GOVERNMENT OF TRIPURA
DIRECTORATE OF HEALTH SERVICES

No. F. 5(1-31)/X-Ray/Store/DHS/2016-2017 Dated, Agartala the 19/07/2016

NOTICE INVITING TENDER

Tenders in sealed cover are hereby invited in 2(Two) bids (Technical & Financial bid) for the year
2016-17 (Valid up to 31.03.2018) by the Director of Health Services, Government of Tripura, Agartala on behalf of the Governor of Tripura from resourceful, experienced, reliable and bonafied renowned, licensed manufacturer/importers for supply of 100mA Mobile X-Ray Machine, 500mA Conventional X-Ray Machine Digital Radiography System & Computed Radiography System X-Ray Machine Experience certificate/documents of supply order for supply of same machines should be enclosed from any one of the following Institutions.
(I) AIIMS, New Delhi.
(II) Safdarjung Hospital, New Delhi
(III) P.G.I., Chandigarh
(IV) SSKM Hospital, Kolkata
(V) National Institute of Mental Health & Neuro Science, Bangalore.
(VI) Christian Medical College(CMC), Vellore.
(VII) TATA Memorial Cancer Hospital, Mumbai.

The details specification of 100mA Mobile X-Ray Machine, 500mA, Digital Radiography System & Computed Radiography System X-Ray Machine is enclosed with tender form in annexure-A Approximate yearly requirement 4(Four) nos. each.

The tender will remain valid up to 31-03-2018.
Pre-Bid meeting was held on 28.06.2016 at 2.00 P.M.

TERMS AND CONDTIONS

1. Checked list:- The tenderers should be submitted following documents with technical bid:-

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Name of documents. Page

1. EMD with DD Number & name of the Banks

2. List of the item with specification for which rate is quoted
3. Self attested copy of PAN card of tenderer.
4. Self attested copy of VAT registration certificate of tenderer.
5. No conviction/no pending conviction certificate from attested/issued by notary for preceding
3(three) years on Rs. 100( One hundred) non Judicial (notary)
6. Authorization certificate. If any.
7. Valid manufacturer license / Importers license
8 Experience certificate/ documents of supply order from the concerned institutions where the
agency supplied the items for at least 1(one) year during last 5(Five) year
9. Quality Assurance Certificate like ISI, BIS, ISO, or any other approved standard of
manufacturer
10. Undertaking stating that all information furnished with the tender are true & correct and the
agency will execute the full supply of the ordered quantity and they will abide by the terms &
conditions of N.I.T., if their quoted rate is approved.

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2. Tender will be received by Speed Post/Registered Post/Courier Services only in sealed cover addressed to “Director of Health Services, Government of Tripura, Gurkhabasti Complex, P.O:- Kunjaban, Agartala-799 006” up to 16.00 hours of 20.08.2016.Tender received after the aforesaid date and hours shall be rejected. The Director of Health Services shall not remain responsible for any postal delay. Tenderer is requested to provide detailed address along with phone and fax number and S.T.D. Code No. for easier communication.

3.. On the top left side of the sealed tender inquiry number and date, due date of receive of tender and name & address of tenderers should be mentioned. Tender forms will be issued on application up to 16.00 hours of 12.08.2016 free of cost.
Details terms & conditions of NIT can also be downloaded from the Website-www.helath.tripura.gov.in. Tenders are likely to be opened on 27.08.2016, if possible. Tenderers or their representative may remain present at the time of opening of the tenders.
4.. The interested bidders shall submit the bids in two parts, namely “Financial Bid” and “Technical Bid”. The 2(two) Bids should be put in 2(two) separate sealed envelope, indicating on the cover as to which one is the Technical Bid and which one is the financial Bid. The 2(two) envelopes shall, thereafter, be placed inside a large sealed cover and the same may be submitted. The Technical Bid shall contain all details regarding the item offered by the bidder, compliance of terms and Conditions, submission of documents etc. in other words, everything except the rate offered. The “Financial Bid” shall contain the rate offered by the bidder. While processing the bid the Technical Bids will be opened first and the eligible bidders meeting requirement will be short-listed. Thereafter, financial bids of only short listed bidders will be opened for consideration.
5.. 100mA Mobile X-Ray Machine, 500mA, Digital Radiography System & Computed Radiography System X-Ray Machine with detailed specification and name of manufacturer, quoted by the bidder, is to be enclosed in the Technical bid.
6.. The manufacturers having Marketing Agency at Agartala, Tripura will be preferred during consideration of rate & firm by a constituted committee.

7.. 100mA Mobile X-Ray Machine, 500mA, Digital Radiography System & Computed Radiography System X-Ray Machine must be supplied directly by the manufacturers itself or by its authorized distributors and should obtain Sales Tax Clearance before delivery. An authorized representative of the firm should remain present during delivery of the ordered quantity. Authorized distributors shall have to furnish appropriate credential from the firm they represent.
8.. The supply order of 100mA Mobile X-Ray Machine, 500mA, Digital Radiography System & Computed Radiography System X-Ray Machine must be completed within 60(sixty) days from the date of issue of order. A penalty @ 1% on the total value shall be charged for every week or part of week of delay beyond stipulated date of supply. However relaxation will entertain only in special circumstance (Natural calamities, war or any other situation beyond human control).

9.. 5% of the value of ordered quantity will have to be deposited as security money by demand draft from any Nationalized Bank by the firm within 20(twenty) days time from the date issue of supply order.
10.. The Security money will be released after completion of full supply within the stipulated period or it may be kept for the next supply order whichever is applicable.

10.. The bidder will have to quote rate for 5(Five) years. CAMC(Comprehensive Annual Maintenance Contract with spare parts) after the warranty period of 3(Three) years. Payment of C.A.M.C. will be paid on bills basis after submission of service report from the In-Charge of respective institutions. The supplier has to execute an agreement bond with the authority for Comprehensive Annual Maintenance Contract (CAMC)
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11.. The Income Tax/Sales Tax will be deducted from the bill as per guideline of the Government, if applicable. 12.. Any enhancement of rate within the validity period of contract will not be considered except for imposition of any levy or increase in existing levy by the Government. Any undue request may lead to cancellation of the order. 13.. Payment of successful tendered shall be made on bill basis only after completion of supply of the items ordered for. No advance payment shall be made under any circumstances.
14.. Extension of rate for supply may be considered for 2nd year to the approved supplier on the basis of satisfactory performance and execution of supply orders in time and in terms of quality.
15.. The rate should be typed and quoted both in figure and words clearly. The unit cost of item, the rate of both C.S.T. and VAT should be mentioned separately and clearly in financial bid. Rate should be quoted in Indian currency only.
16.. Yearly approximate requirement is incorporated in the list of items which likely to be increased or decreased as per requirement. The yearly supply of order may be issued once for staggered supply as per requirement.
17.. In case of supply of each and every item the label of packing, should bear the inscription “Tripura Govt. Supply, Not for Sale” in indelible ink. Relaxation, if needed, is entitled as per discretion of procuring authority.

18. The Earnest Money Deposit (EMD) for an amount of Rs. 30,000/-(Rupees Thirty thousand) will have to be furnished by Account payee Demand Draft only

19. The E.M.D. shall be drawn on any scheduled Commercial Bank in India in favour of Director of Health Services, Govt. of Tripura. The Earnest money shall be valid for a period of forty five (45) days beyond the validity period of tender. The E.M.D. will be released after validity period of contract in case of successful tenderer and that of unsuccessful tenderer will be released after finalization of tender.
20. Price quoted should be met F.O.R. Door delivery with installation charges at concerned health institutions for which supply order will be issued,.
21. No insurance charge is admissible and successful tenderer will be responsible for any breakage and loss in transit on way to destination.
22. Any default or breach of contract/ non-execution of supply order or If any information is found incorrect & false, shall lead to forfeiture of earnest money/security deposit of successful tenderers beside to such action as may be considered appropriate by the Director of Health Services, Government of Tripura including black listing/delisting the tenderers for the future. they will execute the full supply of the ordered quantity and they will abide by the terms & conditions of N.I.T., if their quoted rate is approved.
23.. If any item supplied is found to be not of standard quality, the quantity of “not of standard quality item(s)” supplied should be taken back and replaced by fresh stock at own cost of supplier.
24.. The Director of Health Services, Government of Tripura, Agartala reserves the right to accept or reject any tender without assigning any reason thereof and tender may be accepted or rejected in part or in whole.
25.. In case of legal dispute the jurisdiction will be the Tripura High Court, Agartala
26.. 5% security deposit against value of ordered quality of items and fresh deposit at call are relaxed for public sector undertaking subject of production of documents with the tender.
27.. The Director of Health Services, Govt. of Tripura, Agartala reserves the right to unilaterally terminate contract or cancel the acceptance or the rate or supply order at any time without notice before expiry or the period for which rate are now invited.

Director of Health Services,
Government of Tripura: Agartala.

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6.Christian Medical College(CMC), Vellore.
7.TATA Memorial Cancer Hospital, Mumbai.

The tender form with detailed description of items and terms & conditions would be available from the office of the undersigned on any working day during the office hours from 11.00 am to 4.00

pm. hours, free of cost up to 12/08/2016 and also would be available through the website www.health.tripura.gov.in & www.tripura.gov.in

The sealed tender would be received at the office of the undersigned up to 16-00 hours of 20/08/2016 by Speed Post /Registered Post / Courier service only & will be opened on 27/08/2016 at 3.00 pm, if possible in the office of the undersigned.

Director of Health Services
Government of Tripura, Agartala

Dizital Radiography System with Flat Panel Detector for Whole Body Digital Radiography

Specifications for Digital X-ray Machine
A fully digital radiography system capable of detector exposure and image acquisition in vertical, horizontal and oblique positions to perform all skeletal body and chest radiography. 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 have Two detector, with one integrated control console capable of controlling Generator, X ray tube, imaging system from the central console area
System should have a ceiling mounted X ray tube support, capable of all direction movement for X-Y-Z axis and tube angulations with display & control at tube side.
Generator:

Generator should be of latest technology with High-frequency, multipulse generator with inverter principle and automatic exposure control (AEC) for constant output
Output - Minimum 80 kW or higher. 100 KHz multi-pulse waveform.
kV range should be at least 40 kV-150kV
Output at 100 kV should be 800 mA or more and maximum up to 1000 mA.
It should have automatic exposure control device(AEC). Shortest exposure time 1 ms.
It should have digital display or kV and mA and ms in the console and the tube housing
It should have more than 1250 organ programs.
X-Ray tube and Collimator:
The X-ray tube should be ceiling mounted with rotating anode with high speed of 8000 RPM or higher, fully compatible with the generator and must have dual focus. Focal spot of the following sizes are required: Large focus: 1.1 mm or less with output 80 kW
Small focus: 0.6 mm or less with output 40 kW
Tube should be with anode heat storage capacity of 750 kHU or more
The X-ray tube should have Multi leaf collimator having halogen lamp/bright light source.

Collimator should have a rotation of up to a maximum of ± 45°, should have manual and

motorized control and controllable using the organ programs.__

The X-ray tube should be manufactured by the manufacturer of X-ray system._

Ceiling mounted column support

Ceiling mounted tube support with full length tracking in z- direction should be provided Movement should be smooth and fast in all-axis direction
A color touch screen should be available on the X ray tube for control and display of multiple functions. Touch screen should correct display orientations, when the tube is rotated
Vertical tracking! 80 crn or more should be available
It should have provision of auto centering
Minimum focus to ceiling distance should be 83 cm
Specify the horizontal and vertical tube rotation angle around the respective axes.
Tube rotation should be possible in the horizontal and vertical axis and rotation of tube about vertical axis at +/- 90 degree should bq possible with stop position at 0 degree, 90 degree and 180 degrees.

Specify the horizontal and vertical travel range of the tube
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Patient Table

Table with floating table top should be provided
Vertical Bucky stand with One integrated detector
The unit should be provided with Vertical Bucky
It should have provision to do chest radiography without grid
The vertical Bucky stand should accommodate an integrated solid state detector of size 14 inch x 17 inch The minimum grid ratio of the moving grid on the vertical bucky should be 10:1 and not less.
Tilt of the vertical Bucky must be possible between s550 to 1650 mm height adjustment or more
Grip handle should be possible in 2 different height position
It should have counterbalance with electro-magnetic locks.
Integrated Detector system in the patient table:

The detector in the table should be of solid state flat detector with Csl for High resolution image The size of detector should be minimum 14 inch x 17 inch in the patient table._
The active detector matrix size should be2.8Kx2.8Kor more_
The pixel size should be 195 |j.m or less & 16 bit depth of image_
The resolution should be minimum of 3.4 lines pair/millimeter
Detector Quantum Efficiency (D.Q.E) should be 65% or more at llp/mm
Image acquisition and image processing based on body part and viewing position
The digital workstation should be based on the latest high speed processor of at least 12 bit_
It should have the possibility of acquiring the images from the detector system within less than 3 seconds and retrieval of patient list and examination data from Hospital/Radiology Information systems (HIS/RIS) should be possible.
It should have image storage disk of 10,000 images or more.
The system should have ready DICOM Interface and networking capability with RIS/HIS/PACS Post processing function must be available._
Console station must be provided for image processing, image display, post processing function and networking with anti glare color monitor of LCD type with size 19" with matrix of 1024 x 1024_ Dry laser camera of 500 dpi or more for printing the images on film should be available.
Essential Accessories

Voltage stabilizer for the complete DR system should be quoted along with the unit. It should be of required capacity and the make and capacity of the voltage stabilizer should be specified
On line UPS with suitable rating and 30 minutes back up for console / digital system should be supplied along with the DR system_
Warranty.
Warranty of 60 months of all parts as well as accessories and auxiliary units supplied with the main equipment. This should include the x-ray tube and the Flat panel detector also._
Others

Any two of the following item like generator, X-Ray tube and detectives should be from the same manufacturers.
CE or FDA approval along with AERB type approval is mandatory. NOC from AERB will not be acceptable

Director of Health Services,
Govt. of Tripura: Agartala.

Tender-Mobile X-ray Machine Specifications
SI.
NO

Tender
Name

Specifications Quantity.

1. Mobile
X-ray
Machine

The mobile x-ray equipment would be required to perform x-ray studies in emergency and Trauma Center and at the bedside in wards and ICU. The unit should be compact, lightweight and easily transportable. It should have following specifications:
Generator: A high frequency generator with the following features:
a. Power: 4 KW or more

b. kVp Range: 40-100 KVp or more
c. mAS Range: 250 m As or more
d. m A range: 10 mA to 100 mA or more
Exposure Time: 10 ms to 5 sec
Digital display
kV and mAs parameters, system ON, System OFF, status and fault messages on the kV and mAs area
X-Ray Tube
Stationary/Rotating Anode tube with focal spot 1.8X1.8 mm or better
Tube Stand

The stand should be fully counterbalanced with rotation in all directions. Collimator

Collimator rotation should be + 90 to -90 degrees with auto shut off lamp facility Cassette storage box
The equipment should have cassette storage box for minimum of 2 cassettes. Electrical requirement:
The unit should be operational on main voltage from single phase 180-260 v AC with automatic main compensation.
Ergonomics:
The unit should have small foot print. The height of the column stand should not be more than 150 cm for easy transportation in the lift etc. and areas with small height doors. The equipment should be light weight, not more than 160 kg.
Breaking System
The unit should have effective breaking system for parking.
Warranty
5 years comprehensive warranty for complete system including X-ray tubes.
CMC Charges: The bidders should quote year-wise CMC charges for five years after completion of warrantee. Uptime warranty should be 98%.
Installations

The bidder should have installed same model successfully in India. The copy of the satisfactory performance certificate of same model to be enclosed alongwith the bid. Certification

System shall have valid AERB certificate of the quoted model. The bidder to provide any other certificate required for importing the equipment in case of imported models.
Product Date Sheet

All technical specification should br supported with original date sheet highlighting the page number in the compliance sheet.
Photocopy/computer print wll not be acceptable.
Spare parts availability
The principal should give undertaking regarding the availability of spare parts for the next 10 years.

Director of Health Services,
Govt. of Tripura: Agartala.

TECHNICAL SPECIFICATIONS

Equipment Name: X-Ray Machine 500 mA with Table

X-RAY GENERATOR:-

1. Type: Full wave rectified
2. Max KVp: 125
3. Max mA: 500
4. Should have 500 mA at 100KV and 320mA at 125 KV. X-RAY TUBE:-

1. Type: Rotating anode
2. Focal spot: Dual 1.2x1.2mm and 2x2mm
3. Anode heat capacity: minimum 240KHU
4. Anode speed: minimum 2800 RPM at 50 Hz RADIPGRAPHY:-
1. KV range: 40-125
2. mA range: Small focus-80 to 160mA
3. Large focus- 160 to 500mA
CONTROL PANEL:-

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
5. Line voltage compensator for coarse and fine adjustment.
MECHANICAL SPECIFICATIONS:-

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
TABLE SPECIFICATION:-

1. Five position manual table
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, auto centering of cassette with cassette lock and should be capable to accommodate 14”x17”
7. Compression band, hand grip, foot rest and foot step should be provided. FEATURES:-

1. The quoted model and tube should be AERB type approved for usage up to 500mA. Relevant copies of the certificate should be attached with the bid.
STANDARD ACCESSORIES

1. And 1.5 mm lead equivalence mobile lead barrier
POWER SUPPLY REQUIREMENTS
1. 380 to 440Vac, Three phase, 50/60Hz.

Director of Health Services,
Govt. of Tripura: Agartala.

SI.
NO.

Item Specifications Quantity

1. Computed
Radiography
(CR) System

Specifications for a computed radiography unit.
Computed Radiology must be a state of the art system manufactured by a reputed brand or manufacturer adhering to following specifications. CR system should broadly comprise of following modules/components:

a) Image recording system (cassette & reading plates)
b) Image reading system (reader/digitizer)
c) Identification & CR processing workstation.
d) Dry imager.
1.Image recording system (cassette & imaging plates).
The following sizes of radiography cassettes along with image plates should be supported by the unit.

a. 35cm X43 cm or 14”x17”: 4 nos
b. 24 cm X 30 cm or 10”X 12”: 4 nos
c. 18 cm X 24 cm or 8” X 10”: 2 nos

2.Image reader(CR reader/digitizer)
a). The CR reader/digitizer should be able to process 65 image plates/hr or more of the largest size cassette
b). CR reader/digitizer must be able to handle phosphor image plates. Cr reader capable of handling latest Dual side /needle/structured/columnar image plates will be preferred.
c). It should have a resolution of 6 pixels/mm (minimum) for high resolution cassette reading.
d).Gray scale resolution: Cr reader/digitizer should have a minimum resolution of 12bits/pixel for images sent to CR processing station.

3.Identification Station & processing server
a). The processing station must have 2GB RAM, at least 2x500 GB HDD in RAID configuration and 19 inch clinical grade monitor. The PC hardware and monitors must be from reputed brands like DELL, HP, and BARCO etc. The monitor should have a wide viewing angle and it should be clinical grade monitor with at least 1.3 MP resolution.
b). Processing server capable of identification of patient demographics to the acquired image will be preferred, else a separate identification station must be provided
c). The server and /or ID station must be DMWL(DICOM modality work list) compliant to access patient and study data from HIS or RIS d). It should provide display of acquired images with greater details of demographics viz. Patient/study listing for easy access
e). The server must provide full amount of post processing features vix. Geometric corrections, window level algorithms, annotation like markers, predefined test, drawing lines and geometrical shapes, multi-scale image processing, measuring distance and angles, shuttering, histograms, zoom, grey scale reversal, edge enhancement, noise reduction, indication of gray scale saturation level, latitude reduction etc. Contd..P/2

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f). It should facilitate full fledged DICOM printing and should be able to print multiple formats of patient study.
g). Should be able to send DICOM images to DICOM workstation or PACS without loss of information
h). Should be equipped with DICOM CD writer for transferring image i). Should be able to store image on external device viz. CD or pen drive
etc.

j). The system should have a facility to indicate over /under exposure in the preview screen. Kindly specify the image preview time
k). The software must have dedicated pediatric and mammography image processing.
4.Dry imager
a) The system must have a dry imager without need of any wet chemistry
b) It must be DICOM 3.0 compatible allowing multiple modalities to be connected at a time
c) The system must be able to print at least 60 films/hr of the largest size d) The system must deliver its first film within 80 seconds from the request sent.
e) The imager must have spatial resolution of 500 ppi minimum
f) the system must have contrast resolution of 14 bits/pixel or more. The system must have at least three online film sizes and should be capable of printing any of the 8”X10”, 10”X 12”, 11”X14” or 14”X17” films g) The imager should support daylight loading of films

5..Suitable UPS back up must be provided for 15 minutes backup for the whole system
6.The firm should attach detailed installation list along with users’ complete address and telephone number.
7. The availability of above mentioned features and technical specification must be substantiated with authentic published documents from manufacturer or regulatory bodies.
8. The unit should be Conformite Europeenne (CE) approved.
9. The successful bidder will have to ensure onsite training of end users for a period not less than 3 weeks after installation of the unit.

Director of Health Services,
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