

## **AMENDMENT No.1**

**Date: 26/06/2014**

**Subject: Amendment to the tender Enquiry Document**

**Ref: Tender Enquiry No.: HLL/PCD/PATIALA/02/14-15 dated 27/05/2014**

The pre-bid meeting for the referred tender enquiry was held on 06/06/2014. Based on the pre-bid discussion with the prospective bidders, following amendments are being incorporated in the referred tender enquiry document.

### **SECTION - VI**

#### **LIST OF REQUIREMENTS**

**Part II: Required Delivery Schedule Amended for item at sl. No. 13 (1.5Tesla MRI) only as under:**

**a) For Indigenous goods or for imported goods if supplied from India:**

**90 days from the date of opening of L/C of Direct Imported items as stated in para b) below.** (Tenderers may quote the earliest delivery period).

**b) For Imported goods directly from foreign:**

**90 days** from the date of opening of L/C. The date of delivery will be the date of Bill of Lading/Airway bill. (Tenderers may quote the earliest delivery period).

Installation and commissioning shall be done within 60 days of receipt of the stores/ goods at site or within 60 days of handing over the site for installation, whichever is later.

Delayed delivery and/ or installation and commissioning liquidated damages will get applied as per GCC clause 23.

### **SECTION-VII**

#### **Technical Specifications**

##### **Item No. 2: Digital Research Microscope with CCD Camera**

**Existing:** Para 1. Digital Research Microscope with CCD Camera.

**Read As:** Para 1. Digital Resrach Microscope with camera & **imaging software.**

**Existing:** Para 2. Observation Tube - SiedentopfTrinocular, 30 deg. inclined 360 deg. rotatable. IPD range 52-75mm.

**Read As:** Para 2. Observation tube- Trinocular, 30 deg inclined, IPD range 52-75 mm.

**Existing:** Para 3. Eyepiece - Focusable WF 10x (18mm/ 20mm).

**Read As:** Para 3. Eyepiece- focussable 10x with **F.O.V 20 or better.**

**Existing:** Para 4. Revolving Quintuple nose piece (for objectives)

**Read As:** Para 4. Revolving **Quadruple** nose piece (for objectives)

**Existing:** Para 5 : Objectives - RP Series Infinity Corrected Plan 4X, 10X, 40X (Spring Loaded), 100X (Spring Loaded, Oil Immersion)

**Read As:** Para 5. Objectives-Infinity Corrected Plan 4X,10X,40X(Spring Loaded),100X (Spring Loaded,Oil Immersion)

**Existing:** Para 7. Image Device - 2/3” CCD Camera - Resolution 1.4MP or better with suitable mount

**Read As:** Para 7. ½ CCD/CMOS **scientific color** camera-resolution 1.4 MP or better with suitable mount.

**Existing:** Para 9. Interface – USB

**Read As:** Para 9. Interface-USB or **port to connect PC**

**Added Para: Stage-XY mechanical stage with minimum stage size of 180 (W) x 130(Y) mm or better & travel range of minimum 75mm (X) and 50mm(Y) or better with double slide holder capability.**

### Item No. 03

#### Computerized cardiopulmonary exercise testing system with treadmill for humans

**Existing:** Para A13 - The system should have the following: **PFT supplement: FRC-Helium/Nitrogen washout/Methane and diffusion single breath.**

Para A14 - Automatic BP measurement through Tango Type automatic BP recording device to record BP at all stages of exercise and automatically enter into the recorder

**Read as: Para -A13 - DELETED**

**Para A14 – DELETED**

**Existing Para B -2 -** The digital interface (RS 232) should allow the treadmill and all its functions being controlled via an Ergo spirometry measuring station or a PC (SW program for control via virtual User Terminal to be included). Current values such as speed, gradient, time, index no., distance as well as pulse rate can be transferred to the Ergo spirometry measuring station.

**Read as: Para B -2 – Deleted.**

**Existing:** Para B - 3 (i): **Speed: adjustable from 0 - 22 km/h optional: 0 - 30 km/h**

**Read as:** Speed: **adjustable from 0 - 22 km/h**

**Existing:** Para 3 (ii): Resolution: 0.1 km/h; 0.5 %, Gradient: 0 - 24 %: electrical engine brake prevents acceleration caused by body

**Read as:** Para 3 (ii): **Deleted**

**Existing:** Para 3 (iii): Weight at gradient; optional: reverse operation 0 to -24% for downhill running (up to 5 km/h)

**Read as:** Para 3 (iii): **Deleted**

**Existing:** Para 3 (v): Acceleration: 7 intensities (3 ... 131 sec from 0 to max.) manual or also selectable via program step.

Para 3 (vi): Slow down: 7 intensities (3 ... 131 sec from max. to 0) manual or also selectable via program step

**Read as: Para 3 (v & vi) - Deleted**

**Existing:** Para 3 (vii): Motor power: 2.2 kW

**Read as: Para 3 (vii): Motor power: 2 kW approx.**

**Existing –**

Para 3(ix) – Heart rate measurement: POLAR wireless, 1-channel receiver, beat-to-beat ECG precise measurement automatic load control according to pre-programmed heart rate (target pulse)

Para 3(x) - Interface: RS232 (V 24) incl. PC-, CosRec-, CosCom- ECG, Oxycon and serial printer protocol.

Para 3(xi) - Programs: fixed memory locations incl. test programs Conconi, Ellestad, Duke, Cornell, Naughton, etc. in combination with User Terminal Platform: wear-resistant and shock-absorbing Handrails: metallic railing in front and at both sides.

4. User terminal with HR Measurement
5. Integrated User Terminal with high contrast LC display. Complete with POLAR Heart Rate Measurement system and heart rate dependent load control. Current values such as speed, gradient, time, index no., distance as well as pulse rate should be legibly presented on the LCD. Programs should be available with fixed memory locations incl. test programs Conconi, Ellestad, Naughton, etc.
6. Following should be available
  - (i) Para graphic Software:- The PC-software package Para Graphics should provide on-line recording of the load parameters and the heart rate in the form of graphs on the colour screen. The data should be exported to other programs (e.g. POLAR, Cyclo Vantage, HRCT, etc.) and should thus be evaluated.
  - (ii) Apart from on-line recording the software package Para Graphics HRC should provide a heart-rate controlled training. It should work automatically to control the speed of the treadmill according to the desired range of the heart rate that should be programmed.

**Read as – Deleted all above Para**

**Existing Para 7 (iii) - Heart rate [bpm]**

**Read as Para 7 (iii) – Deleted**

**Existing Para –**

8. Rehabilitation attachment:- comfortable joint adjustment in width and height ; with scale; the Rehab attachment should be fixed to the lateral railings of the Treadmill. The Rehab attachment should be folded together, and should not need to dismantle it after use
9. Full Resting ECG Evaluation 12 Leads with Computerized Reporting Analysis of Waveform Morphology & Rhythm.

10. Computerized Treadmill Exercise Testing with 12 Leads, 3 leads Screen Showing Advanced waveforms Analysis. Accurate ST Segment Measurement, Heart Rate, BP Measurement should include noninvasive BP measurement from time to time during treadmill evaluations.
11. Facility for programmability for all variety of protocols.
12. Trend Charts for Heart Rate BP & ST shifts in at least 3 leads available at the end of the test.
13. Minute to minute Evaluation of all leads available at the end of the test.
14. 12 lead Printout to be available as & when necessary during the test.
15. Stable Reusable Electrode that gives clear good quality online ECG.
16. ST Analysis of all 12 leads at maximum ST Depression & at Maximum METs should be available at the end of the test.
17. Minute to minute evaluation of HR, BP, METs, Speed , Percentage of elevation of Treadmill Belt, ST Analysis in minimum 3 selected leads or maximum ST Depression out of all leads should be available at the end of the test.
18. Disc storage of at least 5 patients real time patients ECG / PFT analysis

**Read as - Deleted all above Para**

#### **Item No. 4: Portable automatic Computerized Spirometer**

**Existing:** Para v: Internal memory 2500 tests

**Read as:** Para v: Internal memory **100** tests or **more**.

#### **Item No. 5: Evoked Potential Machine**

**Existing:** Para 4: Standard program for routine electromyogram (EMG) recording motor unit potential (MUP) analysis, interference pattern analysis, single fiber EMG, jitter analysis, automatic computation with display

**Read as:** Standard program for routine electromyogram (EMG) recording motor unit potential (MUP) analysis, interference pattern analysis, single fiber EMG

**Existing:** Para 11: PC requirements: Intel® Core™ i5-760 processor (2.80GHz, 1333MHz FSB, 8MB Cache) Genuine Windows® 7 Professional, 64bit (English) or higher ; 21.5” Full HD Widescreen Flat Panel Monitor ; 6 GB DDR3 SDRAM, 500GB SATA Hard Drive ; Single Drive: Blu-ray Disc Combo (DVD+/-RW + BD-ROM). Facility for internet connectivity, with facility of up gradation

**Read as:** Suitable PC

**Existing:** Para 12: Colour laser printer & UPS with 20 minutes back up for whole system along with computer

**Read as:** Laser Printer and UPS with 30 min. backup.

**Existing:** Para B - 14: Recording paper – 3 [three]

**Read as:** Deleted

**Item No. 6**

**High resolution /Quality Microscope with digital camera, image analyser & computer**

**Existing:** High resolution /Quality Microscope with digital camera, image analyser & computer

**Read as:** Built in high resolution research grade microscope with digital camera

**Existing:** Para 1 : Digital Research Microscope with CCD Camera.

**Read as:** Digital Motorised Research Microscope with CCD Camera.

**Existing:** Para 2 :Observation Tube – Siedentopf Trinocular, 30 deg inclined 360 deg rotatable. IPD range 52-75mm.

**Read as:** Trinocular, 30 deg inclined with 3 way light path sector of 0:100, 100:0, and 20:80

**Existing:** Para 3 :Eyepiece - Focusable WF 10x (18mm/ 20mm).

**Read as:** 10x with F.O.V. 22 or better (focussable)

**Existing:** Para 4 : Revolving Quintuple nose piece (for objectives)

**Read as:** Revolving motorised sextuple nose piece (for objectives).

**Existing:** Para 5 : Objectives - RP Series Infinity Corrected Plan 4X, 10X, 40X (Spring Loaded), 100X (Spring Loaded, Oil Immersion)

**Read as:** Objectives - Infinity Corrected Plan 4X, 10X, 20X, 40X (Spring Loaded), 100X (Spring Loaded, Oil Immersion)

**Existing:** Para 6 :Illumination - 6V 20 W Halogen Lamp with 5 spare lamps

**Read as:** Para 6 :Illumination - 12V 100 W precentered Halogen Lamp with 5 spare lamps

**Existing:** Para 7 : Image Device - 2/3” CCD Camera - Resolution 1.4MP or better with suitable mount

**Read as:** Para 7 : Image Device - CCD Camera - Resolution 5MP or better with suitable mount and should be from the same manufacturer of camera

**Existing:** Para 9 : Interface – USB

**Read as:** USB/Fire wire

**Added Para:** Camera, Microscope and Software should be from the same manufacturer.

**Item No. 7: HPLC along with its accessories**

**Existing:** Para 3.4 Photo diode array detector:Drift less than  $5 \times 10^{-4}$  AU/Hour

**Read as:** Photo diode array detector: Drift less than  $10 \times 10^{-4}$  AU/Hour.

**Existing:** Para 3.4 : Photo diode array detector:Noise level  $\pm 0.3 \times 10^{-5}$  AU

**Read as:** Photo diode array detector: Noise level  $\pm 1.0 \times 10^{-5}$  AU

**Existing:** Para 3.4 :Photo diode array detector:Light source D2, W, D2+W lamps (3 modes)

**Read as:** Para 3.4 :Photo diode array detector:Light source D2/D2+W lamps.

**Existing:** Para: Florescence detector:Wavelength accuracy: $\pm 2$ nm

**Read as:** Florescence detector: Wavelength accuracy: $\pm 3$ nm

**Existing:** Florescence detector:Wavelength reproducibility +/-0.2nm

**Read as:** Florescence detector: Wavelength reproducibility +/-0.25nm

**Item no. 8**

**Whole body plethysmograph for conscious unrestrained freely moving animals**

**Existing Para 3.1** - Chamber is constructed of a durable clear acrylic measuring 33” (83.8cm) OD and approximately 12” (30.5cm) in height with lid and ball valve in place, weight 7.8lbs (3.5kg)

**Read as 3.1** Chamber is constructed of a durable clear acrylic with lid and ball valve in place.

**Existing para 3.2** – Animal holding chamber 23.5” (59.7cm) ID and 5.75”(14.6cm) in height, volume approximately 425 cubic inches (2740 cubic cm)

**Read as Para 3.2 - Animal holding chamber for holding Rat.**

**Existing Para –**

4. System configuration accessories, spares and consumables, replacement accessories:
  - 4.1 Replacement screens
  - 4.2 Ball valve
  - 4.3 Water bottle with sipper tube
  - 4.4 Water bottle holder
  - 4.5 Temperature sensor
  - 4.6 Humidity sensor
  - 4.7 Temperature sensor cable for universalIXE
  - 4.8 Humidity sensor cable for UniversalIXE
  - 4.9 Rat whole body plethysmograph chamber lid
  - 4.10 Rat whole body plethysmograph chamber floor
  - 4.11 Gasket kit (6 gaskets)

**Read as Para –**

4. System configuration accessories, spares and consumables, replacement accessories:
  - 4.1 Replacement screens - **06**
  - 4.2 Ball valve - **06**
  - 4.3 Water bottle with sipper tube - **06**
  - 4.4 Water bottle holder - **06**
  - 4.5 Temperature sensor - **06**
  - 4.6 Humidity sensor - **06**
  - 4.7 Temperature sensor cable for universalIXE - **06**
  - 4.8 Humidity sensor cable for UniversalIXE - **06**
  - 4.9 Rat whole body plethysmograph chamber lid - **06**
  - 4.10 Rat whole body plethysmograph chamber floor - **06**
  - 4.11 Gasket kit (6 gaskets) - **06**

**Item No. 09: Real Time PCR**

**Added Para:** The offered system should be IVD approved.

**Item No. 10: Fully Automated Blood culture System**

**Existing:** Para 3 : Sample capacity more than 200 samples.

**Read as:** Sample capacity should 200 or more samples.

**Item No. 11: 2D Colour Doppler Ultrasound Equipment**

**Existing:** Para 2.3: System shall support the ability of post image acquisition optimization to optimize imaging parameters such as B Gain, TGC, Color Gain, Dynamic Range, Speckle Reduction levels, Doppler Gain, Doppler Base Line on image recalled from the image archive.

**Read As: Deleted.**

**Existing:** Para 2.4: System shall allow for live image and archive images side-by-side or quad display on a single monitor. This display shall allow any type of image – B-Mode, Color, or power Doppler on either side.

**Read As: Deleted**

**Existing:** Para 7: M-Mode Imaging: The system shall have a facility allowing the M-Mode cursor to be adjustable in any plane and allow for accurate measurements. The M-mode shall be available from a CINE loop or live image.

**Read As: Deleted.**

**Existing:** Para: 4 Unit should have Ultrasound Contrast imaging capability (Micro bubbles). Tissue Harmonic imaging with contrast should be available as standard feature.

**Read As: Deleted.**

**Item No. 12: 2D Colour Doppler Ultrasound Equipment**

**Existing:** Para Clonoscope: • Optical System

Field of View: 140 degree or more

Depth of View: 4-100 mm or better

HD TV compatible CCD: High resolution Color chip of latest technology

**Read As:** Para Clonoscope: • Optical System

Field of View: **120** degree or more

Depth of View: 4-100 mm or better

HD TV CCD in all scopes

**Existing:** Para : Supplier should have supplied similar equipment to reputed institutes like PGIMER Chandigarh or AIIMS Delhi

**Read As:** Deleted

**Existing:** Para HD medical LCD Monitor

**Read As:** 19" LCD/LED HD monitor

**Added Para:** Scopes, processors, camera unit, monitors, light source should be European CE or US FDA approved.

**HD monitor LCD/LED 19"- 2 Nos - one for clonoscope and one for duedenscope**

**Item No. 13: 1.5 TESLA MAGNETIC RESONANCE IMAGING SYSTEMS**

**Existing:** Para: II **MRI Compatible Anesthesia Machine** - Anesthesia Ventilator:

1.The Anesthesia machine should have integrated Anesthesia Ventilator system that should have at least CMV or A/CMV mode with adjustable breath rate, tidal volume and I:E ratio

**Read as:** The anesthesia machine should have inegrated anaesthesia ventilator system that should have CMV or A/CMV,SIMV mode with adjustable breath rate ,tidal volume and I:E ratio.

**Existing:** II **MRI Compatible Anesthesia Machine-** Anesthesia Ventilator:3. Anesthesia ventilator should have following adjustable parameters: (The range mentioned below in adjustable parameters is minimal desirable and wider range than this will be preferred)

a. Tidal volume range 50ml to 1200ml

**Read as:** II **MRI Compatible Anesthesia Machine** - Anesthesia Ventilator:3. Anesthesia ventilator should have following adjustable parameters: (The range mentioned below in adjustable parameters is minimal desirable and wider range than this will be preferred)

a. Tidal volume range 20 ml to 1200ml

**Added Para for MRI Compatible Anesthesia Machine –**

**1.- Anesthesia machine ,ventilator and vaporizer should be from the same manufacturer.**

**2. - Anesthesia ventilator should have a colored and atleast 6.5" screen .**

**Existing:** Para 8.g. Suitable coil with at least 32 channels for peripheral angiography application

**Read as:** **Dedicated** coil with at least 32 channels for peripheral angiography application

**Existing:** Para 8.h. Bilateral Breast Coil with at least 8 channels. (The best available coil with vendor should be supplied)

**Read as:** Bilateral Breast Coil with at least 4 -8 channels

**Existing:** Para 8.j. Dedicated Knee Coil with at least 15 channels

**Read as:** Dedicated Knee coil with at least 12 channels

**Existing:** Para 8: Coil SystemPara 8: Coil System

I. Loop Flex Coil.

**Read as:** Loop flex coils Large, Medium and Small with atleast 4 channels.

**Existing:** Para 8.n. Suitable coils for multi-nuclear MR spectroscopy for brain, muscle, cardiac and liver spectroscopy. (Price should be offered separately for coils and software if available)

**Read as:** Suitable coils for **Proton** MR spectroscopy for brain, muscle, cardiac and liver spectroscopy. (Price should be offered separately for coils and software if available)

**Existing:** Para 9.g. MR angio Imaging: Should have 20/30 TOF, 20/30 PC , MTS and TONE,ceMRA, Facilities for Accelerated time resolved vascular imaging with applications like Treats/Tracks/Tricks sequences.



**Read as:** MR angio Imaging: Should have 20/30 TOF, 20/30 PC, MTS and TONE, ceMRA, Facilities for Accelerated time resolved vascular imaging with applications like Treats/4DTraks/Tricks sequences.

**Existing:** Para 9. Application sequences

k. Whole body screening images studies for metastasis.

**Read as:** Whole body application for metastasis disease with coverage of more than 180 cms without patient repositioning.

**Existing:** Para 9. Application Sequences

q. Advanced Cardiac Applications: (Optional price to be quoted separately)

**Read as:** q. Standard Cardiac Applications - **Standard**

**Existing:** Para 9.t. Susceptibility weighted imaging (i.e.SWI)/ Venous BOLD imaging.

**Read as:** Susceptibility weighted imaging with phase information (i.e. SWI/SWIp/eSWAN 2.0) Venous BOLD imaging.

**Added Para:**

1. Cable to be provided from transformer to the room for approx. 300 mtrs.
2. Quantification of fat in the liver

#### **Item No. 14: Volumetric Infusion Pump**

**Existing:** Para 3.10: RS232C/USB/RS485 output for Printer, PC connectivity and Data acquisition with selectable baud rate options should be there.

**Read as:** RS 232C/USB/RS485 output for printer, PC connectivity and Data acquisition.

#### **Item No. 15: SYRINGE INFUSION PUMPS**

**Existing:** Para 2. Must Work on commonly available standard

2ml/3ml/5ml/10ml/20ml/50ml/60ml Syringes with accuracy of minimum of +/-2% or better, with automatic syringe size recognition.

**Read as:** Para 2. Must Work on commonly available standard 5ml/10ml/20ml/50ml/60ml

Syringes with accuracy of minimum of +/-2% or better, with automatic syringe size recognition.

**Existing:** Para 4. Flow rate programmable from 0.01 to 1000 ml/hr or more in steps of 0.01 ml/hr with user selectable flow set rate option. SAVE last infusion rate even when the AC power is switched OFF.

**Read as:** Flow rate programmable from 0.1 to 1000 ml/hr or more in steps of 0.1 ml/hr with user selectable flow set rate option. SAVE last infusion rate even when the AC power is switched OFF

**Existing:** Para 8: - Should have upto 2000 history records

**Read as:** Should have upto 1500 history records or more

**Existing:** Para 17: Mounting device i Docking Station for two or four pumps as per requirement so as to enable to power up to 2-4 pumps with one power cord when mounted on IV pole (optional)

**Read as:** Mounting device Docking Station for two or four pumps as per requirement so as to enable to power up to 2-4 pumps with one power cord when mounted on IV pole -10Nos

**Item No. 16: Ventilator-High End (I.C.U)**

**Existing:** Para 3.3 c : 3 loops- P-V, F-V, P-F with facility of saving of 2 Loops for reference.  
**Read as:** Min 2 loops- P-V, F-V with facility of saving of 1 Loop for reference.

**Existing:** Para 3.10 : Two autoclavable expiratory blocks including flow sensors should be provided with each ventilator and no routine calibration should be required.  
**Read as:** Two autoclavable expiratory blocks including flow sensors should be provided with each ventilator and no routine calibration should be required.  
**Flow sensors and O2 Cell should be covered under warranty.**

**Existing:** Para 4.4 : Heavy duty air compressor & ventilator should be mounted & it should be mobile - 01 no. & it should be European CE approved.  
**Read as:** Heavy duty air compressor & ventilator should be mounted & it should be mobile - 01 no. from the same manufacturer

**Existing:** Para 7.3 : Certified to be compliant with ISO-7767 for Oxygen monitoring.  
**Read as:** Deleted.

**Existing:** Para 7.4 : Should meet IEC 529 Level 3 (IP3X)(spraying water) for enclosure protection, water ingress.  
**Read as:** Deleted.

**Added Para: Permanent or Galvanic O2 cell but it should be covered under warranty and CMC period**

**Item No. 17: Anesthesia Machine with Integrated Monitor & Ventilator**

**Existing:** Para 14 : Should have independent paramagnetic oxygen sensor for FiO2 monitor and flow sensor for spirometry.  
**Read as:** FiO2 Monitoring should be with Paramagnetic/ Galvanic O2 Cell Technology.  
**Oxygen Cell should be covered under warranty & CMC**

**Existing:** Para 13 c : It should have coloured screen of minimum 8 inch size.  
**Read as:** It should have coloured EL/LCD display screen of minimum 6 inch size.

**Existing:** Para 13 g : Tidal volume range from 20ml to 1500 ml or more  
**Read as:** Tidal volume range from 20ml to 1400 ml or more

**Existing:** Para 13 h : Respiratory rate from 4 to 80 or more  
**Read as:** Respiratory rate from 4 to 60 or more

**Existing:** Para 14- Bidder must ensure regular supply of medical grade Sodalime with rate quoted separately.  
**Read as:** Deleted.

**Existing:** Para 15: Should be able to display  
a) Pressure Vs time  
b) Volume / Flow Vs time

**Read as:** b) Volume / Flow Vs time- **Deleted.**

**Existing:** Para 15(d)- IBP Transducers: 20nos

**Read as:** Disposable IBP Transducers - 20 nos

**Existing:** Para 16 : Upgradable to modular EEG monitoring and SVO2 monitoring

**Read as:** Upgradable to modular EEG monitoring

### **Item No. 18: Neonatal Ventilator**

**Existing:** Para A 7: The flow sensor should be reusable and should be located proximal **between the Y piece and endotracheal tube**

**Read as:** The flow sensor should be reusable and should be located proximal **between the Y piece and endotracheal tube or at the machine end with quick response time**

**Existing:** Para A 10: **Should be compatible with the Nitric oxide delivery system Sensor NOx (Viasys Healthcare, CA, USA)** and the necessary connectors/adaptors/tubings and any other accessories required should be provided

**Read as:** **Should be compatible with the Nitric oxide delivery system Sensor NOx** and the necessary connectors/adaptors/tubings and any other accessories required should be provided

**Existing:** Para D.3a: Inspiration **Time: 0.1 – 3 sec**

**Read as:** Inspiration **Time: 0.2 – 3 sec**

**Existing:** Para D.3h: **Proximal flow trigger facility** with a trigger sensitivity of at least 0.2 L/minute

**Read as:** **Flow trigger facility** with a trigger sensitivity of at least 0.2 L/minute

**Existing:** Para H4: Nebulizer: **Should be in built and inspiration synchronized and preferably volume compensated with a time-programmable flow mechanism to activate nebulizer**

**Read as:** Nebulizer: **Should be in built/inline ultrasonic nebulizer with particle size  $\leq 3$  micron and should be synchronized with inspiration**

**Item no. 21**

**Complete specification of Laparoscopic Surgery Set with Hysteroscope & Resectoscope with High Definition Camera & Monitor are replaced with following**

**Item no. 21****HYSTEROSCOPE & RESECTOSCOPE**

<b>CAMERA CONTROL UNIT &amp; CAMERA HEAD</b>		
1	High definition Three chip Endoscopic camera system should have following features:	
	a) Digital HD technology	
	b) Progressive Scan	
	c) Camera control unit with three chip HD camera head having HD CCD chip of same aspect ratio of 16:9 and camera control unit should be able to produce following video output: DVI-D-2 nos, RGB-1 no. SDI – 1 no, S-VHS-2 nos, Composite Video – 1 no.	
	d) Three chip camera head should produce at head itself Pure Digital Signal with High Definition video (1920 * 1080P) with aspect ratio of CCD chip and video format of 16:9 or 16:10.	
	e) System should have integerated Parafocal Optical Zoom ( F should not be less than 12 mm and upper range should not be less than 30 mm, 2 X) to enhance image size and focus lens/rings to make it fully soakable and waterproof.	
	f) System should be able to optimize all the settings and should be ready as soon as connected to camera control unit.	
	g) Three Chip Camera control unit should be compatible with all the tree chip camera head and the company should provide standby facility within 48 hours of breakdown.	
	h) Should be compatible for remote controlled operation of various features	
	i) Camera should be suitable for Hysteroscope	
	j) Should have Integrated gain, shutter, Enhancement, white balance with brightness control.	
	k) All camera functions to be controlled from camera head buttons and through key board at camera control unit to make it controllable from both sterile and non-sterile zone	
	l) Technical Specification :-	
	Image Sensor CCD Chip	
	Pixels 1920 x 1080	
	AGC Microprocessor controlled	
	Lens F14-30mm	
	Video Outputs Composite to BNC, Y/C to S-VHS, RGB to D Socket, HDTV-DVI-D, DV for recording	
	Input Key Board for Character Generator, 5 pole Din	

<b>2 High Definition Medical Grade Monitor – 1 nos.</b>		
	Wide Screen Monitor having the following features:	
	a) HDTV Display in 16:10 HDTV format.	
	b) LCD/LED Crystal display	
	c) 26” High Resolution HD video Medical grade monitor –	
	d) Resolution : 1920 x 1200 pixels	
	e) SDI/HD-SDI, Composite, S-Video RGB, DVI-D, VGA input, S-VHS –	
	f) TFT screen stand/Fixtures for connecting to pendant system/Ceiling Light Arm	
	g) Dustproof and Drip Water Protected	
	h) Fast response time: (5-12ms)	
	i) Number of colours: 16.8 million	
	j) Luminance: 500cd/m2, contrast ratio: 800:1	
	k) Vertical/Horizontal Viewing angle: 178 degree	
<b>3. LIGHT SOURCE</b>		
	a) Xenon 300 watts	
	b) Manual and automatic adjustment of light intensity	
	c) Lamp life 500 hrs or more with at least one spare bulb	
	d) Display of lamp life/Bulb usage meter warning light	
	e) Standby mode with emergency lamp with visual indicator	
	f) Long ( 250 cm or more ) fluid and fibre-optic light cable of diameter 4.8-5 mm	
	g) Light weight	
	h) Certified for National International safety standard normal	
	i) Should be able to produce colour temperature of 6000K.	
<b>4 VIDEO- CART (Should be from the Indian manufacturer)</b>		
	a) Made of stainless steel / Epoxy coated metal	
	b) Portable on 4 antistatic dual castors, 2 with locking brakes	
	c) Required number of shelves for housing all the units of the set	
	d) Adjustable arm for fixation to either side for fixing the TFT monitor	
	e) One drawer unit with lock and key	
	f) Cable Manager	
	g) Power box with concealed wiring for providing electrical connections of proper rating to all the units	
	i) Separate mobile cart with lock and key for housing all the components of the image management system	
	j) It should be medical grade with touch screen monitor.	
	k. Full HD recording, Medical grade computer and Monitor, Touchscreen, Minimum 1 TB storage memory. It should have window based operating system, minimum Windows –XP.	
	iv. It should be CE approved.	

<b>Technical Specification for Hysteroscope &amp; Resectoscope</b>		
	<b>Description of Function</b>	
	The resectoscope is a hysteroscope with a built in wire loop (or other shape device) that uses high-frequency electrical current to cut or coagulate tissue. It allows surgery inside the uterus an organ without having to make an incision.	
	Hysteroscopy uses a hysteroscope, which is a thin telescope that is inserted through the cervix into the uterus for examination	
	<b>Operational Requirements</b>	
	Complete unit with Resectoscope and Hysteroscope is required	
	<b>Technical Specifications</b>	
	<b>A) HYSTEROSCOPE TELESCOPES STANDARD –</b>	
	a). Operating and Contact-Hysteroscope Forward-Oblique Full HD Telescope 30°, enlarged view, magnification 1x, 60x, diameter 4.0 mm, length 30 cm, autoclavable, fiber optic light transmission incorporated,- 1 no	
	b). Forward-Oblique Telescope 30°, enlarged view, diameter 4.0 mm, length 30 cm, autoclavable, fiber optic light transmission incorporated - 1 no	
	c) Diagnostic Sheath with obturator 5mm diameter for the above 4 mm Hysteroscope telescopes( item A ), with luer lock adapter	
	d) Continuous irrigation Operative Hysteroscope Sheath with obturator, outer and inner sheath for the above 4 mm hysteroscope telescope with channel for semi-rigid 5/8 fr size instruments. Should have facility for self-closing sealing system for precise irrigation.	
	<b>B)Accessories</b>	
	Hysteroscopy flexible / semi rigid instruments which should be adaptable to above sheath , 5/8 fr. Diameter-	
	a. Foreign body grasping forceps. –	2
	b. Scissors-Scissors semi rigid, blunt tips, 5 Fr., length 33-36cm, single action jaws-	4
	c. Scissors semi rigid, pointed jaws, 5 Fr., length 33-36cm, single action jaws, semi-rigid –	2
	d. Biopsy and Grasping forceps - Biopsy- and Grasping Forceps semi rigid, 5 Fr. , length 33-36cm, double action jaws -	2
	e. Punch Forceps - Punch through Cutting semi rigid 5Fr, length 33-36cm-	2
	f. Tenaculam grasping forcep, semi rigid, size 5Fr, length 33-36cm	2
	g. Needle electrode and ball electode-Unipolar – high frequency cords of any make should be compatible with the above equipment	
	h. Bipolar vaporizing electrode – high frequency cords of any make should be compatible with the above equipment	
	i. Myoma fixation screw	1
	j. Palpation probe	1
	k. Polypectomy loop	2

	<b>E) Resectoscope</b> including connecting tube for inflow and outflow for the above 4 mm hysteroscope telescope complete with continuous irrigation double sheath system, i.e outer flow and rotating inner tube with ceramic insulation distal tip,with obturator to be quoted along with working element and complete set of electrodes and 2 set of HF cables	
	All electrodes and Collin's knife to be bipolar/unipolar (as per requirement) to be quoted with appropriate cautery	
	<b>ACCESSORIES FOR RESECTOSCOPE FOR TCRE UNIPOLAR AND BI-POLAR SET</b>	
1	UNIPOLAR WORKING:- Unipolar Working Element to be used with 26FR Resectoscope sheath: Motion by means of a spring. The thumb support is movable. Return of the loop is controlled by the thumb and in rest position the electrode should rest inside the operating sheath, to be used with 4mm hysteroscopy telescope - 1 no	
2	CUTTING LOOP ELECTRODE FOR UNIPOLAR:-Cutting loop 24 Fr -12 nos	
3	STRAIGHT CUTTING ELECTRODE FOR UNIPOLAR:- Forward angle/straight cutting loop 24Fr - 06 nos	
4	ROLLER COAGULATING ELECTRODE FOR UNIPOLAR:- Roller electrode Cylindrical diameter 3mm, 24Fr - 06 nos	
5	POINTED ELECTRODE FOR UNIPOLAR:- Pointed electrode/Collines HF knife electrode, 24Fr - 06 nos	
6	VAPOR CUTTING ELECTRODE UNIPOLAR:- VAPOR CUTTING Electrode, 24Fr - 06 nos	
7	SPIKE ELECTRODE UNIPOLAR:- SPIKE Electrode 24Fr, size 3mm diameter, 24Fr - 06 nos	
8	BIPOLAR WORKING ELEMENT SET:- BIPOLAR Working Element to be used with 26Fr Resectoscope sheath: Motion by means of a spring. The thumb support is movable. Return of the loop is controlled by the thumb and in rest position the electrode should rest inside the operating sheath, to be used with 4mm hysteroscopy telescope. Should work in saline. - 01 no	
9	BIPOLAR CUTTING LOOP:- BIPOLAR Cutting loop 24 Fr should work in saline -	6
10	BIPOLAR CUTTING LOOP SMALL:- Cutting Loop 24Fr, bipolar, small should work in saline -	6
11	BIPOLAR ELECTRODE POINTED:- Coagulating Electrode 24Fr, bipolar, pointed should work in saline -	6
12	BIPOLAR ELECTRODE BALL END:- Coagulating Electrode 24Fr, bipolar, ball end should work in saline - no	6
13	BIPOLAR LOOP STRAIGHT:- Cutting Loop 24Fr, bipolar, straight should work in saline -	6

14	RESECTOSCOPE SHEATH FOR UNIPOLAR:- Continuous Flow Resectoscope Sheath 26 Fr., including connection tubes for in- and outflow, 2 LUER-lock adaptors, diameter 8 mm, oblique beak, fixed inner tube, with ceramic insulation, for use with working element -	2
15	RESECTOSCOPE SHEATH FOR BIPOLAR:- Continuous Flow Resectoscope Sheath 26 Fr., for Bi-Polar, including connection tubes for in- and outflow, 2 LUER-lock adaptors, diameter 8 mm, oblique beak, rotating inner tube, with ceramic insulation, for use with working element should work in saline. -	1
16	OBTURATOR:- Obturator, for use with the Resectoscope sheath. -	1
17	FIBER OPTIC CABLE:- Fiber Optic Light Cable, diameter 3.5 mm, length minimum 300 cm -	1
<b>5. Electrocautery compatible with, Hysteroscope&amp;Resectoscope</b>		
	1• Should have unipolar cutting and coagulation as well as bipolar cutting and coagulation modes and have the facility of blending cutting and coagulation in different ratios and degree –soft, standard and/ or forced coagulation and spray coagulation	
	2• Arc controlled cutting with a pre selectable power of maximum of 200 watts in both unipolar and bipolar modes	
	3• Arc controlled coagulation with a pre selectable power of maximum of 120 watts in both unipolar and bipolar modes	
	4• Auto stop function with automatic power – off on completion of coagulation process.	
	5• Automatic start function for bi- polar coagulation. Should be operable both in hand and foot mode and should have hand control switch on the handle of the electrode. Bipolar application with irrigation with sodium chloride	
	6• Endoscopy mode with reduced voltage output for use with fine endoscopic electrodes.(microfunction)	
	7• It should have automatic read out panel to display current being used and actual output at distal tip of electrode, simple operation due to clearly arranged control with easy to read symbols	
	8• Should be compatible with under water operative procedures	
	9• It should have neutral electrode monitoring through a patient contact system.	
	10• It should have automatic high frequency power cut off by autocoagulation stop and autostart facility	
	11• The unit should have the facility of self-testing for trouble shooting	
	12• Visual and acoustic signs of HF activation by different colored indicators and different acoustic tones for cutting and coagulating	
	13• Unit should have safety monitoring circuit in event of malfunction for output monitoring. Neutral electrode connection .Automatic self-test and automatic power cutoff in event of malfunction. Ground leakage current(LF/HF) HF application time	



	14. Power supply 230VAC, 50/60 Hz.	
	15• The unit should be supplied with all standard accessories such as Electrode, Foot switch, Twin earth pad , bipolar forceps with Cord, Electrode Handle with switches , neutral plate, ball electrodes, Loop electrodes, variable output power for all types of currents	
<b>6 System Configuration Accessories, spares and consumables</b>		
	6.1 System as specified	
	6.2 ACCESSORIES:- All Possible accessories of the equipments should be quoted. The specific accessory and its quantity will be decided on the basis of actual requirement	
	6.3 The system should be capable of accepting standard accessories of major international brands, which should be specified and for which suitable adaptor, if required, is to be provided	
	6.4 The codes and rates of all relevant individual accessories should be quoted separately with clear mention of period of validity of rates	
	6.5 Cautery system should be upgradable for vessel sealing device	
<b>7 Environmental factors</b>		
	7.1 The unit shall be capable of being stored continuously in ambient temperature of 0-50 deg C and relative humidity of 15-90%	
	7.2 The unit shall be capable of operating continuously in ambient temperature of 10-40deg C and relative humidity fo 15-90%	
<b>8 Power Supply</b>		
	8.1 Power input to be 220-240VAC, 50Hz fitted with Indian power-plug	
	8.2 UPS for all systems of adequate rating for power supply to the system for 60 minutes.	
<b>9 Standards &amp; Safety</b>		
	9.1 Should be USFDA or European CE approved product	
	9.2 Manufacturer and Supplier should have ISO certification for quality standards	
	9.3 Electrical safety conforms to standards for electrical safety IEC 60601-1 General Requirements ( or equivalent BIS Standard)	
	9.4 Shall meet internationally recognized standard for Electro Magnetic Compatibility (EMC) for electro-medicequipment : IEC-60601-1-2 :latest edition Or Equivalent BIS) or should comply with 89/366/EEC; EMC-directive as amended	
	9.5 Certified to be complaint with IEC 60601-2-2 Medical Electrical Equipment part 2-2: Particular requirements for the safety of equipment mentioned above – wherever applicable	
<b>10 Training</b>		
	10.1 Comprehensive training for staff of user department and support services till familiarity with the system.	
	10.2 Training of two faculties from each consignee to be provided	

<b>11 Documentation</b>		
	11.1 Product Literature in original along with that of accessories and indigenous components if any Photocopies/computer generated copies are not acceptable	
	11.2 Statement of compliance with tender specification with clear and unambiguous links to relevant portions of product literature/authentic document, which should be highlighted. Alternatives provide for noncompliant specification with justification must be described in details with supporting literature	
	11.3 Certificate of Compliance with standards and approvals stated above	
	11.4 Certificate of manufacturer/principal regarding authorization of service facility provided by the supplier	
	11.5 List of important spare parts and accessories, which are required for maintenance and repair, with their part number and costing.	
	11.6 Commitment for supply of log book with check list for daily, weekly, monthly and quarterly preventive maintenance with contact details of service personnel along with the equipment. The job description of the hospital technician and company service engineer should be clearly spelt out in the log book	

**Item No. 22: Orthopedic Operating Table with Accessories**

**Existing:** Para A1: Radiolucent table top made up of Carbon Fiber or equivalent for orthopedic use

**Read as: DELETED**

**Existing:** Para A2e. Should be able to slide longitudinally more than 250mm both side.

**Read as: DELETED**

**Existing:** Para A3. Should have provision for Eccentric Position.

**Read as: DELETED**

**Existing:** Para 9C. Lateral Tilt- **15-30 degree**

**Read as: Lateral Tilt- 15-25 degree**

**Existing:** Para 9g : Can be operated directly from the mains for all electro hydraulic and Manual override movements

**Read as: Can be operated directly from the mains for all **electromechanical** movements**

**Existing:** Para B-9. **Well Leg Support system**

**Read as: Leg Support system**

**Existing:** Para 13. **Beach chair position system with helmet type head rest for position of the patient along with radiolucent. shoulder plates**

**Read as: DELETED**

**Existing:** Para 14. Skull traction and head rest for cervical spine surgery  
**Read as: DELETED**

**Existing:** Para 15. Accessories for genucubital position  
**Read as: DELETED**

**Existing:** Para 16. Accessories for genupectoral position  
**Read as: DELETED**

**Existing:** Para 17. Mayfield attachment for cervical spine  
**Read as: DELETED**

**Existing:** Para 22. Silicone Gel pads (One set each) for various patient  
**Read as: DELETED**

**Existing:** Para 22a. Gel pads as Head ring: open and closed type for both adult and pediatric use separately  
**Read as: DELETED**

**Existing:** Para 22b. Gel pads for head rest in supine, prone and lateral positions separately for adults and children  
**Read as: DELETED**

**Existing:** Para 22c. Gel pads as operating table pad, perineal table pad, sacral protector, arm protectors  
**Read as: DELETED**

**Existing:** Para 22d. Gel pads for flexed knee in positions for spine surgery  
**Read as: DELETED**

**Existing:** Para 22e. Gel pads thigh, leg, heel  
**Read as: DELETED**

**Existing:** Para 22f. Gel pads for different positions  
**Read as: DELETED**

**Existing:** Para 23. Cushions (One set each): as foam pads for different positions:Head ring, lateral positioning, leg rest cushion, cushions especially for spine surgery  
**Read as: DELETED**

**Existing:** Para 24 **Should include below Pediatric accessories**  
**Read as: DELETED**

**Existing:** Para 24a. Pediatric traction boot.  
**Read as: DELETED**

**Existing:** Para 24b. Side post.  
**Read as: DELETED**

**Existing:** Para 24c. Perineal post  
**Read as: DELETED**

**Existing:** Para 25. Two or more detachable shoulder segment

**Read as: DELETED**

**Existing:** Para 26. RS 232 port/USB should be available for diagnostic and servicing purposes

**Read as: DELETED**

**Existing:** Para 27. It should be USFDA/European CE approved and all accessories from the same manufacturer

**Read as:** Table should be USFDA/European CE approved

**Item no. 23**  
**General Orthopaedic Instruments**

**The specification of General Orthopedic Instruments is amended and to be read as follows:**

<b>General Orthopaedic Instruments – Set No. 1</b>		
	<b>DESCRIPTION</b>	<b>QTY</b>
1	Hohmann's Retractors	2 Nos. each
	i. 8mm Blade	
	ii. 10mm Blade	
	iii. 17mm Blade	
	iv. 43mm Blade	
	v. 13/25mm Blade	
2	Hip Retractor set with quadrilateral frame and six spare blades	2 Nos.
3	Jacob's drill (open type/closed type)	5 Nos.
4	Bone levers	5 Nos. each
	Small size	
	Medium size	
	Large size	
5	Hammer	2 Nos. each
	i. Collin Mallet	
	ii. Gerzog Mallet	
	iii. Nylon Faced Hammer	
6	Bone Holding Reduction Forceps with locking device	2 Nos. each
	Small for forearm bones	
	Medium	
	Large for leg bones	
7	Bone Holding Forceps	4 Nos. each
	Lane's- Small, Medium, Large size 6 each	
	Ferguson's- Small, Medium, Large size 6 each	

	Hey Grove"s- Small, Medium, Large size 6 each	
	Burn"s – Small, Medium, Large size 6 each	
8	Bone forceps with Wire Passer (two blunt blades with hole for Passing K wire to fix phalanx fractures)	4 Nos.
9	Bone Reduction forceps with radiolucent attachment to pass Wire to fix the fractures	4 Nos.
10	Forearm clamps with provision for passing plates without Removing the clamp	4 Nos.
11	Wire holding forceps	4 Nos.
12	Wire holding pliers	
	Small	4 Nos.
	Large	4 Nos.
13	Wire bending pliers – 5 each of blunt tip and sharp tip	2 Nos.
14	Wire tensioner	2 Nos.
15	Wire passer	4 Nos.
16	Bending Irons for 3.5 mm plates	2 Nos.
17	Bending Irons for 4.5 mm plates	2 Nos.
18	Bending Irons for reconstruction plates	2 Nos.
19	K- Wire Traction Set Complete	2 Nos each.
	a) Each set should contain	
	i. Kirschner Stirrup for wire extension	
	ii. K – Wire double ended 200mm	
	b) Each Set Should Contain	2 Nos each.
	i. Gissane Stirrup for wire extension	
	ii. K- Wire double ended 200mm	
20	Bernhard Towel Forceps 6 ½	50 Nos.
	Backhaus Towel Forceps 5"	50 Nos.
21	Sims Maier Sponge Holding 11"	5 Nos.
22	Amputation Saw ( Charriere Type)	2 Nos.
23	Bone Curette	
	i. Volkman All Size	5 Each
	ii. Maartini Currettes All Size	5 Each
24	Patella Holding Forceps, 4 prong/3 prong	4 each
25	Pointed reduction Clamp(AO type, small, medium,large)	2 Nos. each
26	AO type self-centric Forceps, (AO type, small, medium,large)	2 Nos. each
27	Low Man clamp, small, medium, large	2 Nos. each
	<b>General Orthopaedic Instruments - Following Instruments made good quality stainless steel with long lasting cutting edge</b>	
1	A.O. type damaged screw removal set	2 set

<b>General Orthopaedic Instruments – Set No.3</b>		
	Specification: Following items manufactured to international standards by reputed multinational firms	
	DESCRIPTION	
1	Bone Rongeur – Double Action	
	Small Size 18 cm	2 Nos.
	Medium Size 23 cm	2 Nos.
	Large Size 27cm	2 Nos.
	Sergent Bone Rongeur	2 Nos.
	Duckbill Bone Rongeur	2 Nos.
	Lacksell Bone Rongeur	2 Nos.
2	Bone cutter – Double Action straight & curved	
	Small Size 18cm	2 Nos.
	Medium Size 23 cm	2 Nos.
	Large Size 27cm,	2 Nos.
	Tudur Edward	1 Nos.
3	K- Wire Cutter (Capacity 4 mm) with replaceable tungsten carbide	
	Blades with rubber Jaws Set	2 Sets.
	Should consist of:	
	I. K- wire cutter 28cm	
	II. Spare Blades 4 pairs with Screws	
	III. Spare Rubber Jaws 4 Pairs with Screws	
	IV. Allen keys 4 sets	
4	Stienmann Pin Cutter cutting capacity up to 6mm	2
5	Bone Curette Double Ended Round/Oval	
	Small 13 cm	2
	Medium 16 cm	2
	Large 20cm	2
6	Loute wire tightener cum wire cutter	2
7	Wire Bending cum cutter plier length 15 cm	2
8	Osteotomes, straight with tufnol handle, 2 each of sizes 7,10,15,20 mm width	2 each
9	. Osteotomes, curved with tufnol handle, 2 each of sizes 7,10,15,20 mm width	2 each
10	Osteotomes, straight with tufnol handle, 2 each of sizes 4,6,8,10,12 mm	2 each
11	Chisel Straight with tufnol handle 2 of each sizes 7,10,15,20 mm	2 each
13	Retractors	
	Wullstein-Weitlaner Self-Retaining Retractor 3 X 3 Teeth Blunt Length 13 Cm	2 Nos.
	Weitlaner Self-Retaining Retractor 3 X 4 Teeth Blunt Length 163 Cm	2 Nos.
	Weitlaner Self-Retaining Retractor 3 X 4 Teeth Blunt Length 26 Cm	2 Nos.

	Adson Self-Retaining Retractor 3 X 4 Teeth Blunt Length 26 Cm	2 Nos.
	Gelpi Self-Retaining Retractor With Balls, Blunt Length 18 Cm	2 Nos.
14	Elevators	2 Nos.
	Farabeuf Periosteal Elevator, Straight 13 Mm Length 15 Cm	2 Nos.
	Farabeuf Periosteal Elevator, Curved 13 Mm Length 15 Cm	2 Nos.
	Lambotte Periosteal Raspatory And Elevator, Curved 10mm Length 21 Cm	2 Nos.
	Mc Donald Elevator Double Ended Curved 6/6 Length 19 Cm	2 Nos.
	Cobbs Elevator Medium 13mm With Long Handle	2 Nos.
	Cobbs Elevator Large 19mm With Long Handle	2 Nos.
	Bristows	2 Nos.
15	Bolt Cutter	
	Bolt Cutter Maximum Capacity Dia 6mm Length 56 cm	2 Nos.
16	Lead Hands	
	Lead Hands for Adults	2 Nos..
17	Jacobs Chuck With Handle	
	Jacobs Drill Three Jaw Chuck With Key, Max Dia 6.35mm Length 14 Cm	2 Nos.
18	Awls	
	With T-Handle Length 14 Cm	2 Nos.
	With Round Handle Length 14 Cm	2 Nos.
19	Skin Grafting Handle With Blades	2 Nos.
	N.B. Only Complete set should be quoted and Sample to be produced for evaluation	
	<b>General Orthopaedic Instruments - Set No.6</b>	
	Specifications: Following items manufactured to international standards by reputed multinational firms	
	GENERAL INSTRUMENTS FOR ORTHOPAEDIC SURGERY (LONG LASTING)	
	Specifications	
	1 SCISSORS	
	STANDARD SURGICAL SCISSOR BLUNT/BLUNT, STRAIGHT LENGTH 13 CM	5 Nos.
	STANDARD SURGICAL SCISSOR BLUNT/BLUNT, STRAIGHT LENGTH 18.5 CM	5 Nos
	STANDARD SURGICAL SCISSOR BLUNT/BLUNT, CURVED LENGTH 13 CM	5 Nos
	STANDARD SURGICAL SCISSOR BLUNT/BLUNT, CURVED LENGTH 18.5 CM	5 Nos
	STANDARD SURGICAL SCISSOR SHARP/BLUNT STRAIGHT LENGTH 13 CM	5 Nos
	STANDARD SURGICAL SCISSOR SHARP/BLUNT STRAIGHT LENGTH 18.5 CM	5 Nos

	STANDARD SURGICAL SCISSOR SHARP/BLUNT, CURVED LENGTH 13 CM	5 Nos
	STANDARD SURGICAL SCISSOR SHARP/BLUNT, CURVED LENGTH 18.5 CM	5 Nos
	MAYO DISSECTING SCISSOR STRAIGHT LENGTH 14.5 CM	5 Nos
	MAYO DISSECTING SCISSOR STRAIGHT LENGTH 20 CM	5 Nos
	MAYO DISSECTING SCISSOR CURVED LENGTH 14.5 CM	5 Nos
	MAYO DISSECTING SCISSOR CURVED LENGTH 20 CM	5 Nos
	METZENBAUM DISSECTING SCISSOR BLUNT/BLUNT, STRAIGHT LENGTH 18 CM	5 Nos
	METZENBAUM DISSECTING SCISSOR BLUNT/BLUNT, STRAIGHT LENGTH 25 CM	5 Nos
	METZENBAUM DISSECTING SCISSOR BLUNT/BLUNT, CURVED LENGTH 18 CM	5 Nos
	METZENBAUM DISSECTING SCISSOR BLUNT/BLUNT, CURVED LENGTH 25 CM	5 Nos
	BEEBEE WIRE CUTTING SCISSOR BLUNT/BLUNT, STRAIGHT LENGTH 12 CM	5 Nos
	BEEBEE WIRE CUTTING SCISSOR BLUNT/BLUNT, CURVED LENGTH 12 CM	5 Nos
	LISTER BANDAGE AND PLASTER SHEAR SCISSOR LENGTH 20 CM	2 Nos
	BERGMANN BANDAGE AND PLASTER SHEAR. SCISSOR LENGTH 23 CM	2 Nos
	IRIS SCISSORS 11.5 CM STRAIGHT	2 Nos
	IRIS SCISSORS 11.5 CM CURVED	2 Nos.
2	FORCEPS	
	USA STANDARD DRESSING FORCEPS LENGTH 14.5 CM	5 Nos
	USA STANDARD DRESSING FORCEPS LENGTH 20 CM	5 Nos
	ADSON DRESSING FORCEPS LENGTH 12 CM	5 Nos
	ADSON DRESSING FORCEPS LENGTH 15 CM	5 Nos
	TAYLOR DRESSING FORCEPS WITH DISSECTOR END LENGTH 17.5 CM	5 Nos
	TAYLOR DRESSING FORCEPS WITH DISSECTOR END LENGTH 18.5 CM	5 Nos
	BROPHY DRESSING FORCEPS STRAIGHT LENGTH 20 CM	5 Nos
	STANDARD TISSUE FORCEPS 1 X 2 TEETH LENGTH 14.5 CM	5 Nos
	STANDARD TISSUE FORCEPS 1 X 2 TEETH LENGTH 20 CM	5 Nos



	STANDARD TISSUE FORCEPS 1 X 2 TEETH MEDIUM WIDE LENGTH 14.5 CM	5 Nos
	STANDARD TISSUE FORCEPS 1 X 2 TEETH MEDIUM WIDE LENGTH 20 CM	5 Nos
	STANDARD TISSUE FORCEPS FINE 1 X 2 TEETH LENGTH 14.5 CM	5 Nos
	STANDARD TISSUE FORCEPS FINE 1 X 2 TEETH LENGTH 20 CM	5 Nos
	USA STANDARD TISSUE FORCEPS 1 X 2 TEETH LENGTH 14.5 CM	5 Nos
	USA STANDARD TISSUE FORCEPS 1 X 2 TEETH LENGTH 20 CM	5 Nos
	DEBAKEY ATRAUMATIC DISSECTING FORCEPS 1.5 MM STRAIGHT LENGTH 16 CM	5 Nos
	DEBAKEY ATRAUMATIC DISSECTING FORCEPS 1.5 MM STRAIGHT LENGTH 20 CM	5 Nos
	DEBAKEY ATRAUMATIC DISSECTING FORCEPS 2.7 MM STRAIGHT LENGTH 16 CM	5 Nos
	DEBAKEY ATRAUMATIC DISSECTING FORCEPS 2.7 MM STRAIGHT LENGTH 20 CM	5 Nos
	HALSTEAD - MOSQUITO FORCEPS STRAIGHT LENGTH 14 CM	10 Nos.
	HALSTEAD - MOSQUITO FORCEPS CURVED LENGTH 14 CM	10 Nos.
	HALSTEAD FORCEPS STRAIGHT LENGTH 21 CM	10 Nos.
	HALSTEAD FORCEPS CURVED LENGTH 21 CM	10 Nos.
	RANKIN - KELLY FORCEPS STRAIGHT LENGTH 16 CM	10 Nos.
	RANKIN - KELLY FORCEPS CURVED LENGTH 16 CM	10 Nos.
	NEGUS FORCEPS CURVED LENGTH 19 CM	10 Nos.
	KOCHER (ROCHESTER- OCHSNER) FORCEPS 1 X 2 TEETH STRAIGHT LENGTH 18 CM	10 Nos.
	KOCHER (ROCHESTER- OCHSNER) FORCEPS 1 X 2 TEETH STRAIGHT LENGTH 20 CM	10 Nos.
	KOCHER (ROCHESTER- OCHSNER) FORCEPS 1 X 2 TEETH CURVED LENGTH 18 CM	10 Nos.
	KOCHER (ROCHESTER- OCHSNER) FORCEPS 1 X 2 TEETH CURVED LENGTH 20 CM	10 Nos.
1	NEEDLE HOLDERS	
	CRILE-WOOD NEEDLE HOLDER SERRATED P04, LENGTH 15 CM	10 Nos.
	CRILE-WOOD NEEDLE HOLDER SERRATED P04, LENGTH 20 CM	10 Nos.
	STRATTE NEEDLE HOLDER SERRATED P05, LENGTH 23 CM	10 Nos.

**Item No. 24: DRILL & SAW SYSTEM**

**Complete Specifications amended and to be read as following:**

**ELECTRICAL DRILL & SAW SYSTEM**

Drill and Reamer Hand Piece

Should have forward/ reverse and oscillation mode

Minimum speed of 1000-1200 rpm and should have variable speed control on the hand piece

Adaptors for Drill/ Reamer Hand Piece

Attachments

Reamer attachment for humrus, femur & tibia - -01No.

Drill chuck with Quick Coupling - -01No.

Oscillating Saw Attachment with variable Angle with Key -01No.

**All other terms and conditions of the tender enquiry remain unaltered.**