

**TENDER SPECIFICATION OF ECG MACHINE 12 CHANNEL
FOR BNS PATENGA, BNS UPASHAM, BNS GOMATI AND BNS BHATIARY**

1. **Name of Equipment:** ECG Machine 12 Channel
2. **Purpose:** To be used in Cardiology/ ICU Dept.
3. **Quantity:** 10 (Ten) complete sets (03 x PTG, 05 X UPSM, 01 X GMT & 01 X BTRY).
4. **Make /Model:** To be mentioned.
5. **Brand:** To be mentioned.
6. **Country of Origin:** USA/ Canada/ UK/ Germany/ France/ Italy/ Japan/ Australia.
7. **Manufacturing Country:** USA/ Canada/ UK/ Germany/ France/ Italy/ Japan/ Australia.
8. **Name & address of Manufacturer:** To be mentioned with e-mail.
9. **Name of Local Agent with Complete Address (including email & phone number):** To be mentioned by the bidder.
10. **Port of shipment:** To be mentioned (if applicable).
11. **Qualification of Bidders:** Only the genuine manufacturer/ principal can submit quotation through authorized local agent.
12. **Year of Manufacture.** From 2026 or later.
13. **Source of Supply:** To be mentioned.
14. **Ambient Condition:** The ECG Machine 12 Channel will be operated and maintained in the following ambient conditions:

a	Ambient air temperature	5°C - 45°C
b	Relative humidity	Up to 95%

15. **Scope of Supply:** 10 (Ten) complete sets of ECG Machine 12 Channel will have to be supplied with all attachments, accessories etc and complete in all respect for immediate operation.

16. **Technical Specification:**

ECG Machine 12 Channel

Interpretive 12 Channel resting ECG with color LCD Touch screen.

Feature:

- a. Convenient A4 size print-outs allow for easy chart filling
- b. Grid function allows you to use low cost plain fax paper
- c. One-touch operation (monitoring, Recording mode)
- d. 12ch simultaneous display
- e. Wide and clear color TFT LCD
- f. Touch screen for easy operation
- g. Rotary key access to all menus
- h. 12 channel interpretive ECG
- i. Over 120 kinds of interpretation results based on advanced Minnesota code
- j. Memory up to 200 ECGs
- k. Real-time preview monitor
- l. PC compatible through LAN
- m. Multi-language (English, Russian, French, German, Italian, Chinese, Spanish, Turkish, Polish, Romanian, Portuguese) available
- n. Lead Fault message
- o. Pace maker detection
- p. Supported standard file format: EEG, XML, PDF, JPEG, MFER

ECG Leads: Simultaneous 12 channel Resting ECG

Dimension: 290(W)x300(D)x97.5(H)mm, Approx.3.5kg(Main Body)

RESTRICTED

Recording Channel: 3CH+1RHY, 3CH+3RHY, 6CH+1RHY, 12CH 1CH Long Time (1min) and Beat Report

Sensitivity: 2.5, 5, 10, 20 Auto (1~aVF:10, V1~V6:5) mm/mV

Printing Speed: 5, 12.5, 25, 50, 100mm/sec

Sampling Rate: Analysis Sampling Rate- 500sample/sec Digital Sampling Rate- 8,000sample/sec

Filters: AC (50/60Hz, -20dB or better), Muscle (25~35Hz, -3dB or better) Base Line Drift (off, 0.05, 0.1, 0.2Hz, -3dB or better), Low Pass Filter (off, 40Hz, 100Hz, 150Hz)

Display: 272x480 Pixel Resolution, 4.3" Color TFT Wide Display 12 Channels preview, ID, HR, Gain, Speed, Power Status

Export file format: ECG, XML, PDF, JPEG, MFER

User Interface: Touch Screen, Rotary Push-knob

Recorder: Thermal Print Head, Roll Paper
Report Paper
Width: A4/Letter – 215mm (8.5")
Length: A4 – 297mm (11.7")
Letter – 279mm (11")
Resolution: 8dot/mm (0.125mm pitch)

Reporting: Auto Reporting.

Patient data: ID, Name, Age, Gender, Height, Weight

Basic Measurement: Heart Rate: 30~300bpm, (± 3 bpm) PR, QRS, QT/QTc, P-R-T axis

ECG Data Storage: Internal Storage for 200 ECGs: Built- in Memory

Electrical: Internal noise: 20uV(p-p)max
Input impedance: More than 50M Ω
Input voltage range: ± 5 mV
CMRR: Greater than 105dB
DC offset voltage: $\geq \pm 400$ mV
Patient leakage current: < 10uA
Frequency response: 0.05 ~ 150 with in -3dB Isolated, defibrillation and ESU protected

Signal Quality Control: Pacemaker Pulse Detection Lead Fault Detection, Signal Saturation Detection

Battery type: Replaceable and Rechargeable, Lithium ion, 11.1V, 2600mA

Battery Capacity: 6 hours of normal use (without recording, 200 ECGs) in 12CH Battery charge 3 hours

Communication: LAN, WIFI (option)

Safety Conformity: Class I, Type CF Defibrillation-proof applied Part.

Environment: Operating Temperature: 5~40°C
Operating Humidity: 10~90%RH
Atmospheric Pressure: 70~106KPa

Power: Input: 100-240Vac, 1.5-0.75A, 50-60Hz
Output: 15Vdc, 4.2A

17. **Standard Accessories:**

- a. A list of Standard accessories is to be provided for the **ECG Machine 12 Channel**. Item wise price list is to be provided with the offer for reference value only.
- b. Standard accessories must include all items and accessories, which are essential to operate the offered **ECG Machine 12 Channel** to its maximum functions and capabilities. Any other item required, beyond the list provided below, for the functioning of the **ECG Machine 12 Channel** is to be included in the offer.

c. The price of standard accessories will not be added separately and is to be included in offered Unit Price.

Accessories in each machine: Each machine.

- a. Patient Cable – (1 in no).
- b. Limb Clamp (4x 1set).
- c. Chest Suction Cup (6x1 set)
- d. ECG Paper – (6 in no (roll)).
- e. Power Cord - (1 in no).
- f. Earthling Cable – (1 in no).
- g. Rechargeable Battery – (1 in no).
- h. ECG Gel – (1 Bottle)
- i. Cart – (1 in no).
- j. Hanger – (1 in no).

18. **Local Training:** The supplier will arrange following training at **BNS PATENGA, BNS UPASHAM, BNS GOMATI & BNS BHATIARY** free of cost:

- a. Operational Training: 02 x Operator for 01 week/ as required.
- b. Repair/ Maintenance Training: 02 x EM Tech (02x Navy) for 01 week/as required.

19. **Publication:** Following brochure/catalogue in English language showing detailed particulars of the quoted items should supplied along with the offer with each machine:

- a. Operation manual – 03 copies (1 x Original & 2 x Photocopies).
- b. Repair/maintenance/service manual including detail circuit/schematic diagram-03 copies (1x Original & 2 Photocopies).
- c. Parts Catalogue/Master Parts list – 03 copies (1x Original & 2 Photocopies).

20. **Spare Parts:** Adequate number of fast moving spare parts and other recommended spare parts required for 3 years operation are to be quoted indicating item wise price from which buyer will select as per requirement. The supplier should provide guarantee for supplying spare parts for a minimum period of 3 years.

21. **After Sales Service:** The supplier should have requisite after sales service facilities at home to render necessary services as and when required by BN. Necessary agreement will be signed if required.

22. **Test, Trial and Acceptance:** The supplier will carry out installation, test and trial of the supplied machine at his own cost. The acceptance of the supplied items will be carried out by **BNS PATENGA, BNS UPASHAM, BNS GOMATI & BNS BHATIARY** where the supplier's representative will be present. After the satisfactory test/trial, with certificate the acceptance certificate will be given by **the CINS Chattogram & ACINS Khulna**.

23. **Warranty/Guarantee:**

a. The supplier must ensure that all items are new and unused. The supplier must provide warranty at least for **02 (two) years** from the date of acceptance of the item(s) after satisfactory inspection, test, trial etc as applicable. If any defect/discrepancy of any item arise within the period of warranty, the specific period from the date of notification of the defect/ discrepancy to the supplier upto the date of rectification of defect/resolve of discrepancy will have to be deducted from the warranty period for that particular item(s).

b. In warranty period the supplier will provide all accessories, maintenance and repair services. If any defect/discrepancy arises, within warranty period, then the respective item(s) is/are to be replaced free of cost including freight within 03 (Three) months from the date of notification of the same to the supplier. In this regard, the supplier must furnish an undertaking with the offer by stating, "I do hereby assure that we take the liability to replace all spare parts/item(s) free of cost including freight within three months from the date of notification about the defect/discrepancy of the spare parts/item(s) by the buyer, if it occurs within the period of warranty".

c. The service should be provided within 7 days from the date of complaints lodged.

d. Warranty period will be counted from the date of acceptance by **CINS Chattogram & ACINS Khulna**.

e. In warranty period the supplier will provide all maintenance & repair services free of cost.

24. **Delivery:** The supplied items are to be delivered within **03 (three) months** from the date of signing contract to **The Commanding Officer NSD Chattogram and OIC NSD Khulna**.

25. **Inspection:** CINS Chattogram & ACINS Khulna.
26. **Consignee:** The Commanding Officer NSD Chattogram and OIC NSD Khulna.
27. **Validity of Offer:** Up to 30 June 2027. Authority may cancel work order if supplier fails to supply in due date. Without sufficient cause if extension is required supplier should apply before 15 days showing acceptable causes.
28. **Certificate/Document of Authentication:** The supplier must provide following original certificate(s)/document(s) with the offer/quotation to ascertain the genuinely of source and item(s) in order to establish chain of links from the original source of supply items.
- FDA/EC/CE/EU Certificate /JIS or any other authorized certificate must be submitted.
 - Trained Bio Medical Engineer list with update CV.
 - Must have Global Trade Item Numbers (GTINs) Manufacture Part Numbers (MPNs) with website links.
 - Supply/Tenderer has to submit the authorization letter of the original manufacturer or importer's authentication certificate.
29. **Users List:** User List in Bangladesh with contract number of the quoted machine is to be provided along with the offer.
30. **Terms of Payment:** 100% payment will be made after satisfactory test, trial and acceptance by BN in local currency.
31. **Condition for Acceptance of Quotation:** Quotation has to have supporting documents (booklets, leaflet, catalogue, brochure etc) having detailed particulars of the offered **ECG Machine 12 Channel**. The quotation will not be accepted If detailed information regarding specifications, maker's books and catalogue about the same model of the machine quoted, list of spare parts and accessories, etc are not provided.
32. **Compliance statement:** A compliance statement fulfilling all requirements of the tender is to be submitted for evaluation of the quotations, Stating mere 'Yes' or 'No' will not suffice and detailed description/ information's as required are to be given. An incompliance statement may attribute to cancellation of the offer. If any clause of this specification does not commensurate with the offered item, the deviation has to be spelt out clearly.
33. **Price Quotations:** Price is to be quoted in local currency without import duty as follows:

Name of item	Qty	Unit Price	Total Price
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