SPECIFICATION FOR PORTABLE ULTRASOUND CUM ECHO MACHINE

A. Specifications of Base Unit

A state of art fully digital, compact Color Doppler Ultrasound machine is required with the following technical features:

1. The supplied system should be a new machine and no parts should be refurbished.
2. Unit should be able to give very high image quality with advanced technologies like compound imaging for better contrast resolution, tissue differentiation, and edge detection.
3. The unit should be compact, lightweight, and portable. Weight should not exceed 5 kg including the battery but excluding cart and accessories. Mention the exact weight of the equipment along with the battery.
4. Imaging modes of Real-time 2D, M mode, Color Doppler, Power Doppler, Pulsed Wave Doppler, and Continuous wave Doppler must be available.
5. System must have a fast start-up to scanning in less than 30 seconds from off condition, for use in ICU and emergency conditions.
6. System should support transducer technologies like Phased array, Convex, and Linear and should be future upgradable to support TEE transducer.
7. The system should have a broadband architecture with an operating frequency of at least 1 to 15 MHz.
8. Cine memory of at least 250 should be available on all operating modes.
9. The system should have a dynamic range of 165 decibels or more.
10. The system should have a maximum scanning depth of 30 cm or more.
11. The system should provide a minimum of 6 generic digital callipers.
12. The system must have dedicated calculation packages for cardiac, Vascular & Obs/Gyn measurements.
13. The system should have an integrated high-resolution TFT / LCD of 12 inches or more with the facility of tilt and swivel facility along with a convenient grip.
14. Alphanumeric soft keys backlit and splash-proof resistant keyboard with easy access scan controls, facility to sanitize the system keyboard to avoid cross-contamination.
15. System should possess 'Needle Visualization Software' to track the needle clearly at steep angles during procedural guidance while maintaining striking image quality of the target structures and the surrounding anatomy with simple on/Off functionality on both linear & curvilinear transducers.

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16. The system must have the ability to function by AC/DC or battery power with the same degree of functionality; the inbuilt battery life (run time) shall be at least 120 minutes.
17. The unit offered must be sturdy and should be able to withstand accidental hits and falls during transport.
18. The system must have archive capability for storage & retrieval of images and clips. It should have at least 2 USB 3.0 slots, which allow for direct sharing of images (JPEG) and clips (AVI) to a PC.
19. The system must have in-built memory of at least 16 GB for storing Patient data & studies.
20. The system should be capable of supporting all DICOM functionality (Storage, Print, and Work List), and also shall be compatible to connect to PACS.
21. Detachable, imported, molded, OEM Trolley/cart to mount transducers and machine. The cart height should be hydraulically adjustable and the work surface should be adaptable from horizontal to vertical.
22. Unit should function with 200-240 V, 50 Hz AC, and 5amp power outlets. Power requirement to be specified.
23. When the machine is mounted on a trolley, a facility for connecting three transducers simultaneously with an easy selection of active transducers should be possible.
24. The vendor should agree to provide any kind of future software updates at no additional cost for a period of 10 years from the date of installation.

B. Specifications of Transducers:

S. No	Transducer	Functions	Number
1	2-5 MHz (±1 MHz) multi-frequency,	Abdomen,	01
2	6-13 MHz (±2 MHz) multi-frequency,	vascular, nerve imaging	01
3	1-5 MHz (±1 MHz) multi-frequency,	Abdomen, Cardiac,	01

Conditions for tender:

1. All accessories should be from the same Original Equipment Manufacturer for the main unit.
2. Instruments must be ISO certified and a copy should be enclosed. (The ISO Certificate must be issued by any organization accredited by the Bureau of Indian Standard or accredited by the international accrediting forum "IAF" (Certificate to be attached).

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3. Should be USA FDA and European CE be approved by 4 digits notified body.
4. Other necessary certifications, if any, will be provided by the bidder for the smooth functioning of the machine.
5. Installation process should be performed by O.E.M trained service engineers/ service representatives on OEM letterhead or Service Report within 15 days of supply, with the mandatory provision of providing preventive services visit of OEM trained Service Engineer/ Service Representative quarterly per year till the completion of warranty period (i.e., 20 visits for the first 05 years) & further quarterly visits (04 visits/year) year till the completion of CMC period.
6. The equipment should have a Brand name/ Model Number embossed/etched on the equipment.
7. All the technical specifications in the compliance statement must be supported by Original Literature from the firm/ O.E.M with highlighting Numbering & flagging of all technical certificates.
8. Offered Equipment should have a strong Government Installation base.
9. Offered Equipment should have a Regional Sales Service Centre of the Original Equipment Manufacturer in the region for a 95 % uptime guarantee.
10. For the offered main unit, the essential, optional required consumables'/accessories' shelf life should be declared on the Original Equipment Manufacturer's letterhead.
11. In case of technical snag/failure/breakdown the response time for the inspection should be within 24 hours and repair within 05 days otherwise provide a service machine/ alternate arrangement to be made till the period of recovery of the breakdown of the unit, failing which attracts penal action as per the decision of institute/ hospital.
12. For offered equipment the Training of technical staff and users should be performed by Original Equipment Manufacturer trained Service Engineers at the proper designated place- at bidders' cost.
13. Company should quote their latest model and need to provide an affidavit for the same.
14. As a tendering process the Demonstration of the offered Equipment is Mandatory at hospital/institute premises or other designated places at the bidder's cost.
15. The bidder must comply with the General Financial Rules and their modifications if any issued by the Government of India- 2017.
16. Any bidder from a country that shares a land border with India will be eligible to bid in the tender only if the bidder is registered with the Competent Authority (i.e., Registration certificate issued by the Ministry of Commerce and Industry (Department

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for Promotion of Industry and Internal Trade- DPIIT after October 2020). If any such bidder is not registered with DPIIT they will be liable for technical disqualification.

17. Principal (OEM) must authorize only one agent to be quoted in the bid otherwise multiple quotes through different agents in the same bid will be canceled.
18. The Bidder and its OEM both have to submit a notarized affidavit on the Indian Non-Judicial Stamp Paper of Rs.100/- that the bidder has not quoted the price higher than the current financial year and last financial year supplied to any government Institute/ Organization/ reputed Private Organization. OEM also has to submit that the price quoted by the bidder in the bid is on its behalf and the lowest in the current and last financial year in the country. Therefore, if at any stage it has been found that the supplier and its OEM have quoted lower rates than those quoted in this bid; the Institute (the purchaser) would be given the benefit of lower rates by the Supplier and any excess payment if any, will become immediately payable to the Institute (the purchaser). If such an affidavit is not submitted, the bid will be outrightly rejected. (Part of technical bid).
19. Guarantee / Warranty Period: Separate offers of Comprehensive Maintenance Contract (CMC on main equipment) and Annual Maintenance Contract (AMC on main equipment) for further 5 years after expiry of 5 years of warranty (i.e., 6^{th}, 7^{th}, 8^{th}, 9^{th} and 10^{th} years) in rupees only (and on basis of percentage of price) should be included in a financial bid in the absence of which the offer is liable to be rejected. Payment for CMC/AMC shall be made only after the expiry of the warranty of 5 years, in case the Institute (the purchaser) decides for availing of CMC/AMC services. Contract for CMC/AMC shall be decided on expiry of warranty but rates (not more than 5% inclusive of all taxes for 6^{th} to 10^{th} year) will be frozen at the price of an issued purchase order before the release of payment by the Institute (the purchaser). However, the Institute (the purchaser) may decide not to enter into any CMC/AMC contract without assigning any reason for the same, which shall be binding upon the bid.

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