EMS Memorial Co.operative Hospital, Perintalmanna

QUOTATION NOTICE FOR PURCHASE OF

MEDICAL EQUIPMENT

EMCH / QTN /GEN / 14 A / 2025 15th November 2025

Sealed quotations are invited from reputed manufacturers / authorised suppliers / dealers for the supply and installation of **3 Tesla MRI, Heart Lung Machine, Heater Cooling Unit, Echocardiography Machine, Ventilators, Higher End Cardiac Monitor, Biphasic Defibrillator, Anaesthesia Work Station, Thulium Laser, Flexible Digital Ureteroscope (Disposable), Reusable Ureteroscope, Hysteroscopy Set, Laproscopy Morcellator, OT Table for CVTS, Flexible Video Bronchoscope, Dialysis Machines, Syringe Pump, Infusion Pump, Temporary Pacemaker Single Chamber etc**

Technical specifications of the equipment can be obtained from www.emshospital.org.in/about/tender

Quotations should be in Two sealed covers

- First cover super scribed " Technical cover" should include technical specifications, list of installations authorization for the supply, safety certificates etc
- Second cover super scribed "Commercial cover" should include commercial terms such as Price, Warranty terms, tax if any, AMC / CMC details for next 5 years, cost of consumable / spare parts / consumables regularly required etc.
- Technical quotations will be scrutinized by a technical committee.
- Technically qualified quotations will only be considered for opening of Commercial quotations.
- The quotationers should submit their authorization for supply of the quoted items from the Manufacturer

Sealed quotations addressed to The General Manager, EMS Memorial Cooperative Hospital, Perintalmanna should reach the Administrative Office of the hospital on or before **4 PM on 29th November 2025**

General Manager

EMS Memorial Co.operative Hospital, Perintalmanna

3 Tesla MRI SCANNER

MAKE : Please specify
Model : Please specify
Manufacturing country: Please specify
Year of Launch : Please specify

I. GENERAL

1. **USE**

1.1. Clinical purpose MRI is primarily used to identify diseases of the central nervous system, brain, and spine and to detect musculoskeletal disorders. It is also used to view cartilage, tendons, and ligaments. MRI can also be used to image the eyes and the sinuses. MRI can be used to help diagnose infectious diseases; to detect metastatic liver disease; to display heart-wall structure; to stage prostate, bladder, and uterine cancer. MRI can also be used as a functional imaging tool.

1.2. Used by clinical department/ward Radiology Department

II. TECHNICAL

2. MAGNET

2.1. Whole Body 3 Tesla Magnetic Resonance Imaging System optimized for higher performance in wholeBody and Vascular examinations with superconducting magnet, high performance gradientsand digitalRadio Frequency System.

2.2. 3T active shielded super conductive magnet should be short and non-claustrophobic.

2.3. It should have at least 65 cm patient bore with flared opening.

2.4. Magnet length should be less than 175cm.

2.5. Homogeneity of magnet should be better than 1.5 ppm over 40 cm DSV.

2.6. The magnet should be well ventilated and illuminated with built in 2way intercom for communication with patient.

2.7. It should have a built in cryo-cooler such that helium consumption does not exceed 0.01 lit/ hour. Helium refill time should be more than 2year.

2.8. Emergency Rundown Control at both operator console room and Gantry Room is a must.

2.9. Fringe Field 0.5 Gauss line radius is essential.

2.10. Front Panel of gantry should display table and patient position.

3. SHIM SYSTEM

3.1. High performance and highly stable shim system with global and localized manual and auto—shimming for high homogeneity magnetic field for imaging. Specify time for shimming. Quote the number of shimcoil used Off-centre shimming should be possible.

3.2. Auto shim (global and voxel shim) should take minimum time to shim the magnet with patientin position.

3.3. System should have higher order/ 2nd order shimming as standard/ Autoshim

4. GRADIENT SYSTEM

4.1. Actively shielded Gradient system.

4.2. **The gradient should be actively shielded with gradient perfomance of a slewrate atleast 200 T/m/s and a peak amplitude of 44 mT/m or above** .

4.3. The system should have efficient and adequate Eddy current compensation.

4.4. Effective cooling system for gradient coil and power supply.

4.5. Duty Cycle- 100% the gradient power amplifier.

4.6. Usable over 45 cm of FOV in all directions.

5. RF SYSTEM AND COILS (specify elements / FOV)

5.1. A fully digital RF system capable of transmitting power of at least 30 KW.

5.2. **It should also have at least 32 or more independent RF receiver channels with each having bandwidth of 1 MHz or more along with necessary hardware to support quadrature ICP array/Matrix coils.**

5.3. Head coil – 32 channels or more for high resolution imaging of brain.

5.4. Separate coil for Head neck at least 16 channels or more for routine brain/Neurovascular exams should also be quoted as standard.

5.5. **Spine phased array coil 32 channels or more (single or in combination)**

5.6. Body phased array coil with 32 channels or more (single or in combination) in 50 cm in Z-axiscoverage for imaging of abdomen.

5.7. Light weight coils with less than 1.8Kg to be offered as standard.

5.8. Dedicated Breast Coil capable of performing simultaneous bilateral breast imaging with minimum of 16 elements/ channel (even 3rd party coil for this region is accepted).

5.9. Dedicated RIGID Shoulder coil at least 16 channel or more should be offered.

5.10. Dedicated RIGID Knee coil at least 16 channel or more should be offered.

5.11. Loop flex coils - large and small each 1no. - 16 channels or more for imaging of large regions such as large shoulder, hip and knee & small regions such as small to medium shoulder, wrist, elbow and ankle.

5.12. Integrated coil technology, latest as available with the vendor to be quoted: Equivalent of TIM /GEM/ D Stream or equivalent to be offered.

5.13. Multiple coils should be offered to avoid coil repositioning.

5.14. Vendor shall offer user friendly 4 or more coil acquisition in order to optimize the throughput-increase and increased effective FOV. The coil system shall cover a body length of at least 200cm. This 200cm should be possible with surface coil.

5.15. The supplier should quote coils or their combinations exclusively for each application. The number of coils should be as per the BOQ. It should be mentioned as independent coils and not having overlapping applications.

6. USER'S INTERFACE

6.1. The main Host computer should have a 19 inches 3 MP or more high resolution LCD TFT color monitor with 1024 x 1024 matrix display.

6.2. The system should have image storage capacity of 100 GB for at least 2,00,000 images in 256x256 matrix.

6.3. Latest state-of-art computer system with sufficient RAM (32 GB or more) and computational speed to match the single shot Echo Planar Imaging (EPI), interactive angiogram, multi-planar Three-dimensional (3D) reconstruction, surface rendering and dynamic imaging, vascular imaging/angiography, and adequate storage for images and other applications.

6.4. Complete cardiac suite to see Cardiac Morphology, anatomy, perfusion, viability and functional imaging.

6.5. Should be offered with full post processing capabilities such as wall thickness, wall thickening, End Systolic and Diastolic Volumes, Ejection Fraction, Cardiac Output, Quantification Flow to be offered as standard.

6.6. The reconstruction speed should be at least 5000 or more for full FOV 256 matrix.

6.7. The main console should have facility for music system for patient in the magnet room. The system should have DVD / CD / flash drive archiving facility. The system should be provided with auto DVD writer.

6.8. Two way intercom system for patient communication.

6.9. MRI System should be DICOM ready in all parameters with no additional requirement of license for connectivity to any PACS/HIS and Radiotherapy treatment planning system.

6.10. Software and/ or standard of communication where ever required.

6.11. A client server work station shall be provided. (optional)

6.12. SERVER SYSTEM: A Client - Server Architecture based solution, Minimum 40,000 concurrent slices, 2 no. floating /concurrent user license for all applications. (optional)

6.13. DICOM 3.0 compatibility and interfacing with other modalities must be possible. CONFIGURATION: A single dedicated workstation should be provided with the same user interface with same licence

6.14. Licenses: 2 no’s Concurrent license here implies the capability to process all the loaded software to be accessible and usable on all the clients/ nodes simultaneously without any processing delay. The software should also include reputed antivirus software of a perpetual type or renewed by the supplier. (optional)

6.15. Hardware: Client / Node: CPU unit, minimum 16 GB RAM, Medical grade monitor of 2MPresolution & size - 21” or more, mouse, keyboard.(optional)

6.16. Hardware Server: The server (single/dual configuration) should have image storage capacity of at least 2.5 Tera bytes, minimum 20,000 concurrent slice processing power and at least 64GBRAM and 2.5 Ghz CPU. 21" or more TFT/LCD monitor. (optional)

6.17. DVD RW drive for writing of images, spectra and raw data along with the necessary software for reading the images and spectra on DVD/CD storing capabilities.

6.18. The bidder should provide Level 3 network Switch (with 32 nodes) or latest, to integrate the network and should connect to the hospital PACS. (optional)

6.19. The network speed and cables should match the latest industry standards (e.g. 10 BaseT/100BaseT/ 1GB). (optional)

6.20. The bidder should provide necessary networking and configuration assistance with existing PACS,HIS, RIS

6.21. Workstation with same user interface as of main console is required with the availability of all necessary software including:

- Basic post-processing software including MIP, MPR, surface reconstruction and volume rendering technique.
- Advanced post-processing offered applications perfusion quantification, advanced diffusion and DTI processing of 20/30 CSI data, with color metabolite mapping, quantification of CSF flowdata, vascular analysis package AS, BOLD, Fast & Ultrafast EPI
- Cardiac package should be available

7. DATA ACQUISITION

7.1. The system should be capable of 2D and 3D acquisitions in conventional, fast &ultra-fast spinecho and gradient echo modes so that real-lime online images ran lie observed if needed. All the sequences that are available with the vendor at the time of quote/ delivery should be provided as per their manual.

7.2. 2D multi slice imaging should be possible in all planes (axial, sagital, coronal, oblique and double oblique.

7.3. Up to 1024 x 1024 matrix acquisitions preferred for all applications. Wherever 2048 matrix available, please mention.

7.4. Half Fourier or other techniques to reduce scan acquisition lime while maintaining adequate SNR.

7.5. 3D volume, multiple contiguous slabs, multiple interleaved and multiple overlapping slabs

7.6. Slice thickness in 2D and partition in 3D to be freely selectable.

7.7. Dynamic acquisition (serial imaging) with capability to initiate scan sequences either from the magnet panel or from the console.

7.8. Dynamic acquisition; number of repeat scans with delay time either identical time interval or selectable.

7.9. Auto slice positioning from the localizer images.

7.10. Maximum off- centre positioning both anterior posterior and lateral direction and should be selectable.

7.11. Gating: physiological signals like ECG, pulse, respiratory', External signal triggering (interlace for triggering input pulse from external source). The provision should be available at the console also [for FMRI, EEG etc.).

7.12. Simultaneous acquisition, processing and display of image data in 2D multi-slice mode.

7.13. Selection of voxels from oblique slices should be possible while doing spectroscopy.

7.14. Artifact reduction/imaging enhancement / image filtering / image subtraction / addition / multiplication / division techniques:

7.15. Flow: 1st and 2nd order flow artifact compensation

7.16. Presentation slabs: a number of relocatable saturation bands to be placed either inside or outside the region of interest

7.17. Graphic prescription.

7.18. Fat saturation techniques: frequency selective RF pulses to suppress fat signals in the measured image FOV. ROI selective (regional) fat suppression should also tie Riven.

7.19. Magnetization transfer saturation: Off resonance RF pulses to suppress signals from stationary tissue in FOV

7.20. Phase contrast capability in 2D and 3D mode.

7.21. Image intensity correction

7.22. Breath hold acquisition

7.23. EPI mode

7.24. DTI with MDDW or equivalent with a minimum of 12 and selectable up to 128 direction encoding

7.25. Data acquisition in all three standard planes (axial, sagittal, coronal| and oblique and double oblique planes or more oblique planes.

7.26. Higher matrix acquisition capability in single shot EPI. Acquisition time. TR, TE and slice thickness should be clearly mentioned and supported by data sheet reference.

7.27. The vendor should offer multi coil acquisition in order to Optimize throughput increase and increased effective FOV. Individual acquisition elements of every coil should be mentioned.

8. IMAGING PULSE SEQUENCES

8.1. All standard and special pulse sequences available at the time of quote/ delivery should be offered and quoted in the bid. If the vendor does not have any particular sequence/s but offers a work in progress (WIP) sequence/s, then it should be provided without any pre-condition like asking the Institute to sign any agreement for this purpose. This also applies to any post- processing software that is offered which is WIP.

8.2. The system should be capable of selecting TR and TEs as per requirement in majority of the pulse sequences.

8.3. Spin echo (SE): multi-slice single echo, multi-slice multi echo (8 echo or more), SE with symmetrical and asymmetrical echo intervals and fast spin echo. MT-SE imaging sequence.

8.4. Inversion recovery (IR): including short Tl modified IRSE, FLAIR, DIR (Double Inversion Recovery).

8.5. Gradient echo (GE): with transverse gradient/RF spoiling, and transverse gradient re phasing,e.g., GRASE or equivalent etc. 3D gradient echo with shortest TR and TE, free choice of flip angle selection, while maintaining SNR.

9. FAST SEQUENCES

9.1. Fast spin echo and GE sequences in 2D and 3D mode with T1, T2 and PD contrast capable of acquiring maximum number of slices with a given TR a minimum TE, echo train should be at least128 or more in fast spin echo mode.

9.2. Half Fourier acquisition capabilities should be available with/without diffusion gradients and in combination with/fast spin echo

9.3. Fast inversion recovery with spin echo

9.4. Fast gradient spin echo IR multi-slice multi- echo mode with maximum ETL. Sequences should incorporate RF focusing to acquire ultra-fast gradient spin echo.

9.5. Fast gradient echo sequence should incorporate RF spoiling and other technique to acquire images in ultra-fast 2D and 3D modes.

9.6. Fat and water suppressed imaging sequences.

9.7. EPI optimized sequences (with and without fat suppression)

9.8. For T1, T2, PD imaging, perfusion, regular diffusion values (at least 5b, 3 directions) EPIFLAIR.

9.9. EP1- IR. EPI FLAIR diffusion tensor, EPI MT FLAIR, tensor diffusion at least 16b values, and 128 directions) and diffusion studies. Suitable artifact/ fat suppression techniques to be incorporated in the sequence to have optimum image quality.

9.10. There should be capability of calculating ADC map (isotropic and anisotropy from the regular diffusion and tensor data].

9.11. Optimized sequences for special applications.

9.12. Multi-band EPI: Simultaneous Multi Slice Accelerate Advance applications for Neuro & Body.

10. OPTIMIZED SEQUENCE PACKAGES NEURO

10.1. All T1 (2D, 3D), T2 (2D, 3D), IR (2D, 3D), Dual IR (2D, 3D) sequences

10.2. Sequence for internal ear imaging for visualization of fine structures like cranial nerves(appropriate sequences like CISS, etc. or equivalent. Mention the sequences provided.

10.3. 3D sequences for internal auditory canal imaging

10.4. Dynamic imaging of pituitary using appropriate sequence

10.5. Whole spine T1, T2, IR sequences

10.6. Whole neuro examination with automatic' planning, scanning and post processing, with single localizer positioning, without changing the coils/ repositioning

10.7. SMS (Simultaneous Multi Slice Imaging)

10.8. 2D /3D ASL

11. ANGIOGRAPHY

11.1. MR angiography: 2D/3D TOF, 2D/3D Phase contrast |with and without gating) and magnetization transfer saturation, black blood angiography for cerebral, pulmonary, abdominal and peripheral vessels.

11.2. For peripheral moving table angiography should he offered covering hip to limbs to be examined in one go with high resolution and high SNR.

11.3. Bolus tracking software package.

11.4. Sequences for breath hold angiography with contrast enhancement.

11.5. Sequences for time resolved angiography with contrast Kinetics.

11.6. ECG triggered non contrast angiography

11.7. Contrast bolus tracking (including single shot whole body MRA, interactive and automatic tracking, etc.).

11.8. Perfusion study in organ systems like kidney, brain, etc. with T1 perfusion with permeability maps and quantitation of rCBF/ rCBV, MTT, etc., with color maps.

12. DIFFUSION/DTI

12.1. Sequence package for diffusion including DTI (tractography) study in organs like brain, kidney, muscle, heart, spine, breast, etc.

12.2. There should be capability of calculating ADC map (isotropic and anisotropic from the regular diffusion and tensor data).MR diffusion tensor imaging package with tractography

12.3. Zoom IT or FOCUS, Application for high resolution for small FOV diffusion imaging

13. BODY IMAGING

13.1. Flow quantification in vessels and CSF, hepatobiliary system

13.2. Fly through facility with Flow analysis including display of various velocity values.

13.3. Optimized breath hold sequences for abdominal studies including angiogram.

13.4. MR Cholangiography and Pancreatography: Specialized sequences and processing to perform MRCP.

13.5. Pulmonary 2D/3D MRA sequence, including single breath hold sequence.

13.6. MR ventriculography, cisternography, myelography.

13.7. Single sequence to acquire four different contrast (in phase, out of phase water only, fat only).The same technique should be used in other sequences, for dynamic portography / T1 quantitative analyses.

13.8. Parallel acquisition techniques including new sequences. Specify the technique used and the factor by which the acquisition time is reduced for similar acquisition with and without parallel imaging technique. Mention the sequences.

13.9. Flow quantification packages for CSF with dynamic CSF flow imaging, aqueduct and spinal canal.

13.10. Radial/Spiral pulse sequences for ultrafast imaging.

13.11. Suitable artefact / fat suppression techniques to be incorporated in all the sequences to have optimum image quality.

13.12. A sequence for differentiation of fluid and carriage in ortho applications (sequence like DESS or equivalent)

13.13. Susceptibility artifact correction techniques to be incorporated in all the sequences to have optimum image quality.

14. SWI

14.1. Sequences for susceptibility imaging

15. PROSTATE IMAGING

15.1. Sequences for imaging of prostate

16. **WHOLE BODY DIFFUSION AND STIR, ANGIOGRAPHY**

16.1. DWIBS OR equivalent, whole body imaging using Inversion recovery sequence, Whole body MR angiography.

17. **m-DIXON**

17.1. Provide sequences like m-Dixon for all applicable sequences, m Dixon - HD or 3 Point DIXON.

18. **RELAXOMETRY**

18.1. Tl mapping and T2 mapping with necessary post-processing's/w.

19. **MOTION CORRECTION**

19.1. Sequence for in-line motion correction for uncooperative patients/ children (with software and acquisition sequences like BLADE. PROPELLAR, Multivane or equivalent.

19.2. Sequence with ultra-short TE

19.3. Sequence for nullifying CSK pulsation artifacts

19.4. Whole body imaging (using body coil and surface coils)

19.5. Whole body diffusion weighted imaging (using body coil

19.6. Automated fusion and composing for the above two (without any artifacts)

19.7. Volume acquisitions for Neuro applications

20. **MR SPECTROSCOPY**

20.1. System should have capability to perform multi planar proton

20.2. Proton MRS Sequence for single-voxel acquisition, with selectable fat /lipid saturation band options of water saturation (e.g. VAPOR, CHRSS, etc.) with all post-processing software

20.3. Proton Multi-voxel CSI |2-D and 3-D] acquisition and metabolite mapping with all necessary RF sequences (and post processing algorithms) with all post processing software

20.4. If separate coils arc needed for carrying out MRS, it should be provided.

20.5. RF sequences for prostate, liver, musculoskeletal and brain (if there are any specialized /optimized sequence available, the same should be offered)- with all post processing software

20.6. Water and lipid suppression in automated sequences.

21. CARDIAC PACKAGE

21.1. Myo map (T1,T2, T2*)

21.2. MR Cardiac Ventricular Function

21.3. MR Cardiac flow

21.4. Advanced cardiac including PSIR Myocardial tissue characterisation , Coronary imaging

22. POST PROCESSING AND EVALUVATION

22.1. Licenses of all the post processing and evaluation packages should be provided for the main and additional console/ Workstation.

22.2. Specify clearly number wise the algorithms that need licenses and a statement whether these have been provided in both the main console and the additional workstation (Satellite console/extended workspace).

23. **SPECIAL APPLICATION PACKAGES**

23.1. The vendor must provide their specialized and optimized imaging sequences In the Main Acquisition Console; Post processing packages in the Main Acquisition Console and additional workstation.

23.2. Neuro (Smart exam/Ready Suite/ Smart Brain/ etc.),

23.3. Body

23.4. Oncology, Angio (including DSA approach, capturing arterial, capillary and venous phases in a single acquisition with a single bolus)

23.5. 23.6 Ortho and MSK, Metal artifact reduction software should be provided as standard for imaging of joints with prosthesis.

23.6. Liver (including 3D T1 Fat sat for dynamic liver imaging)

23.7. Pediatric

23.8. Breast

23.9. Prostate

23.10. Necessary composing software for whole body applications. Smart Exam/ Smart Brain/Ready Suite/Brain Dot Engine/ equivalent technique should be quoted in all available imaging packages.

23.11. Knee porto system for knee instability studies - please specify

24. MPR

24.1. Multi planar reconstruction (MPR) in any arbitrary plane including curved planes with freely selectable slice thickness tend slice increments.

24.2. Surf0ace Reco0n0struction and evaluation on reconstructed images with minimum time.

24.3. MIP in displaying in cine mode 2D and 3D mode, Targeted/segmented MIP in any orthogonal axis with minimum processing lime and capable of displaying in cine mode.

25. **ADC, PERFUSION, etc.,**

25.1. Evaluation and display of diffusion images, ADC map, fMRI in reference of EPI optimized sequence.

25.2. Perfusion image evaluation with time intensity graph and other statistical parameters

25.3. Evaluation package for calculating rCBV, rCBF, MTT, perfusion map, corrected CBV calculation; Fusion of perfusion map with Contrast enhanced 3D T1 images etc. Mention the package /software offered with brochure.

25.4. Flow quantification and evaluation far vascular (high &. low) CSF, bladder outlet and cine display.

26. ARTERIAL SPIN LABELING

26.1. 2D / 3D ASL processing and quantification package in main console/additional workstation

27. TRACTOGRAPHY

27.1. Post-processing package for DTI and Tractography, estimation of ADC, FA (Lambdaparallel, perpendicular separately and combined), Fiber tracking, fiber statistics, and display of fiber tracts on anatomical images.

28. IMAGE STATICS

28.1. Measurement of distance, area, volume, angle, mean, SD, image addition, subtraction, multiplication, division, interpolation, segmentation, threshold, histogram.

28.2. Image filtering and Image fusion software.

28.3. Software for co registering MRI/ fMRI/ MRS/ Metabolite mapping images with images fromCT, PET, and SPECT.

28.4. Evaluation features like zoom, rotation, scroll, roaming, image synthesis, multipoint Tl andT2 calculation (more than 8) window stretching, text dialogues graphics, sorting, search, archiving, recalling etc.

29. SPECTROSCOPY

29.1. Full post-processing for single-voxel MRS, CS1 (multi-voxel MRS), metabolite mapping with color coding (metabolic images) etc., for brain, prostate and for other application.

29.2. Post processing should include FFT, base line correction, curve optimization, automatic phase correction, metabolite imaging, spectral mapping, magnetic-resonance spectroscopic imaging(molecular imaging) with naming and peak integral values for all in vivo metabolites.

30. ADVANCED ORGAN SPECIFIC IMAGING

30.1. Any advanced organ specific imaging with automatic planning, scanning and post-processing application should be quoted.

31. SILENT MRI

31.1. Silent MRI for neuro protocols including T1W, T2W imaging without any loss of image quality on all sequences (like Neuro Silent/ Silenz, or equivalent), with noise less than 80db. The quiet scanning should be without loss of SNR.

32. **ADVANCED COMPRESS SENSING IMAGING**

32.1. System should have the Advanced Compressed Sensing Imaging for high speed image acquisition for brain, body, MSK. Also offer simultaneously multi slab acquisition for diffusion and fmri of the brain.

33. QUALITY ASSURANCE AND PHANTOMS

33.1. Phantoms for routine quality assurance for all coils(including body coil).

34. **MRI ACCESSORIES**

34.1. Rechargeable Handheld metal detectors (2 Nos.)

34.2. Walk through Metal detector with multiple sensor and multiple location LED (Zone III tope)- 01 no

34.3. MR Compatible Dual Pressure injector (minimum 2000 Gauss line) with 100 syringes and patient tubing.

34.4. Two quantity: Non-magnetic IV stand

34.5. Two quantity: Digital Patient Weighing Scale (in the range between O to 200 kg)

34.6. Coil storage cabinets to be provided.

34.7. Network cable and other required materials for the complete installation to be provided by the supplier

34.8. MR compatible crash cart 1 no.

34.9. MR compatible instrument-trolley - 1 no.

34.10. MR compatible patient trolley (to transfer patient to the magnet table) with both vertical and horizontal movement with hydraulic operation and should take a minimum load of 150 Kg in both vertical and horizontal motion (Model: Adjustable Height Trolley:

MR5501 of Wardray Premise Ltd. U.K or Adjustable Height Trolley, Femo, UK or equivalent) - 1 no.

34.11. MR compatible wheelchair (Wardray/equivalent model) (with cushion, backrest and anti-rest)- 1 no.

34.12. Uninterrupted power supply (UPS) with sufficient capacity' (appropriate rating as required for MRI and chiller) for 15 minutes back up of the full load MR system and its accessories during patient MR imaging.

34.13. Two (quantity) MR compatible oxygen cylinders B type with trolley, flow meter and humidifier.

34.14. Suitable Chiller system

34.15. Imported RF cabin

34.16. Dry Film Printer with minimum 16 bits 500 dpi 2 ports, 2 trays

34.17. MR compatible stethoscope

34.18. Patient comfort kit

34.19. Music and PA system with speakers

34.20. MR compatible fire extinguisher

34.21. Phantom for regular QA

34.22. MR compatible Pulse oxy meter and NIBP ECG Monitoring system

35. **ANTIVIRUS s/w AND WEB UPDATES**

35.1. All the Servers and Workstations in the network (MRI console, additional workstation, PACS workstation, fMRI workstation, etc.) that is supplied by the vendor should be provided with antivirus software (periodically updated) in the warranty and CAMC period.

35.2. The vendor should provide antivirus updates in the warranty and CAMC period and make sure of the updated antivirus every week |using automatic- updates with internet facility by the vendor)

35.3. The vendor should ensure that all the above modalities include necessary connection, image& work list send/receive, image and data storage, scheduling, patient registration, and synchronization functions as per DICOM standards for smooth and effective integration to RIS / PACS.

36. SAFETY AND CERTIFICATIONS

36.1. Should be of CE issued by a notified body or FDA (US) certificate.

37. **OTHER TERMS AND CONDITIONS :-**

37.1. Preference will be given for better features in the following :

1) Year of Launch
2) Software advancements
3) Clinical performance during site visit
4) Innovative techniques

5) Current advanced features

37.2. Various models can be quoted by a single vendor. All models will be taken for evaluation

37.3. Standard Warranty:2years

37.4. AMC and CMC rates after warranty period should be quoted in price bid for next 8 years.

37.5. The plat form should be able to accommodate all the up gradations required later (as when required) both hardware and soft ware to add on more and more special features with no additional cost

37.6. The Equipment should be the state of the art design, incorporate all the latest facilities and modern concepts

37.7. The Model quoted must be latest and most advanced and spare and service must be available for at least 10 years which means company will be responsible for maintaining the equipment all 10 years in full working conditions at least 95 % Up time

37.8. In case of failure of Equipment/Accessories/ Instruments, standby arrangements must be provided within 48 Hours.

37.9. Should have safety certificate from a competent authority CE issued by a notified body registered in the European commission / FDA (US)/ STQC CB Certificate/ STQC S Certificate or valid detailed electrical and functional safety test report from ERTL. Copy of the certificate/ test report shall be produced along with the technical bid

37.10. The system should be automatically upgrade as and when releasing a new platform or software and for updating the software if any hardware is required that also should be upgraded with free of cost during the life cycle of the machine .

MANDATORY DOCUMENTS ALONG WITH TECHNICAL BID

1. Compliance statement with technical specification
2. Product datasheet,
3. Details of service division
4. Sales authorization letter from Manufacturer.
5. Details of installations
6. Company representative should be signed in the purchase contract
7. CE & FDA certificate if any

EMS Memorial Co.operative Hospital, Perintalmanna

HEART LUNG UNIT

Make : please specify

Model: please specify

Year of launch : please specify

Manufactured in : please specify

1. Should have 4 pump console:
2. Should have selectable ratio of blood and cardioplegia from 1:1 to 1:20
3. Should have direct or belt driven pumps and touch screen technology on pump heads
4. Console should be compatible to integrate an additional centrifugal pump module
5. Air-oxygen blender with hoses and flow meter should be provided
6. Each pump should have programmable modes of operation as :Arterial, Arterial pulsatile, cardioplegia, slave 1, slave 2,pump sucker, auxiliary and free
7. Pumps should be operable in clockwise and counter clockwise direction
8. It should have a precise and lockable central occlusion knob
9. Cardioplegia monitoring unit should display cardioplegia data including volumes, ratio, time, pressure and temperature
10. Each roller pump should be capable of running on 24 V supply with a transformer in the console
11. Roller pumps should be easy to remove and reassemble
12. The heart lung machines should have an emergency battery back up for atleast 90min for all the pumps with all necessary safety systems and accessories
13. Transitioning from mains to back up power should not require any action from the user
14. Level and bubble detector should be provided with the unit
15. Bubble detector should detect bubbles of minimum 5 mm diameter
16. Unit should have the following parameters monitoring facility:pressure(for 4 pressure display), Time(3 resettable timers with 1 real time display), Temperature monitor(temperature display), cardioplegia delivery(Total volume, actual volume, time, pressure of delivery), Temperature control of heater cooler unit
17. Should work with 220 240v/ 50-60Hz
18. Should be compact
19. Should be transportable with castor wheels that are 360 degree turnable
20. Should have an flexible LED lamp, which is water resistant and provide natural white light
21. Should have fixed height shelf along with the machine
22. Should have a multi positional system control panel
23. All alarms and errors should be acoustically represented
24. A single button to silence and alarm should be incorporated
25. Remote control for the heater cooler unit to allow control the patient temperature
26. Should have safety certificate from a competent authority CE/FDA (US). Other equivalent certificates will not be accepted. Should have valid detailed electrical and functional safety test

report from ERTL. Copy of the certificate/test report shall be produced along with the technical bid

27. Should have the accessories
28. Standard venous clamp
29. Drawer which can be fixed below the console
30. Height adjustable slide guard which can be fixed to the right or the left side to the console
31. All pumps must be rotatable by 15 degree increments upto 180 degree or 240 degrees
32. All alarms and safety warnings must be displayed as text messages and have differentiated audio alarms.
33. System must have provision to add Mast Pumps
34. Continuous inline blood parameter monitoring.

Other terms and Conditions

1. Should have safety certificate from a competent authority CE issued by a notified body registered in the European commission / FDA (US)/STQC CB Certificate/ STQC S Certificate or valid detailed electrical and functional safety test report from ERTL. Copy of the certificate/ test report shall be produced along with the technical bid.
2. The Model quoted must be latest and most advanced and spare and service must be available for at least 10 years which means company will be responsible for maintaining the equipment all 10 years in full working conditions at least 95 % Up time. AMC and CAMC Rate should be quoted in price bid for 8 years
3. Standard warranty : 3 years
4. In case of failure of Equipment/Accessories/ Instruments, standby arrangements must be provided within 48 Hours .
5. Better preference will be given for user friendliness and better features

Please attach a copy of

- CE & FDA certificate if any
- Compliance statement with technical specification
- Product datasheet
- Details of service division
- Sales authorization letter from Manufacturer.
- Details of installations
- Company representative should be signed In purchase contract

HEATER COOLING UNIT

Make : please specify
Model: please : specify
Year of launch : please specify
Manufactured in : please specify

1. Unit should have at least 2 tanks. Machine must be capable of independently controlling 3 separate temperatures cooling and warming patient cardioplegia, blanket.
2. Water temperature should be regulated independently.
3. Main and cardiaplegia should be separated in two tanks to ensure fast temperature adjustments of the two circuits and allow the availability of cold cardioplegia
4. Should be modern design and the outer housing should be in polished stainless steel
5. Should be comp act
6. Should be easy to manoeuvre (very good running, 180 degrees turnable wheels with foot-lever operated brakes)
7. The data of the user interface should be transferrable to the Devi¢e via CAN
8. The Control Unit should be individually positioned on the machine or the mast of any heart lung machine. No second remote cont rol is necessary.
9. There should be provision to connect two external temperature sensors to the cooling warming therapy units and to the HCU device
10. The interior design should include an automatically controlled mixing valve.
11. Only the circulated water should be heated (not the tank water).
12. The rapid switching of temperatures should be applicable to both, the patient water circuit and the cardioplegia water circuit.
13. Only the circulated water should be heated (not the tank water).
14. The rapid switching of temperatures should be applicable to both, the patient water circuit and the cardioplegia water circuit
15. Should have safety certificate from a competent authority CE / FDA (US) / STQCS CB certificate / STQC S certificate or valid detailed electrical and functional safety test report from ERTL. Copy of the certificate / test report shall be produced along with the technical bid

Other terms and Conditions

1. Should have safety certificate from a competent authority CE issued by a notified body registered in the European commission / FDA (US)/STQC CB Certificate/ STQC S Certificate or valid detailed electrical and functional safety test report from ERTL. Copy of the certificate/ test report shall be produced along with the technical bid?
2. The Model quoted must be latest and most advanced and spare and service must be available for at least 10 years which means company will be responsible for maintaining the

equipment all 10 years in full working conditions at least 95 % Up time. AMC and CAMC Rate should be quoted in price bid for 8 years

3. Standard warranty : 3 years
4. In case of failure of Equipment/Accessories/ Instruments, standby arrangements must be provided within 48 Hours .
5. Better preference will be given for user friendliness and better features

Please attach a copy of

- CE & FDA certificate if any
- Compliance statement with technical specification
- Product datasheet
- Details of service division
- Sales authorization letter from Manufacturer.
- Details of installations
- Company representative should be signed In purchase contract

ECHO CARDIOGRAPHY MACHINE

MAKE : Please specify
Model : Please specify
Manufacturing country : Please specify
Year of Launch : Please specify

1. Should quote only the latest and most technologically advanced system with minimum 20 lakh channel please specify the number of channels :
2. Should be supplied with software for Pre & post-analysis.
3. Future upgradability through software
4. Should have post-processing capabilities for gain, B mode, sweep speed etc
5. Should have multiple lines acquisition with rapid frame rates of more than 2800 frames/second.
6. Coded/pulse harmonic imaging should be possible
7. Digital beamformer technology with high definition imaging
8. There should be a broad-angle at least 90 degrees.
9. Should have an ergonomic design with one or 2 touch control panel
10. At least 22-inch flat-panel type LCD/LED monitor with tilt, swivel & float options
11. The system should be capable of the following imaging and operating modes
    a. Real time anatomical mMode and
    b. Dual focal zones should be available
    c. White zoom-on line & offline
    d. Read zoom online and offline
    e. Advanced stress echo package with automatic report generator with flexible protocols for physical and pharmacologic stress with 2 minute continuous capture
    f. Should be capable of Quantization of tissue Doppler.
    g. Latest Software for speckle tracking
    h. Strain and strain rate imaging should be available
    i. 2D, MMode, color MMode
    j. Color flow Doppler imaging
    k. Fully steerable pulsed Doppler
    l. Fully steerable continuous wave Doppler
    m. Tissue Doppler with high frame rates & 2D strain imaging
    n. Digital cine replay of all imaging and Doppler with measurements and calculations
    o. Full measurement and analysis capability
    p. Digital image storage and patient archive with true scanner frame rates

1. The system should be able to

a. Trace, calculate and display the perimeter of a displayed structure with incremental erasing of perimeter trace
b. Trace, calculate, and display the area of a displayed structure
c. The system should support automated strain quantification for LV,LA,RV

2. ESSENTIAL ACCESSORIES

1. Phased Array Probe (Adult) With smallest footprint and Bandwith 1.5 – 4 Mhz With Field Of View at least 90 Degree or better
2. Phased Array(PEDIATRIC) Probe With smallest footprint and Bandwith 3-6 Mhz With Field Of View at least 90 Degree or better
3. Linear probe band width 6 - 12.0 Mhz
4. Curved array probe bandwidth 1.6 - 5.0 MHz
5. Adult Transesophageal probe 3.0-7.0 MHz field of view 90-degree depth of field 20cm.
6. Should supply external original licensed workstation of latest specification available in the market
7. Should be provided with suitable UPS for the unit and should include warranty and CAMC Period

3. IMAGE MANAGEMENT

1. The system should be able to store patient images, loops in the hard disk drive of 500 GB or more 2.
2. The system should have an inbuilt CD/DVD writer and USB port
3. Should have supplied with A4 Colour laser printer and should include warranty and CAMC Period

4. TECHNICAL SUPPORT

1. Operating manual
2. Power supply 230+-15%, 50Hz.
3. Should provide suitable online pure sine branded UPS with one hour back up and which should include in warranty and CAMC Period

Other Terms and Conditions

1. Standard Warranty:2years
2. AMC and CMC rates after warranty period should be quoted in price bid for next 8 years.
3. The plat form should be able to accommodate all the up gradations required later (as when required) to add on more and more special features with no additional cost
4. The Equipment should be the state of the art design, incorporate all the latest facilities and modern concepts

5. The Model quoted must be latest and most advanced and spare and service must be available for at least 10 years which means company will be responsible for maintaining the equipment all 10 years in full working conditions at least 95 % Up time
6. In case of failure of Equipment/Accessories/ Instruments , standby arrangements must be provided within 48 Hours .
7. Necessary trainings should be provided for doctors, user department staff at free of cost

MANDATORY DOCUMENTS ALONG WITH TECHNICAL BID

1. Compliance statement with technical specification
2. Product datasheet,
3. Details of service division
4. Sales authorization letter from Manufacturer.
5. Details of installations
6. Company representative shoud be signed in the purchase contract

EMS Memorial Co.operative Hospital, Perintalmanna

ANAESTHESIA WORK STATION

Make : please specify

Model : please specify

Year of launch : please specify

Manufactured in : Please specify

1. The workstation should have a built-in anesthesia ventilator with pressure, volume controlled, SIMV, Pressure support with apnoea backup& CPAP MODE
2. Support neonate, pediatric and adult patients.
3. Should be electronically controlled, pneumatically operated
4. Gas mixing type: Please specify
5. Should provide with adult and pediatric reusable and autoclavable light weight tubing breathing circuit.
6. Should be able to deliver a tidal volume from 5ml to 1200ml.
7. Should have a battery backup for 1 hour with low battery alarm and over charge protection.
8. Should have monitoring facility of airway pressure, tidal volume, frequency and oxygen concentration.
9. Should have pressure Volume and flow volume loops.
10. Should have display of at least 12 inches for set parameters and for measured parameters.
11. Should have automatic self test and leak test.
12. Anesthesia machine should be with 3 gas supply system (O2, N2O, Air) with pipeline connections and reserve cylinder yokes.
13. Gas cylinder (pin indexed) yokes with sturdy clamping bars for easy handling.
14. Should supply pin index yokes for connecting cylinders each for O2, N2O and air through pipeline.
15. Regulator two each for O2 and N2O. N2O should be activated only with oxygen on flow.
16. Should have pressure gauge for all gas inlets including central lines mounted on the front panel for easy visibility.
17. Should have audible alarm for O2 failure.
18. N2O supply should cut off if O2 supply fails. (Anti-hypoxic guard).
19. Oxygen and Nitrous oxide should be linked either mechanically or pneumatically to ensure a minimum of 25% oxygen delivery at all times to avoid delivery of hypoxic mixture
20. The anesthesia machine should have a master control ON/OFF switch.
21. Provision to mount any two selectable vaporizer with interlocking facility to allow use of only one vaporizer at a time.
22. Iso-flurane vaporizer of newer generation having specifications equivalent to tech 7 type to be provided.
23. Non-return cum pressure relief valve when pressure exceeds 120cmof H2O
24. Should have only one common gas outlet.
25. Should provide with oxygen flush switch.

26. Circle absorber with corrugated reusable breathing circuit for closed circuit system with each unit.
27. It should be autoclavable. It should be with ventilator selector switch and circle on/off switch.
28. Should have low flow anesthesia technique.
29. Mention Fresh gas flow setting from 100ml/min to 12 Ltr/min.
30. It should have the indicator to show the efficiency of fresh gas setting while used in Low flow and Should have a facility to connect the passive scavenging system.
31. Should have safety certificate from a competent authority CE / FDA (US) /STQC CBcertificate / STQC S certificate or valid detailed electrical and functional safety test report from ERTL. Copy of the certificate / test reportshall be produced along with the technical bid.
32. Should have a provision for mounting monitors on top of the machine and withdrawers & working platform
33. Should have fiber wheels and Foot brakes.
34. Standard circuit : Adult and pediatric , Jackson-Rees : 2 Nos, Reusable
35. Reservoir bag (2liters): 3 nos. with each machine.
36. AMBU bag: 1 no. with each machine.
37. Pressure regulated valve with 5 meter hose and connector (conversion kit) for oxygen should be provided with the machine.-2 no
38. Should be supplied with driver gas hoses with necessary attachments (colour coded).
39. Should be supplied with necessary attachments to use the breathing circuits Jackson-Rees, and closed circuit.
40. Should work in 220-240Vac 50 Hz input supply.
41. The Anesthesia machine and ventilator should be from same manufacturer.
42. The Model quoted must be latest and most advanced and spare and service must be provided for at least 10 years which means company will be responsible for maintaining the equipment all10 years in full working conditions at least 95 % Up time
43. Standard warranty : 2 YEARS
44. AMC and CAMC Rate should be quoted in the price bid for 8 years after warranty period
45. Please attach a copy of
    (1) CE & FDA certificate if any
    (2) Compliance statement with technical specification
    (3) Product datasheet
    (4) Details of service division
    (5) Sales authorization letter from Manufacturer.
    (6) Details of installations
    (7) Company representative should be signed In purchase contract

HIGHER END CARDIAC MONITOR

Make : please specify
Model : please specify
Year of launch : please specify
Manufactured in : please specify

1. Advanced high end patient monitor having integrated non-invasive, invasive measurements & features
2. Suitable for Neonate, Pediatrics & Adult patients.
3. Monitor must have bright, highly visible minimum 12'' or more Colour TFT/LED display with full touch
4. Screen facility.
5. Monitor must have the facility to display 8 waveform or more, along with related numerical parameters
6. on single screen.
7. Monitors should be fully modular have facility to monitor ECG, SpO2, NIBP, Respiration, temp with inbuilt module & Dual IBP,ETCO2 CVP & PA Pressure monitoring separately , cardiac output monitoring
8. Should have full panel of lethal and non lethal arrhythmias (20 nos)
9. Should have transport module with display facility
10. Should have event recall minimum up to 24 hours trend, graphical and tabular trends, including short trends & drug dose calculations, alarm logs, Hemodynamics calculations
11. The monitor should have facility for enlarge numeric display for distance viewing with multiple layout of screen.
12. Monitors should have ST segment calculations with all latest arrhythmia detection.
13. 12 lead ECG simultaneous display using 10/ 12 lead ECG cable.
14. Should have internal rechargeable battery for minimum 2 hours or more operation along with battery charge indicator
15. Monitor should have audio/ visible alarm in different colours & should be visible from distance.
16. Monitors must have ESU & Defibrillation protection.
17. Should have safety certificate from a competent authority CE issued by a notified body registered in the
18. European commission / FDA (US). The certificate attached shall be verifiable.
19. Monitors should be supplied with following free of cost:
    - 5/ 6 Leads ECG cable – 1 Nos & 10/ 12 Leads ECG cable – 1 Nos
    - Adult Reusable Spo2 probe - 2 Nos
    - May 2023EMS MEMORIAL CO-OPERATIVE HOSPITAL & RESEARCH CENTREPERINTALMANNA

- Technical specifications of Medical Equipment
- NIBP cuff for Adult & Pediatrics - 2 nos each
- Temp Probe - 2 nos (rectal / oesophageal / surface)
- Monitor stand - extruded Aluminum, powder coated.
- Load bearing capacity 20 kgs approximately.
- Should supply, install with necessary anchor fastners at the site
- IBP set with 2 transducer stands should be provided

II. **Central Monitoring System**

1. Central monitor should display waveform and numeric data of up to 16 bedside patient monitors.
2. All bedside monitor should be connected to central monitor through LAN - Wireless connection.
3. Should have 21" LCD display.
4. Should be able to connect 16 monitors or more
5. Setting of alarms should be more efficient & should be able to set all parameter limits in one window.
6. Should be able to assign frequently used operations to function keys for easy operation
7. Should have time linked 72 hours review of numeric and graphical trend data, along with 72 hours review of arrhythmia recalls,
8. Should have 72 hours full disclosure of upto six selectable waveforms.
9. Safe shutdown of the system, preserving data in case of sudden power loss should be possible.
10. Bidirectional communication including NIBP monitoring
11. Facility to retain the data in case of a change of a Monitor at the Bedside.
12. Alarm Events should be in graphical form

OTHERS

1. Should have safety certificate from a competent authority CE issued by a notified body registered in the
2. European commission / FDA (US)/STQC CB Certificate/ STQC S Certificate or valid detailed electricaland functional safety test report from ERTL. Copy of the certificate/ test report shall be produced alongwith the technical bid
3. The Model quoted must be latest and most advanced and spare and service must be available for at least10 years which means company will be responsible for maintaining the equipment all 10 years in fullworking conditions at least 95 % Up time. AMC and CAMC Rate should be quoted in price bid for 8years
4. Standard warranty : 2 years
5. In case of failure of Equipment/Accessories/ Instruments, standby arrangements must be provided within48 Hours.

Copies of following to be attached with technical quotation

- CE & FDA certificate if any
- Compliance statement with technical specification
- Product datasheet
- Details of service division
- Sales authorization letter from Manufacturer.
- Details of List of installations

EMS Memorial Co.operative Hospital, Perintalmanna

THULIUM LASER

MAKE : Please specify

Model : Please specify

Manufacturing country : Please specify

Year of Launch : Please specify

1. A dedicated, user friendly and advanced 60 W Thulium laser for Urology- stone surgery & Gastroenterology with wavelength of 1900 to 2100 nm
2. Should be able to fragment calculi of any size in the bladder, pancreatic, ureter or kidney and any impacted stone fragment.
3. Should be able to do Stone fragmentation & Dusting.
4. Should be able to ablate superficial bladder tumors, urethral & ureteral tumours.
5. Should have power output of 60 watts or more
6. Should be supplied with a Foot switch
7. Should have repetition rate of 2400 or better
8. Should have Energy per Pulse of 0.2 - 6 Joules or better
9. Should have adjustable pulse width.
10. Should have Green aiming beam of 5mW at 532nm, adjustable intensity settings.
11. Should have a Touch Screen Color Display
12. Should have a closed loop, self-contained water to air exchanger cooling system.
13. Should be able to use with 200-240 VAC 50/60Hz
14. Should have safety certificate from a competent authority CE issued by a notified body registered in the European commission / FDA / STQC CB Certificate/ STQC S Certificate or valid detailed electrical and functional safety test report from ERTL. Copy of the certificate/ test report shall be produced along with the technical bid.
15. Should have standard laser protection mechanism and gadgets should be supplied with the machine
16. Equipment should supply along with the following accessories and also should offer rates separately for each item in the price bid
    a. 550 Micron Reusable, Flexible Fiber-2 Nos
    b. 365 Micron Reusable, Flexible Fiber -3 Nos
    c. 200 micron Reusable, Flexible Fiber -5 Nos
    d. 550 Micron Stripping and cleaving (set)- 1 Nos
    e. 365 Micron Stripping and cleaving (set) -1 Nos
    f. 200 Micron Stripping and cleaving (set) -1 Nos
    g. Fibre Inspection Scope -1 Nos
    h. Fibre Cutting Scissors -1 Nos
    i. Laser Safety Glasses -3 Nos

Other Terms and Conditions

1. Standard Warranty:2years
2. AMC and CMC rates after warranty period should be quoted in price bid for next 8 years.
3. The plat form should be able to accommodate all the up gradations required later (as when required) to add on more and more special features with no additional cost
4. The Equipment should be the state of the art design, incorporate all the latest facilities and modern concepts
5. The Model quoted must be latest and most advanced and spare and service must be available for at least 10 years which means company will be responsible for maintaining the equipment all 10 years in full working conditions at least 95 % Up time
6. In case of failure of Equipment/Accessories/ Instruments , standby arrangements must be provided within 48 Hours .

MANDATORY DOCUMENTS ALONG WITH TECHNICAL BID

1. Compliance statement with technical specification
2. Product datasheet,
3. Details of service division
4. Sales authorization letter from Manufacturer.
5. Details of installations
6. Company representative shoud be signed in the purchase contract

EMS Memorial Co.operative Hospital, Perintalmanna

FLEXIBLE DIGITAL URETEROSCOPE DISPOSABLE

MAKE : Please specify

Model : Please specify

Manufacturing country : Please specify

Year of Launch : Please specify

1. Field of view 110 or equivalent
2. Line of vision 0 degree or equivalent
3. Depth of view : 2 mm -50mm or equivalent
4. should be digital CMOS Imager
5. Deflection of tip : >270 degree up and down or equivalent
6. Diameter 7.5 fr or equivalent
7. working channel: 3.3 fr or equivalent
8. working length : 670mm or equivalent
9. Should have the following functions for control unit: white balance , brightness control image capture, video capture etc.. & can be used with storz, Olympus and Stryker monitors
10. Video connections: SDI/DVI/HDMI
11. Power requirements : 100 V Ac-240 v ac
12. Frequency : 50 Hz

1. Standard Warranty:2years
2. AMC and CMC rates after warranty period should be quoted in price bid for next 8 years.
3. The plat form should be able to accommodate all the up gradations required later (as when required) to add on more and more special features with no additional cost
4. The Equipment should be the state of the art design, incorporate all the latest facilities and modern concepts
5. The Model quoted must be latest and most advanced and spare and service must be available for atleast 10 years which means company will be responsible for maintaining the equipment all 10 years in full working conditions at least 95 % Up time
6. In case of failure of Equipment/Accessories/ Instruments , standby arrangements must be provided within 48 Hours .

MANDATORY DOCUMENTS ALONG WITH TECHNICAL BID

1. Compliance statement with technical specification
2. Product datasheet,
3. Details of service division
4. Sales authorization letter from Manufacturer.
5. Details of installations
6. Company representative should be signed in the purchase contract

EMS Memorial Co.operative Hospital, Perintalmanna

REUSABLE URETEROSCOPE

MAKE : Please specify

Model : Please specify

Manufacturing country : Please specify

Year of Launch : Please specify

1. Should be a flexible, Reusable fiber optic Uretero – Renoscope with Continuous Irrigation.
2. Outer diameter of the shaft should be between 6 Fr. - 10 Fr . or equivalent
3. Should have an instrument channel between 3 Fr. to 4 Fr. or equivalent
4. Should have 680mm ±20mm working length or equivalent
5. Should have a ceramic liner in the distal end of the working channel to protect it from thermal or electro cautery damage.
6. Should have angle of view between 80 degree to 90 degree field of view 0 degree with eyepiece adjustment or equivalent
7. Should have minimum angle of deflection 180 & 270 degree up & down or equivalent
8. Should have active defection mechanism.
9. Should be supplied with gas sterilization valve.
10. Should be waterproof and fully immersible in solution.
11. Should be adhering to sterilization method with ETO, FO gas.
12. 12 Should be able to connect with stryker,storzm, olympus etc,, make console
13. Should be supplied with the following accessories of compatible sizes.
    a. Pressure compensation cap - 1 No’s
    b. Leakage Tester - 1 No’s
    c. Cleaning Brush - 1 No’s
    d. Carry Case - 1 No’s
14. Should have safety certificate from a competent authority CE / FDA (US) / STQC CB certificate / STQC S certificate or valid detailed electrical and functional safety test report from ERTL. Copy of the certificate / test report shall be produced along with the technical bid.

Other Terms & Conditions

1. Standard Warranty:2years
2. AMC and CMC rates after warranty period should be quoted in price bid for next 8 years.
3. The plat form should be able to accommodate all the up gradations required later (as when required) to add on more and more special features with no additional cost
4. The Equipment should be the state of the art design, incorporate all the latest facilities and modern concepts
5. The Model quoted must be latest and most advanced and spare and service must be available for at least 10 years which means company will be responsible for maintaining the equipment all 10 years in full working conditions at least 95 % Up time

6. In case of failure of Equipment/Accessories/ Instruments , standby arrangements must be provided within 48 Hours .
7. Necessary trainings should be provided for doctors, user department staff at free of cost

MANDATORY DOCUMENTS ALONG WITH TECHNICAL BID

1. Compliance statement with technical specification
2. Product datasheet,
3. Details of service division
4. Sales authorization letter from Manufacturer.
5. Details of installations
6. Company representative should be signed in the purchase contract

EMS Memorial Co.operative Hospital, Perintalmanna

Ventilators for CVTS

Make : pls specify

Model : pls specify

Year of launch : pls specify

Manufacturing Country : pls specify

I. Ventilation modes

1. Assist and Controlled mode - Volume and pressure
2. SIMV/V and SIMV/P.
3. Bi-level Ventilation with 100 % O2 support
4. CPAP and PEEP,
5. Facility for Non-Invasive ventilation including control and support
6. Dual mode PRVC or equivalent
7. Spontaneous weaning modes: ASV/PAV+/ Auto flow / Equivalent
8. Lung protection tools /equivalent technology
9. Pressure support ventilation with PS 35 cm of water or above

II. Should have real time monitoring for:

1. Peak -Pressure, Plateau -Pressure, Mean - Pressure, PEEP Pressure and Weaning Parameters
2. Exhaled tidal volume and Minute Volume
3. Inhaled tidal volume
4. FiO2
5. Lung mechanics - - Resistance, Compliance, Occlusion Pressure, intrinsic PEEP

III. Patient category: Adult and Pediatric

IV. Ventilation parameters: -

1. Tidal volume
   a) 200 – 2000 mL (Adult patient).
   b) 20 to 300 mL (Paediatric mode).
2. Respiratory rate- 5 - 80 BPM or more.
3. Pressure - 0 - 100 cm H2O including PEEP.
4. Inspiratory Peak flow- maximum of 180litre/min.
5. Minute volume - 1 - 30 l/min.
6. Oxygen Concentration - 21 -100 %
7. PEEP/CPAP - 40 cm H2O
8. Deceleration flow pattern in CMV should be available
9. Trigger flow & pressure 1 to 10

10. NIV modes facility
11. Spontaneous mode –CPAP

V Standard Accessories (with each machine): -

1. Patient circuit (Adult, Autoclavable and reusable) – 1 complete set.
2. Patient circuit (pediatric , Autoclavable and reusable) - 1 complete set.
3. HME-25each
4. Bacterial and viral filter - 25nos each
5. should have Inbuilt Medical Nebulizer
6. Heated Humidifier with one chamber adult (optional) - 1 No.
7. Hose for O2 and air connection with connector - 5 mts.
8. Test lung - 1 No.
9. NIV mask (large & medium reusable) - 2 nos

VI. Features: -

1. The ventilator should be working on centralised compressed air
2. Back up mode for apnea.
3. Full alarm system for all ventilator settings and monitored values.
4. Touch screen Monitor (12"or higher size) graphical display for real time display of three waveforms. Should display minimum 2 scalars simultaneously and 2 loops.
5. Monitoring of all patient data in graphical and numerical form should be possible with trend facility for minimum 24 hours with HIS Compatibility.
6. Direct access to vital settings
7. Inbuilt, secure expiratory flow sensor with expiratory valve and transducer. It should be Autoclavable as a unit(including expiratory valve, flow sensor) and reusable. Expiratory flow
8. sensor should work on hot wire/electromagnetic/Ultrasonic / differential pressure principle. The unit should be rugged and with a history of trouble free operation
9. PEEP valve should be built in.
10. Patient circuit should have a separate inspiratory and expiratory limb with water traps
11. Should have safety certificate from a competent authority CE issued by a notified body registered in the European commission / FDA (US) .Copy of the certificate/ test report shall be produced along with the technical bid
12. O 2 sensor and flow sensor should be covered in Warranty / CAMC period
13. All accessories except the patient circuit should cover in Warranty / CAMC
14. Inbuilt ETCO2 (Optional)

1. Replacement guarantee should be provided for battery, flow sensors, expiratory valve and oxygen sensor for the entire 2 years warranty period and also the rate offered for CMC should include the replacement guarantee for battery, flow sensors and oxygen sensor and expiratory valve.

2. The unit must be supplied with good quality moisture filter

VII. Power Source: - 1. 220/240 V Ac 50 Hz supply. 2. Internal battery (maintenance free) with 1 hour minimum operating time for the ventilator

Mounting Trolley / cart mounting for easy transportation, from the same Manufacturer.

Other terms and Conditions

1. Should have safety certificate from a competent authority CE issued by a notified body registered in the European commission / FDA (US)/STQC CB Certificate/ STQC S Certificate or valid detailed electrical and functional safety test report from ERTL. Copy of the certificate/ test report shall be produced along with the technical bid.
2. The Model quoted must be latest and most advanced and spare and service must be available for at least 10 years which means company will be responsible for maintaining the equipment all 10 years in full working conditions at least 95 % Up time. AMC and CAMC Rate should be quoted in price bid for 8 years
3. Standard warranty : 2 years
4. In case of failure of Equipment/Accessories/ Instruments, standby arrangements must be provided within 48 Hours .
5. Better preference will be given for user friendliness and better features

Please attach a copy of

- CE & FDA certificate if any
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- Product datasheet
- Details of service division
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- Details of installations
- Company representative should be signed In purchase contract

EMS Memorial Co.operative Hospital, Perintalmanna

Ventilator - Critical care ICU

Make : pls specify

Model : pls specify

Year of launch : pls specify

Manufacturing Country : pls specify

I. Ventilation modes

1. Assist and Controlled mode - Volume and pressure
2. SIMV/V and SIMV/P.
3. Bi-level Ventilation with 100 % O2 support
4. CPAP , PEEP & HFNC
5. Facility for Non-Invasive ventilation including control and support
6. Dual mode PRVC or equivalent
7. Spontaneous weaning modes: ASV/PAV+/ Auto flow / Equivalent
8. Lung protection tools /equivalent technology
9. Pressure support ventilation with PS 35 cm of water or above

II. Should have real time monitoring for:

1. Peak -Pressure, Plateau -Pressure, Mean - Pressure, PEEP Pressure and Weaning Parameters
2. Exhaled tidal volume and Minute Volume
3. Inhaled tidal volume
4. FiO2
5. Lung mechanics - - Resistance, Compliance, Occlusion Pressure, intrinsic PEEP

III. Patient category: Adult and Pediatric

IV. Ventilation parameters: -

1. 1. Tidal volume
   a) 200 – 2000 mL (Adult patient).
   b) 20 to 300 mL (Paediatric mode).
2. Respiratory rate- 5 - 80 BPM or more.
3. Pressure - 0 - 100 cm H2O including PEEP.
4. Inspiratory Peak flow- maximum of 180litre/min.
5. Minute volume - 1 - 30 l/min.
6. Oxygen Concentration - 21 -100 %
7. PEEP/CPAP - 40 cm H2O
8. Deceleration flow pattern in CMV should be available

9. Trigger flow & pressure 1 to 10
10. NIV modes facility
11. Spontaneous mode –CPAP

V. Standard Accessories (with each machine): -

1. Patient circuit (Adult, Autoclavable and reusable) – 1 complete set.
2. Patient circuit (pediatric , Autoclavable and reusable) - 1 complete set.
3. HME-25each
4. Bacterial and viral filter - 25nos each
5. should have Inbuilt Medical Nebulizer
6. Heated Humidifier with one chamber adult (optional) - 1 No.
7. Hose for O2 and air connection with connector - 5 mts.
8. Test lung - 1 No.
9. NIV mask (large & medium reusable) - 2 nos

VI. Features: -

1. The ventilator should be working on centralised compressed air
2. Back up mode for apnea.
3. Full alarm system for all ventilator settings and monitored values.
4. Touch screen Monitor (12"or higher size) graphical display for real time display of three waveforms. Should display minimum 2 scalars simultaneously and 2 loops.
5. Monitoring of all patient data in graphical and numerical form should be possible with trend facility for minimum 24 hours with HIS Compatibility.
6. Direct access to vital settings
7. Inbuilt, secure expiratory flow sensor with expiratory valve and transducer. It should be Autoclavable as a unit (including expiratory valve, flow sensor) and reusable. Expiratory flow sensor should work on hot wire/electromagnetic/Ultrasonic / differential pressure principle. The unit should be rugged and with a history of trouble free operation
8. PEEP valve should be built in.
9. Patient circuit should have a separate inspiratory and expiratory limb with water traps.
10. Should have safety certificate from a competent authority CE issued by a notified body registered in the European commission / FDA (US) .Copy of the certificate/ test report shall be produced along with the technical bid
11. O 2 sensor and flow sensor should be covered in Warranty / CAMC period
12. All accessories except the patient circuit should cover in Warranty / CAMC
13. Inbuilt ETCO2 (Optional)
14. should have transpulmonary pressure monitor-OPTIONAL

1. Replacement guarantee should be provided for battery, flow sensors, expiratory valve and oxygen sensor for the entire 2 years warranty period and also the rate offered for CMC should include the replacement guarantee for battery, flow sensors and oxygen sensor and expiratory valve.

2. The unit must be supplied with good quality moisture filter

VII. Power Source: - 1. 220/240 V Ac 50 Hz supply. 2. Internal battery (maintenance free) with 1 hour minimum operating time for the ventilator

VIII. Mounting Trolley / cart mounting for easy transportation, from the same Manufacturer.

Other terms and Conditions

1. Should have safety certificate from a competent authority CE issued by a notified body registered in the European commission / FDA (US)/STQC CB Certificate/ STQC S Certificate or valid detailed electrical and functional safety test report from ERTL. Copy of the certificate/ test report shall be produced along with the technical bid?
2. The Model quoted must be latest and most advanced and spare and service must be available for at least 10 years which means company will be responsible for mmaintaining the equipment all 10 years in full working conditions at least 95% Up time.
3. AMC and CAMC Rate should be quoted in price bid for 8 years
4. Standard warranty : 2 years
5. In case of failure of Equipment/Accessories/ Instruments , standby arrangements must be provided within 48 Hours .
6. Better preference will be given for user friendliness and better features

Please attach a copy of

1) CE & FDA certificate if any
2) Compliance statement with technical specification
3) Product datasheet
4) Details of service division
5) Sales authorization letter from Manufacturer.
6) Details of installations
7) Company representative should be signed In purchase contract

EMS Memorial Co.operative Hospital, Perintalmanna

BIPHASIC DEFIBRIILLATOR

1. Biphasic and Manual type with synchronization mode.
2. Compact and light weight.
3. Energy selction 5 J to 200 J or above in steps.
4. Momentary energy selection access on front pannel.
5. Should have adult and pediatric paddles integrated on same handle.
6. Momentary charge key on front panel and on the apex hand.
7. Monitor should display selected and delivered energy
8. Should have disarm facility.
9. Sync message should display in case of selection of synchronization mode.
10. Energy should be delivered within 30 ms after the detected R wave in synchronization mode.
11. Charging time should be maximum 5 sec for 200 J & 8 sec for maximum energy level of the defibrillator.
12. Should have battery backup for 50 discharges of 200 J .
13. Should have ECG inputs through paddles or 3 lead cables.
14. Should have display for selected ECG input source (I,II,III,paddles).
15. Lead off messages should appear with alert tone.
16. Amplitude gain of ECG waveform should be adjustable.
17. Should have display for heart rate.
18. Should have alarm high and low HR with a provision for alarm silence mode.
19. Should have an inbuilt thermal recorder.
20. Should have enable/disable option for printer.
21. Should operate on mains 230 V, 50 Hz
22. Should have safety certificate from a competent authority CE issued by a notified body registered in the European commission / FDA(US)/STQC CB Certificate/ STQC S Certificate or valid detailed electrical and functional safety test report from ERTL. Copy of the certificate / test report shall be produced along with the technical bid.
23. All standard accessories with pacing pads – 10 Nos, 2 Bottles of Jelly & 12 Rolls of thermal paper along with the unit

24. Other terms and Conditions

1. Pacing & AED with voice prompt to be quoted separately as optional
2. Standard Warranty : 2 years.
3. AMC and CMC Rates after Warranty period should be quoted in Price bid for next 8 years.
4. Should have safety certificate from a competent authority CE issued by a notified body registered in the European commission / FDA (US)/STQC CB Certificate/ STQC S Certificate or valid detailed electrical and functional safety test report from ERTL. Copy of the certificate/ test report shall be produced along with the technical bid?

5. The Model quoted must be latest and most advanced and spare and service must be available for at least 10 years which means company will be responsible for maintaining the equipment all 10years in full working conditions at least 95 % Up time. AMC and CAMC Rate should be quoted in price bid for 8 years
6. In case of failure of Equipment/Accessories/ Instruments, standby arrangements must be provided within 48 Hours.
7. Better preference will be given for user friendliness and better features
8. Please attach a copy of
    - CE & FDA certificate if any
    - Compliance statement with technical specification
    - Product datasheet
    - Details of service division
    - Sales authorization letter from Manufacturer.
    - Details of installations
    - Company representative should counter sign the purchase order confirming the terms and conditions in the purchase order.

EMS Memorial Co.operative Hospital, Perintalmanna

INFUSION PUMP

Make : Please Specify

Model : Please Specify

Manufacturing country : Please Specify

Year of Launch Please Specify

1. Should be operated on drip rate Peristaltic and volumetric pump method with inbuilt drop sensor
2. Should compatible with most of the IV set (macro/micro drip sets). Should be supplied with 100 Nosof compatible IV sets.
3. Should have the following flow rates.
4. IV set ml/hr drops/min 15 drops/ml 3-450 ml/hr 1-100 drops/min 20 drops/ml 3-450 ml/hr 1-100drops/min 60 drops/ml 1-100 ml/hr 1-100 drops/min
5. Should have a flow rate accuracy of ±10% and drip rate accuracy of ±5%
6. Should have a volume infused display from 0 to 999ml
7. Should have a purge and KVO facility.
8. Should have an audible and visual alarm for occlusion pressure, air alarm, door open, empty, low battery, free flow, and disconnection.
9. Should have a LCD graphical display with backlight and graphical display of infusion. Should have a minimum 4hr battery back up at highest delivery rate.
10. Should work with input 200 to 240ac 50Hz supply.
11. Should have different modes of infusion, time, rate and dose

Other terms and Conditions

1. The Model quoted must be latest and most advanced and spare and service must be available for at least 10 years which means company will be responsible for maintaining the equipment
2. All 10 years in full working conditions at least 95 % Up time. AMC and CAMC Rate should be quoted in price bid for 8 years
3. The plat form should be able to accommodate all the up gradations required later (as when required) to add on more and more special features with no additional cost
4. Should have safety certificate from a competent authority CE issued by a notified body registered in the European commission / FDA (US)/ STQC CB Certificate/ STQC S Certificate or a valid detailed electrical and functional safety test report from ERTL. Copy of the certificate/test report shall be produced along with the technical bid
5. Standard warranty : 2 years
6. In case of failure of Equipment/Accessories/ Instruments, standby arrangements must be provided within 48 Hours.
7. Better preference will be given for user friendliness and better features

Please attach a copy of

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SYRINGE PUMP

Make : pls specify

Model : pls specify

Year of launch : pls specify

Manufacturing Country : pls specify

1. Should be easy to use and nurse friendly with drug library and dose calculation.
2. Should have automatic syringe size and model detection.
3. Should have large format LCD/TFT Display.
4. Should have a minimum flow rate range from 0.1-1200 ml/hr for 50ml syringe, 0.1-100 ml/hr for20ml syringe and 0.1-60ml for 10ml syringe.
5. Syringe range from (5 – 50) ml.
6. Should have a flow rate accuracy of ±2%.
7. Should have a bolus rate up to 1000 ml/hr for 50ml syringe.
8. Should have automatic and manual bolus.
9. Should have atleast 3 levels of programmable occlusion pressure.
10. Should have automatic bolus reduction system to avoid accidental bolus delivery after occlusionincident.
11. Should have a rechargeable battery with backup time of minimum 4 hours
12. Pump must trigger following alarms with visual indication:-
    a) Occlusion pressure alarm
    b) KVO or 3 min pre-alarm
    c) Syringe empty and volume infused alarm.
    d) Internal malfunction and battery charge low alarm
    e) Syringe disengaged and incorrectly placed alarm
    f) Alarm loudness control
    g) No mains
13. Should work with input 200 to 240V AC 50Hz supply

Other terms and Conditions

1. The Model quoted must be latest and most advanced and spare and service must be available for at least 10 years which means company will be responsible for maintaining the equipment
2. All 10 years in full working conditions at least 95 % Up time. AMC and CAMC Rate should be quoted in price bid for 8 years
3. Should have safety certificate from a competent authority CE issued by a notified body registered in the European commission / FDA (US)/ STQC CB Certificate/ STQC S Certificate or a valid detailed electrical and functional safety test report from ERTL. Copy of the certificate/
4. Test report shall be produced along with the technical bid

5. Standard warranty : 2 years
6. In case of failure of Equipment/Accessories/ Instruments, standby arrangements must be provided within 48 Hours.
7. Better preference will be given for user friendliness and better features
8. Please attach a copy of
    - CE & FDA certificate if any
    - Compliance statement with technical specification
    - Product datasheet
    - Details of service division
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    - Details of installations
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HYSTEROSCOPY SET

Make : Pls Specify

Model : Pls Specify

Year of Launch : Pls Specify

Manufacturing Country : Pls Specify

Hysteroscope :

1. 2.9 mm Hysteroscope
2. Diagnostic Sheath -1 no , 4.1 mm or equivalent
3. Operative inner sheath :1 no:
4. Operative outer sheath :1 no:
5. Scissors : 1 nos
6. Biopsy and Grasping forceps : 5 fr or equivalent
7. Bipolar electrode with cable 5 Fr or equivalent : 1 nos

Irrigation pump

1. Pressure regulated suction and irrigation system for use in Laparoscopy and Gynaecology.
2. Unit should have touch screen / feather touch buttons with digital display as user interface.
3. Unit should have feature of automatically fixing maximum parameters for Laparoscopy and Hysteroscopy mode.
4. Unit should have feature of simultaneous display of set values and actual values, enabling user for continuous monitoring of suction and irrigation parameters.
5. Unit should have feature of use of disposable/reusable cassette tubing set for Laparoscopy/Hysteroscopy procedures.
6. Unit should be supplied with glass suction bottle 5 litres, bottle cap, bottle stand.
7. Unit should have Pressure settings:
   a) Hysteroscopy mode: 0-200 mmHg.
   b) Laparoscopy mode: 100/300/500 mmHg.
8. Unit should have Flow settings: a. Hysteroscopy mode: 200/400/600ml/min. b. Laparoscopy mode: 0-1300ml/min.
9. Suction Pressure regulated: .
   a) Hysteroscopy mode: 0.1 to -0.8bar(-80kPa).
   b) Laparoscopy mode: 0.1 to -0.8bar(-80kPa).
10. Power supply: 100-240VAC, 50/60Hz

Others

1. The Model quoted must be latest and most advanced and spare and service must be available for at least 10 years which means company will be responsible for maintaining the equipment all 10 years in full working conditions at least 95 % Up time. AMC and CAMC Rate should be quoted in price bid for 8 years
2. Standard warranty : 2 years
3. In case of failure of Equipment , standby arrangements must be provided within 48 Hours .
4. Additional items to be supplied from the company : Reusable breating tubings 2 Nos
5. Should have safety certificate from a competent authority CE issued by a notified body registered in the European commission / FDA (US)/ STQC CB Certificate/ STQC S Certificate or valid detailed electrical and functional safety test report from ERTL. Copy of the certificate/ test report shall be produced along with the technical bid

Please attach a copy of

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2. Compliance statement with technical specification
3. Product datasheet
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6. Details of installations
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EMS Memorial Co.operative Hospital, Perintalmanna

LAPAROSCOPY MORCELLATOR

Make : Please Specify

Model : Please Specify

Manifacturing country : Please Specify

Year of Launch : Please Specify

1. The Morcellator system should have separate motor drive unit and should have aspeed control with a minimum adjustable speed of atleast 100RPM and a maximum RPM of 3000RPM which can be increased or decreased as per need of surgeries and enabled
2. foot pedal activation.
3. The reusable Morcellator handle should have the facility to connect the interchangeableMorcellatortrocarsofdifferentdiameterof10/12/15/18mm,wherein the Morcellator trocars can be rotated 360 degrees for changing the positions of the core guard at any time of surgery
4. The tissue MORCELLATOR should be provided with reusable and interchangeable Morcellator trocars of 10mm,12mm,15mmand18mmwhichcouldbeassembledwith same Morcellator handle.
5. TheMorcellatortrocarsshouldhavegasinflowinletandeffectivelengthshouldbe ranging 9 cm to 18cm.
6. The tissue MORCELLATOR should have the reusable cutterblade tubes with 10/12/15/18mmdiameterswhichcouldbeinterchangeable touseonthesame Morcellator handle.
7. TheMorcellatorhandleandcutterbladesof10mm/12mm/15mmand18mmshould have the facility to keep it in exposed position and hidden position (cut and non-cut position) once inserted and assembled with the handle
8. The reusable Tissue Morcellator system should have the obturator of different diameters of 10/12/15/18 mm with a conical blunt tip at the front end with a reverse tapering and should have a head end with circular head with 5 to 8 pinholes enabling to lock with the handle.
9. There should be reusable rotor cable with both ends uniform so that it can be inserted and connected by either side to the morcellated handle and to the motor drive unit.
10. There should be Morcellation bags as part of morcellator system for in-bag morcellation as pneumo peritoneum devices of 1800ml, 2500ml, 3200ml, 4200ml and 5000ml capacity which are pre-rolled and ready to insert with tubular guide on the anteriorwallofthemorcellationbagandshouldhaveaclearlyidentifiableanteriorand posterior wall.
11. The reusable Tissue Morcellator system should have a reusable and detachable handlle head cap to cover the exposed rotating portion of the cutter tube head to avoid spillage
12. There usable morcellator system should be provided with reusable double decker pneumoseal washers with double locking grooves and double valve mechanism.
13. The power corda nd foot pedal cables should be of minimum 3-meter length.

Others

- The Model quoted must be latest and most advanced and spare and service must be available for at least 10 years which means company will be responsible for maintaining the equipment all 10 years in full working conditions at least 95 % Up time. AMC and CAMC Rate should be quoted in price bid for 8 years
- Standard warranty : 2 years
- In case of failure of Equipment , standby arrangements must be provided within 48 Hours .
- Additional items to be supplied from the company : Reusable breating tubings 2 Nos
- Should have safety certificate from a competent authority CE issued by a notified body registered in the European commission / FDA (US)/ STQC CB Certificate/ STQC S Certificate or valid detailed electrical and functional safety test report from ERTL. Copy of the certificate/ test report shall be produced along with the technical bid

Please attach a copy of

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- Product datasheet
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- Details of installations
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PACEMAKER (TEMPORARY)- SINGLE CHAMBER

1. Should be a Single Chamber Pacemaker (Temporary) for brady cardia treatment before,during or after a surgery.
2. Stimulation burst and permanent stimulation should be available for high pacing, rate.
3. Should be compact & easy-to-operate device, particularly suitable for emergency treatment.
4. Safety features, including automatic lead and battery check .
5. Should have continuous monitoring of the battery voltage.
6. Should have transparent cover for parameter protection.
7. Should have shock and water-resistant housing.
8. Should have back up pacing during battery change.
9. Should have Modes AOO, AAI, VOO, VVI
10. Should have pacing rate 40-180 ppm or better
11. Should have fast pacing (Burst rate) of 80-200 ppm.
12. Should have Pulse Amplitude of 0.1-17V
13. Should have sensitivity 1.0-20mV
14. Should have minimum battery backup > 200 hours
15. Should have safety certificate from a competent authority CE issued by a notified body registered in European Commission / FDA (US) / STQC CB certificate / STQC S certificate or valid detailed electrical and functional safety test report from ERTL . Copy of the certificate / test report shall be produced along with the technical bid.
16. Should have minimum 1 year warranty
17. The Model quoted must be latest and most advanced and spare and service must be available for at least 10 years which means company will be responsible for maintaining the equipment all 10 years in full working conditions at least 95% Up time. AMC and CAMC Rate should be quoted in price bid for 8 years

Please attach a copy of

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OT Table for Cardiothoracic Unit

Make : Pls specify

Model : Pls specify

Year of launch : Pls specify

Manufacturing country : Pls specify

1. The table should have a minimum of 4 sections ie. head section, leg section, a seat section, and backplate section
2. The table should be electro-hydraulically operated having the following hand switch operated electro-hydraulic functions (all the dimensions will have a permitted deviation of +/- 10 %)
   i. Up / Down 680-1000mm
   ii. Trendelenberg& Reverse 30deg
   iii. Side Tilting (Lateral) 20deg
   iv. Back Plate (Sitting Position) -40 to +80
   v. . Top Slide 300mm
   vi. Breaking (by hand switch)
4. In addition to the above-hand switch operated functions, the table must have the following manual functions. Description Range i. Head Section Tilting 30deg Up / 90deg Down ii. Split Leg Plate manual movement +10 to -90
5. The table should be supplied with the following accessories.
   i. Mattress for the complete tabletop in sections - 1 set
   ii. A pair of arm boards with pad and fixing clamp - 1 set
   iii. A pair of padded shoulder support with clamps (SS grade 304) – 1
   iv. A pair of padded lateral support with clamps (SS grade 304) – 1
   v. v. Anesthetic screen frame with clamp (SS grade 304) – 1
   vi. Patient restraint strap – 1
   vii. leg crutches with side rail locks – 1 pair .
   viii. x. Back support and chest support
6. The base cover, lifting column cover and side rails should be made of stainless steel grade SS 304
7. Should have the enhanced weight bearing casters fitted with ball bearing.
8. The table should have a heavy and sturdy base and be compact to provide adequate foot room for the operating team.
9. The weight-bearing capacity of the table shall be at least 175kg. Please specify
10. Should have battery back up (better preferrence for more) pls specify
11. Should have inbuilt Auxillary controll unit
12. Should have an emergency manual floor lock releasing option

Accessories

1. Gel Sand bag : 4 nos
2. Armboard clamp : 4 nos
3. Cardio thorasic cage : 2 nos
4. Raised Arm board : multipurpose :1 nos
5. patient shifting roller : 2 nos
6. Bolster pillow : 1 nos
7. screen rod : 1 nos
8. side support : 1 nos
9. Arm protection : 4 nos

Others

- Should have safety certificate from a competent authority CE issued by a notified body registered in the European commission / FDA (US)/STQC CB Certificate/ STQC S Certificate or valid detailed electrical and functional safety test report from ERTL. Copy of the certificate/ test report shall be produced along with the technical bid
- The Model quoted must be latest and most advanced and spare and service must be available for at least 10 years which means company will be responsible for maintaining the equipment all 10 years in full working conditions at least 95 % Up time. AMC and CAMC Rate should be quoted in price bid for 8 years
- Standard warranty: 2 years
- In case of failure of Equipment/Accessories/ Instruments, standby arrangements must be provided within 48 Hours.
- Please attach a copy of
  (1) CE & FDA certificate if any
  (2) Compliance statement with technical specification
  (3) Product datasheet
  (4) Details of service division
  (5) Sales authorization letter from Manufacturer.
  (6) Details of installations
  (7) Company representative should counter sign the purchase order confirming the terms and conditions in the purchase order.

EMS Memorial Co.operative Hospital, Perintalmanna

Flexible Video Bronchoscope

Make : Please Specify

Model : Please Specify

Manufacturing country : Please Specify

Year of Launch : Please Specify

Monitor and other accessories for flexible video Bronchoscope

1. Equipment should be disposable flexible, light weight handy and portable bronchoscope with inbuilt light source for highly infected patients
2. Scope should be available in following various sizes. . 2 Customisable scope should be supplied along with the unit at free of cost

a. Outer diameter of 2.2 mm & inner diameter of 0 mm

b. Outer diameter of 3.2 mm & inner diameter of 1.2 mm

c. Outer diameter of 4.9 mm & inner diameter of 2.2 mm

d. Outer diameter of 5.8 mm & inner diameter of 2.8 mm

e. Outer diameter of 6.2 mm & inner diameter of 3.2 mm

3. Working length 600 mm
4. Should have suction port, oxygen port and drug installation port
5. Tip should be easily manoeuvrable, tip deflection range 180/180 degree
6. Scope should come in pre sterile packing
7. Should provide portable TFT LCD monitor of size at least 8” with touch screen and clamp for fixing with IV stand.
8. Monitor should have minimum 8 GB storage capacity, minimum 2 hour backup, recording facility, USB port and provision for video output
9. Monitor should run on both electricity and battery
10. Should have safety certificate from a competent authority CE issued by a notified body registered in the European commission / FDA (US)/ STQC CB Certificate/ STQC S Certificate or valid detailed electrical and functional safety test report from ERTL. Copy of the certificate/ test report shall be produced along with the technical bid. (for monitor).

Others

- The Model quoted must be latest and most advanced and spare and service must be available for at least 10 years which means company will be responsible for maintaining the equipment all 10 years in full working conditions at least 95 % Up time. AMC and CAMC Rate should be quoted in price bid for 8 years
- Standard warranty: 2 years
- In case of failure of Equipment , standby arrangements must be provided within 48 Hours .
- Additional items to be supplied from the company : Reusable breating tubings 2 Nos

- Should have safety certificate from a competent authority CE issued by a notified body registered in the European commission / FDA (US)/ STQC CB Certificate/ STQC S Certificate or valid detailed electrical and functional safety test report from ERTL. Copy of the certificate/ test report shall be produced along with the technical bid.

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HAEMO DIALYSIS MACHINES

Make : Please Specify

Model : Please Specify

Manufacturing country : Please Specify

Year of Launch Please Specify

1. Facility for both Acetate and Bicarbonate Dialysis
2. Facility for sodium profiling, ultra filtration profiling, online clearance monitoring or equivalent technology and Bicarbonate profiling.
3. Facility for bicarbonate dry concentrate.
4. Automated disinfection and cleaning programs.
5. Twin Microprocessors for safety monitoring and operation of machine.
6. Facility for Rinse, Hot Rinse and Hot disinfection with fixed time limit..
7. Facility for upgradation in future.
8. Facility for different dialysate flow range 300 to 800 ml/min
9. Dialysate temperature 35 - 39 centigrade.
10. Dialysate mixing ratio (default)1:1.83:34 and 1:34
11. Volumetric Ultra filtration
12. Ultra filtration rate 0-4 litre /h with accuracy ± 1%
13. Parameter display – ultra filtration goal, UF time, UF rate and UF volume.
14. Facility for arterial, venous, transmemberane pressure monitoring.
15. Arterial pressure monitoring range (-300) to +300 mm Hg, Accuracy ±10mm of Hg.
16. Facility for Arterial blood pump flow range 50-600 ml / min, Accuracy ±10%
17. Heparin pump delivery range 0-10 ml/hr with syringe size 20-50ml.
18. Facility for Air and blood leak detector.
19. Blood leak detector sensitivity less than or equal to 0.5 ml / min.
20. Facility for dialysis fluid conductivity range 12.8 – 15.7 mS /cm.
21. Heat disinfection 85% chemical disinfection at 85 degree centigrade.
22. Water inlet pressure 1.5-6 Bar
23. Water inlet temperature 5-30 degree centigrade.
24. Optional quote has to be offered for connecting the machine to network if the feature is available. Network connectivity (cabling) and PC will be provided by the tender inviting authority/user institution. (Rate quoted will not be taken for evaluation.) All other hardware and software required to connect the machines to the network shall be provided by the bidder and should have the following features. a. Patient details including ID no, name, age etc. b. Dialysis details including all dialysis parameters including set values and real time values and adequacy of dialysis simultaneously from any number of dialysis centres across Kerala. c. Customised report of dialysis

25. Shall be able to view all other parameters centrally
26. Should have minimum 15-30 minutes battery backup for safety monitors and blood pump.
27. Should operate on mains 220-240Vac, 50 Hz single phase.
28. Should have safety certificate from a competent authority CE issued by a notified body registered in the European commission / FDA (US)/ STQC CB Certificate/ STQC S Certificate or valid detailed electrical and functional safety test report from ERTL. Copy of the certificate / test report shall be produced along with the technical bid
29. The equipment should have rodent and insect proof design or the warranty shall cover all defects arising due to rodents and insects

Others

- The Model quoted must be latest and most advanced and spare and service must be available for at least 10 years which means company will be responsible for maintaining the equipment all 10 years in full working conditions at least 95 % Up time. AMC and CAMC Rate should be quoted in price bid for 8 years
- Standard warranty: 2 years
- In case of failure of Equipment , standby arrangements must be provided within 48 Hours .
- Additional items to be supplied from the company : Reusable breating tubings 2 Nos
- Should have safety certificate from a competent authority CE issued by a notified body registered in the European commission / FDA (US)/ STQC CB Certificate/ STQC S Certificate or valid detailed electrical and functional safety test report from ERTL. Copy of the certificate/ test report shall be produced along with the technical bid.

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- Details of installations
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