



## Notice Inviting e-Tender

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**Supply and Commissioning of Medical equipments for setting up of Sports Medicine unit  
at Govt. Medical College & Hospital of the Govt. of West Bengal**  
(Submission of Bid through *online*)

**Bid Reference No.: WBMSCL/NIT-36/2022**

**Dated-28.01.2022**

The following amendments have been made in the technical specifications of the tender document,

### **Amendment – I**

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### **Schedule - I**

## **C ARM FLUOROSCOPE X RAY MACHINE**

The system should have the below mentioned specifications:

#### **1. I.I.T.V. SYSTEM:**

- a) The image intensifier should be of latest series
- b) It should be of 9 inches triple field i.e. 9 inches / 6 inches / 4.5 inches
- c) The center resolution should be minimum 48 lp/cm.
- d) The circular grid should be fixed on the Image Intensifier (I.I.) to improve image quality.

## 2. C-ARM STAND:

- a) It should be ruggedly built and should be of good design
- b) It should have **1 or 2** separate steering for controlling back and front wheel movements
- c) It should also have the below mentioned movements.
  - Horizontal travel should be minimum 200 mm
  - Orbital movement should be **115°-125°**
  - Panning movement should be  $\pm 12.5^\circ$
  - Vertical movement should be motorized of 400 mm
  - Focus to I.I distance should be 900 mm
  - C-Arm rotation should be  $\pm 180^\circ$  (Preferably  $\pm 360^\circ$ )

## 3. CCD CAMERA:

- The CCD camera should be  $\frac{1}{2}$  inch
- It should have resolution of 1k x 1k minimum

## 4. MONITORS:

- a) Medical grade monitor minimum 19 inches more on trolley – 2 Nos.
- b) The monitor trolley should be provided for mounting 2 monitors and should have 2 shelf for keeping memory and stabilizer.

## 5. GENERATOR:

- a) It should be microprocessor controlled digital system with display.
- b) It should be of high frequency with output of minimum 3.5 KW and frequency of 40 KHz. (Preferably **100 KHz-200 KHz**)
- c) The KV should be from 40 to 110 KV.
- d) The fluoroscopic mA should be from 0.3 to 3.0 mA or wider.
- e) The system should have fluoroscopy mode like
  - Manual Fluoro mode and Continuous Fluoro mode.
  - Pulsed fluoro mode with facility to select time interval between the pulses from **1 fps to 10 fps** or more
  - Auto Dose Rate Control in fluoroscopy mode by which mA & KV should be set automatically as per the thickness of the organ.
  - Manual KV selection during fluoroscopy also should be available.
  - Boost fluoroscopy mode (optional) / High Definition Fluoroscopy
- f) The digital fluoroscopic timer should be incorporated with arrangement of auto cut off of exposure after 300 secs.
- g) The radiographic mAs range should be from 20 to 100 mAs or more
- h) The X-ray tube should be dual focus stationary anode. The focal spot of the tube should be
  - 1) Small: 0.6mm x 0.6mm
  - 2) Large: 1.5mm x 1.5 mm.

It should have mono block / tube housing heat storage capacity of 200 KHU or more. It should also have inherent filtration of **0.5mm** or more Al eq.

- i) The system should have backlit LCD display of fluoro mA, KV, timer & radiography mAs should be provided.

- j) The reversal, image rotation, functions should be operatable either from control panel or with a remote control.
- k) Memory functions like store recall/image transfer should be operatable from control panel as well as from memory unit.
- l) There should be independent selection of mA and KV & mAs.
- m) The control should have indicator for power, Overload, X-Ray & Tube heating
- n) The system should be upgradable to latest functions

#### 6. IMAGE MEMORY:

- a) Digital Image Processing & Memory system with PC or a USB Drive.
- b) The System should have DVD recording facility as externally or internally.
- c) It should have 100 images
- d) It should have at least 100 permanent images storage capacity
- e) It should have image integration function to reduce the image noise
- f) Should be capable of copying images to Pen Drive.

#### ESSENTIAL ACCESSORIES:

- a) Lead aprons, Thyroid Shield, Lead Goggles (12 nos each)
  - b) Lead apron stand – 12 Nos. & Hanger (6)
  - c) Servo stabilizer -1
7. Should be AERB approved
  8. The system should be DICOM compatible.

The product should have US FDA or **European CE (4 digit)**

## Amendment – II

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### Schedule - II

## ANTI GRAVITY TREADMILL

1. The unit should be useful for rehabilitation of lower limb extremities (hip, knee, ankle or foot) and for paediatrics as well as adult patients.
2. The unit should have work on the principal of Differential Air Pressure (DAP) technology and have LCD/LED touch screen display.
3. The unit should have forward speed of the treadmill from 0-15 kmph and reverse speed of the treadmill 0-3kmph.
4. The unit should have speed adjustment increment of 0.16 kmph.
5. The unit should have inclination of the treadmill 0-15%.
6. The unit should have Air Pressure mechanism for partial weight bearing system.
7. The unit should have Body weight reduction should be 0 -80% with 1% increment.

8. The unit should have User weight capacity (for small, medium & large) upto 180kg.
9. Paediatric Height: 152-190 cm
10. Medium user height: 168-200 cm
11. Large user height: 185-220 cm
12. User hip size (for small, medium & large): Width min. 47 cm, circumference min. 147 cm
13. The unit should be USA FDA or European CE approved (4 digit).
14. The unit should work on 220V/50Hz
15. The system should be supplied with CVT/Servo Voltage Stabilizer of required rating.

## Amendment – III

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### Schedule - III

### EMG / NCV / EP MACHINE

| Parameter  | Threshold Limit / Range      |
|--|------------------------------|
| No. of channel   | 4 or more                    |
| Sensitivity range in $\mu\text{V}/\text{div}$                | (1-2 $\mu\text{V}$ ) or more |
| Sensitivity range in $\text{mV}/\text{div}$                  | (1 - 10) or more             |
| Sweep speed $\text{ms}/\text{div}$ in steps                  | (1 - 800) or more            |
| Input impedance in M ohms                                    | 100 or more                  |
| Noise in $\mu\text{V}$ RMS                                   | 0.8 or less                  |
| Average (BAER) Per channel                                   | 2000 or more                 |
| Electrical range in mA                                       | (0 - 100) or more            |
| Duration of electrical stimulation in ms                     | (0.02 - 1.0) or more         |
| Repetition rate of electrical stimulation in per second      | (0.5 - 30) or more           |
| Auditory Frequency in Hz                                     | (250 - 8000) or more         |
| White noise Contralateral masking in dB normal hearing level | 0 – 50 or more               |
| Intensity of click stimulation in dB normal hearing level    | (0 - 110) or more            |
| Intensity of click stimulation in dB Standard Pressure Level | (30 - 140) or more           |
| A/D Converter in bits  | 16 or more                   |
| <b>MUST HAVE</b>   |                              |
| OS Platform (windows 7 / WINDOWS 8 / XP)                     |                              |
| High cut and low cut filter                                  |                              |
| Impedance check  |                              |
| Simultaneous acquisition in all 4 channels during EMG test   |                              |
| Sweep speed and sensitivity can be changed after acquisition |                              |
| Screen separator for viewing M and F or H waves side by side |                              |
| User programmable rates for all stimulator                   |                              |

|   |  |
|---|--|
| Speaker sound can be stored and can be played on a multimedia                                       |  |
| Split screen facility   |  |
| Facility of reviewing EMG data with raster  |  |
| F wave separator  |  |
| Pediatric shock stimulator  |  |
| LED GOGGLES & FLASH   |  |
| EMG trigger   |  |
| Electrical Stimulator   |  |
| Adult and pediatric Headphone   |  |
| Auditory stimulus   |  |
| Video monitor facility for changing checker board size  |  |
| Facility of flash mode  |  |
| Facility of setting   |  |
| Facility of averaging   |  |
| Facility of latency intensity graph   |  |
| List of muscles for easy selection  |  |
| Facility of online guide to locate various muscles and nerves                                       |  |
| Click duration in 100 $\mu$ s square wave   |  |
| Square size of 4 to 32 or more  |  |
| 13 difference check sizes to be viewed in 16 difference field                                       |  |
| H Reflex, Blink Reflex Facility   |  |
| Repetitive Stimulation  |  |
| Necessary trolley   |  |
| Online UPS (30 minutes backup) of appropriate capacity for the entire system                        |  |
| Surface electrode - 10 pair   |  |
| Stimulating bar electrode and felt stimulation pads - 1 no.   |  |
| Ring electrode - 2 pair   |  |
| Ground electrode with cable (paediatric) - 1 nos.   |  |
| Ground electrode with cable (adult) - 1 nos   |  |
| Disposable concentric needle electrode - 25 pcs   |  |
| Adapter for needle electrode connection - 1 no.   |  |
| Adaprer for disposable electrodes connection should be provided (20cm) - 2 pcs                      |  |
| Jumper Electrode - 4 pcs  |  |
| Skin Preparation gel - 10 nos.  |  |
| Conductive paste - 10 nos.  |  |
| Selected bidder should construct necessary proper earthing at the space identified by the authority |  |
| Shoul supply colour printer for printing of graphics and reports in A4 size paper facility          |  |
| <b>Quality Standrad and safety Certification</b>  |  |
| US FDA and European CE (4 digit)  |  |