

Brihanmumbai Municipal Corporation
B.Y. L. Nair Ch. Hospital & T. N. Medical College: Mumbai
Department of Nephrology
NEPH-765 dt 23.02.2024

EXPRESSION OF INTEREST

Subject: To invite Expression of Interest from vendors for **Supply, Installation, Testing and Commissioning of a C-ARM** for the Department of Nephrology, BYL Nair Hospital through CSR Fund received through PPF, BYL Nair Hospital from UTI Infrastructure Technology & Services Limited (UTIITSL)

BYL Nair Hospital is a tertiary care referral hospital with 1623 beds. Department of Nephrology, B.Y.L Nair Ch. Hospital runs 21 bedded Hemodialysis unit at three different places in the hospital, which conducts 38-40 Hemodialysis sessions, round the clock. It also handles 05 bedded IRCU & 05 bedded Transplant unit. Doctors in the department on an average do 180-200 temporary hemodialysis catheter insertions every month. About 35-40 tunneled cuff catheter insertion are done every month. About 16-18 Kidney biopsies are done bedside every month. All these procedures are done under Sonography guidance.

For procurement of the **C-ARM** for the Department of Nephrology, it is proposed to invite "Expression of Interest (EOI)" from vendors to supply the same to BYL Nair hospital.

To supply the required **C-ARM**, vendors should obtain **Application Form** from **Dean Office on 28.02.2024 to 05.03.2024** and submit all required documents on or before **05.03.2024**, up to 1.00pm in the drop box in Dean Office, G building, Ground floor, BYL Nair Hospital. This will be a 2 stage EOI comprising of 2 packets; Packet A - relevant documents related to the technical specifications along with the duly filled Application form AND Packet B - Commercial documents (quotation in the prescribed format). **Packet A will be opened on 06.03.2024 & packet B will be opened on 14.03.2024** in the Dean's Office.

SPECIFICATIONS FOR HIGH FREQUENCY MOBILE C-ARM IMAGE INTENSIFIER FOR THE DEPARTMENT OF NEPHROLOGY, BYL NAIR HOSPITAL, MUMBAI

Microprocessor controlled C-arm machine with FPD should provide the excellent image quality at low radiation, ideally suited for general surgeries in many application fields and special application such as orthopedics, urology, Gastroenterology, pain management, Spine fixation, Neurology & angiography procedures.
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A) FLAT PANEL DETECTOR:

- | |
|---|
| <ul style="list-style-type: none">• Receptor Type should be of Amorphous Silicon technology /CMOS• Conversion Screen should be of CsI• Flat Panel Detector with 21cm x 21cm size or more should be provided• Image Matrix should be 1K x 1K or more• Pixel pitch should be 210µm or less. |
|---|

- ADC conversion should be 16bit or more
- Limiting resolution should be 2.5lp/mm or more
- Suitable Carbon fiber grid should be provided.
- Laser centering device should be available.

B) Monitor on Trolley:-

1 No 32" or more colored display monitor with split screen for Live & Reference Image display mounted on trolley should be provided.

C) Monitor on C-carriage:-

13" or more Touch screen console mounted on C-carriage to operate the machine & for live Image display.

D) C-ARM MOVEMENTS: Fully counter balanced all movements

1. Rotation: ± 180 Degrees.
2. Motorized Up/down: 400mm or more
3. Horizontal Travel: 200 mm or more
4. Arc Orbital Movement: 120 Degrees.
5. Wig Wag: ± 12.5 Degrees.
6. Source to Image distance should be more than 900mm.
7. Depth of "C" should be at least 650mm

8. Free space should be 750mm or more

Steering handle with ± 90 degree movement for both side diagonal scan.

E) X-RAY GENERATOR:

1. High Frequency (50 KHz) or more
2. Output power should be 6KW or more.
3. Fluoro & Rad. Kv 40 to 120 KV.
4. Digital Spot: 60mA or more
5. Pulse Fluoroscopic mA(peak):-
 - up to 20mA or more (Normal Mode)
 - up to 25mA or more (boost fluoro mode)

F) X-RAY TUBE:

- Monoblock tube head having dual focus Rotating anode X-Ray tube of focal spot 0.3mm (small focus) & large focus (0.6mm) should be provided.

<ul style="list-style-type: none"> • Anode Heat Storage capacity should be min 300kHU • Lead collimator Shutters with preview-Radiation free should be provided. • Anode heat dissipatron should be min 1000 volts
<p>G) CONTROL:</p>
<p>Touch screen monitor mounted on C-arm carriage for Image & Exposure parameters control is provided with following functions and indications:-</p>
<p>On GUI Screen</p>
<ul style="list-style-type: none"> • Fluoroscopy timer (Five minute cumulative timer with buzzer that activates after the completion of 300 seconds of exposure to reinitiate the exposure <i>reset</i> switch is provided). • ABS (Automatic brightness stabilization) selection for hand free operation- also known as ADR • KV and mAs increase and decrease switches. • X-Ray ON indicator. • Collimator open/close switches • Various Interlocks are displayed on LCD Screen for self diagnosis. <ul style="list-style-type: none"> a) KV Interlock b) Filament Interlock c) Thermal Interlock d) Rotor Interlock • Emergency OFF Switch. • Image rotation & Image flip function
<p>Others</p>
<ul style="list-style-type: none"> • Switches for up/down movement of "C" on both side of machine frame, with image storing capacity of > 50000 frames • Emergency OFF switches should be present • Machine ON/OFF Key switch. • Flouro, Cine & spot switches should be present
<p>H) MEMORY SYSTEM should include the following: -</p>
<ul style="list-style-type: none"> • Image processing software with real time image capturing, storage, and display up to 1k X 1k format. • Boosted fluoroscopy (CINE) at minimum 30 FPS with real time recording on hard disk drive. • Digital Radiography (SPOT) exposure mode is available • Variable Frame Rate (1-30) FPS • Fully integrated system with X-ray generator calibration from the imaging software
<p>User selectable view on Single monitor.</p>
<ul style="list-style-type: none"> • User selectable image display for Live & Reference view
<p>DSA:-</p>
<ul style="list-style-type: none"> • Should be capable to conduct trans jugular renal biopsies • Up to 10 FPS image acquisition for DSA • R-Mask

<ul style="list-style-type: none"> • Land marking (%age based)
<ul style="list-style-type: none"> • Pixel Shift
Roadmap:
<ul style="list-style-type: none"> • Real time path map
<ul style="list-style-type: none"> • Roadmap clear
<ul style="list-style-type: none"> • Peak Hold
Image Processing:
<ul style="list-style-type: none"> • Real time noise with reduction with Averaging up-to 16
<ul style="list-style-type: none"> • Recursive filter for image smoothing, DRC, Contrast, Brightness, Sharpness.
<ul style="list-style-type: none"> • Interactive Zoom and Pan
<ul style="list-style-type: none"> • Dynamic Zoom up to 400%
<ul style="list-style-type: none"> • Pre-programming for image setting for different operating Modes
<ul style="list-style-type: none"> • Image Inversion
<ul style="list-style-type: none"> • Dynamic Noise Reduction Filter(DNF) for moving anatomy.
<ul style="list-style-type: none"> • WW/WL level adjustments
<ul style="list-style-type: none"> • Image Flipping and Image Rotation Clockwise or Anti-clockwise.
<ul style="list-style-type: none"> • Live to Reference View on Single Monitor
<ul style="list-style-type: none"> • Cine Loop Play(Auto and Frame wise)
<ul style="list-style-type: none"> • Real time Image Flip(Horizontal/Vertical)
<ul style="list-style-type: none"> • Preferable to have dose display for particular procedure
<ul style="list-style-type: none"> • Image hold facility
Collimator:
<ul style="list-style-type: none"> • Ultra fast Preview collimator
DAP Module:
<ul style="list-style-type: none"> • DAP dose integrated in software and total summary for Fluoro/Cine Saved.
<ul style="list-style-type: none"> • Real Time Patient dose monitoring display with overdose warning message
Heat Unit Display:
<ul style="list-style-type: none"> • It displays Remaining Heat Content of X-Ray Tube in percentage (%).
Full Dose , Half Dose and Quarter Dose or dose mention in percentage
<ul style="list-style-type: none"> • Three level Dose Control to facilitate the user to work with selective Dose mode in fluoroscopy
<ul style="list-style-type: none"> • Provision for continuous fluoroscopy
MAG:-
<ul style="list-style-type: none"> • Real Time Three step Digital MAG.
Touch monitor :
<ul style="list-style-type: none"> • Touch based console for frequently used parameters along with image display.
DICOM Features
<ul style="list-style-type: none"> • Connectivity with DICOM workstation/PACS
<ul style="list-style-type: none"> • DICOM Send/Storage Commitment
<ul style="list-style-type: none"> • DICOM Print

<ul style="list-style-type: none"> • DICOM Worklist/MPPS
<ul style="list-style-type: none"> • DICOM 3.0 version preferable that it should be compatible to record procedures
Storage:
<ul style="list-style-type: none"> • Upto 780 GB Hard disk for storing images
<ul style="list-style-type: none"> • Fluoro saving as per user need
<ul style="list-style-type: none"> • LIH saving as per user need
Annotation:
<ul style="list-style-type: none"> • Rectangle, Ellipse, Line, Text
Measurement:
<ul style="list-style-type: none"> • Stenosis measurement, Length Measurement
PACS Connectivity
<ul style="list-style-type: none"> • Multiple Nodes can be configured.
<ul style="list-style-type: none"> • Single/Multiple Image Tagging to transfer into PACS/Workstation
Miscellaneous
<ul style="list-style-type: none"> • Exposure Lock/Un-Lock facility
<ul style="list-style-type: none"> • Electronic Collimator
<ul style="list-style-type: none"> • Paper Printing
<ul style="list-style-type: none"> • Different format of image saving like JPG, BMP, TIF, PNG , AVI Loop
<ul style="list-style-type: none"> • Cine loop play
<ul style="list-style-type: none"> • Image Data Export to DICOM CD
<ul style="list-style-type: none"> • Mosaic view/Image layout 2x2, 3x3, 4x4.
<ul style="list-style-type: none"> • Wireless remote for software features like Image Flip/ Rotation etc.
<ul style="list-style-type: none"> • Fluoro Navigation Compatibility
<ul style="list-style-type: none"> • Images should be easily transferred out via USB drives
I) Power requirement:
<ul style="list-style-type: none"> • The unit should be operable on Single Phase 230 V \pm 10% AC, 50 Hz
<ul style="list-style-type: none"> • UPS for power backup of the software mounted in trolley should be provided.
J) Accessories:-
<ul style="list-style-type: none"> • Lead Aprons of 0.25 mm lead equivalence- 10 Nos.
<ul style="list-style-type: none"> • Thyroid Guards- 10 Nos.

• Gonad Shields- 10 Nos.
• 01 No Lead Aprons Stand for 05 Lead Arpons.
• Sterilize Covers- 02 Nos.
• TLD batches – 10 nos (QA will be done by the bidders for next 08 years till CMC)
H) OTHER REQUIREMENTS:
• The company should be ISO & ICMED certified.
• The unit should be approved by AERB.
• The unit should be European CE Certified from Notified body.
• The company should have a local Service center.
• The company should have proven track record in Govt. sector.
• The X-Ray generator, detector and console software should be from same manufacturer for seamless connectivity and consistent image quality.

1. There years Comprehensive Warranty to be followed by 5 years CMC. Technical support, required spares and consumables should be ensured for two years after initial 3+5 years' period is over
2. It should be CE Certified by notified body (under MDD) along with declaration of conformity or US FDA approved.
3. Demonstration of quoted model is compulsory
4. Service Training to MEC Engineer & Operational training to user department.
5. Operating and details service manual should be provided.
6. The equipment should be certified by AERB and documentary evidence to that effect shall be uploaded.
7. Tropicalization : Operating Temperature : 40°C
8. Storage Temperature : 60°C
9. Relative Humidity : Upto 90% non condensing
10. Free software updates to be provided as per newer launches by company.
11. Quality assurance will be done by vendor as per AERB guidelines, (Atomic energy regulatory board) (on 2nd, 4th, 6th, 8th & 10th year)
12. Operational licensing of the supplied machine will be done by vendor along with institutional support.
13. QA of the TLD batches will done by the vendor till 08 years CMC

General Specifications	
a	Three years comprehensive warranty to be followed by 5 years of CMC. Technical support, required spares and consumables should be assured for two years after initial 3+5 years' period is over. Three years warranty & Five years CMC should cover all the spare parts & the rate of which will be unchanged for total 08 years irrespective of whether those are treated as consumables or otherwise.
b	It should be Notify body, CE certificate under MDD along with Declaration of confirmatory by manufacturing / EU representative of manufacturing or US FDA approval certificate for equipment and accessory is required.
c	Demonstration of quoted model is compulsory.
d	Operating and detail service manual should be provided
e	Service training to MEC Engineers and Operational training to user department
f	The license for the software & software update from time to time shall be valid for the 03 years warranty period & 05 years CMC period without any extra charges.

e	Bidder should submit all technical details in the form of technical brochures / leaflets for all the equipment's proposed for supply and mentioned in the technical offer.
f	Consumables (if applicable) the rates should be freezed for 08 years

	General Requirements
a	Price should include GST charges & if there are any other charges
b	It is mandatory to provide free installation & training for the use of equipment
c	All the above equipments shall be new and manufactured from virgin material.
d	Equipments should be supplied within 30 days from the date of Purchase order.
e	Installation should be done within 30 days of issuing Purchase order
f	All the requirements of the supply shall be sourced from the original equipment manufacturer of the model quoted. In case the machine is imported one, no import substitution is permitted neither before the award nor after the award for any part of accessory.
g	Service centre should be present in Mumbai
h	All breakdown calls should be attended within 24 hours

The Installation Report & necessary documents will be submitted to the Donor, The Donor will deposit the payment in Nair Poor Patient fund (PPF) and payment will be made by Nair PPF, after receiving payment from Donor.

If any doubt or any query about above mentioned work, you can contact at the Office - Telephone No.02223027682/02223027680

SD/-
Dr. Kalpana Mehta
Professor & Head
Department of Nephrology

SD/-
Dr. Anjali Parande
Head of Department
Medical Social Service dept.

SD/-
Dy. Dean
TN Medical College &
BYL Nair Hospital
Mumbai 400 008

SD/-
Administrative Officer
TN Medical College & BYL
Nair Hospital
Mumbai 400 008

SD/-
Dean
TN Medical College & BYL
Nair Hospital
Mumbai 400008

Brihanmumbai Municipal Corporation
Topiwala National Medical College & BYL Nair Hospital
Mumbai 400008

Date:

To,

**Dean
PPF
BYL Nair Ch. Hospital
Mumbai-400 008**

Subject: Purchase of C-ARM for the Department of Nephrology.

I/We _____

Address _____

As per the Expression of Interest advertised by B. Y. L. Nair Hospital, Mumbai regarding the purchase of C-ARM. We will comply with all the rules and conditions of MCGM regarding the procurement process and are willing to supply the equipment with 3 years of Warranty and 5 years CMC.

Enclosed below are the details of company:

1. Name of the Company:
2. Address & Contact No.
3. GST No.
4. Company PAN No.
5. Name of Equipment:
6. Name of the Manufacturing company:
7. Company Bank Details:
 - a. Bank Name:
 - b. Account No:
 - c. IFSC Code:
 - d. Branch Address:

I/We have carefully gone through the instruction provided in the Application form and the relevant documents to be uploaded in both packet and are ready to participate in this process. Also, terms and conditions mentioned therein & are all acceptable & agreeable to me/us.

Name of the Company:

Authorized Person Name & Contact details:

Full Signature of the tenderer:

with Official Seal

General Instructions:

Documents to be submitted in Packet A:

1. A copy of Expression of Interest with sign and stamp
2. Duly filled application form with sign and stamp
3. Details of the equipment along with accessories without disclosing the rates with sign and stamp on company letterhead (Format enclosed as Annexure I)
4. Authorization letter in case of bidder quoting for the equipment.
5. Technical Brochure of the equipment
6. Notify body, CE certificate under MDD along with Declaration of confirmatory by manufacturing / EU representative of manufacturing or US FDA approval certificate for equipment and accessory is required.

Documents to be submitted in Packet B:

1. Quotation in the prescribed format (Enclosed as Annexure II) with sign and stamp on company letterhead.

Please Note:

- 1. The equipment has to be delivered and installed by 28th February 2024**
- 2. The Installation Report & necessary documents will be submitted to the Donor, The Donor will deposit the payment in Nair Poor Patient fund (PPF) and payment will be made by Nair PPF**

Annexure I

Details of the equipment along with accessories
(To be uploaded in packet A)

No.	Description of Item	Make & Model	Qty
1.	C-ARM]along with standard accessories (if applicable)		1 No.
2.	Local supply of accessories (if applicable)		
3	Consumables (if applicable)		

Terms and Conditions:

1. Validity:
2. Payment Terms: **The Installation Report & necessary documents will be submitted to the Donor. The Donor will deposit the payment in Nair Poor Patient fund (PPF) and payment will be made by Nair PPF**
3. Delivery:
4. Warranty: 3 years
5. CMC- The CMC charges for 5 years (@5% of cost of instrument) to be provided in the above table
6. Installation charges will be beared by the company.
7. Transportation Charges will be beared by the company.
8. Any other charges (If any, please provide details with charges):
9. Training cost will be beared by the company

Full Signature of the tenderer:

with Official Seal

Annexure II

Quotation Format

(To be uploaded in packet B on company letter head along with the rates)

No.	Description of Item	Qty	Rates (INR)
1.	C-ARM along with standard accessories (if applicable) and 3 years warranty	1 No.	
2.	GST (as applicable)		
3	Consumables (if applicable)		
	Total cost		

No.	Description of Item	Rates (INR)
1.	Cost of CMC after completion of three-year warranty for next 5 years	
2.	GST (as applicable)	
	Total cost	

Terms and Conditions:

1. Validity:
2. Payment Terms: **The Installation Report & necessary documents will be submitted to the Donor. The Donor will deposit the payment in Nair Poor Patient fund (PPF) and payment will be made by Nair PPF.**
3. Delivery:
4. Warranty: 3 years
5. CMC- The CMC charges for 5 years (@5% of cost of instrument) to be provided in the above table
6. Installation charges will be beared by the company.
7. Transportation Charges will be beared by the company.
8. Any other charges (If any, please provide details with charges):
9. Training cost will be beared by the company
10. QA of the TLD batches will done by the vendor till 08 years CMC

**Full Signature of the tenderer:
with Official Seal**