

2.

Non-Invasive Cardiac Output Monitoring System (Proprietary item)**Portable Non-Invasive Cardiac Output Monitor system**

- **Cardiac Output Monitor should minimum display the following parameters:**
 - a) **Stroke volume / index**
 - b) **Cardiac output / index**
 - c) **Systemic vascular resistance / index**
 - d) **Contractility**
 - e) **Systolic time ratio**
 - f) **Heart Rate**
 - g) **SVV (Stroke Volume Variation)**
 - h) **TFC (Thoracic Fluid Content)**
 - i) **FTc (Flow Time Corrected)**
1. Equipment should be based on non-invasive and advanced electrical velocimetry or similar proven technology.
 2. It should give accurate cardiac output and other parameters for Adult, Pediatric, and Neonatal patients.
 3. Should work in critically ill patients with high heart rates above 250 ppm weight equal to or more than 500 grams and different heights.
 4. Should have the facility to measure the beat-to-beat cardiac output with high accuracy.
 5. Company should submit clinical validations published from reputed hospitals in India like AIIMS New Delhi, Post Graduate Institute (PGI) Chandigarh, or from abroad.
 6. The method of derivation of hemodynamic parameters should be well documented.
 7. It requires a minimum number of externally applied electrodes which is convenient to apply fast.
 8. It should be compatible with Implantable Pace Maker, and other ICU equipment.
 9. It should work with patients with obesity, and respiratory diseases like chronic obstructive airway disease (emphysema, chronic bronchitis) and pulmonary edema.
 10. Equipment should be highly portable, hand-held, and less than 800 grams., easily transportable to move to a patient's bedside, ambulance, and in an emergency.
 11. Equipment should have a built-in display.
 12. Non-Invasive Cardiac Output Monitor should be supplied with an extended touch screen on a trolley.
 13. Display parameters show the bar diagnostic screen with normal range and measured value for each parameter, Trend, Chart and waveform screens.

Prof. Avinash Agrawal
MD, IDCC, IFCCM, FICCM, FIACCM, FCCP (USA)
Head, Department of Critical care,
King George's Medical University, Lucknow

14. Unit should have memory for 70 hours, and the record continues data which can be downloaded using Bluetooth.
15. Should have battery backup for operating for a minimum of two hours.
16. Unit should be supplied with 50 sets of sensors for 50 patients.
17. The unit should be already used in reputed hospitals in India like AIIMS, New Delhi, and PGI Chandigarh, etc. and a satisfaction certificate should be submitted.
18. Price of disposable sensors should be mentioned separately.
19. Price of 1000 sets (One set per patient) consumables will be taken into consideration along with equipment price to decide the lowest bidder.

Conditions for tender:

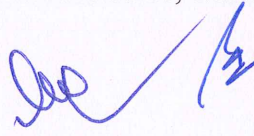


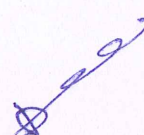
1. All accessories should be from the same Original Equipment Manufacturer for the main unit.
2. Instruments must be ISO certified and a copy should be enclosed. (The ISO Certificate must be issued by any organization accredited by the Bureau of Indian Standard or accredited by the international accrediting forum "IAF" (Certificate to be attached).
3. Should be USA FDA and European CE be approved by 4 digits notified body.
4. Other necessary certifications if any required 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.

Page 2 of 4

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 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

Prof. Avinash Agrawal
Head, Department of Critical Care,
King George Medical University, UP, Lko.

equipment) for further 5 years after expiry of 5 years of warranty (i.e., 6th, 7th, 8th, 9th and 10th 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 6th to 10th 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.





Dr. Anil Kumar Agrawal
MD, IDCC, IFCCM, FICCM, FIACCM, FCCP (USA)
Head, Department of Critical Care,
King George's Medical University, UP, Lko.