



ALL INDIA INSTITUTE OF MEDICAL SCIENCES
ANSARI NAGAR, NEW DELHI-110029
STORES SECTION (DO)

Dated:
13/8/24

CIRCULAR

Subject: - Approved Technical Specifications of the Digital Subtraction Angiography Unit (Biplane) - Reg.

With reference to the office order No. Z-28016/35/2024-PMSSY-IV (8285627) Dated:- 02.08.2024, on above cited subject issued by Joint Director, MoHFW, GoI, it is informed to all user departments who intended to procure the **Digital Subtraction Angiography Unit (Biplane)** are advised to adhere the approved specifications by the committee set up by MoHFW and dully approved by Secretary HFW, enclosed herewith which shall be valid for two years.

(Enclosure - As above)

13/8/24

ARCHNA SHARMA
STORE OFFICER (D.O)

Distribution (With a request to also circulate it to all officials under their control)

1. Dean's (Academic/Research)
2. Medical Superintendent, AIIMS.
3. All Chief of Centers/All Head of Departments.
4. The faculty Incharge, Computer facility - With request to upload the same on institute website.

Copy to:-

1. PPS/PS/PA to Director/DDA.
 2. Professor In-charge/Officer In-Charge (Procurement).
- } For Information Please.

Email

00398
09/08/24

Sk. Jatinder
Pl. make a circular
10/8

Nirupam Madaan

Fwd: Circulation of approved technical specifications of Digital Subtraction Angiography Unit (Biplane) – reg.

From : Srinivas.M <director@aiims.gov.in>

Mon, Aug 05, 2024 01:16 PM

Subject : Fwd: Circulation of approved technical specifications of Digital Subtraction Angiography Unit (Biplane) – reg.

4 attachments

To : Nirupam Madaan <ms.main@aiims.gov.in>, P. RAJASHEKAR <addlmsctc@aiims.gov.in>

PIC Procurement for the
needful pls
10/8/24

Dr. M. Srinivas
Director
AIIMS, New Delhi

So, DO

1 Amil-
9/8/24

From: pmssysectioniv@gmail.com

To: "Jaideep Kumar Mishra" <Asfa-mhfw@nic.in>, "j_mishra" <j_mishra@gov.in>, "ROLI SINGH" <asfr-mohfw@gov.in>, "ROLI SINGH" <roli.singh@ias.nic.in>, "Roli Singh" <ash-mohfw@nic.in>, "Ms. V Hekali Zhimomi" <Zhimomiv@ias.nic.in>, "Ms. V. Hekali Zhimomi" <Dgoffice@naco.gov.in>, "L Sweety Changsan" <lschangsan@nic.in>, "Aradhana Patnaik" <asmd-mohfw@nic.in>, "Dr. Manashvi kumar" <jstraining-mohfw@gov.in>, "Pushpendra Rajput" <Pushpendra.r@nic.in>, "Vandana Jain" <Vandana.jain@nic.in>, "Elangbam Robert Singh" <Robert.elangbam@gov.in>, "Vijay Kumar Sinha" <Sinha.vijay@nic.in>, "Indrani Kaushal" <Ea-mohfw@nic.in>, "Dr. K. K. Tripathy" <kk.tripathy@nic.in>, "RAJIV WADHAWAN" <r.wadhawan15@nic.in>, "Ms Meera Srivastava" <jsrch-mohfw@gov.in>, "Smt. Jaspal Kaur" <cca-mohfw@nic.in>, "Anoop Kumar Puri" <anoopk.puri@nic.in>, Ddgtb@rntcp.org, "Pradeep Khasnobis" <pradeep.khasnobis@gov.in>, "ANKITA MISHRA BUNDELA" <js-pmssy-mohfw@gov.in>, "Saurabh Jain" <js-publichealth@gov.in>, "ANKITA MISHRA BUNDELA" <Ankita.edu@nic.in>, "Prof (Dr) Atul Goel" <dghs@nic.in>

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वर्षा संख्या/Diary No. 7798
दिनांक/Dated. 09/08/24

BISWAS" <ak.biswas57@nic.in>, "Raj Kumar Jalan" <jalan.raj@gov.in>, "Mr.SankarGarg
Mr.SankarGarg" <sankar.garg@gov.in>, "Amit Batra" <amit.batra@gov.in>

Sent: Monday, August 5, 2024 10:49:08 AM

Subject: Circulation of approved technical specifications of Digital Subtraction
Angiography Unit (Biplane) – reg.

Sir/ Madam

Please find the attachment.

Note: In case this email requires you to reply, you are requested to reply to all
the officials of PMSSY-IV Section at - dinesh.kumar14@nic.in; ak.biswas57@nic.in;
sankar.garg@gov.in; amit.batra@gov.in

Regards

PMSSY-IV Section

Ministry of Health and Family Welfare

 **Encl_ Technical specifications of Digital (2).pdf**
2 MB

 **Office Order 1.pdf**
51 KB

 **Technical specifications of Digital Subtraction Angiography Unit
(Biplane).pdf**
51 KB

 **Office Order 11.07.2024.pdf**
3 MB

Z-28016/35/2024-PMSSY-IV (8285627)

Government of India

Ministry of Health & Family Welfare

Room No. 201-D, Nirman Bhawan, New Delhi

Dated the 02-08-2024

Office Order

Subject : Circulation of approved technical specifications of Digital Subtraction Angiography Unit (Biplane) – reg.

In continuation to Office Order of even no dated 11.7.2024, please find enclosed herewith the technical specifications of Digital Subtraction Angiography Unit (Biplane) - as submitted by the Committee set up by the MoHFW under the Chairpersonship of Dr. Raju Sharma, Professor & Head, Department of Radiodiagnosis & Interventional Radiology, AIIMS New Delhi.

2. The above specifications have the approval of Secretary HFW and shall be valid for two years. All AIIMS/ INIs/ Institutes/ Hospitals/ Procurement Support Agency (HITES) of the Ministry are advised to adhere to the approved specifications (enclosed) while undertaking procurement of these equipment.

Signed by Dinesh Kumar

Date: 02-08-2024 15:29:30

(Dinesh Kumar)

Joint Director, MoHFW, Gol

Tel:011-23061730

Encl(2):

- i. Technical specifications of Digital Subtraction Angiography Unit (Biplane)
- ii. Office Order No. Z-28016/35/2024-PMSSY-IV dated 11.7.2024

To

- i. All Additional Secretaries/ Joint Secretaries, MoHFW – with a request to circulate the above specifications to all the Institutes/ Hospitals/ Autonomous Bodies under their administrative control, for compliance.
- ii. Director General of Health Services, MoHFW, Gol

Copy to :

- i. Director, AIIMS New Delhi
- ii. Director, PGIMER, Chandigarh,
- iii. Director, JIPMER, Puducherry
- iv. Director, NIMHNAS, Bengaluru
- v. The Directors/ Executive Directors of new AIIMS under PMSSY
- vi. The Directors of Central Government Hospitals in Delhi/ North East Hospitals
- vii. CEO, HITES (via email at ceo@hllhites.com)

Copy for information to :

- i. PSO to Secretary(HFW)
- ii. PPS to Joint Secretary (PMSSY)

Z-28016/35/2024-PMSSY-IV (8285627)

Government of India

Ministry of Health & Family Welfare
(PMSSY-IV)

Room No. 745-A, Nirman Bhawan, New Delhi

Dated: 11th July, 2024

Office Order

Subject : Circulation of technical specifications of Digital Subtraction Angiography Unit (Biplane) – reg.

With the approval of Competent Authority in the Ministry of Health & Family Welfare, the technical specifications of Digital Subtraction Angiography Unit (Biplane) - as submitted by the Committee set up by the Ministry under the Chairperson-ship of Dr. Raju Sharma, Professor & head Department of Radiodiagnosis & Interventional Radiology, AIIMS New Delhi – are hereby circulated for reference while procuring the above equipment.


11/07/2024

(Raj Kumar Jalan)

Under Secretary to the Government of India

Tel:011-23061343

Encl(1): Technical specifications of Digital Subtraction Angiography Unit (Biplane).

To,

1. All Additional Secretaries/ Joint Secretaries, MoHFW – with a request to circulate the above specifications to all the Institutes/ Hospitals/ Autonomous Bodies under their administrative control, for compliance.

Copy to :

1. Director, AIIMS New Delhi
2. Director, PGIMER, Chandigarh,
3. Director, JIPMER, Puducherry
4. Director, NIMHNAS, Bengaluru
5. The Directors/ Executive Directors of New AIIMS under PMSSY
6. The Directors of Central Government Hospitals in Delhi/ North East Hospitals
7. CEO, HITES (via email at ceo@hllhites.com)

Copy for information to :

1. PSO to Secretary(HFW)
2. PPS to Joint Secretary (PMSSY)
3. PPS to Joint Director, PMSSY

SPECIFICATIONS FOR DIGITAL SUBTRACTION ANGIOGRAPHY UNIT (BIPLANE)

The manufacturer/bidder must quote the latest 'state of the art' BiPlane Digital subtraction angiography with flat panel detector technology for vascular diagnostic and interventional procedures as per the specifications below.

- The quoted model must be launched in or after the year 2019 onwards.
- The offered model should be BIS / European CE with 4 digit notified body number/ USFDA certified. USFDA approved (authentic and legible certificate for the same to be annexed).
- Also, the vendor will guarantee that the system supplied is not refurbished and the DSA system quoted is the latest best available model in the segment quoted, at the time of delivery and should submit an undertaking in this regard.

Technical Specifications

I. Certifications:

1. The system should be AERB type approved and the copy of E-LORA Listing should be submitted along with the bid. If the quoted model has not been yet installed in India, vendor should submit NOC from AERB. Regular QA according to AERB norms will be the responsibility of the bidder during warranty and CMC period.
2. Should have import/manufacturing license from Central licensing Authority or State licensing authority of CDSCO for Medical Devices and copy of valid license should be submitted for the quoted model.
3. In case the vendor has not yet obtained import/manufacturing license from CDSCO for the quoted model, proof of application for CDSCO medical device license to be submitted in the bid document and valid CDSCO license to be produced at the time of supply/ NOC for the quoted model.

A. Gantry

1. The system should have two gantries: one floor mounted and one ceiling suspended providing full body coverage. The lateral plane should have motorized longitudinal C-arm movement.
2. It should be possible to pre-program the gantries for multiple examination positions.

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A. S.

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Prakash Valakada

Raju Sharma

H. S.

3. All movements of the gantries should be controlled from the controller on the table side as well as from the control desk.
4. The system should have adequate collision protection for the safety of the patient. Both gantry movements should be rapid, motorized & collision proof. Manual override by the operator should be possible.
5. Both gantries should have fast speed for angulations and positioning. The frontal system should have a speed of at least 15 degree/sec. for all positions and lateral plane should have a speed of at least 8 degree/sec.
6. Gantry angulations in both planes frontal and lateral should be freely user selectable to satisfy clinical imaging needs.
7. Both the gantries should have an automatic positioning capability dependent on the reference image being selected.

B. Patient Table

1. The table should have motorized Vertical & longitudinal and free floating with electromagnetic locking facility.
2. It should have the motorized stepping facility for automatic bolus chase for peripheral angiography.
3. It should be possible to swivel the table or should have multiple floating success in case of emergencies.
4. Table should have Trendelenburg tilt/cradle facility.
5. It should have patient load capacity of 200Kg or more
6. Table side touch control panel for 3D reconstruction and C-arm positioning with respect to 3D image & selection of 3D image positioning should be provided

C. X-Ray Generator:

1. System should have Microprocessor-controlled high-frequency (100 kHz) X-ray generator with automatic dose rate control for fluoroscopy and acquisition.
2. Generator should be multi-pulse/high frequency for constant output.
3. Max generator power output should be 1000 mA at 100 KV equivalent to 100 kW.
4. Radiography KVP range should be 40 kV-125 kV in 0.1 kV steps
5. It should have an automatic exposure control device for radiographic fluoroscopy and angio mode. Manual Override facility is preferable.
6. It should have a digital display of kVp & mAs.
7. Tube current should be freely selectable in 0.01 mA steps for continuous fluoroscopy, pulsed fluoroscopy and angiomode
8. Anatomical programming radiography should be possible.

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9. It should have over loading protection.
10. It should have the facility for pulsed fluoroscopy at variable rates for reducing the radiation dose to the patient during intervention procedure.

D. X-Ray Tubes

1. Both planes should be provided with rotating anode high speed tubes with increased contrast during fluoroscopy, especially for examinations on obese patients
2. The focal spot should have the following sizes:
 - 1.0 mm or less with load 80 KW or more in minimum one plane.
 - 0.6 mm or less with load 38 KW or more in minimum one plane.
3. Anode heat storage capacity should be 3 MHU or more (true value) having liquid bearing technology or metal lubricant
4. The system should have adequate cooling facility for the x-ray tubes for uninterrupted performance during procedure.
5. Fluoroscopy power (maximum continuous power)-tubes should provide at least 2.4kW continuous output for over 30 minutes.
6. Mention the Heat dissipation rate, higher heat dissipation rate is preferable
7. Leakage radiation should conform to international standards. Filtration & leakage radiation dose should be indicated in the offer.
8. The lateral plane tube should be mounted on the far side (left of the patient) of the ceiling suspended C-arm to reduce scatter radiation to the operator.
9. System should be quoted with the latest dose reduction technique for better image quality with less dose.

E. Collimator

1. One collimator for each plane is to be provided.
2. The collimator should have facility for automatic /pre-program / suitable alternative technology copper pre-filtration for reducing the X-ray dose.
3. The collimator leaf should have IRIS/rectangular/ wedge shaped type arrangement with Independent rotation and shift of filter blades
4. The collimator should have the facility for the dose measurement chamber in order to display the skin dose on the monitors in the lab.
5. The collimator should have facility for automatic copper pre-filtration for reducing x-ray dose as per patient thickness. Additional filters with multiple leaf's should be provided & it should be possible to position these filters & collimator leaf's without live fluoroscopy & independent of each other (clearly mention in the offer).
6. Automated exposure control with at least 3-level motorized Cu-filters

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7. Independent rotation and shift of filter blades
8. Automatic synchronous rotation of the detector and collimator unit to compensate for image rotation at different examination positions.

F. Biplane Digital System

1. Dynamic flat detector system with high spatial and 14 bit contrast resolution with 1.5k matrix resolution with Integrated collision sensor, Removable grid and active detector cooling facility
2. Size of the detector
 - Size of frontal plane should be at least 43 cm diagonal
 - Size of lateral plane should be at least 39 cm diagonal
3. Detector rotation in portrait to landscape mode and Vice versa, should be possible at detector level, examination console and control console at least in frontal plane
4. Standard AAPM phantoms for resolution measurement to be provided.
5. It should have multiple input format / field with minimum of 4 field zoom sizes,
6. Spatial resolution should be at least 2.5 LP/mm in the frontal plane and 2.5 LP/mm in the lateral plane.
7. Mention the Pixel pitch and detective quantum efficiency (DQE)

G. Imaging Display System

1. Examination Room Monitor

- I. Medical grade large high definition display (minimum 55 inches) to display live, reference, 3D CT /MRI images of any patient, Hemodynamic and EP waveforms with layout selection from integrated tableside control in the exam room.
- II. Another Two medical grade (2kX2k) monitors (one for live, another for review) mounted on a movable trolley should be provided as a standard, for radiographer viewing while doing procedure.

2. Console Room

- I. Control room shall have at least 4 (QTY) of wide screen (19" or more each), Medical grade monitors for display of live, playback, reference images of each plane.
- II. Gantry, collimator, table & injector operations should be possible from control room console without interrupting image review, hard copying, and archiving or image transfer functions.
- III. Separate/inbuilt Monitor for patient data registration.

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IV. Integrated Two-Way communication system with integrated mic & speaker to allow duplex communication between Console & Exam room.

H. Digital Imaging System

1. Should be possible for Fast, direct access to all series, single images and reference images, store monitor images, in both the examination room and the control room
2. Should be Possible for display of USG/CT/MR images as static reference image on the examination room monitor
3. Post processing software facilities with Changing window values, real time edge enhancement, positive/negative image display, electronic shuttering, roaming, image reversal, zooming/panning, annotation, Distance, angle measurements image labelling, text functions, drawing lines, arrows and circles
4. It should have the capability to acquire images in 1024 x 1024 matrix with a maximum speed of 6 frames or more per second on-line subtraction. Specify the maximum image acquisition rate without subtraction.
5. It should have a minimum image storage capacity of 50,000 or more images in the 1024 x 1024/12 bit.

6. Operating modes

A. Fluoroscopy mode should have following functions

- Biplane Dual Fluoroscopy mode to allow side-by-side display of digitally processed non-subtracted fluoroscopy and trace-subtract fluoroscopy for visualization and catheter guidance during complex procedures.
- Digital pulsed fluoroscopy with 7.5, 10, 15, 30 p/s
- Road mapping with automatic pixel shift
- Overlay fade (online superimposing of active fluoro and reference image)
- Store Monitor and Store Reference (even during online fluoroscopy)

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- Store Fluoro: Last 1024 image of last performed fluoro
- Last Image Hold (LIH)

B. DSA mode should have following functions

- Digital subtraction angiography with digital real-time filtering with frame rates from 0.5 f/s to 7.5 f/s in 1K/14-bit matrix or better
 - Remask/move mask/Replace mask, peak opacification for iodine contrast (MaxOpac) and CO2 contrast (MinOpac), display of anatomical background (Landmark) from 0 to 100 %
 - Pixel shift: Manual pixel shift, automatic pixel shift, flexible pixel shift
7. A separate workstation for 3D reconstruction of the rotational angiography images should be provided. The 3D image measurement and slicing should be possible. Facility to display reconstructed images in the procedure room should be provided. The same workstation should have the capability to query, retrieve images from existing PACS system and also should have 3D post processing capability and the same should be displayed on one of examination room monitor for viewing during interventional procedures
 8. It should be possible to fuse the 3D CT data with 3D Angio to combine high resolution vessel information with soft tissue information.
 9. The complete digital system along with the workstation should be networked and connected to a DICOM compatible laser camera. Entire networking and necessary switches should be borne by the vendor.
 10. The digital system should have software for vascular analysis and quantification including stenosis %. All measurements should be possible from the patient table side.
 11. DVD reader and CD/DVD recorder should be provided with a workstation and main console Computer system.

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12. The system should be able to Query, receive DICOM format CT/MRI/USG from PACS or other modality network nodes and display images on reference monitor,
13. DICOM print facility should be made available. Also compliant with HIS/RIS/PACS
14. It should have a facility to measure dose during the procedures.
15. The system should have latest radiation safety package like Clarity IQ/CARE & CLEAR MAX/Blueprint/ Autoright / equivalent
16. All software updates should be provided in warranty & CMC period.

I. Essential Applications And Softwares

1. Dyna CT or equivalent for acquisition of 3D high contrast reconstruction based on digital rotational angiography (2D/3D) at a speed of 40 degree/sec and acquisition frame rate of atleast 50/sec. Automatic image data transfer to the advanced workstation while all parameters needed for the 3D reconstruction are already included in the exam set to generate cross sectional CT like images.
2. Road mapping facility (Real time 2D & 3D) should be available with possibility of superimposing fluoro image on reference image. 3D road mapping facility directly from CT/MR 3D image without rotational angio 3D image to save contrast and radiation.
3. Smart mask road mapping procedures by overlaying fluoroscopy with a selected reference image on the live monitor. The reference and fluoro images can be faded to taste on the monitors.
4. Peristepping/Bolus chase software (Stepping of the table with a single contrast-medium injection performed while observing the contrast medium bolus should be provided like Peristepping or equivalent /Bolus chase software) should be provided.
5. Real time stent enhancement,
6. Needle guidance to plan needle-based procedure in a 3D volume by specifying a target and multiple trajectories
7. Embolisation Guidance for planning and performing embolizations

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8. Rotational angiography facility (2D & 3D) at a speed of at least 40 degree/sec. with acquisition frame rate of at least 25 frames/sec. in 1k matrix with facility for online display of subtracted images should be available. Rotational data acquisition with an output of cross sectional CT like images should be possible.
9. System should have CT/MR/PET fusion application.
10. Facility of CO2 angiography with supportive software should be provided

Optional Softwares:

1. 3D CT/DSA perfusion imaging. contrast-enhanced blood volume distribution of the whole brain in 3D cross-sectional images based on a steady-state contrast injection
2. Dyna 4D or equivalent software to see flow patterns in 3D
3. TAVR Assist Software or equivalent

J. Essential accessories:

The following essential accessories to be provided with the unit.

1. Broadband connection and LAN for the operation of SRS System is responsibility of the vendor and all the recurring cost of same should be borne by the vendor
2. Complete hemodynamic Multiparameter patient monitor (Specifications Annexure 1)
3. State of the art Anaesthesia equipment (Qty 1 No) (Specifications Annexure 2)
4. Suitable UPS of at least 120 kVA with complete back up for the entire system including generator, digital system all essential accessories to continue angio acquisition for 30 minutes.
5. Lead glass 100 x 150 cm for the console room.
6. Single Head Pressure injector of reputed make should be coupled with DSA system. 100 Nos. disposable syringes sets and 500 Nos. of tubings should be supplied along with the system. Unit price for syringes and tubings should be quoted separately and the same should be valid during warranty and CMC period.
7. Dry Chemistry Laser Imager with resolution of 500 DPI or more with two tray. Printer should be DICOM ready and online for printing films of all variable sizes
8. Ceiling suspended radiation protection system OF 0.5 Lead equivalence and table side protection system.
9. Focused ceiling mounted high luminous light with a handle for positioning the light.

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Rajesh Kumar

D.P.

A. Singh

H. Singh

Prakash Vatsa

Prakash Singh






Raja Sharma




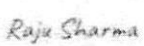

Rajesh

10. Activated Clotting Time (ACT) machine and 30 no's cartridges / tubes. Unit price for cartridges and tubes should be quoted separately and the same should be valid during warranty and CMC period.
11. Ultra-light weight ,double sided Lead Gown with lead equivalent of 0.5 mm: 10 Nos
12. Thyroid Guards - 10 Nos
13. Lead spectacles - 10 Nos.
14. Fully ergonomic foot switch for fluoro/acquisition control with both cordless and with cord should be provided.
15. Wooden/Metal household staircase
16. Lead protected viewing glass as per AERB norms (Size: 150cm X 100 cm)
17. Bi-Phasic Defibrillator (Latest and best in the market)
18. Lead Apron Hanger - 4 No's
19. Lead Apron Stand - 1 No
20. Accessories for the table should include: (Supply of 2 nos. each)
 - a. Head fixing aids
 - b. Chin support
 - c. Carbon fiber radiolucent arm support for brachial approach
 - d. Body straps
 - e. Shoulder harness
 - f. Easy to clean suitable soft mattress
 - g. Drip stands
 - h. Arm support
 - i. Sand bags for thickness compensation for the head - adult & pediatric
21. Dehumidifier of 110 Litre - 2 Nos.
22. Environmental friendly sterile plastic covers for ultrasound probe, flat panel Detectors and control touch panel in console room QTY: 1000 each. Unit price for each of these covers should be quoted separately for future purchase and the same should be valid during warranty and CMC period.
23. Vendor should provide LED X-ray Film viewer with adjustable brightness; capable of holding 3 films of 14"x17" size. Qty 2 no.s (one in each Console room and Examination room)

Terms and Conditions to the Vendors

- Original Product Datasheet of main unit and all accessories, including third party items to be provided.
- All agreements should be binding on the Principal. The principals should be responsible for any lacuna or deficit in service or supply.

- All items in the supply order should be supplied during the time of installation. No exceptions will be allowed.
- Items under Research Agreement should be finalized well in advance after receipt of supply order), so that there is no delay in delivery of software or coil or any other accessories.
- Software upgrades/ updates (where hardware upgrades are not required) like new application packages, etc, should be provided within one month after release.
- In case, the same is not provided in time, the parent company should undertake the responsibility to implement the same.
- Vendor should provide on site Training for radiologists and Technicians for a period of 4 Weeks

WARRANTY AND COMPREHENSIVE MAINTENANCE CONTRACT

- The warranty period of the system commences from the date of handing over (from the date of issue of Inspection Note) the fully functional unit of all essential parts and the accessories supplied (such as UPS including batteries replacement as when Required, AC etc.) including third party items such as patient monitor system, with probes, anesthesia machine, against Manufacturing defects of material and workmanship.
- UPS batteries and Anesthesia machine related accessories repairs (including replacement, if needed) should be included in the warranty and CMC period.
- The post-warranty (after 5 years) CMC should be comprehensive and should include (repair and / or replacement) + labour + spares for the complete system which includes all the accessories supplied such as UPS AC, etc. (including all consumables like batteries for UPS, and maintenance for another 5 years.
- If a particular part is not working for more than 5 days and due to which patient work suffers, the firm will be asked to pay penalty of half-a-day beyond 5 days for each day that it is not working.

Buy Back Option: As per need of Consignee Buy Back option may be exercised. It will be the responsibility of the seller/vendor to check on site the existing equipment and calculate offer price. Offer price will be used for calculation of L1

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