



## **Notice Inviting e-Tender**

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**Supply and Commissioning of EP study System for IPGME&R-SSKM Hospital**  
**(Discipline- Cardiology)**  
(Submission of Bid through *online*)

**Bid Reference No.: WBMSCL/NIT-226 /2023**

**Dated-10.05.2023**

### **Amendment: I**

**Revised Technical Specification of EP System with Stimulator & RF Generator**

#### **STANDARD SPECIFICATION:**

1. All the components should have FDA & European CE (4 digit notified body) certificate as the mark of quality Standard.
2. All the components of EP Lab: Recording System, Stimulator, RF Ablator and 3D Mapping should be from **preferably** Single Principle/manufacturer.
3. 03 years warranty and 10 years maintenance support from the principal manufacturer / **supplier (to be warranted by principal company)**.

#### **EP System with Stimulator & RF Generator**

##### **Recording System**

1. Should have a 12 – Body Surface ECG
2. Should have unipolar intra-cardiac channels up to 120
3. Should have a facility of Invasive pressure recording & display – 2 Channels
4. Should have a facility of off-line Software/Hardware system to “Review Data” – one installation outside
5. Must be supplied with compatible laser printer
6. **Operating system should be preferably Windows 7 or above (Upgradation is mandatory whenever it is available without any extra expenditure)**
7. HDD minimum 500 GB and 4GB RAM
8. Data storage in standard HDD, Patient data writable only DVD/CD/USB storage.
9. Ease of use with simple commands using one keyboard.
10. Must have a facility of real time beat by beat display.

11. Should provide retro recording for minimum of 30 sec.
12. Continuous surface ECG visualization
13. Facility of Split screen display for re-viewing & matching the EGMs.
14. View of real time & review data simultaneously
15. Selectable amount of data to be stored per patient
16. Computer based display of RF parameter
17. Should have option of automatic export of screen page to power point slide
18. Adequate filtering for good signal quality
19. User configurable reporting format
20. Data transfer to Power Point, JPEG or similar format
21. Display of RF parameters graphically in the EP software
22. Aggregate report of RF delivery per case
23. Only one keyboard to control the complete system.
24. System should have at least three 23" Monitors.

### **Stimulator**

1. Must be preferably separate Digital Stimulator Integrated to the Amplifier
2. Should have a facility of **2 or more** pacing channels with up to 6 extra stimulation option
3. Should have 9 preprogrammed protocol and 10 programmable protocol
4. **Preferably** have an option of Stimulator Touchscreen
5. Stimulation protocols can be controlled through touchscreen, keyboard and mouse.

### **Radiofrequency Ablator System**

1. RF Ablator should be of 100 Watt
2. **Must be compatible with Thermister or Thermocouple catheters.**
3. Should have a memory features for ablation parameter storage & recall
4. Must have auto cutoff intelligence feature in RF ablator
5. Must have temperature and Power control Mode available

### **3D Electro-anatomical Mapping system**

Following general features should be available.

- Capable of 3D non-fluoroscopic mapping of arrhythmia facilitates radio frequency ablation.
- Electro anatomic 3D mapping should be based on location technique using electrical field current or magnetic field or both electrical and magnetic field.
- Platform based on PC computer

- The equipment should be latest model should be launched 2021 or later with capability to create 3D map of multiple Arrhythmias.
- System should be based upon open Platform allowing the use of any make of regular EP catheters / Patch from multiple manufacturers.
- Intuitive Graphical representation of catheters & up to 256 Shadows to identify previous position.
- System should offer Contact Mapping for multiple arrhythmias.
- Should have the capability to treat non-sustained arrhythmias & create Voltage Map from a SINGLE PVC beat.
- Should offer uninterrupted view of unlimited number EP catheters and minimum 128 Catheter Electrodes in a three Dimensional Map.
- Must have the capability to record simultaneously upto 3000 Virtual Unipolar Electro-grams & display them as selected by user.
- Should store permanently at least 10 beats of patient data & have the facility to make a Map from stored ECG in the Review mode.
- Should have Respiration compensation facility by measuring actual change by impedance & modest patient movement should not affect the procedure.
- Should have the capability of creating Real time geometry from upto 20 electrodes on the catheter
- Should offer 1 TB Hard drive with separate partition of 400 GB of patient data storage.
- Should offer option of doing pediatric cases as well on the 3D system.
- Should offer feature of simultaneous Real time and review options.
- While doing complex fractionated electro-gram (CFE) mapping system should allow user to define data collection interval from 1 – 8 seconds.
- 3D system should be able to integrate with all the equipment in the cath lab including wide range of Recording system, Generators (Including Cryo).

- 3D System should have a minimum of 1 KHz sampling rate for best signal quality.
- Should be CE and USFDA approved as mark of quality standard.
- Should have advanced capability of displaying simultaneous two live maps- Voltage and time maps.
- Should display both Bipolar and Unipolar maps for enhanced visualization.
- Should be able to do faster high density mapping by allowing point collection from all electrodes of the catheter.
- The supplier should provide the saline flow irrigation pump (with options for both low and high flow rates) and integration to the RF ablator to facilitate irrigated ablation. It should be possible to switch between both low and high flow rates automatically (preferably) or manually.
- Should provide option of Automatic mapping of the defined area for faster mapping and marking points automatically.
- Should provide an optional quote for compatible Contact Force Technology.
- Supplier should provide 10 units of 3D accessories along with the machine for initial cases.
- Rate of Consumables to run the machine is to be quoted separately.
- AC power operation and UPS compatibility

Note: The response time in case of any breakdown should be within 24 hours.