



महालक्ष्मी नगरपालिका नगर कार्यपालिकाको कार्यालय, जितपुर, धनकुटा



प्रदेश नं. १, नेपाल

पत्र संख्या:-०७८/०७९

चलानी नं. —

X-ray (500 MA) र CR Machine खरिद गर्ने सम्बन्धि सूचना

प्रथम पटक प्रकाशित मिति २०७८/०६/१८

यस कार्यालयका लागि आवश्यक X-ray (500 MA) थान १ (एक) र CR Machine थान १ (एक) सार्वजनिक खरिद ऐन, २०६३ को दफा ८ को उपदफा १ (क) तथा सार्वजनिक खरिद नियमावली, २०६४ को नियम ३१ (ख) बमोजिम सम्बन्धित कम्पनी वा सोको आधिकारिक विक्रेताहरू वमा मात्र प्रतिस्पर्धा गराउने विधि क्याटलग (सपिंग) बाट खरिद गर्ने निर्णय भएकाले इच्छुक इजाजत प्राप्त उत्पादक कम्पनी वा त्यसको आधिकारिक विक्रेताहरूले आ-आफ्नो फर्म दर्ता प्रमाणपत्र, भ्याट दर्ता प्रमाणपत्र, एजेन्सी दर्ता प्रमाण पत्र, Letter of Authorization र आ.व. २०७७/०७८ को करचुक्ता प्रमाणपत्रको प्रतिलिपी रू समावेश गरी सार्वजनिक खरिद नियमावली, २०६४ को नियम ३१ ख (१) अनुसार निम्न स्पेसिफिकेशन बमोजिमको X-ray (500 MA) र CR Machine को आधिकारिक स्पेसिफिकेशन, मूल्य र सुविधा सहितको गुणस्तर विवरण (क्याटलग वा बोस) संलग्न राखी यो सूचना प्रकाशित भएको मितिले १५ (पन्ध्र) दिनभित्र यस कार्यालयको कार्यालय समय भित्र निवेदन दर्ता गर्नुहुन यो सूचना प्रकाशित गरिएको छ ।

आवश्यक सामग्रीको विवरण

S.N.	Item	Quantity	Remarks
1	X-ray (500 MA)	1 (one)	
2	CR Machine	1 (one)	

नोट: सम्बन्धित सामग्रीहरूको आवश्यक स्पेसिफिकेशन यस कार्यालयको Website www.mahalaxmimundhankuta.gov.np राखिएको छ ।

[Signature]
०६/०६/१८

वसन्त गिरी

प्रमुख प्रशासकीय अधिकृत

TECHINICAL SPECIFICATION FOR X-RAY 500 mA

S. N.	Purchaser's Specifications(Mahalaxmi mun FY:78/79)	Bidder's Compliance Sheet		
		Yes/No	Page No. in Catalogue	Remarks
	X-ray 500ma			
	Manufacturer			
	Brand			
	Type/Model			
	Country of Origin			
1	Description of Functions			
1.1	A general purpose X-ray machine for routine X-ray examinations at healthcare facilities.			
2	Operational Requirements			
2.1	It shall be suitable to be used for adult and paediatric patients in general Radiography examination.			
3	System Configurations			
3.1	X-ray Generator. 1 unit			
3.2	X-Ray tube & tube support system. 1 unit			
3.3	Radiographic patient table. 1 unit			
3.4	Floor mounted bucky stand. 1 unit			
4	Technical Specifications			
	X-ray Generator:			
1	Bidder shall indicate brand and model information here and provide technical data document for X-ray generator offered			
4.1	Line frequency or high frequency generator . the generator shall have approx. 40kHz.			
4.2	Generator Output: approx. 40 kW (500mA at 100kV)			
4.3	Radiographic voltage: approx. 40 kV to 120kV, in 1kV step or better			
4.4	Radiographic current: 10 to 500mA or better			
4.5	Exposure time: 0.01sec (1msec) - 6sec or better			
4.6	Shall come with overload protection device.			
4.7	Power supply: 3 phase, 380-415V 50/60Hz or single phase			
II	X-Ray Tube:(approx.)			
4.1	X-ray tube rotating: +/-120°.			
4.11	Large focus not more than 1.2 mm.			
4.12	Small focus not more than 0.6 mm.			
4.13	Maximum tube voltage 120 KV. Maximum tube output shall match with the generator output of approx.40 KW.			
4.14	Anode heat capacity shall not be less than 150 KHU.			
III	Radiography Patient Table:(approx.)			
4.15	Radiography table shall be fixed height or height adjustable. 4-way floating top type with foot switch control or sensor control.			
IV	Floor Mounted Bucky Stand:(approx.)			
4.16	Cassette size: accept all sizes from 5"x7" to 14"x17".			
4.17	Movement arrested by electromagnetic brakes.			
V	Floor Mounted Tube Stand:(approx.)			
4.18	Longitudinal travel: approx. 1750mm.			
4.19	Vertical travel: from 630 -1850mm or in the range.			
4.2	Movement arrested by electromagnetic brakes or manual brakes.			
4.21	Rotation of tube arm around vertical axis: 180°; lockable at 0° to +/- 90°.			
VI	Collimator:			
4.22	Manually adjustable.			
4.23	Built-in light switch should be provided.			
4.24	Turning angle should be min +/- 45 degree.			
4.25	Halogen lamp.			
VII	Control Console:			
4.26	Digital Display.			
4.27	Minimum 3 Point Exposure Technique.			
4.28	Status display. error display.			

Technical specification of Computed Radiography (CR) System

S.N.	Purchaser's Specifications(Mahalakshmi mun FY:78/79)	Bidder's Compliance Sheet		
		Yes/No	Page No. in Catalogue	Remarks
	Computed Radiography (CR) System			
b.	Multifunctional console having all image optimization and post processing software like zooming, annotation, flipping, windowing and centering.			
c.	Additional computer with necessary software should be provided at the reception to feed the patient information to help ease the workflow.			
d.	Approx.19" LCD Monitor with CPU.			
4.4	Dry imaging printer(film based) 1unit:			
a.	Print images from CR workstation, in DICOM 3 format.			
b.	Printer should provide image depth of 12 bits or more			
c.	Mechanism to print images to 14x17 and 8x10 film sizes simultaneously.			
d.	Docked in processor.			
e.	Resolution> 500 DPI.			
f.	Processing capacity should be more than 45 films/hour or more for 14x17 inch film size			
g.	Shall be able to switch between Receiver Mode and Processor mode.			
h.	Printer should have dry Laser imager Technology			
4.5	IP/Cassettes size:			
a.	CR system should be provided with the following cassettes and imaging plates.			
b.	14 x 17 in: 1 Pcs.			
c.	10 x 12 in: 1 Pcs.			
d.	8 x 10 in: 1 Pcs.			
5	Accessories, spares and consumables			
5.1	Accessories:			
a.	Computer and Printer			
b.	At least Latest model Computer having Intel i3 processor and 4 GB RAM , 500GB storage and approx. 19"LCD Monitor- 1 set			
c.	Must provide online UPS for at Least 2 hour battery backup.			
d.	All standard accessories, consumables and parts required to operate the equipment, including all standard tools and cleaning and lubrication materials, to be included in the offer.			
6	Operating Environment			
a.	The system offered shall be designed to be stored and to operate normally under the conditions of the purchaser's country. The conditions include Power Supply, Climate, Temperature, Humidity, etc.			
b.	Power supply: 220 - 240 VAC, 50Hz fitted with appropriate plug.			
7	Standards and Safety Requirements			
a.	Must submit ISO13485:2003/AC:2007 for Medical Devices AND			
b.	CE (93/42 EEC Directives) & USFDA approved product certificate			
c.	Electrical safety conforms to standards for electrical safety IEC 60601-1 General requirement for Electrical safety of Medical Equipment.			
8	User Training			
a.	Must provide user training (including how to use and maintain the equipment).			
9	Warranty			
a.	Comprehensive warranty for 1 years after acceptance.			
10	Maintenance Service During Warranty Period			
a.	During warranty period supplier must ensure preventive maintenance & corrective/breakdown maintenance whenever required			
11	Installation and Commissioning			
a.	The bidder must arrange for the equipment to be installed by certified or qualified personnel; any prerequisites for installation to be communicated to the purchaser in advance, in detail.			
12	Documentation			
a.	User (Operating) manual in English			
b.	Service (Technical / Maintenance) manual in English.			
c.	Certificate of calibration and inspection from factory.			

Bidder must completely fill the Technical Specification Form (TSF). Only Yes/no/all complies should not be written. Page number in the catalogue of all the required parameters must be clearly mentioned and highlighted. Failure in doing so may lead to rejection of bid from technical committee.

Medical Engineer

Technical specification of Computed Radiography (CR) System

S.N.	Purchaser's Specifications(Mahalakshmi mun FY:78/79)	Bidder's Compliance Sheet		
		Yes/No	Page No. in Catalogue	Remarks
	Computed Radiography (CR) System			
	Manufacturer			
	Brand			
	Type / Model			
	Country of Origin			
1	Description of Function			
a.	Radiography system to replace conventional Film/Screen based X-Ray processing techniques with Photostimulable Phosphor Plate technology to obtain digital X-ray images.			
2	Operational Requirements			
a.	The system shall be able to record X-Ray images on Imaging Plates (IP)			
b.	Convert these images from the IP into digital values and transfer these values to an image evaluation computer with predefined Image Processing Parameters.			
c.	Operationally and functionally equivalent to and better than the present film based system.			
3	System Configuration			
a.	Image Reader system: 01			
b.	CR Workstation: 01			
c.	RIS Interface: 01			
d.	Remote ID and Preview station: 01			
e.	Archiving System: 01			
f.	Dry imaging printer(film based), and double tray type :01			
4	Technical Specifications			
4.1	Image Reader			
a.	IP processing rate minimum 45 films/hr or more for 14 x 17 inches cassette.			
b.	Scanning mechanism to read, erase and process the images from the imaging plate. (IP)			
c.	Indicator for status of the CR Reader in case of machine malfunction			
d.	Spatial resolution of digital image approx.6-10 pixels/mm.			
e.	CR System should have data acquisition of 12 bits or more			
f.	X-Ray Generator compatibility with reputed manufacturers.			
g.	CR system should have the capability of processing the cassettes both in standard and high speed mode.			
h.	Image matrix at standard resolution (14 x 17) - approx. 3000 x 4000 Row x Column			
4.2	CR Workstation:			
a.	Capable of Archiving and printing selected images to a standard DICOM destination in DICOM 3.0 format			
b.	Storing images in the local disk for predefined period.			
c.	Sorting of patient image based on name, date, exam etc.			
d.	Using predefined parameters or user defined and stored image parameters			
e.	Correcting typographical in patient demographic module, in case RIS connection was down and manual data entry was done.			
f.	Capability of changing R/L, Flipping, Rotating, Zooming, Collimating, annotating the incoming image.			
g.	Multi-image and slide formats			
h.	Capability of storing in CD/DVD.			
i.	Software for Advance Image processing, applications, display and quality monitoring.			
j.	Connectivity and compatibility to communicate to RIS/HIS and DICOM Compatible devices such as MR/CT/DSA Work station.			
k.	Must provide for HL-7 compatible or equivalent interface			
l.	Scanning gray scale resolution- 12bits/pixel or more.			
4.3	Console:			
a.	Software should have graphic selection to allow quick and easy picking of body parts and views			

S. N.	Purchaser's Specifications(Mahalaxmi mun FY:78/79)	Bidder's Compliance Sheet		
		Yes/No	Page No. in Catalogue	Remarks
	X-ray,500ma			
5	Accessories, Spare Parts and Consumables			
5.1	Accessories:			
	• Lead apron, light weight with Lead equivalence 2mm-01 nos.			
5.2	All standard accessories, consumables and parts required to operate the equipment, including all standard tools and cleaning and lubrication materials, to be included in the offer. Bidders must specify the quantity of every item included in their offer (including items not specified above).			
6	Operating Environment			
6.1	The system offered shall be designed to be stored and to operate normally under the conditions of the purchaser's country. The conditions include Power Supply, Climate, Temperature, Humidity, etc.			
6.2	Power supply: 380-415VAC 3 phase 50Hz fitted with appropriate plug for X-ray generator fitted with appropriate plug for other units. The power cable must be at least 3 metres in length.			
7	Standards & Safety Requirements			
7.1	Must submit ISO 13485:2003/AC: 2007 AND			
7.2	CE (93/42 EEC Directives) or AERB OR USFDA approved product certificate.			
	Shall meet:			
7.3	• IEC 60601-1-3 - Part 1: General Requirements for safety - Collateral Standard: General Requirements for Radiation Protection in Diagnostic X-Ray Equipment.			
	• IEC 60601-2-7 - Part 2-7: Particular Requirements for the Safety of High-Voltage Generators of Diagnostic X-Ray Generators.			
8	User Training			
8.1	The Supplier shall conduct user training for this equipment to enable operators to use the equipment properly. The training shall include the use of all operational functions of the equipment, as well as routine checks and maintenance expected by users.			
9	Warranty			
9.1	Comprehensive warranty for 2 years from acceptance.			
10	Maintenance Service During Warranty Period			
10.1	During warranty period supplier must ensure preventive maintenance & corrective/breakdown maintenance whenever required.			
11	Installation and Commissioning			
11.1	The bidder must arrange for the equipment to be installed 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	List of important spare parts and accessories with their part numbers and costing.			
12.4	Certificate of calibration and inspection from factory.			