

TECHNICAL SPECIFICATION

SONOGRAPHY COLOR DOPPLER SYSTEM

The system should be state of art with full Digital Technology & should be capable of whole body Sonography & other applications for adult & pediatrics (Infants & neonates) which includes Abdominal, Obs/Gyn., Endovascular, Peripheral vascular, Transcranial, transvaginal, transrectal, & Small parts.

1. The system should incorporate facility for high resolution 2D, 3D, M Mode, PW, Color Flow Imaging, Power Doppler Angio Imaging Modes.
2. The Equipment should have more than 30000 Digital Channels & should be up gradable on the site to higher numbers of channels. Higher number of channels is Preferred.
3. The system should have 256 Grey shed or more.
4. All Transducer have Broad Bandwidth for extreme High resolution 2D imaging. Frequency range of transducer should be 2 to 16 MHz or more.
5. System should have advance image processing algorithms to analyze between targets & artifacts so as to sharpen target anatomy, reduce the sparkle & artifacts for improve image quality.
6. The system should have a high Dynamic range of 200 DB or more. Higher dynamic range will be preferred. Scanning depth 30 cm or more.
7. The system should have a very high frame rate of 700 frames per second or more. Please specify frame rate in triplex mode.
8. The system should have Harmonic imaging for tissue for hard to image patients. The system shall support Tissue Harmonic imaging capability on phased, linear, 3D and curved array transducers.
9. The system shall offer Harmonic imaging in Power Doppler imaging mode for improved sensitivity & specificity in differentiating blood / Agent from Tissue.
10. The system should have a full alphanumeric key Board with illuminated keys & status Display.
11. The system should be able to support at least three Transducers with universal ports allowing any Transducers to be connected to any Port.
12. The system should have High Resolution fully articulating non interlaced full flat LED/LCD Display of 19" or more, with Tilt & swivel facility
13. The system should have facility for Zoom (Real-Time & Frozen image) & manipulation of image through pre processing & post processing with cine loop viewing of images of all modes
14. System should have hard disc of at least 500 GB or more.
15. The system should have facility of digital storage & retrieval of B/W & color image data (Both frozen & cine loops) on built in as well as removable media (CD,DVD) USB Port.
16. The system should have automatic real time quantification of Doppler parameters like velocity, frequency, time, heart rate slope, flow volume, pulsatility index, resistivity index, peak velocity, average value, point value, area & diameter flow volume etc.
17. The system should have capability of triplex display in real time with all probes.
18. The system should have extensive calculation software packages for general measurement, Obs/Gyn, Vascular, Pediatric
19. Machine should be supplied with followings transducers
 - I. Broad band convex array Transducer with multi frequency range of 2 to 5 MHz or wider range-1 no.
 - II. Broad band transvaginal/ transrectal Probe with multi frequency range between 5 to 8 MHz or wider range -1 No. (Angle of view should be mentioned)
 - III. Linear probe Transducer 5 to 16 Mhz or more.-1 No
20. The system should have the following documentation devices.
 - a) Laser color printer for color image printing of latest technology of Dye sublimation technology with features of water proof prints & image persist for atleast 5 years , color thermal printer with video input to print multiple print formats as per user requirements.
 - b) Sony / Fuji make B/W Thermal printer of latest model.

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- c) Glazed thermal paper Rolls 50 no. & 5 rim of Glossy paper sheet.
21. All information in the tender document must be supported with product data sheet. Companies should quote the latest model
 22. 1.5 Ton 5 Star split AC with voltage stabilizer should be supplied with machine with complete installation (Hitachi/ O-general/ DAIKIN/ Mitsubishi).

Additional Requirements for A/C unit:

- 3 mtr copper piping with superlon insulation for suction line (copper pipe of minimum 0.70 mm thickness)
 - 3 mtr copper piping with superlon insulation for Discharge line (copper pipe of minimum 0.70mm thickness)
 - 3 mtr PVC piping for drain or as required (15mm dia. flexible type)
 - 3 Mts. Indoor-Outdoor unit connecting power cable and required cable from power socket to stabilizer and from stabilizer to A.C. unit with suitable MCB box & power socket top plug.
 - Base plate for hanging indoor unit
 - MS Stand for outdoor unit
23. UPS of appropriate rating for 30 minutes should be provided with the system
 24. Machine European CE/ USFDA certified. (valid documentation should be submitted in technical bid)
 25. **Guarantee:**
 - Three years on complete unit including probes from the date of the installation.
 - Two Years on AC and Voltage Stabilizer from the date of the installation.
 - Five years on AC compressor from the date of the installation.
 26. **CMC:** CMC may be given for seven year (on yearly basis) after guarantee period of three years.
 27. The company should submit technical compliance sheet as per technical specifications mentioning the make & model of quoted item in the Technical bid.
 28. Demonstration of the Equipment may be taken if needed.
 29. Company should have Service Center in Rajasthan.
 30. Installation will be done by supplier free of cost.
 31. Firm should mention all the pre installation requirements in the technical bid
 32. The Company should submit original catalogue and data sheet (signed & stamped) of quoted item at the time of bid submission. Any declaration/ undertaking in this regard shall not be considered.

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Executive Director (EPM)
Rajasthan Medical Services Corporation Ltd,
Jaipur