Notice Inviting e-Tender

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Supply and Commissioning of Medical Equipment for Cath Lab of Midnapore Medical College & Hospital, Paschim Midnapore

(Submission of Bid through *online*)

Bid Reference No.: WBMSCL/NIT-235/2023	Dated-10.05.2023

Amendment-III

REVISED TECHNICAL SPECIFICATION

Schedule-I

Defibrillator

1. Biphasic, Manual and AED with voice prompt, compact and light weight
2. Energy selection 2J to 200J or more in steps
3. Momentary energy selection access on frontal panel
4. Should have adult and pediatric paddles integrated on same handle
5. Momentary charge key on front panel and on the apex hand
6. Monitor 5" or more should display selected energy.
7. Should have disarm facility
8. Energy should be delivered within (30-60) ms after the detected R wave in synchronization mode
9. Charging time maximum up-to 6 sec for 200J
10. Should have battery backup (3 to 4 hrs) for minimum 50 discharges of 200J

11. Should have ECG inputs through paddles or 3 lead cables
12. Should have display for selected ECG input source (I, II, III paddles)
13. Lead off message should appear with alert tone
14. Amplitude gain of ECG waveform should be adjustable
15. Should have display for heart rate
16. Should have alarm for high and low HR
17. Should have an inbuilt thermal recorder-paper size 50 mm or more , paper speed 25 mm/sec
18. Should have enable / disable option for printer
19. Should supply 2 bottle of jelly, 12 roll of thermal

paper

20. Should supply 100 (hundred) pairs of AED pads

21. Should operate on mains 230 V, 50 Hz

22. External pacing facility.

23. Environmental Factors:

- The unit shall be capable of being stored continuously in ambient temperature of 10 – 40°C & Relative Humidity of 15 – 90%
- Shall meet IEC – 60601 – 1 – 2:2001 (or Equivalent BIS) general requirements of safety for electromagnetic compatibility
- Shall be capable of operating continuously in ambient temperature of 10 – 40°C and Relative Humidity of 15 – 90%

24. Power input: 220 – 240V / 50Hz Single phase or 380 – 400V AC 50 Hz three phase fitted with appropriated Indian plugs and sockets

Standards and Safety:

i). It should be US FDA or CE ("Conformite Europeene") from European Union notified body having 4 digit identification number approved or BIS (Certificate to be submitted).

ii). Electrical safety conforms to standards for electrical safety IEC – 60601 / IS – 13450

iii). Manufacturer should have ISO certification for quality standards

iv). It should have onsite service facility. The service provider should have necessary equipments recommended by the manufacturer to carryout preventive maintenance test as per guidelines provided in the service/ maintenance manual.

25. Internal paddle (35 mm)– for infant – 2 Set

26. Internal paddle (45 mm)– –for paediatric – 2 set

27. Internal paddle (55 mm) – for adult – 5 set

Schedule-II

BiPAP Machine

1. **Modes of Operation:**
    - Spontaneous
    - CPAP
    - BI-LEVEL
    - Variable (10-40 breath per minute) apnea backup
    - During changing from one mode to the other, the machine should not be switched off.
    - All its parts are to be considered as non-consumables and should be supplied free of cost during warranty and CMC
    - Should have facility for attachable/inbuilt temperature controlled Humidifier. The bidder should supply with attachable/inbuilt temperature controlled Humidifier with the equipment.
    - Ventilator circuit for paediatric -05 nos. and Ventilator circuit for adult - 5 nos. ; The Paediatric and adult circuit should be supplied along with the machine
    - Nasal mask for infants, Full Face Mask for paediatric and adult - 05 nos. each; full face mask and nasal mask should have adequate cushion to avoid facial injury.
- **Product Feature:**
    - Simplified standard setting menu
    - Automatic Leak management
    - Automatic / Adjustable Breath trigger / cycle
    - Noiseless flow generator of less than 30Db
- **Technical Specification:**
    - **Performance:**
        - Operating pressure range: 4 to 25 cm H_2O

        - Maximum single fault pressure: 40 cm H_2O
    - **Dynamic pressure characteristics:**
        - S mode: IPAP: 4 to 40 cm H_2O ; EPAP: 4 to 25 cm H_2O
        - CPAP mode: 4 to 20 cm H_2O
        - S/TD mode (with back up breath and also Ti)
    - **Sound pressure level:**
        - <30 dB with certification
    - **Display:**
        - Leak
        - Pressure
            - IPAP
            - EPAP
        - Respiratory Rate
        - Minute / Tidal Volume
    - **Power Supply:**
        - 220 – 240 V AC, 50 – 60 Hz
        - Inbuilt Battery Back-up minimum 1 hour when heated wire is not in use
    - **Environmental condition:**
        - Operating Temperature – 5 – 40^0C
        - Humidity – 10 – 95%
    - **Air Filter:**
        - Washable air filter
        - Filter to be changed whenever needed without disturbance to compressor
    - **Electromagnetic Compatibility:**
        - Shall meet IEC – 60601 – 1 – 2:2001 (or equivalent BIS) general requirements of safety for electromagnetic compatibility
    - It should be US FDA or CE ("Conformite Europeene") from European Union notified body having 4 digit identification number approved or BIS (Certificate to be submitted).

Note: Supplier should arrange for stand by machine in case the equipment is taken to the service centre for repair and calibration.

Schedule-IV

Echocardiogram Machine with Adult, Pediatric, vascular and TEE probe

Specification	Specification Name	Bid Requirement (Allowed Values)
Standards	Confirmity to Manufacturer's Certification	ISO 9001 AND ISO 13845 BOTH
	The offered model should have US FDA & European CE(4 digit notified body) approval	Mandatory
	The machine should launch after 2017 or later	Mandatory
Types of Probes & Features	Cardiac and Vascular Probes Configuration	ALL
	TTE Probe Type	Adult, Vascular and Pediatric
	4D TEE Adult Probe biplane and Multiplane frequency, in MHz	2 - 7.5 MHz (±2)
	TEE Pediatric Probe Supplied	Yes
	2D TEE Pediatric Probe frequency, in MHz	3 - 8 MHz (±2)
	4D Adult Cardiac probe frequency in MHz	2-5 MHz (±1)
	2D Paediatric Cardiac Probe frequency in MHz	2-8 MHz (±1)
	Vascular probe	4- 12 MHz or more
	Dedicated 3D/4D volume imaging for cardiology TTE ad TEE	Yes
	Live 3 D imaging in color doppler system	Yes
	Colour Doppler system with all application Packages, Quad loop for serial studies with high frame rate reviews, harmonic imaging capability in all modes and integrated stress echo package digital storage and retrieval	Yes
	Provision of Tissue Colorization (B-Colour) for improved contrast resolution	Yes
	Application software	Adult, Pediatric, Vascular and Transesophagal applications
	Cine Loop Features	Yes

Specification	Specification Name	Bid Requirement (Allowed Values)
	Frame grabber facility for post analysis	Yes
	Facility of Various maps for pre and post processing	Yes
	ECG trigger facility	Yes
	"Dedicated integrated dynamic stress echo package for flexible user defined protocols with stacked sub loops facility and contrast stress protocol usable for stress echocardiography"	Yes
	Number of transducer/probe ports	4
	Cardiac 3D/4D automatic Option	Yes
	Contrast Harmonic/Agent Imaging with angio mode	Yes
	Provision of Harmonic imaging in TTE, TEE and Linear Probes	Yes
	Color Doppler 3-D/4-D option	Yes
	Contrast-enhanced ultrasound (CEUS) option	Yes
	Tissue synchronization, tissue velocity	Yes
	Provision for higher sensitivity for low frequency doppler in all probes	Yes
	Latest generation Electronic Phased/sector array Colour Doppler system	Yes
	Number of Channels in color Doppler system	50000 or more (If channels are being designated as digital channels)
	System should be capable of generating real time live 3- D images	Yes
Image display and processing	DICOM THREE POINT ZERO COMPLIANT	Yes
	Automated B-mode (2-D) image	Yes
	Automated CDI image optimization	Yes

Specification	Specification Name	Bid Requirement (Allowed Values)
	Automated PW Doppler image optimization	Yes
	TOUCH SCREEN	Yes
	Monitor display size, cm (in)	21 Inch (±1)
	Monitor Display Type	OLED/HDU/LED
	Split screen	Twin View and Live Quad Screen
	Single/dual monitors	Single with optional second console
	Speckle-tracking strain and strain rate	Yes
	Stress echo	Yes
	Analysis and calculation packages	2-D wall motion tracking, 3-D wall motion tracking, cardiac, mitral valve analysis, user programmable calculations
	DVD/CD Writer	Yes
	Type of printer provided with the echo cardio machine	THERMAL PRINTER
	ECG Cable	2
	Echo cardiography system to be DICOM Ready	Yes
	Dicom Interfacability to HIS	Yes
	Dicom Interfacability Dicom to PACS	Yes
	Interfacability Dicom to RIS	Yes
Power Requirements	Resettable over current breaker shall be fitted for protection	Yes
	Power backup	UPS
	Back up time in minutes	60

Specification	Specification Name	Bid Requirement (Allowed Values)
Miscellaneous Parameters	Warranty	2 Years
	Number of installations of the echo cardiogram machines in Central/State/PSU Govt Hospitals(Note: Seller should supply a performance certificate of the device to the buyer if demanded after placement of order)	At least 3 numbers of the same quoted model
Additional Parameters	2D Speckle Tracking for LV,RV and LA	Mandatory
	4D auto LV,RV and LA	Mandatory
	4D adult TEE probe with customizable TEE probe button and wider field of view for Apex in 4D TTE probe	Mandatory