



## **Notice Inviting e-Tender**

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**Procurement of Ultrasonic Osteo-Surgery System for the Department of Orthopaedics,**  
**NRS MCH, Kolkata**

(Submission of Bid through *online*)

**Bid Reference No.: WBMSCL/NIT-063/2026**

**Dated-16.01.2026**

### **Amendment-I**

#### **Revised Technical Specification**

#### **Ultrasonic Osteo-Surgery System**

1. Ultrasonic Osteo-Surgery System should have a design to provide clean cuts through osseous structures with minimal loss of viable bone while sparing adjacent soft tissue to enable rapid, safe & precise osteotomies. Ultrasonic surgical device should minimize loss of viable bone with drastic reduction of intra-operative bleeding. Osteo-Surgery System should consist of an Ultrasonic console, hand piece with wrench, foot switch & system accessories having following features:
2. Ultrasonic console with inbuilt irrigation pump for Ultrasonic Osteosurgery to work on 20 to 25 kHz $\pm$  500 kHz frequency with maximum 300 micro-amp Ground leakage current.
3. Console should deliver maximum output power of 130 Watt.

Console front panel should have digital display with following features:

- I. Ultrasound enabled/Standby button.
- II. Menu Button (optional).
- III. Amplitude control for power selection.
- IV. Pulse rate control for power selection.
- V. Ultrasonic Timer with Reset.
- VI. Irrigation Flow rate control (Variable up to 90ml/minute)
- VII. Various specific buttons for different modes.
- VIII. Should have inbuilt upgradable feature for wound debridement as and ultrasonic aspiration with additional hand piece.

#### 4. Foot switch Control for Ultrasonic output.

- I. The Ultrasonic Surgical device should have straight hand piece for ease of use. It should be autoclavable / low profile to be used in various procedures.
  - II. Straight or angle Hand piece should have light weight piezo electric transducer to convert input signal into mechanical oscillations - 2 Nos.
  - III. Straight Hand piece blade should oscillate in linear, like motion enabling an effortless dissection of hard cortical bone with 1,300,000 to 1,350,000 or more strokes per minute<sup>19</sup>. Also, blade should be atraumatic to soft tissue with linear movement of blade which eliminates wrapping & tearing of soft tissue.
  - IV. Ultrasonic System should provide non-abrasive, compression cut with minimal bone loss in combination not more than 0.5-1.0 mm thickness blade.
  - V. Hand Piece should facilitate non-necrotic bone dissection with help of in line/ integrated liquid pathway to direct fluid to blade tissue interface side<sup>22</sup>.
  - VI. The system should have integrated / in-line irrigation which should run through the hand piece and through the blade.
  - VII. All disposable blades should have channel to support in-line/ integrated irrigation.
  - VIII. Blade should have safety stop feature for precise and fast osteotomies. Elastic tissue response, Blunt Cutting Edge, Jet nozzle expels irrigation.
5. Accessories like T-handle and torque wrench should be provided with the system.
  6. Straight Tips for hard tissue removal to be connected with hand piece with blade thickness as small as 0.5, 1.0 mm should be in following sizes with standard working length:
    - A. Bone scalpel Blade with inline irrigation channel inside the blade with tubing (Includes 10 mm blade & short extension) - 20 Nos.
    - B. Bone scalpel Blade with inline irrigation channel inside the blade with tubing (includes 20 mm Unilateral Serration blade & short extension) - 10 Nos.
    - C. Bone scalpel Blade with inline irrigation channel inside the blade with tubing (Includes 20 blade & short extension) - 30 Nos. 35.
    - D. Bone scalpel Blade with inline irrigation channel inside the blade with tubing (Includes 25 mm blade & short extension) - 10 Nos.

#### 7. Irrigation System

- Pump type - Peristaltic<sup>27</sup>.
  - Pump flow rate - Variable up to approximately 90 ml/min<sup>28</sup>.
  - Pump control Flow rate control<sup>29</sup>.
  - Tubing - Male luer lock connection at hand piece<sup>30</sup>.
8. Whole System should be CDSCO certified.
  9. Customized suitable trolley should be provided along with the system<sup>39</sup>.
  10. Environmental Specifications

- Operating temperature 55-95° F (13-35°C).
- Relative humidity 20-90% (Non condensing).
- Standard atmosphere pressure.

**Certificate:** The bidder/OEM should submit valid CDSCO Certificate/ Registration/ License for both the manufacturer(s) and importer(s) as applicable.