
1	Specification of High Frequency Mobile C-ARM with Flat Panel Detector	No Change
2	The system should have the below mentioned specifications	No Change
3	I.I.T.V. SYSTEM:	Flat Panel Detector
	Flat Panel Detector - Receptor Type: Amorphous Silicon technology Conversion Screen: CsI FPD with 20cm x 20cm or higher	No Change
	Image Matrix 1K x 1K Pixel pitch 210 µm or less ADC conversion 14 bit or better	No Change
4.	C-ARM STAND:	No Change
	a) It should be ruggedly built and should be of good design	No Change
	b) It should have 01 (one) or more separate steering for controlling back and front wheel movements	No Change
	c) It should also have the below mentioned movements	No Change
	Horizontal travel should be minimum 210 mm	No Change
	Orbital movement should be 115°	No Change
	Panning movement should be ± 12.5°	No Change
	Focus to FPD distance should be 900 mm	No Change
	Vertical movement should motorized of 400 mm	No Change
	Focus to FPD Clearance should be 730 mm	No Change
	C-Arm rotation should be ±180° (Preferably ±360°)	No Change
5	CCD CAMERA: Flat Panel Detector System	No Change
	a) The CCD camera should be 1 K x 1K at least ½ inch should be of internationally reputed make	Deleted
	b) CCD camera must be image capture resolution minimum of 1Kx1K (1024x1024)	Deleted
	MONITORS:	No Change
	a. Monitor should be used with high resolution (1kx1k), used for medical grade images, at least 17" or more size	No Change
	b. The monitor trolley should be provided for mounting 2 monitors and should have 2 shelf for keeping memory and stabilizer.	No Change
6.	GENERATOR:	No Change
	a) It should be microprocessor controlled digital system with display.	No Change
	b) Frequency of 40 KHZ or more	No Change
	c) The fluoroscopic mA should be from 0.3 to 3.0 mA or wider.	No Change
	d) The system should have fluoroscopy mode like	No Change
	(i) Manual fluoro mode	No Change
	(ii) The pulse/frame rate instead of pulse time 1 sec to 10 sec.	No Change

	(iii) Auto Dose Rate Control in fluoroscopy mode by which either mA & KV should be set automatically as per the thickness of the organ.	No Change
	(iv) Manual KV selection during fluoroscopy also should be available.	No Change
	(v) Boost fluoroscopy mode (optional) / High Definition Fluoroscopy	No Change
	e) The digital fluoroscopic timer should be incorporated with arrangement of auto cut off of exposure after 300 secs.	No Change
	f) The radiographic mAs range should be from 01 to 25 mAs or more	No Change
	g) The X-ray tube should be dual focus stationary anode. The focal spot of the tube should be 1.5mm x 0.6mm and 1.5mm x 0.6 mm. It should have mono block / tube housing heat storage capacity of 200 KHU or more. It should also have inherent filtration of 0.7mm or more Al eq.	No Change
	h) The system should have backlit LCD display of fluoro mA, KV, timer & radiography mAs should be provided.	No Change
	i) The reversal, image rotation, functions should be operable either from control panel or with a remote control.	No Change
	j) Memory function like save/ recall should be operated from memory panel & with wireless remote	No Change
	k) There should be independent selection of mA and KV & mAs.	No Change
	l) The control should have indicator for power, Overload, X-Ray & Tube heating	No Change
	m) The system should be upgradable to latest functions	No Change
7.	IMAGE MEMORY:	No Change
	a) The unit should be capable of digital subtraction angiography (DSA) with Road map facility	No Change
	b) The systems should have more than 50000 image storage capacity permanently.	No Change
	b) It should have image integration function to reduce the image noise.	No Change
	c) Should be capable of copying images to Pen Drive through in-built USB port.	No Change
8.	ESSENTIAL ACCESSORIES:	No Change
	a) Lead aprons, Thyroid Shield, Lead Goggles (12 nos each)	No Change
	b) Servo stabilizer -1 (compatible with the whole unit for the voltage range of 150 Volt-260 Volt)	Servo stabilizer /Inbuilt voltage control (compatible with the whole unit for the voltage range of 150 Volt-260 Volt)
9	Machine should have US FDA / CE (Issued by notified body)/BIS approved	(i) should have US FDA / CE (Issued by notified body)/BIS approved (ii)

		should have CDSCO certification
10.	Should be AERB approved.	No Change
2. Name of Equipment:- 300 mA X-Ray Machine		
Sl. No	Technical Specification as per tender	Final Amendment
	1. X-Ray Generator:	No Change
	A.It should have Microprocessor controlled High Frequency X-Ray Solid State Generator .	No Change
	B.Inverter frequency – 20 KHz or more	No Change
	C.Generator Output power 30KW or more & Over Load Protection.	No Change
	D. KV Range – 40 to 125KVp	No Change
	E. mA range- up to 300 mA or more	No Change
	F. 300mA @ 80 KV or better	No Change
	G. mAs range – 2 to 200 mAs or more	No Change
	2.X-Ray tube	No Change
	A. Rotating anode & Anode heat capacity should be 300KHU or more	No Change
	B. Focal spot :- small - 1.2 x 1.2 mm & Large - 2 x 2 mm	No Change
	C. One pair of High-tension cable (at least 8 meters)	No Change
	D.Should have Double slot collimator for full field illumination (LED) and adjustment of exposure area with Auto cut-off provision.	No Change
	3.Table	No Change
	A) Should have 4-Way Floating Table Top with waterproof, stain free & low radiation absorption paper phenolic white laminated radiolucent material of carbon fibre.	Should have 4-Way Floating Table Top with waterproof, stain free & low radiation absorption paper phenolic white laminated radiolucent material of carbon fibre/Equivalent Material
	B) Should have Electromagnetic Locks controlled through foot switch for table top movement.	No Change
	C) Should have Table Top dimension of 220cm x 80cm or more	No Change
	D) Should have Longitudinal movement of +300mm or more	No Change
	E) Should have Transverse movement of +125mm or more	No Change
	f) Should have motorized reciprocating oscillating bucky with integrated high density Anti Scatter Grid* with grid ratio of 10:1, grid density of 103Lines/inch, grid size 17 1/4" X 18 7/8" , accommodate cassette size 8"x10" to 14"x17".	No Change
	g) Bucky should Travel entire length of the table and locked at desired position by Electromagnetic lock.	No Change

	h) Should have accessories like Stainless Steel cassette tray and Compression band with the table Should have Patient Weight carrying capacity of 200Kg or more	No Change
	VERTICAL BUCKY STAND:	No Change
	a) Should be Floor Mounted Vertical bucky stand with vertical travel upto 1000mm or more equipped with stainless steel cassette tray.	No Change
	b) Should have Electromagnetic locking system operated through cassette tray Hand Grips.	No Change
	c) Should have Oscillating Bucky with integrated high density Anti Scatter Grid* with grid ratio of 10:1, grid density of 103 Lines/inch focus at 115 cm.	No Change
	d) Bucky should accommodate cassette size 8"x10" to 14"x17"	No Change
	e) It should be counterweight balanced.	No Change
	f) Material used in vertical Bucky column stand should be made of corrosion free material like Aluminium, Titanium, super alloy etc.	No Change
	g) Should have provision of doing chest radiography without grid.	No Change
	X-Ray Ceiling column	X-Ray Ceiling column/ Floor to ceiling free
	Travel range: 195 cm ($\pm 10\%$); movement arrested with electromagnetic brakes	No Change
	Vertical travel: 135 cm ($\pm 10\%$); movement arrested with electromagnetic brakes	No Change
	Column rotation: 360°; from + 180° to -180° in 90° increments	No Change
	D. X-ray tube rotation: $\pm 180^\circ$; locks at 0° / +90° / -90°	No Change
	CONTROL PANEL:	No Change
	a) It should have micro controller based Large touch/ Soft Feather touch LCD display control Panel with user friendly User Interface	No Change
	b) Control panel should be floor mount type.	No Change
	c) Should have 7" or more Touch Screen LCD display for KV, mA, ms, mAs, APR Program, error display	Should have 7" or more Touch Screen LCD/LED display for KV, mA, ms, mAs, APR Program, error display
	d) Should have provision of 2 Point Technique and 3 Point Technique for exposure and should have radiography control for kV, mA, ms and mAs.	No Change
	e) Should have Touch Screen / Soft feather touch panel LCD display of APR parameter and selection of 200 or more APR of Anatomy, which helps the user to select exposure parameters based on body part, examination view and size of the subject.	No Change
	f) Should have dual action hand switch with retractable cord.	No Change
	STANDARD ACCESSORIES	No Change
	A. Three-fold X-ray protection barrier – 1no.	No Change

	B. Lead apron 0.35mm lead equivalence with thyroid guard – 2 no.	No Change
	C. Should be supplied with chest stand and cone for skull x-rays. Footstep (2 step) for the table- 1no.	No Change
	d. SPECIFICATION FOR THREE-FOLD LEAD PROTECTIVE BARRIER. Qty 1	No Change
	Should be a threefold mobile lead protective barrier.	No Change
	Should be a mounted on heavy duty casters.	No Change
	Should have a viewing window of 1.5 mm thick lead equivalence.	No Change
	The center part should have 3 feet width and 6 feet height. The sides should be 1.5 feet width and 6 feet height	No Change
	POWER SUPPLY REQUIREMENTS	No Change
	1. Should operate on Three phase 400 VAC, $\pm 10\%$, Frequency 50 Hz.	No Change
	Should be supplied with suitable capacity servo controlled voltage stabilizer.	No Change
	US FDA / European CE (Issued by notified body) Approved model should be offered. & AERB Approved model.	(i) Should have US FDA / European CE (Issued by notified body) / BIS approved. (ii) Should have CDSCO certification (iii) should have AERB Approved model.
	Supplier is responsible to comply AERB guideline for installation. Lead of Patient entry door, Exposure Lamp & Radiation singe is responsibility of supplier	No Change
	Supplier is responsible to comply AERB guideline for installation. Lead of Patient entry door, Exposure Lamp & Radiation singe is responsibility of supplier	No Change
	QA test of the machine as per AERB guidelines will be responsibility of supplier during warranty & during CMC, cost is added in CMC cost of the machine.	No Change
3. Name of Equipment:- 600 Ma X-Ray Machine		
SI. No	Technical Specification as per tender	Final Amendment
	A high-frequency radiography system for various radiographic examinations	No Change
	1. High frequency generator:	No Change
	a. Microprocessor controlled high frequency x-ray generator should be of latest technology with constant output with low ripple frequency.	No Change
	b. Output not less than 50 kW.	No Change
	c. kV range 40 kV - 125 KV, In 1KV increments	No Change
	d. Output of 600 or more mA at 80 kV	No Change
	e. It should have automatic exposure control (AEC) device	No Change

	f. It should have high speed starter	No Change
	g. It should have digital display of kVP and mAs	No Change
	h. Anatomical programming radiography should be possible.	No Change
	2. X-ray tube:	No Change
	a. Floor mount column stand for x-ray tube with facility of:- Floor Mounted tube stand with 10ft. Long tracks and 98" (249cm) of longitudinal travel. Multi-function, fingertip controls.	No Change
	Trunnion rings provides a tilt king of the movement to the tube to allow some lateral cross examinations to the transverse tube.	No Change
	Auto-stop sensor for horizontal/ vertical adjustments.	Manual movement for horizontal and vertical adjustments
	FAIL -SAFE electromagnetic braking system. Column Rotation (+/-90degree), Transverse (10" travel).	No Change
	Vertical Travel of 60.5" (154cm) with minimum floor to focus distance of 13.75" (35cm)	No Change
	Tube Angulations of +/-135" with detents 0 degree,+/-90"	No Change
	b. The x-ray tube should be rotating anode high speed and must have dual focus.	No Change
	c. Focal spots of the following sizes: Large Focus: 1.2 mm or less.	No Change
	d. Tube load for small focus and large focus, should be at least 30 kW for small focus and at least 50 kW for large focus	No Change
	e. Anode heat storage capacity should be at least 300 kHU or more	No Change
	f. Tube protection against overload.	No Change
	g. A high speed rotor accelerator (starter) is preferable	No Change
	h. Tube rotation + _90 degree	No Change
	i. Should have provision of electromagnetic locks with collision protection sensors.	No Change
	j. Multileaf collimator having halogen lamp/bright light source, with auto shut off provision of the light, should be available	No Change
	3. Radiographic table (horizontal Bucky table):	No Change
	a. Compact floor mounted Bucky table with adjustable height (motorized) and floating top	No Change
	b. Carbon fiber or equivalent table top table with low attenuation and scratch resistant surface.	No Change
	c. Table must be of following minimum dimensions: Length 2160 mm or more, width 600 mm or more and height 900 mm or more.	No Change
	d. Table should support patient weight of 200 kg. or more	No Change
	e. Foot switches for adjusting height.	No Change
	f. Grid movement facility should be available. Should have a grid ratio of 10:1 or more	No Change

	4. Vertical Bucky: Chest Stand-Good quality, wall mounted, fixed chest stand, vertical movement up to 6 feet.	Vertical Bucky: Chest Stand-Good quality, wall mounted, fixed chest stand, vertical movement up to 5 feet.
	5. Accessories:	No Change
	a. Suitable rating, Voltage stabilizer servo controlled should be supplied.	No Change
	b. Lead lining for doors	No Change
	c. 0.35 lead equivalent, radiation protection aprons of good quality-(two)	No Change
	d. Two thyroid shields.	No Change
	e. One stand for radiation protection aprons.	No Change
	f. Lead screen (with lead glass window)	No Change
	g. Patient fixing belts and compression device (for performing excretory urography, etc.)	No Change
	6. Approvals:	No Change
	a. The system should have US FDA/European CE (Issued by a notified body) and AERB approval for the whole system on the date of closing of tender. Any other certification from any regulatory authority will be the responsibility of the supplier.	(i) Should have US FDA / European CE (Issued by notified body)/ BIS approved. (ii) Should have CDSCO certification (iii) should have AERB Approved model.
	b. QA test of the machine as per AERB guidelines will be responsibility of supplier during warranty & during CMC, cost is added in CMC cost of the machine.	No Change