वी.पी. कोइराला स्वास्थ्य बिज्ञान प्रतिष्ठान, धरानको

कोटेशन माग गरिएको सुचना

सुचना प्रकाशित मिति: २०८०/१२/२८

यस प्रतिष्ठानलाई आवश्यक तपशिलका उल्लेखित Urology C-Arm Machine खरिद गर्नुपर्ने भएकोले इजाजत प्राप्त प्रतिष्ठानमा सुचि दर्ता गरेको फर्म, संस्था, कम्पनीबाट अद्यावधिक फर्म दर्ता प्रमाणपत्र, मु.अ.कर दर्ता प्रमाणपत्र, आ.व.२०७९/०८० को कर चुक्ताको प्रमाणपत्र प्रतिहरु संलग्न गरी यो सुचना प्रकाशित मितिले १२ दिन भित्र कोटेशन पेश गर्नुहुन सुचित गरिन्छ । माग गरिएको कोटेशन तोकिएको म्याद भित्र प्रतिष्ठानको दर्ता चलानी फांटमा खामबन्दि दर्ता गर्नुहुन वा quotation.procurement@bpkihs.edu मा email मार्फत पेश गर्नुपर्नेछ ।

SN.	Product Name	Qty	Unit
1	Urology C-Arm Machine	1	Nos

Terms & Condition:

1. Delivery Period within 30 Days, otherwise a penalty of 0.05% per day of purchase order value will be charged,
2. Payment will be forwarded only after the supply of 100% items and quality approved by quality control committee of the Institute,
3. If the items supplied by the supplier are rejected by the quality control committee of the Institute, then the supplier has to replace the items as demanded by the user/ department,
4. Certificates of quality must be attached,
5. Commitment letter regarding warranty/ guarantee must be submitted.

Technical Specifications of C-Arm Machine

S.N.	Purchaser's specification	Bidders Remarks
	Mobile C-Arm(Fluoroscopy) Machine	
	Manufacture:	
	Brand:	
	Type/Model:	
	Country of Origin:	
1	**Description of Functions**	
1.1	A mobile C-arm X-ray for continuous fluoroscopy, image storage and retrieval.	
2	**Operational Requirements**	
2.1	It shall operate on single phase AC power supply.	
3	**System Configuration**	
3.1	Mobile C-Arm (Fluoroscopy) X-ray. The System must Single Unit i.e. control unit and display unit integrated as a single compact machine without the need for a stand-alone monitor cart for efficient operation and transport.	
3.2	Image processing unit with monitor	
3.3	CD/DVD/RW drive, 1unit or USB connectivity	
4	**Technical specification**	
4.1	**X-Ray generator**	
4.1.1	Must be microprocessor based, 40KHz or more, high frequency generator.	
4.1.2	Generator Output should be 2.5KW or more at 100KV	
4.1.3	Fluoroscopic KV range: 40KV-110KV or more	
4.1.4	Fluoroscopic mA range: 0.2mA-12mA or more	
4.1.5	It should have capability for at least 30 minutes continuous fluoroscopy with the capability of pulsed mode.	
4.1.6	Should have Continuous high level fluoroscopy up to 12mA and Pulsed fluoroscopy up to 25 mA.	
4.1.7	Should be able to perform low dose fluoroscopy at 2 mA or less.	
4.1.8	C-arm must have auto mode in pulse fluoroscopy for dose saving and ease of use.	
4.1.9	It should be equipped with inbuilt automatic system to control the radiation dose.	

4.2	**X-Ray Tube**	
4.2.1	It should be dual focal spot type.	
4.2.2	It should have dual focal spot: Small focal spot: (approx.) 0.6X0.6 or better Large focal spot: (approx.) 1X1 or better	
4.2.3	Nominal KV Range should be 40-11KV	
4.2.4	It should have inbuilt automatic expose control system and cooling mechanism for heat management.	
4.2.5	It should have anode heat storage capacity of at least 70KHU or more.	
4.2.6	Should have anode heat dissipation rate of 35 KHU/Min or more	
4.2.7	Tube assembly total filtration should be at least 2mm A1 equivalent or more.	

4.3	**Collimator**	
4.3.1	Should provide with operator controlled automatic collimation.	
4.4	**C-Arm**	
4.4.1	Tube to image intensifier distance should be 75cm or higher	
4.4.2	Depth should be at least 20cm	
4.4.3	Horizontal travel should be at least 20cm	
4.4.4	Vertical travel should be at least 40cm, motorized	
4.4.5	Arc orbital movement should be 120° or more	
4.4.6	Image display swivel should be 180° or higher	
4.4.7	Display monitor swivel range at main frame should be 200° or more	
4.4.8	Rotation about horizontal axis should be 360° or more	
4.4.9	Should have radiation indicators to show the dose delivered to the patients.	
4.5	**Image Intensifier or FPD**	
4.5.1	Input field size should be Tri-mode: 23cm/16cm/12cm,(9"/6"/4.5") Image Intensifier or flat panel detector (FPD) unit of equivalent size.	
4.5.2	The camera shall have high resolution 1K X 1K CCD camera or image processor with FPD.	
4.5.3	The digital imaging system must have image processing matrix at least 1K X 1K.	
4.5.4	It must have minimum image distortion.	
4.5.5	Detective Quantum Efficiency (DQE) should be >=65% or more.	
4.5.6	It should have noise reduction feature for better contrast imaging.	
4.5.7	Central Resolution at image intensifier should be 50 lp/cm or better at 9" input field.	
4.6	**TV Monitor**	
4.6.1	Should come with integrated single 25inch or more touch screen HD monitor for viewing of live image and reference image with articulating arm, attached on a standard C-Arm Unit trolley.	
4.6.2	Image matrix should be at least 1K X 1K or better	
4.6.3	Should come with touch screen panel of 10 inch or more for system control and input. It must be attached on the c-arm unit trolley.	
4.6.4	Screens high resolution and anti-glare type.	
4.7	**Imaging modes**	
4.7.1	Fluoroscopy modes shall have the following facility	
	a. Continuous fluoroscopy with last image hold b. Last image hold with simultaneous display of side by side with live image	
4.7.2	Shall have facility for cine recording at up to 25 fps and cine saving with play/pause, frame by frame review feature.	
4.7.3	It should have hard disk with image storage capacity of at least 100,000 images or more.	
4.7.4	It should have facility of zoom (X2) or more as well as split screen display.	
4.7.5	Measures: at least distances and angles.	
4.7.6	The system shall have feature to automatically adjust the brightness and contrast for high quality image.	
4.7.7	Shall have feature to reduce noise and motion artifacts while capturing various anatomy.	

4.7.8	Shall have software for low dose imaging mode for pediatric patients.	
4.7.9	Shall have inbuilt laser aimer for centering, accurate positioning for precise imaging.	
4.7.10	C-arm must have feature for automatic exposure termination after image is captured.	
4.8	**Other requirements**	
4.8.1	Shall have user friendly user interface through touch screen	
4.8.2	Shall have both footswitch control for X-ray exposure in fluoroscopy and radiology mode.	
4.8.3	Shall have facility to export images via USB port in JPEG and DICOM format.	
4.8.4	Shall have DICOM 3.0 interface for digital network integration.	
4.8.5	C-arm should be compatible with navigation system for surgery.	
4.8.6	The system should come with robust & freely movable castors have locking facility for easy mobility and positioning of the C-arm unit.	
5	**Accessories, spares and consumables**	
5.1	Lead aprons – 02 pcs Thyroid guards – 02 pcs Gonad shield – 02 pcs Lead goggles – 02 pcs Sterilizable cover with clips for x-ray tube and image intensifier.-02 nos Footswitch – 01 pcs	
5.2	All standard accessories, consumables and parts required to operate the machine, including all standard tools and cleaning and lubrication materials. Bidders shall specify in a separate excel worksheet, the quantity and details of any items included in this offer which has not been specified in this Technical Specification Form.	
6	**Operating Environment**	
	Power supply: 220 – 240VAC Single phase, 50Hz fitted with appropriate plug.	
6.1	The system offered shall be designed to store and to operate normally under the conditions of the purchaser's country. The conditions include Power Supply, Climate, Temperature, Humidity, etc.	
7	**Standards and Safety Requirements**	
7.1	The system must ISO 13485 certified from an EU registered notified body having notified body number. Bidder must submit valid ISO 13485 certificate.	
7.2	The system must be certified with EU-CE & US-FDA (510K). The EU-CE certificate should be issued from an EU registered notified body having notified body number. Bidder must submit valid EU-CE & US-FDA (510K) certificate.	
7.3	Must submit IEC 60601-1-3 Part1: General requirement for safety collateral standard: general requirement for radiation protection in diagnostic X-ray equipment. IEC 60601-2-7: Particular requirements for the safety of high voltage generators of diagnostic X-ray generators.	
8	**Training**	
8.1	Must provide comprehensive user training (including how to use and maintain the equipment).	
8.2	Must provide comprehensive repair and maintenance training on designated training center of manufacturer for the technical staffs.	
9	**Warranty**	
9.1	Comprehensive warranty for 3 years after acceptance. The bidder should replace the whole unit in case of defect in the major part of the system during the warranty period.	
10	**Maintenance Service during Warranty Period**	
10.1	During warranty period supplier must ensure corrective/ breakdown maintenance whenever required including two mandatory visit/year for preventive maintenance.	
11	**Installation and Commissioning**	
11.1	The bidder must arrange for the equipment to be installed and commissioned by certified or qualified personnel; any prerequisites for installation to be communicated to the purchaser in advance, in detail.	
12	**Documentation**	
12.1	User (Operating) manual in English.	
12.2	Service (Technical/ Maintenance) manual in English.	
12.3	All necessary software in CD/DVD/ Pen driver or SD Card (if applicable)	
12.4	The bidder must quote a frozen rate for Comprehensive maintenance contract (CMC) for a period of 7 years after the completion of warranty period which should not exceed 5% of the equipment's cost. CMC must include parts, labor, service, tube and all other aspects. Price of CMC will be taken into consideration during financial evaluation.	

Bidder must duly fill up the compliance sheet along with page no of the related brochure or datasheet, failure to do so may lead to rejection in technical evaluation.