

UROLOGY DEPARTMENT
LIST AND SPECIFICATION OF MACHINE & EQUIPMENTS

(1) Anaesthesia Workstation

HIGH END ANESTHESIA WORK STATION WITH HIGH END MONITOR

- It should be three gas Anaesthesia workstation with 2 Vaporiser, Isoflourane & Sevoflourane
- The system has inbuilt ventilator with electronically controlled and pneumatic or Piston driven technology pneumatic driven by Oxygen
- System has changing of bellows for adult & infants.
- System has the following modes: Manual/ Spontaneous, Volume controlled & Pressure controlled
- The ventilator is capable to be upgraded to pressure support.
- Tidal Volume : 20 ~ 1400 mlOK, 20-1500 ml
- PEEP : 0 ~ 20 mbarOK, off/4-20 cmH2O
- Breathing Frequency : 4 to 60 BPMOK
- I:E Ratio : 4:1 to 1:4OK, 3:1-1:6
- Inspiratory pause : 0 – 50% of TiOK, off/5%-50%
- Is able to ventilate with atmospheric air, in case of total gas supply failure
- Has Integrated Airway monitoring and display of following parameters
- Expiratory Tidal Volume
- Expiratory Minute volume
- PEEP, Peak & Mean and Plaetau airway pressure
- Frequency
- Waveform display for Airway pressure
- The machine is suitable for low and minimal flow anesthesia application with compliance compensation of breathing ckt, fresh gas flow compensation/ decoupling
- 15" TFT-LCD colour touch screen Multipara Monitor
- Monitor has ECG, Respiration, NIBP, SpO2, Dual Temperature, Dual IBP as standard and has ST analysis
- Arrhythmia detection, pacer spike detection, Drug Dose Calculation and OxyCRG.
- Gas monitoring for 5 common anaesthetic gas agents along with N2O simultaneously, display the value of CO2OK concentration in exhale gas, both graphical and numerical, EtCO2 monitoring
- Audible visual oxygen failure alarm. Emergency Oxygen flush at 30 – 70 L/min bypassing the vaporizer
- In the event of complete power loss and battery failure it shall be possible to manually ventilate and deliver anaesthetic agent
- The system should has more than 2 hrs. Battery backup
- European CE Certified

(2) Specification for Bipolar TURP Set:

It should consist of the following:

1. Telescope 30 Degree ,diameter 4mm,autoclavable, fiber optic light transmission incorporated.
2. Working Element,Bipolar , Cutting by means of spring,movable thumb support and in rest position the electrode remain inside the resectoscope sheath.
3. Resectoscope sheath,26Fr,including connecting tubing for in and outflow, oblique beak,rotatable inner tube with ceramic insulation .
4. obturator for use with resectoscope sheath.
5. Cutting loop,bipolar,24 Fr
6. Cutting:loop,bipolar , small,24 Fr.
7. Resection in saline solution.
8. The direct current should return via the electrode to prevent a current flow via the sheath. to ensure a high deep coagulation effect during cutting.

Specification for Bipolar Resectoscope set:

- Resection in saline solution
- It should have one 30 degree and one 12 degree telescope, 4mm, autoclavable.

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- Cutting loop, bipolar, 24 Fr, to be used with both 30 degree as well as 12 degree telescopes.
- Cutting loop, bipolar, 24 Fr, small, to be used with both 30 degree as well as 12 degree telescopes.
- Resectoscope sheath, 26 Fr, oblique beak, rotatable inner tube with ceramic insulation.
- Obturator for use with sheath.
- Working Element, bipolar, cutting by means of spring, movable thumb support, in rest position the electrode is inside the sheath.
- Compatible HF cord.

Specification for High Frequency surgery units for bipolar resection should have following features:

- Degree of coagulation can be reselected in several steps.
- It should have the soft, standard and forced coagulation.
- Auto start function: manual adjustment of operating time limit for bipolar coagulation.
- Voltage regulated cutting
- Service port for software updates
- Automatic activation of coagulation current as soon as coagulation electrode touches tissue with both branches.
- Activation of HF functions possible via footswitch or manual control switch.
- Bipolar application with NaCl irrigation solution.
- Connecting sockets for unipolar and bipolar application can be selected according to individual requirements.
- Convenient use Touch Screen.
- Switchover function enables switching between two modes within a user programme via a footswitch from the sterile area.
- Interdisciplinary use
- Spray coagulation
- Arc-controlled cutting, unipolar
- Maximum Bipolar saline coagulation at 200 watt, bipolar saline cut -100 watt, bipolar saline –c-cut at 300 watt.
- Unipolar maximum at 300 watt where standard coagulation at 200 watt, forced coagulation at 120 watt, spray coagulation at 120 watt.
- LF/HF leakage current monitor
- Neutral Electrode safety system

(3) Blood Gas Analyzer

Arterial Blood Gas Analyzer System

The system should have following configuration:

- Patient test time of 35 seconds
- Automated, internal equivalent QC
- Checks barcode to ensure test card is not expired
- Manipulates the card to pass the calibration fluid over the sensors
- Controls the temperature of the reactions
- Measures the barometric pressure required to correct blood gas pressure measurements
- Measures the electro-chemical signals generated when the blood sample contacts the sensors
- Amplifies and transmit signals to the host by Bluetooth
- Sensor electronics:
 - Amperometric
 - Conductometric
 - Potentiometric
- No maintenance
- Offers portable or fixed functionality
- A/C Power or Rechargeable Battery
- battery provides power for 50 tests

- Communicates bi-directionally with epoc Host via integrated Bluetooth® technology Host Mobile Computer
 - It is the data interface between the Reader, the EDM and the User
 - PDA with a Windows operating system
 - Integrated Barcode Scanner to enter the user and patient identification numbers
 - Other data are entered by the user by tapping the screen with the stylus
 - The host receives, analyses and display the patients results
 - Test results storage: 2000 tests, using FIFO principle
 - Bi-directional communication with epoc Data Manager & Readers via Wi-Fi and Bluetooth
 - If the user has purchased an EDM, the host transmits the patients data to the EDM (on a laptop) via a wireless connection
 - Software update of a host can be done via EDM, or by using an SD card, or from host-to-host via wifi
 - Software update of a reader is done with the same procedure
 - Customizable epoc Host Software:
 - Patient test results, parameters, vitals
 - Respiratory & vent parameters
 - Reference & critical result ranges
 - Automated Critical result handling and reporting
 - Operator / Patient / QC lockouts
 - Host battery is charged when connected to the reader (and the reader to the power)
- BGEM Card**
- A single-use, self-calibrated test, every time –
 - Quality Assured PRIOR to inserting Pt sample
 - electro-chemical sensors. Electrical signals proportional to the analyte concentrations.
 - Blood sample port
 - on-board calibration fluid
 - 92 uL sample, fresh whole blood
 - Room temperature storage for up to six months
 - No more refrigeration hassles and manual dating
 - Barcoded for improved safety, easy inventory management and total quality assurance
 - Incorporates SmartCard™ technology
 - Allows for low cost, quality manufacturing
 - What takes some other POC vendors 2.5 weeks, we can do in 2.5 minutes
 - Multi-Analyte card incorporates
 - PO2, PCO2, pH, Na, K, iCa, Hct, Glu, Lac w/ additional calculated parameters

(4) Technical Specification of Bowl-Utensils Sterilizer

General Specification

The Bowl sterilizer will be of All-weld, Stainless Steel Construction. Product benefits include Automatic Temperature Control for operational economy and automatic elimination of excess steam.

Electrical Load – 60 KW or more

Electric Supply Requirement: 440 V, AC 3 Phase

Size: 800mm X 760mm X 850 mm

Main Features:

- 1) Automatic Temperature Control and Automatic Elimination of excess Steam.
- 2) The machine is provided with the inlet, outlet and overflow arrangements

Certification

Company should have ISO 9001-2008, ISO 2003-13485 and CE certified.

Manufacturing Experience

Company should have manufacturing experience more than 10years.

(5) High Frequency C-Arm System

SPECIFICATION OF HIGH FREQUENCY MOBILE SURGICAL C-ARM WITH 9" IMAGE INTENSIFIER AND MEMORY SYSTEM

C-ARM STAND having following movements:

Orbital movement	- 120 deg.
C-Arm rotation	- \pm 360 deg.
Horizontal travel	- 20 cm.
Swivel range	- \pm 12.5 deg.
Motorized Vertical Travel	- 40 cm.
Focus to II distance (SID)	- 90 cm.
C-Arm Depth	- 55 cm.

All movements should be preferably motorized.

"C" perfectly balanced, machine has to be smooth and free noise less travel in all directions.

X-RAY GENERATOR

X-Ray Tube Head Thermo tin plated container contains Stationary Anode X-Ray Tube and Oil inside, acting as coolant and insulator, 40 KHZ, High voltage Transformer, converting in to constant DC Potential. Generator output of 20 kW. Thermal capacity 500Kj, Thermal safety 57 deg C +/- 3 Deg.C

Output frequency	- 40 KHz with less than 1% ripple factor.
Rise time to maximum power	- Less than 1 ms

Inverter

Maximum performance frequency	- 40Khz
Maximum KV safety	- 110KV
Mains Voltage	- 230V AC +/- 10%, 50 Hz.

RADIOGRAPHIC PARAMETERS

Radiography KV range	- 40 KVP to 110 KVP
Radiography mA range	- 20mA
Radiography Timer	- In steps from 0.01 to 5 Sec.
Exposure Switch	- Two step with extendable cord for radiographic exposure.

FLUOROSCOPIC PARAMETERS

Kv range	- 40 KVP to 110 KVP.
mA for Low dose Fluoroscopy	- 0.25 to 3.0 mA
mA for High Definition Fluoroscopy	- 7.0 mA.
Fluoro Timer	- 5 Minutes auto cut off with buzzer.
Foot Switch	- Foot switch facility for fluoroscopy.
Imaging modes	- Fluoroscopy, Pulse Fluoroscopy and High Definition

Fluoroscopy, Radiography

Digital Display	- KVP, mAs and Fluoro/Radio mA.
Tube Head (Mono Block)	- Dual focus stationary anode tube insert of small focus 0.6 mm x 0.6 mm and large focus 1.5 mm x 1.5mm. Thermo Tin Plated Housing. Performance Frequency 40KHz. Operating Frequency 20KHz. Thermal Auto cut off Switch
Mono block Thermal Capacity	- 500 kj (670 kHU)
Thermal safety	- 57 deg C +/- 3deg
Automatic Dose Regulator	- Automatic Dose Regulator (ADR) for automatic control of dose rate according to the thickness of the part under examination. Manual adjustments of parameters also available.

CONTROL PANEL:

Compact, menu-aided & user-friendly control panel.

IMAGE INTENSIFIER:

9" IMAGE INTENSIFIER (IMPORTED) incorporating state of the art metal enamel technology & the following superb features:

CCD CAMERA:

High Resolution CCD Camera 1K X 1K using CCD solid-state image sensor. Pixel 1046 x 1046, Frame rate 30fps, video output 12 bit Dynamic > 58dB .

MONITOR:

17" (Inch) High Resolution Monitors - 2 nos.

MONITOR TROLLEY:

Ergonomically designed Monitor Trolley.

MEMORY UNIT with USB PORT:

Hundred frame permanent Image Storage Memory with inbuilt **USB port** (2.0 full speed) for innumerable permanent image storage and facility for last image hold. High Resolution

Image capture at Matrix 768 x 576, Capture Resolution 9 - Bit, Pixel Depth ~ 256

Grey Levels, Sampling Frequency 14.75 Mhz, Video Band Width better than 6 Mhz, Line

Resolution better than 40 lp per inch, Display VGA Resolution ~ 800x600x75 Hz refresh

rate, non-interlaced, Video Input 1Vpp / 75 Ohms, CCIR 625 lines, 50 Hz.

A) Image Capture ~ 1/25th of a second.

B) Averaging upto 16 frame

C) Contrast enhancement function

D) Permanent image storage in internal memory (Images are retained even when power is turned off)

E) Image Zoom function with horizontal and vertical pan. Zoom feature (x2 & x3)

F) Image Mirror function

G] Image rotation 360° (In steps of 1°)

H] Keeps date and time

I] Feature of Live / Pulse / LIH

INFRARED REMOTE FUNCTIONS: Different functions can be operated by **I.R. Remote** Control which makes it hassle free for the operator.

STABILIZER: Servo Controlled automatic Voltage Stabilizer to compensate incoming supply from 180V to 260V step less, rated power 2 KVA, for steady input to IITV system.

GRID: Circular 8:1, 103 Lines.

CASSETTE HOLDER 10" x 12"

Should be CE/FDA certified

(6) Technical Specification of Cylindrical Sterilizer

Requirements:
GENERAL:
High pressure steam sterilizer cylindrical Type
Steam sterilizer for the sterilization of instruments, textiles, rubber goods, plastics and glass materials.
The sterilizer should be constructed in accordance with CE / FDA Standard
Double Door System Should be available
Chamber dimensions, approximately: 500 mm X 1200 mm.
Capacity of sterilization chamber in liters: minimum 250 liters.
1. JACKET.
Jacket of the sterilizer contain safety valve (It blow when generated pressure reach required pressure) ,pressure gauge, vacuum breaker.
CHAMBER.
Compound gauge: - It shows the chamber pressure when steam entered into the chamber.
Vacuum dryer:- It's a special hot air apparatus to prevents contamination of sterilized load during drying process
Dial thermometer: - It shows chamber temperature when steam comes into the chamber.
Plug screen:- Its prevent the dirty articles to go into the steam trap
Steam trap: - Its release condense water & arrest dry steam to build up sterilized temperature.
Non return valve: - Its allow the steam to go in one way.
DOOR.
a) Door Hinge: Door is fixed with door hinge to the main unit for and smooth operation.
b) Door Gasket: Door is provided with a door gasket, fixes in the door grooves. Its prevent steam

<p>leaking through the door.</p> <p>c) Mechanical Pressure lock: There is a Mechanical Pressure type Safety Door which locks automatically as soon as the Chamber under pressure and unlocking only when the chamber is exhausted.</p> <p>The unit will be manufactured confirming to Bureau of Indian Standard specifications and would bear certification mark IS: 3829 (Part-I).</p> <p>The unit is fitted with safety door with self locking device. The gaskets would be provided on the door assembly.</p>
<p>Provision of Microprocessor:</p> <p>A Microster with the facility of MMI (Man-Machine-Interface) is provided instead of manual cycle operated multi-port operating valve. The features are:</p> <ol style="list-style-type: none"> The operator can program the cycles with his choice of different settings of time, temperature and corresponding pressure which can be used various contents/materials to be sterilized; MMI Backlit with eight digit password protection – ensures control of the operator; Will generally have six different settings for the cycles; Provision for digital display of temperature, time, pressure, cycle time and elapsed time for ease of operation of the cycle Can be connected to a dot matrix printer which will give the entire process taken place including date, batch, program type selected etc., Provision of 'error code analysis' inbuilt. 'Leak test' cycle provided Dick & Bowie available. The unit would be manufactured as per IS specifications Mark IS:3829(Part-I) and also would bear the certification. The unit will be mounted on tubular stand of mild steel in a ready to use condition. The sterilizer will be fitted with all necessary safety features. Feed Water Pump: Water can be filled up automatically, whenever required with the help of Feed Water Pump. HPHV (HIGH PRESSURE HIGH VACCUM): HPHV is for sterilization at high temperature and better drying. The unit will be fitted with an external high pressure high vacuum pump to give pre vacuum and post vacuum pulses.
<p>Certification</p> <p>Company should have IS-3829 marked.</p> <p>Company should have ISO 9001-2008, ISO 2003-13485 and CE / FDAcertified.</p>
<p>Manufacturing Experience</p> <p>More Than 10years.</p>

(7) 12 CHANNEL ECG MACHINE

- Should be 7-inch color LCD displays simultaneous 12-lead ECG waveforms and data more easily
- Adjustable display improves visibility and provides smooth operation
- Meets IEC60601-2-51 international standard for digital electrocardiographs specifying accuracy and digital filter performance
- ECG analysis by ECAPS 12C interpretation program

- ECG data can be transferred to a PC through wireless or wired LAN
- Easy to view colour LCD
- Easy Data entry for identifying patient and easier filing
- Upto 400 ECG file can be stored in internal memory approx. 3000 ECG file can be stored in a SD memory Card.
- Pacemaker direction facility
- High resolution Thermal Printer
- External Printer facility via PC
- Onscreen Lead quality graphic to save valuable time to highlighting Poor connection
- Print upto more than 100 continuous ECG in a full battery charge
- Rechargeable lithium Ion Battery.
Should be CE/FDA certified

(8) ENDOSCOPIC-3D CAMERA SYSTEM

3D Camera System

- Two distal Full HD image sensors with depth of focus 15mm to 120mm, optimized for stereoscopic endoscopy
- Slender and light design – weight should not be more than 450 gm for optimal ergonomics, integrated in a fine titanium case.
- Sterilization options: Autoclavable, Sterrad® 100S, NX, 100NX; Steris® system, V-Pro, and EtO
- Should have DVI-D output for transmitting the 3D signal in 1080p format at 50/60 Hz to a 3D monitor
- Easy switching between 2D and 3D modes. OR should be able to use 2D head on same.
- Integrated USB interface for saving captured video or still images in 2D while working on 2D mode.
- Should have input Keyboard for title generator, 5-pin DIN socket
- Should meets IEC 601-1, 601-2-18, CSA 22.2 no.601, UL 2601-1 and CE according to MDD, protection class 1/CF defibrillation-safe

High Definition Medical Grade Monitor capable of displaying 3D

- LCD Panel 32 inch (16:9 aspect ratio) High Definition 1920*1200 pixel resolution
- Should supply clip on type glasses also for selectable wearing surgeons.
- Various signal inputs: DVI-D for 3D signal DVI-D for 2d signal in HD, HD-SDI for 2D signal in HD, S-Video for 2D signal in standard resolution
- Should be supplied with 20 pieces of Light, passive circularly polarized 3D glasses.
- Viewing angle- Horizontal: 178 degrees, Vertical: 178 degrees (3D: TBD)
- Contrast 1000:1
- Should be supplied with 20 pieces of Light, passive circularly polarized 3D glasses.

LED Light Source 300 W Specifications:

- High intensity LED light source.
- High color temperature – more than 6000 K corresponds to brightness of sunlight resulting in high visual and photographic clarity for color retention.
- Life span of at least 50,000 hrs.

Fiber optic cable

- High light transmission for optimal 3D Imaging.
- Extremely heat resistance.
- Should be supplied with Diameter 4.8mm, Length 250 cm.

IMAGE/VIDEO RECORDING AND DATA ARCHIVING SYSTEM

State of the art user friendly Medical grade system (certified to be used in OT) should be offered with following features

- User should have full control of the system from the sterile field via camera head buttons, optional touch screen and optional foot switch
 - Parallel (synchronic or independent) recording of two image sources.
 - Still images and videos (optional with audio) in 2D FULL HD or 3D (with optional 3D-camera system). Water mark feature, Intelligent, adaptive storage management.
 - Storage location is freely definable and configurable.
 - Storage on internal memory (2 TB, FIFO), USB storage media via 2.0 and 3.0, optical media (DVD writer, Blu-ray reader), network drive, FTP or via DICOM.
 - Automatic storage in the background to reduce the time between the interventions. Easy management and overview of open/automatic save processes.
 - Import of patient data via keyboard or DICOM work list.
 - Intra- and postoperative printing via optional printer (local or network).
 - Various adaptable templates for printing to choose from Integrated surgical checklist following the WHO standard or customizable. Basic functions for the editing of still images and videos.
 - Playback of 2D and 3D content on separate monitor (optional 3D-system required).
 - Integrated file-viewer for still images, videos and checklists from diverse data sources.
 - Integrated security software as a protection against malware, independent from security patches of the operating system and it is only possible to run certified software.
 - Structured and clear user guidance, optimized for touch screen control. Scalable range of functions.
 - Low noise generation and fast system start due to SSD-technology.
 - Should have seamless USB silicone keyboard with touch pad to enter details
 - Controllable via 12" inbuilt touch screen
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- Input Voltage: 100-240 VAC.
 - Input Frequency: 50 - 60 Hz. Power output: 350 Watt.
 - CPU: Intel® Core™ i7-2600 @ 3.4GHz. Internal memory: SSD (70GB) | HDD (2 TB). Memory RAM: 8GB.
 - Connectors: 3 x 1 GB Ethernet (RJ 45), 6x USB 2.0, 2x USB 3.0. Image format: BMP, JPG, JPG2000.
 - Video format: MPEG-4, MPEG-2, MOV. Video signal inputs: 2 x DVI-D.
 - Color system: PAL, NTSC.
 - Resolution still images: up to 1920x1080, Aspect ratio 16:9.
 - Resolution videos: up to 1920x1080 Progressive Scan for 25/30 frames.
 - Preinstalled printer: SONY UP-DR80MD.
 - Type approval: IEC 60601-1-1, EN60601-1, EN60601-2.
 - The DICOM 3 interface shall be installed to the system in order to allow the surgeon to view all the DICOM 3 images stored in the PACS system on a digital light box within the operating rooms. Furthermore, all intra operative images recorded can be sent via the DICOM 3 interface to the PACS system for further processing.

Imported Endoscopic Trolley

- Equipment Cart , rides on 4 antistatic dual wheels equipped with locking brakes, central beam with integrated electrical sub distributors with 6 sockets, grounding plugs, modular in nature (should be able to add shelves and components later if required)
- Should have central monitor holder to mount monitor with height adjustable, swiveling and tilting, swivel range approx. 360°, loading capacity max. 18 kg, with monitor mount VESA 75/100
- Cart should have following dimensions in mm (w x h x d): Equipment cart: 830 x 1474 x 730, Caster diameter should be 125 mm
- It should consisting of: Base Module, equipment cart 1 x Top Cover, Beam Package, equipment cart 1 x Shelf, size - 630 x 25 x 510, 1 x Drawer Unit with Lock, 1 X Base Plate, 1 x Camera holder
- Cart should be compatible to accommodate followings when required
- At least 4 more shelves
- Isolation transformer
- Counter balance plate

- CO2 cylinder holder
- Monitor holding arms (lateral)

SHOULD BE US-FDA/CE APPROVED

(9) Specification for Flexible Cysto-Nephro-Fibroscope

It should consist of the following:

1. To be used for both office and outpatients clinic.
2. Allows endoscopic monitoring and therapy with pneumatic and laser energy source .
3. Large angle of view and deflectable distal tip for better orientation upto 110 degree.
4. Deflection of distal tip : upward-210 degree and downward- 140 degree.
5. Instrument channel 7 Fr.
6. Waterproof,fully immersible for cleaning and disinfection.
7. Sterilizable via EtO and FO gas,Steris and Sterrad.
8. Direction of view should be 0 degree.
9. Working length 37 cm with distal tip diameter of 15.5 Fr.
10. Following accessories are to be included: Case for fiberscope, grasping forcep 5 Fr for small fragments,single action jaws,Biopsy forcep 5Fr with single action jaws length 73cm, Pressure compensation Cap for ventilation during gas sterilization, Leakage tester with bulb and manometer,Cleaning brush 6Fr flexible long for instrument channel.,LUER-adapter,with seal.
11. stone basket 5Fr length 60 cm consisting of 3-ring Handle ,basket,coil.
12. Coagulating Electrode 4Fr length 73 cm.

(10) High Power Suction Machine:

Housing: Powder coated Heavy MS Cabinet

Capacity: -730mm Hg at 60 LPM

Noise Level: < 50dBa

Pump Type: Oil free double piston

Jars: Polycarbonate 2x2.5 litres cap with mechanical overflow system & ABS lid

Filter: Reusable bacterial filter

Tubing: non collapsible Suction tubing

Vacuum Gauge: 2.0"

Power: 220/230V AC 50 Hz single phase

With two sets of extra jars with lids & 5 sets of Patient tubings

ISI , CE Certified

(11) TECHNICAL SPECIFICATION OF LAP UROLOGY SET

Sl. No.	Description	Qty
1	Forward-Oblique Telescope 30°, enlarged view, diameter 10 mm, length 31 cm, autoclavable. fiber optic light transmission incorporated.	1
2	Forward-Oblique Telescope 30°, enlarged view, diameter 5 mm, length 29 cm, autoclavable, fiber optic light transmission incorporated,	1
3	EndoTip Cannula, size 6 mm, Color code: black, consisting of: Multifunctional Valve, Cannula with thread, with rotational insufflation stopcock, length 10.5 cm	1
4	EndoTip Cannula, size 11 mm, consisting of: Multifunctional Valve ,Cannula with thread, with rotational insufflation stopcock, length 10.5 cm	1

5	Trocar, size 13 mm, color code: black, consisting of: Trocar only, with pyramidal tip, Cannula without valve, with insufflation stop- cock, length 11.5 cm, Multifunctional Valve, size 13 mm	1
6	Double Reducer 13/10 mm and 13/5 mm	1
7	Reducer 11/5 mm	1
8	Grasping Forceps, rotating, with connector pin for unipolar coagulation, size 5 mm, length 36 cm, "Tiger-jaw", 2 x 4 teeth, single action jaws, consisting of: Plastic Handle, with ratchet, Outer Tube, insulated, Forceps Insert	1
9	Dissecting and Grasping Forceps, rotating, with connector pin for unipolar coagulation, size 5 mm, length 36 cm, double action jaws, consisting of: Plastic Handle, without ratchet ,Outer Tube, insulated ,Forceps Insert	1
10	Dissecting and Grasping Forceps, rotating, with connector pin for unipolar coagulation, size 5 mm, length 36 cm, right angled, double action jaws, consisting of: Plastic Handle, without ratchet , Outer Tube, insulated, Forceps Insert	1
11	Dissecting Forceps, rotating, right angled, size 10mm length 36 cm, double action jaws, consisting of: Metal Handle, with hemostat style ratchet, Outer Tube, insert ,Forceps Insert	1
12	Dissecting and Grasping Forceps, rotating, long, size 10 mm, length 36 cm, double action jaws, consisting of: Metal Handle, without ratchet ,Outer Tube, insulated, Forceps Insert	1
13	Dissecting and Grasping Forceps, rotating, size 10 mm, length 36 cm atraumatic, double action jaws, double action jaws, length of jaws 40 mm, for organs, consisting of: Metal Handle, without ratchet, Outer Tube, insulated, Forceps Insert	1
14	Scissors, rotating, with connector pin for unipolar coagulation, size 5 mm, length 36 cm, blades curved, double action jaws, length of blades 12 mm, consisting of: Insulated Handle, without ratchet, Outer Tube, insulated, Insert	1
15	Scissors Insert, Scissors, curved, length of blades 12 mm, double action jaws, size 5 mm, length 36 cm	1
16	Dissecting and Grasping Forceps, rotational, with connector pin for bipolar coagulation, size 5 mm, length 36 cm, , especially suitable for dissection, double-action jaws, consisting of: Ring Handle, Outer Sheath, Forceps Insert	1
17	Bipolar High Frequency Cord with 2 x 4 mm banana-plug to Coagulator, length 300 cm	
18	Surgical Sponge Holder, for atraumatic dissection of tissue layers, size 5 mm, length 30 cm, consisting of: Handle, Outer Sheath, insulated, Sponge Holder Insert	1
19	Suction and Irrigation Tube, anti-reflex surface with two-way stopcock, for single hand control, size 5 mm, length 36 cm	1
20	Needle Holder, straight jaws, axial ring handle with ratchet, size 5 mm, length 33 cm, for use with suture material 2/0-4/0, needle size RB (Ethicon)	1
21	Needle Holder, convex/ concave, slim jaws, curved left,axial ring handle with ratchet, size 5 mm, length 33 cm, for use with suture material 3/0, needle size RB-1 (Ethicon)	1
22	Transurethral Bougie, 18 Fr., with working channel 9 Fr., for anastomosis during laparoscopic prostatectomy	1
23	Laparoscopic Clamp, long version, length of jaws 10 cm, depth of jaws 2.5 cm, straight sheath, size 10 mm, length 30 cm, with axial ring handle, ratchet with security locking device	1
24	Heamolock Clip Applicator - LARGE	2
25	Heamolock Clip Applicator - EXTRA LARGE	2
26	Haemolock Polymer Clips - LARGE SIZE	1

27	Haemolock Polymer Clips - EXTRA LARGE SIZE	1
28	Self-righting reusable needle holder conducting auto-correction for needle holding angles 5mm diameter with palm type handle (for laparoscopic surgery.	1
29	ENDOPOUCH RETRIEVER SPEC BAG -Endopouch specimen bag 4"X6" with retriever handle.	1

(12) SPECIFICATION OF HOLMIUM YAG LASER WITH MORCELLATOR, MORCSCOPE, RESECTOSCOPE & FLEXIBLE URS FOR UROLOGY

1. The equipment should be Compact Holmium YAG Laser with minimum power setting comparable to 100 watt Holmium laser
2. The equipment should have atleast one Laser Head
3. The equipment should have atleast one flash Lamp.
4. The equipment should have atleast one set of mirrors.
5. The equipment & fiber should have a narrow angle of divergence (Numeric Aperture).
6. The equipment should have an integrated facility be used for the following procedure like-BPH, stones, bladder neck incision, strictures, Tumors, endo pyelotomy, etc.
7. The equipment should have emergency Switch to shut off operation completely.
8. The equipment should come with reusable vaporization fiber.
9. The equipment should have a facility doing LITT- Laser Induced thermo therapy (to make coagulated Zones in each lobe of prostate) with special fiber for treating high-risk patient and younger patient
10. The equipment should have a facility doing Holep, Holop, Holvop of BPH with reusable fibres.
11. The equipment should be Air cooled.
12. It should be possible to use BPH fibre for other application like stone fragmentation, Prostate enucleation, prostate Vapo-resection, prostate LITT, bladder neck incision, Strictures, Tumors, endo pyelotomy etc.
13. laser should be compatible with both rigid and flexible instruments .
13. The equipment should have the following technical specification.
 - a) Wavelengths : 2.1µm
 - b) Laser Power : at least 100W
 - c) Max. Laser energy : 0.2 - 4.5J at tissue level
 - d) Repetition rate : 5-50Hz
 - e) Operation modes : Preprogrammed for Litho, LITT, and Ablation modes.
 - f) Aiming Beam : 532nm, <1 mW, adjustable, for better contrast at tissue Level
 - g) Equipment must offer adjustable pulse width between 200-700 µsec beside adjustable repetition rate and energy.
 - h) Power required : 230 VAC with 16 Amps at Single phases
 - i) should have preset memories
 - j) should have internal cooling system
 - K) should be user friendly
 - L)-Electrical requirement – 220-240 v A.C 50Hz 30 A
14. Following accessories Should be supplied along with equipment

Fibre:-

- a) Fiber 200 – 230 microns - 06 Nos.

- (b) 365 microns fiber – 06 nos.
- (c) 550 to 600 microns fiber – 06 Nos.
- d) Vaporization fibre 800 micron (Reusable) - 1 No.
- e) Fibre for LITT (Laser Induced Thermo Therapy) - 1 No.

Accessories:-

- Goggles - 2no.
- Diamond Cutter - 1no.
- Stripper/clipper - 1no.
- Manual

15. A) ROTATION-MORCELLATOR

- i. Power control generator including footswitch, 50/60hz, 100-240 v.a.c.
- ii. Power stick m 4, motorized handpiece with connecting cable, max rotational speed 6000 rpm.
- iii. Rotation morcellator re usable, diameter 4.75 mm, working length 350mm comprising outer and inner blade (2no.)
- IV. Suction pump piranha for continuous aspiration of irrigation fluid and enucleated tissue

B) LASER MORCESCOPE

- i. Panoview plus operating telescope for morcescope angle of view 12 degree, parallel eyepiece, capacity 5mm for auxiliary instruments up to 4.8 mm diameter, panoview plus rod lens system automatic valve on the working channel, continuous irrigation through continuous irrigation sheath 26.5 fr.

C) LASER RESECTOSCOPE

- I. Panoview plus telescope, new generation with fixed eyepiece, dia 4mm 30 degree angle of view, autoclavable.
- II. Outer continuous irrigation sheath "e-line," 26fr., oval, by marberger, with automatic locking mechanism and oblique distal tip
- III. Inner continuous irrigation sheath "e-line," 24 fr., oval, by marberger, with automatic locking mechanism, rotatable irrigation ring, oblique distal tip with ceramic insulation
- IV. Visual obturator 24 fr.
- V. Laser working element with probe guide channel for laser treatment in the lower urinary tract, laser probes can be secured by locking mechanism
- VI. Guide tube for laser fibre, capacity 600 micron
- VII. Guide tube for laser fibre, capacity 365 micron

d) FLEXIBLE URETEROSCOPE with standard accessories for RIRS

- 16.** The Laser equipment should be from a standard manufacturer preferably from European/US country
- 17.** The company should have exclusive dealership rights of Laser in India.
- 18.** The Laser equipment must have ISO,CE & FDA standard certificates.
- 19.** The company should have service backup with trained engineer in the region.
- 20.** The company should have supplied more than 50-60 laser equipments in India.

21. The company should have at least 8-10 years service experience of Holmium YAG Laser. The company should have supplied more than 10 Laser equipment in premium government institute in India.

(13) Specifications for Pneumatic Intracorporeal lithotripter

1. Should have US FDA approval and CE certificate; certificates should be enclosed with the tender.
2. Should have a proven Performance record (including satisfactory performance and service) certificates from at least five teaching institutes.
3. Should have an installation base of a minimum of 10 nos in last three years.
4. Should submit at least five clinical papers from leading urologists to support the efficacy

An Intracorporeal Lithotripter.

- A single foot pedal for controlled delivery of energy.
- Should have diff probe sizes for Ballistic energy.
- Facility to connect the unit to hospital compressed air supply if desired.
- Should be able to withstand pressures from 3.5 to 5 Bar
- Facility to connect to the hospital vacuum supply for suction of stone fragments.
- Facility to collect the stone fragments during PCNL.
- Probes for various applications and scopes
- Ballistic probes: 0.8, 1, 1.6, 2 mm probes
- Optionally Flexible ballistic probe for use in ureter and renal pelvis through flexible scopes can be chosen.

Pneumatic (ballistic) energy unit:

- Repetition rate from 1 to 12 Hz.
- Hand pieces should be compatible for gas, glutaraldehyde sterilization or for autoclaving.
- Selection facility for the frequency setting.
- Should be supplied with a medical compressor.
- Should be able to integrate the suction and ballistic facility for PCNL.

(14) Specification for Adult Cystoscope & Resectoscope, Cystolitholithotripsy and urethrotome

The set should include the following:

1. Straight Forward 0 degree Telescope,diameter 4mm,Autoclavable,Length30cm,fiber optic light transmission incorporated.
2. Forward oblique 30 degree Telescope,diameter 4mm,Autoclavable,Length30cm,fiber optic light transmission incorporated.
3. Forward oblique 70degree Telescope,diameter 4mm,Autoclavable,Length30cm,fiber optic light transmission incorporated.
4. Forward oblique 120 degree Telescope,diameter 4mm,Autoclavable,Length30cm,fiber optic light transmission incorporated.
5. Cystoscope-Urethroscope Sheath,19FR,22Fr & 25Fr each with obturator and 2 LUER-lock connectors
6. Telescope bridge,with 1 lockable channel
7. Telescope bridge,with 2 lockable channel
8. Catheter deflecting mechanism with 2 lockable channels,with quick control.
9. Optical Grasping forcep,double action jaws for stent removal.
10. Forcep for removal of foreign bodies of 5Fr,7Fr & 9Fr each with double action jaws,flexible,length 40cm.
11. Biopsy Forcep 5Fr, 7F & 9 Fr, each with double action jaws,flexible,length 40cm
12. Scissors of 5Fr, 7F & 9 Fr,each with Single action jaws,flexible,length 40cm
13. Ball electrode,unipolar,5Fr & 7Fr ,each with length 53 cm
14. needle electrode,5Fr & 7Fr, each with unipolar, Length 53 cm.
15. Resectoscope Sheath with LUER-Lock stopcock,including connecting tubing for in & outflow,26Fr,oblique beak,rotating inner sheath with ceramic insulation .
16. standard oburator & Visual obturator each with channel for flexible instruments.

17. Working element where cutting by means of a spring,the thumb support is movable and in rest position the electrode is inside the resectoscope sheath.
18. cutting loop,angled
19. coagulating electrode angled,blunt
20. coagulating electrode, with barrel-shaped end.
21. coagulating electrode,with ball end.
22. coagulating electrode,angled,pointed.
23. High frequency cords(Monopolar)
24. Protection tube for sterilization and storage of electrodes.
25. Sachse Urethrotome sheath,21 Fr with channel
26. Obturator for urethrotome sheath.
27. Telescope Bridge for use with urethrotome sheath with 5 Fr channel for instruments.
28. Supplementary Sheath,side open for introduction of ballon catheter,to slip on urethrotome sheath.
29. Mouermeyer stone punch -Punch-Working Element, Punch Sheath, with Central Valve, including connecting tubes for in- and outflow, 25 Fr., straight beak, with obturator. Insert Tube, with channel for flexible instruments, 7 Fr., with atraumatic beak for urethroscopy
30. Sachse cold knife,straight.
31. cold knife,round
32. cold knife,round
33. bottle type ellik evacuator
34. Toomey Glass syringe 50ml and 100 ml

(15) TECHNICAL SPECIFICATION OF MINI NEPHROSCOPE SET

SPECIFICATION FOR MINI and Micro NEPHROSCOPE SET

Miniature Nephroscope 12°, with angled eyepiece, 11/12 Fr., length 22 cm, autoclavable, one working channel 6.7 Fr. for instruments up to 5 Fr., fiber optic light transmission incorporated. Following accessories should be included: Insertion Aid, Instrument Port with Sealing System and Quick Release Lock, Seal, LUER-Lock Tube Connector, male, LUER-Lock Tube Connector, Tray for storage and cleaning.

3-4.3 Fr Micronephroscope with outer sheath compatible with a laser source , with standard accessories.
 3-4.3 Fr Micronephroscope with outer sheath compatible with a laser source , with standard accessories.
 One Set Dilator, Channel for guide wires, for use with Operating sheath of 15 / 18 Fr.

One Set Dilator, Channel for guide wires and distal curved channel for deflection of guide wires, for use with Operating sheath 16,5 / 19,5 Fr.

One Set Dilator, Channel for guide wires and distal curved channel for deflection of guide wires, for use with Operating sheath 21 / 24 Fr.

Operating Sheath, 15 / 18 Fr., for continuous irrigation and suction.

Operating Sheath, 16,5 / 19,5 Fr., for continuous irrigation and suction.

Operating Sheath, 21 / 24 Fr., for continuous irrigation and suction.

Grasping Forceps for Foreign Bodies, 5 Fr., double action jaws, flexible, length 40 cm.

(16) SPECIFICATION FOR PEDIATRIC CYSTOSCOPE,RESECTOSCOPE& URETHROTOME SET

The set should include the following:

1. Straight Forward 0 & 30 degree Telescope,diameter 1.9mm/2.1mm,Autoclavable,Length18cm,fiber optic light transmission incorporated.
2. Cystoscope-Urethroscope Sheath,9.5Fr,length 14cm with instrument channel 4Fr with obturator and 2 LUER-lock connectors.
3. Cystoscope-Urethroscope Sheath,11Fr,length 14cm with instrument channel 5Fr with obturator and 2 LUER-lock connectors

4. grasping forcep,3Fr, double action jaws,flexible,length 28cm
5. Biopsy forcep,3Fr,double action jaws,flexible,length 28cm
6. Ball electrode,3Fr,length 53 cm
7. needle electrode,3Fr. Length 53 cm.
8. Resectoscope Sheath ,including connecting tubing for inflow,11Fr and obturator.
9. Urethrotome Sheath,10Fr,with obturator
10. Telescope bridge,with 1 lockable channel to be used with resectoscope sheath.
11. Telescope Bridge to be used with Urethrotome sheath.
12. Working element where cutting by means of a spring,the thumb support is movable and in rest position the electrode is inside the resectoscope sheath.
13. cutting loop,angled
14. coagulating electrode angled,blunt
15. coagulating electrode,hook shaped,ball end.
16. coagulating electrode,without ball end.
17. coagulating electrode,angled,pointed.
18. Cold knife,straight
19. Cold knife,round
20. High frequency cords(Monopolar)
21. Protection tube for sterilization and storage of electrodes.

(17) TECHNICAL SPECIFICATIONS NEPHROSCOPE

a) Wide angle straight forward Rigid nephroscope , with continuous flow operating sheath capability 17 Fr

b) Wide angle straight forward Rigid nephroscope with angled eyepeice , with continuous flow operating sheath capability 20.5 Fr

c) Wide angle straight forward Rigid nephroscope with parallel eyepeice , with continuous flow operating sheath capability 22 Fr.

Wide angle straight forward Rigid nephroscope with parallel eyepeice , with continuous flow operating sheath capability 24 Fr

(Individual Prices of Scope to be quoted)

1. Lens-6° or 12° lens
2. The eye piece should be compatible with any standard endovision camera head.
3. Accessories- standard
4. Grasping forceps- Biprong , Triprong, alligator and peanut
5. Biopsy forceps
6. Endopyelotomy knife
7. Scissors
8. Sickle knife
9. Suction tube
10. Hollow obturator and fascial dilator (Preferably Amplatz)
11. Initial puncture needle – 2 part and 3 part
12. Storage & transportation tray
13. Alken cannula
14. Metal Alken dilator dilators
15. Amplatz sheath (Full set)

(18) SPECIFICATION OF FLEXIBLE URS

Uretero-Reno Fiberscope with contrapositive deflection mechanism, steerable, deflection of distal tip of atleast 270°/270°, direction of view 0°, angle of view of atleast 88°, working channel inner diameter 3.6 Fr., sheath size 7.5 Fr., working length of atleast 67 cm Following accessories should be included: Carrying Case, Leakage Tester, with bulb and manometer, Cleaning Brush, flexible, for working channel diameter 1.2 - 1.8 mm, length 150 cm, LUER-Adaptor, with seal

Grasping Forceps, 3 Fr., double action jaws, flexible, length 100 cm
Biopsy Forceps, 3 Fr., double action jaws, flexible, length 100 cm
Stone Basket, sterile, disposable, 2.5 Fr., length 120 cm
Coagulating Electrode, 3 Fr., unipolar, length 110 cm
Guide Wire, 3 Fr., with ball end, sterile, package of 10
Sealing for instrument ports
Cleaning adapter for instrument ports
It should adhere to sterilization method with ETO, Steris & Sterrad.

(19) SPECIFICATIONS FOR SURGICAL INSTRUMENTS

- All the instruments should be made of high grade stainless steel. The quality of steel should comply with the DIN standards.
- It should be of high quality and precision.
- It should be light weight, strong and durable.
- It should be non-magnetic.
- All instruments should be autoclavable.
- The manufacturer should have a direct repair facility available in India.
- All instruments should be autoclavable at a minimum of 134deg.
- The Instruments should be CE and FDA certified.
- For special instruments in which both CE and FDA certification is not available either CE or FDA certification alone may be considered.
- Copies of CE and FDA certification must be provided.
- All instrument set should be supplied with their container preferably with tray and silicon mat.

(20) SYRINGE INFUSION PUMP TENDER SPECIFICATIONS

Parameter	Desired Range / Eligibility
Flow Rate:	Should able operate in flow rate range of 0.01 mL/hr to 1200 mL/hr 0.01 - 10.00 mL/hr in 0.01 mL steps 10.00 - 100.00 mL/hr in 0.1 mL steps 100 - 1200 mL/hr in 1 mL steps Provision should be there to change the flow rate during the infusion with out compromising the patient safety Provision to increase the flow rate rapidly
Syringe Sizes:	Should have wide range of syringe sizes 5 mL to 50/60 mL Should accept any brand of Syringes
Volume Over Time:	Should calculate the flow rate automatically by entering the dose amount & time period for infusion OR Should calculate the Time required for infusion by entering the flow rate and dosage
Occlusion Pressure:	Wide range of occlusion pressure from 10 kPa to 120 kPa Should monitor the pressure changes online and indicate the changes on the screen Provision should be available to change the occlusion level during infusion with out compromising patient safety

Bolus Delivery:	Should infuse bolus volume with out stopping the infusion process Should have programmable bolus with infused volume displayed Provision for Hands Free bolus should be inbuilt & should be customizable Hands Free Bolus Dose Rate Range : 0.01 to 999 in units of mL Hands Free Bolus Time Setting Range: 1 sec. to 60 min
KVO:	Should have KVO facility
Power Supply:	Should work in A.C. Power supply in the range of 110 - 240 V Should have inbuilt battery that supports 12 hrs of back up operation
Alarms:	Should have the alaram functions like Syringe Barrel Detector, Syringe Size detection, Clutch Diengagement, Nearly Empty, Low Battery, Occlusion, Start Reminder, Re-Alarm, Delivery Limit Completion, Flow Rate / Volume judgement Alarm, No Flow Rate,

Changing Flow Rate:	A Dial unit should be inbuilt to change the flow rate
Special Functions:	Clearing the Volume Delivered during infusion Should provide a provision for locking the keypad Flow Rate Range Control should be inbuilt for both Lower flow rate limit & higher flow rate Limit Visual guidance for the syringe Loading mechanism should be inbuilt Stand by function should be available Display screen should be > 4 inches Brightness of the screen should be adjustable Buzzer Volumes should be adjustable Should able to detect & display the AC power connection status > 5000 events of History should be accessible from the machine Provision should be available for setting Date & Time
Safety Functions:	Buzzer Notifications while switching off the machine.Shock detection should be registered during the naked fall of machine > 1 mt height.Preventive Maintenance timer should be availble & should be customizable by user.Should prevent delivering excess volume after occlusion release.Should be Class I type & internally powered equipment & should prevent liquid ingress with IP24 certification.Bidirectional Pole clamp for safer transportability
Unit Weight:	Should weigh less than 2.5 Kgs and should be Portable
Power Consupmtion:	should not exceed 25 VA
Standard Accessories:	Pole Clamp, Power Cable, Instruction Manual, Service Manual,

(21) SPECIFICATIONS FOR DUAL ACTION LITHOTRIPSY (ULTRASONIC AND MECHANICAL)

The Dual Action Lithotripsy System must have followings:

1. Should have a single generator for both ultrasonic and low frequency mechanical energy integrated in the same machine.
2. The system should be able to deliver these energies by Same probes and Hand pieces
3. The system should have a Surgeon Controlled / Hand Activation Transducer& Suction

4. The unit should preferably be supplied with following probes : 3.76mm,3.4mm,1.83mm,1.50 mm,0.97mm.
5. The system should simultaneously produce (at the probe tip): - Constant Ultrasonic Wave energy (~21000 x per second)& Intermittent Shockwave (ballistic/mechanical) Energy – high-rate of occurrence ~300 x per second / 300 Hz .
6. The system must Fragment and aspirate all stone sizes, shapes, and composition at a fast speed with significant reduction in procedure time.
7. The system must be Compatible with standard Steam Autoclaving, Sterrad and Sterrad NX cycles
8. The System must be useful for fragmentation of urinary tract calculi in the kidney, ureter, and bladder.
9. The system must offer a complete Probe Size Portfolio – with Single-Use & Re-Usable options (validated to Global CDS requirements)
10. The system should have Integration of both ultrasonic + high frequency bursts of mechanical wave energies, delivered simultaneously from a single probe with Shock Pulse technology and suction control
11. The system should effectively fragments and pulverizes stones of various shape, size and composition.
12. The system should be a “plug & play” system
13. The system should have a single Handpiece design
14. The system should preferably also have hand activation which compliments the footswitch
15. The system should have Ergonomic Placement of Buttons allowing for physician control for all procedures (PCNL, mPCNL, URS, Bladder)
16. The system should have a transducer with Surgeon Controlled Suction.
17. System may have option for using both Foot Switch and Hand control/Hand Switch.
21. System should be US FDA & European CE certified .
22. Generator Specifications : • Voltage of 90-264VAC • Frequency 50/60Hz.

(22) Technical Specification for Integrated Bipolar and Ultrasonic Coagulation & Cutting Unit

The Unit should have following features :

- Synergistic of Ultrasonic energy combined with Bipolar HF energy
- Rapid Dissection and Reliable Hemostasis up to 7mm Vessels in a SingleInstrument
- Dedicated cart for transportation and storage
- Instrument recognition and automatic application of default settings forease of use.
- Provision for Automatic mist and smoke evacuation to maintain a clear laparoscopic view reducing delays associated with compromised visualization when combined with Co2 Gas Insufflator
- HF Unit should have operational compatibility for all Lap / Gyn / Uro /GI / Open Surgery and should have minimum 16 Monopolar & Bipolar modes to cover all OR requirements, boot time not more than 6 Sec, 4000 times feedback control cycle per second.
- LCD and Touch Screen user Interface
- HF unit should have Fast Spark Monitor ensures smooth and reproducible cutting in varying tissue (e.g., muscle & fat)
- HF unit should have Automatic Saline Detection mode for Urology application
- HF & US device should have CF type Protection against electric shock
- Device should have dedicated Seal and & Seal & Cut mode by hand activation without exchanging the instruments.
- Device should have best in class versatility, upto and including 7 mm vessel sealing capability, Fast cutting speed, Fine and easy dissection.

Hemostatic seal mode, Optimised grasping etc for getting less instrument usage & exchange, Uninterrupted operation flow and reduced OR time.

- Device should be supplied with following instrumentations :
 - 1) Ultrasonic Generator with Foot Switch
 - 2) Advanced HF Generator with Foot Switch
 - 3) Transportation Cart

- 4) Communication Cables
- 5) Autoclavable Transducer with cable (2 pcs)
- 6) Hand piece probes for lap (10 pcs)

(23) SPECIFICATIONS OF URODYNAMIC SYSTEMS

- Six or more Channel microprocessor based Urodynamic Equipment with Integrated PC
- Facility to conduct Uroflowmetry, Cystometry, Pressure Flow Study, EMG, & UPP etc.
- For Uroflowmetry system must have accurate spinning disk flow/ weight based transducer.
- The equipment should have atleast 4 pressure channels, 1EMG channel and 1Flow channel.
- The equipment should have long life pressure transducer and has to supply at least 3 nos with the equipment along with the cable
- The system should have H2O Pump for water cystometry with adjustable infusion rate of 2 to 10ml/min (increment of 1ml/min) 10 to 100ml/min (increment of 5 ml/min)
- Preset Index Programme should be shown on screen for easy selection of tests.
- The equipment should have easy to use screen monitor
- UPP puller along with stand.
- Facility of fully automatic comprehensive patient filing and report generation software with editing /post processing mode should be provided in the system.
- It should also be able to provide graphical representation of relation between detrusor pressure and urinary flow rate.
- The system should have inbuilt audible EMG and inbuilt speaker for audible EMG (Raw & Average) to ensure proper placement of electrode.
- Custom built imported trolley
- Equipment should have advanced integrated PC configuration with 19" high resolution monitor, 2GBRAM, minimum 500GB Hard Disk, CD / RW, Color Laser printer and UPS.
- The system should have Wide range of electrodes should be offered to conduct comprehensive pelvic floor EMG:-
 - Needle Electrodes - 2 nos.
 - Surface Electrodes - 1Pkt.
 - Ground Electrode - 1 nos.
 - Rectal Catheter (Feeding tube) - 10 nos
 - 2 Lumen Catheter for Cystometry & UPP 8F - 10 nos.
 - T-Piece - 4nos.
 - 3 way stop cock – 4nos.
 - Disposable Domes for Medex- 4nos.
 - Extension Set (Manometer Line) - 4nos.
 - Hush yoke cable 1.5 mtr. 1no.
 - EMG Cable 1no.
 - Surface electrode cable 1no.
 - Infusion sets 25nos.
 - Optional PQ Plot study
 - Optional Stress Profile study.
- Optional Video Urodynamic with the facility of image processing & Cine loops, Synchronization and superimposition of Video images over traces & vice versa should be possible, Invert of color in the images should be possible so that Radiographic images can be taken out i.e. image with black background & with white features.
- The equipment must have ISO / CE approval.
- Equipment should from a standard manufacturer
- The dealer should have exclusive dealership rights in India
- The dealer should have service backup with trained engineer in the region.
- The dealer should have supplied at least 40-50 urodynamics systems in India.
- The dealer should have at least 10 years service experience of urodynamics.

(24) UROFLOWMETER- TECHNICAL SPECIFICATION

- **Fully Automatic with auto start & Stop.** Measurement duration : atleast 180 seconds.
- Modes of measurements: Auto mode & Hesitancy Mode
- Successive test can be taken without the need to, empty the jar after every test.
- Nomograms in output report.
- It should calculate following parameters:-
 - Voiding time
 - Flow time/ Delay time
 - Time to max. flow
 - Max. flow rate
 - Avg. flow rate
 - Voiding volume
- It should have an accuracy of $\pm 3\%$ throughout the scale
- The equipment should have self test/calibration facility.
- Retention of Last test even if power fails.
- The printer should be built in for automatic print out after the test is complete along with patient identification and test result
- Multiple prints, of the same test possible.
- LCD display for Compact Uroflowmeter
- Portable, reliable , economical and Compact in size
- WEIGHT BASE/rotating disc based UROFLOW DEVICES
- Should comply to CE/ FDA standard

Standard Accessories :

Weight /rotating disc transducer assembly (01)

Urine collection beaker- 2000ml- (01)

Micturation chair – (01)

Funnel – (01)

Mains cable – (01)

Printer – (01)

- Printer cable – (01)

(25) UROLOGY HAND INSTRUMENTS

<u>BLADDER SET</u>	<u>1 Set</u>
FORCEPS, GROSS-MAIER, CVD., 26.5 CM	2
TOWEL FORCEPS, BACKHAUS, SHARP, 11 CM	6
TOWEL FORCEPS F. PAPER DRAPES, 11.5 CM	6
SCALPEL HANDLE, NO. 4, 13.5 CM	1
SCALPEL HANDLE, NO. 3, 12 CM	1
SCALPEL HANDLE, NO. 4L, LONG, 20.5 CM	1
SCALPEL HANDLE, NO. 3L, LONG, 21.5 CM	1
TC-DISS. SCISSORS, FINE, CVD., 18 CM	1
TC-DISS. SCISSORS, FINE, CVD., 20.5 CM	1
TC-DISSECTING SCISSORS, CVD., 23 CM	1
TC-DISSECTING SCISSORS, CVD., 26 CM	1
TC-DISS. SCISSORS, CVD., SERR., 18 CM	1
TC-DISS. SCISSORS, CVD., SERR., 23 CM	1

TC-SCISSORS, MAYO-LEXER, CVD., 16 CM	1
SCISSORS, POTTS, ANGLED UPW., 19.5 CM	1
TC-SCISSORS, DE BAKEY, 45°, 23 CM	1
OPERATING SCISSORS, SH/BL, STR., 14.5 CM	1
TISSUE FORCEPS, 1X2 T., SLIM, 14.5 CM	2
TISSUE FORCEPS, 1X2 T., SLIM, 20.5 CM	2
TISSUE FORCEPS, 1X2 T., SLIM, 25 CM	2
ATR. FORCEPS, DE BAKEY, 2 MM, 16 CM	2
ATR. FORCEPS, DE BAKEY, 2 MM, 20 CM	2
ATR. FORCEPS, DE BAKEY, 2 MM, 25 CM	2
DRESS. FORCEPS, ISOL., W/O CONN., 21 CM	1
FORCEPS, KOCHER, 1X2 T., STR., 14 CM	10
HAEM. FORCEPS, MOSQUITO, CVD., 12 CM	10
FORCEPS, MOSQUITO, 1X2 T., STR., 18.5 CM	2
FORCEPS, KOCHER, 1X2 T., STR., 20.5 CM	2
FORCEPS, KOCHER, 1X2 T., STR., 24 CM	2
FORCEPS, GROSS-MAIER, STR., 26.5 CM	4
PERITON. FORCEPS, MIKULICZ, HEAVY, 20 CM	6
DISS. FORCEPS, OVERHOLT, NO. 2, 20 CM	2
DISS. FORCEPS, OVERHOLT, NO. 4, 22 CM	2
DISS. FORCEPS, OVERHOLT, NO. 4, 28 CM	2
DISS. FORCEPS, GEMINI, STR. CVD., 23 CM	2
DISS. FORCEPS, GEMINI, STR. CVD., 28 CM	2
TC-NEEDLEHOLDER, CRILE-WOOD, 15 CM	1
TC-NEEDLEHOLDER, HEGAR, 20 CM	2
TC-NEEDLEHOLDER, DE BAKEY, 18 CM	1
TC-NEEDLEHOLDER, DE BAKEY, 23 CM	1
TC-NEEDLEHOLDER, DE BAKEY, 26.5 CM	1
TC-NEEDLEHOLDER, STRATTE, CVD., 23 CM	1
RETRACTOR, ROUX, SET, NO. 1-3, 17 CM	1
RETRACTOR, KOCHER, 61X25 MM, 23 CM	2
RETR., VOLKMANN, SEMISH., 4-PR., 22.5 CM	2
RETRACTOR, FRITSCH, 45X75 MM, 25.5 CM	2
RETRACTOR, MIKULICZ, 125X50 MM, 25 CM	1
MILLIN'S BLADDER RETRACTOR, LATERAL BLADES 55X25mm, CENTRE BLADE 115X44mm	1
RETRACTOR, KELLY, 205X38 MM, 27.5 CM	1
ABDOM. SPATULA, HABERER, 37/45 MM, 30 CM	1
LEGUEU BLADD RETRACTOR; 27CM	2
RETRACTOR, SIMON, 115X28 MM, 28 CM	1
VAGINAL SPECULUM, KRISTELLER, SET, NO. 2	1
CASPAR EXPLOR.HOOK, MED., 90°, 245MM	1
HOOKLET, CUSHING, 10 MM, 20.5 CM	1
EMMET FISTULA HOOK, 1PRONG, SHARP, 22CM	2

ATR. ORGAN SEIZING FORCEPS, 25 CM	2
ALLIS ATRAUMA FORCEPS, 8,4MM, 22CM	2
ATR. TISSUE FORCEPS, ALLIS, 24.5 CM	2
PENIS CLAMP, STOCKMANN, 8 CM	1
CITTEL CATHETER GUIDE, 46CM	1
ATR. URO-TANGENTIAL FCPS., NO. 1, 25 CM	1
PROBE, BUTTON END, Ø 2.0/2.0 MM, 30 CM	1
NEEDLE CASE, ROUND, PERF., F. 55-309-65	1
BOWL, METAL, H = 40, Ø 80 MM, 0.14 L	1
BOWL, METAL, H = 55, Ø 128 MM, 0.35 L	1
GUIDE NEEDLE, ANG., KNIFE SHAPE, 10 CH	1
HALSTED FORCEPS, 1X2 TEETH, STR., 185CM	2
KOCHER HYSTERECTOMY FORCEPS STR., 200 MM	2
KOCHER HYSTERECTOMY FORCEPS STR., 240 MM	2
MAIER POLYPUS, SPONGE AND DRESS.FORCEPS	4
MIKULICZ PERITONEUM FORCEPS LARGE, 205MM	6
OVERHOLT-GEISSENDOERFER, DISS. FORCEPS	2
OVERHOLT-GEISSENDOERFER, DISS. FORCEPS	2
DISSECT.FORC.,OVERHOLT-GEISSENDOERFER	2
GEMINI DISS. AND LIGATURE FORCEPS, 230MM	2
GEMINI DISS. AND LIGATURE FORCEPS, 280MM	2
KOCHER RETRACTOR, 60X25 MM	2
VOLKMANN RETRACTOR, SEMI-SHARP,4-PRONGED	2
FRITSCH ABDOMINAL RETRACTOR, 75 MM WIDE	2
MIKULICZ ABDOMINAL RETRACTOR	1
MIKULICZ ABDOMINAL RETRACTOR	1
KELLY RETRACTOR	1
HABERER ADOMINAL SPATULA, MALLEAB., TAP.	1
LEGUEU BLADDER RETRACTOR, 260 MM	2
VAGINAL RETRAC., TUEBINGER PATT.,95X20MM	1
SIMON VAGINAL RETRACTOR, 115 X 26 MM,	1
SUPRAPUBIC TROCAR & CANNULA WITH GROOVE 6mm	1
SUPRAPUBIC TROCAR & CANNULA WITH GROOVE 8mm	1
SUPRAPUBIC TROCAR & CANNULA WITH GROOVE 10mm	1
SUPRAPUBIC TROCAR & CANNULA WITH GROOVE 12mm	1
HEGAR'S DILATOR SET	1
MARYFIELD CATHETER INTRODUCER 300mm	1
TURNER WARWICK URETHROPLASTY NEEDLES SET OF 3	1SET

KIDNEY SET	1 Set
FORCEPS, GROSS-MAIER, CVD., 26.5 CM	2
TOWEL FORCEPS, BACKHAUS, SHARP, 11 CM	6
TOWEL FORCEPS F. PAPER DRAPES, 11.5 CM	6
SCALPEL HANDLE, NO. 4, 13.5 CM	1
SCALPEL HANDLE, NO. 3, 12 CM	1
SCALPEL HANDLE, NO. 4L, LONG, 20.5 CM	1
SCALPEL HANDLE, NO. 3L, LONG, 21.5 CM	1
TC-DISS. SCISSORS, FINE, CVD., 18 CM	1
TC-DISS. SCISSORS, FINE, CVD., 20.5 CM	1
TC-DISSECTING SCISSORS, CVD., 23 CM	1
TC-DISSECTING SCISSORS, CVD., 26 CM	1
TC-DISS. SCISSORS, CVD., SERR., 18 CM	1
TC-DISS. SCISSORS, CVD., SERR., 23 CM	1
TC-SCISSORS, MAYO-LEXER, CVD., 16 CM	1
SCISSORS, POTTS, ANGLED UPW., 19.5 CM	1
TC-SCISSORS, DE BAKEY, 45°, 23 CM	1
OPERATING SCISSORS, SH/BL, STR., 14.5 CM	1
TISSUE FORCEPS, 1X2 T., SLIM, 14.5 CM	2
TISSUE FORCEPS, 1X2 T., SLIM, 20.5 CM	2
TISSUE FORCEPS, 1X2 T., SLIM, 25 CM	2
ATR. FORCEPS, DE BAKEY, 2 MM, 16 CM	2
ATR. FORCEPS, DE BAKEY, 2 MM, 20 CM	2
ATR. FORCEPS, DE BAKEY, 2 MM, 25 CM	2
SILVER CLIP APPLYING FORCEPS 180mm	1
SILVER CLIP APPLYING FORCEPS 200mm	1
SILVER CLIP MAGAZINE	1
MICHEL CLIP APPLYING & REMOVING FORCEPS 125mm	1
DRESS. FORCEPS, ISOL., W/O CONN., 21 CM	1
FORCEPS, KOCHER, 1X2 T., STR., 14 CM	10
HAEM. FORCEPS, MOSQUITO, CVD., 12 CM	10
FORCEPS, MOSQUITO, 1X2 T., STR., 18.5 CM	2
FORCEPS, KOCHER, 1X2 T., STR., 20.5 CM	2
FORCEPS, KOCHER, 1X2 T., STR., 24 CM	2
FORCEPS, GROSS-MAIER, STR., 26.5 CM	4
PERITON. FORCEPS, MIKULICZ, HEAVY, 20 CM	6
DISS. FORCEPS, OVERHOLT, NO. 2, 20 CM	2
DISS. FORCEPS, OVERHOLT, NO. 4, 22 CM	2
FORCEPS, MIXTER, ANG., LONGIT., 22.5 CM	2
DISS. FORCEPS, OVERHOLT, NO. 4, 28 CM	2
DISS. FORCEPS, GEMINI, STR. CVD., 23 CM	2
DISSECTING FORCEPS, O'SHAUGNESSY, 23 CM	2

TC-NEEDLEHOLDER, CRILE-WOOD, 15 CM	1
TC-NEEDLEHOLDER, HEGAR, 20 CM	2
TC-NEEDLEHOLDER, DE BAKEY, 18 CM	1
TC-NEEDLEHOLDER, DE BAKEY, 23 CM	1
TC-NEEDLEHOLDER, DE BAKEY, 26.5 CM	1
TC-NEEDLEHOLDER, STRATTE, CVD., 23 CM	1
RETRACTOR, DBL., FARABEUF, SET, 15.5 CM	1
RETR., VOLKMANN, SEMISH., 4-PR., 22.5 CM	2
RETRACTOR, FRITSCH, 45X75 MM, 25.5 CM	2
RETRACTOR, MIKULICZ, 125X50 MM, 25 CM	1
RETRACTOR, MIKULICZ, 160X50 MM, 25 CM	1
ABDOM. SPATULA, HABERER, 37/45 MM, 30 CM	1
CASPAR EXPLOR.HOOK, MED., 90°, 245MM	1
HOOKLET, CUSHING, 10 MM, 20.5 CM	1
ATR. KIDNEY PEDI. FORCEPS, GUYON, 24 CM	1
ATR. KIDNEY PEDI. FORCEPS, GUYON, 23 CM	1
ATR. TANGENTIAL FORCEPS, SATINSKY, 22 CM	1
ATR. TANGENTIAL FORCEPS, SATINSKY, 26 CM	1
ATR. FORCEPS, POTTS, CVD., 26 CM	1
ATR. LIGATURE FORCEPS, DE BAKEY, 24 CM	1
ATR. ORGAN SEIZING FORCEPS, 25 CM	1
ALLIS ATRAUMA FORCEPS, 8,4MM, 22CM	2
ATR. TISSUE FORCEPS, ALLIS, 24.5 CM	2
KIDNEY STONE FCP., RANDALL, NO. 3, 19 CM	1
KIDNEY STONE FCP., RANDALL, NO. 1, 23 CM	1
KIDNEY STONE FCP., RANDALL, NO. 2, 21 CM	1
KIDNEY STONE FCP., RANDALL, NO. 6, 19 CM	1
PROBE, BUTTON END, Ø 2.0/2.0 MM, 30 CM	1
KOCHER HYSTERECTOMY FORCEPS STR., 200 MM	2
KOCHER HYSTERECTOMY FORCEPS STR., 240 MM	2
MAIER POLYPUS, SPONGE AND DRESS.FORCEPS	4
MIKULICZ PERITONEUM FORCEPS LARGE, 205MM	6
OVERHOLT-GEISSENDOERFER, DISS. FORCEPS	2
OVERHOLT-GEISSENDOERFER, DISS. FORCEPS	2
MIXTER LIGATURE FORCEPS230MM	2
BILE DUCT DILATOR, BAKES, 1 MM, 32 CM	1
Dissecting scissor Metzenbaum180 CVD	1
Dissecting scissor MetzenbaumCVD 200MM	1
Dissecting scissor Metzenbaum CVD 230 MM	1
POTTS-SMITH, CARDIOVASC.SCISSORS,180 MM	1
STRATTE MEEDLEHOLDER, 230MM, DUROGRIP	1

ROUX RETRACTOR, DOUBLE-ENDED, SET OF 3	1
DESCHAMPS NEEDLE, BL, CVD TO LE, 215 MM	1
GEMINI DISS. AND LIGATURE FORCEPS, 230MM	2
VOLKMANN RETRACTOR, SEMI-SHARP,4-PRONGED	2
FRITSCH ABDOMINAL RETRACTOR, 75 MM WIDE	2
MIKULICZ ABDOMINAL RETRACTOR	1
MIKULICZ ABDOMINAL RETRACTOR	1
MIKULICZ ABDOMINAL RETRACTOR	1
HABERER ADOMINAL SPATULA, MALLEAB., TAP.	1
DE'BAKEY VESSEL CLAMP, JAW 38MM,220 MM	1
DE'BAKEY VESSEL CLAMP, JAW 48MM,265 MM	1
DE BAKEY VESSEL FORCEPS, JAW 65MM, 280MM	1
DE'BAKEY VESSEL CLAMP, JAW 54MM,270 MM	1
DE BAKEY DISS. A. LIG. FORC., ACUT. CVD.	1
REDON SPIKE,CHAR.12,SLIG.CVD.,TRIANG.TIP	1
REDON SPIKE,CHAR.14,SLIG.CVD.,TRIANG.TIP	1
Dissecting scissor Nelson- Metzenbaum260	1
NEEDLE CASE, ROUND, PERF., F. 55-309-65	1
BOWL, METAL, H = 40, Ø 80 MM, 0.14 L	1
BOWL, METAL, H = 55, Ø 128 MM, 0.35 L	1
KIDNEY DISH, 250X140X40 MM	1
GUIDE NEEDLE, ANG., KNIFE SHAPE, 10 CH	1
LANGENBECK RETRACTOR, 28X14MM, 210MM	2
LANGENBECK RETRACTOR, 40X10MM, 210MM	2
KOCHER-LANGENBECK RETRACTOR, 55X11 MM	2
BENGOLEA ARTERY FORCEPS, STRAIGHT, 245MM	2
BENGOLEA ARTERY FORCEPS, CURVED, 245 MM	2
NON-TRAUMATIC INTEST.CLAMPS KOCHER 250MM	2
NON-TRAUMATIC INTEST.CLAMPS KOCHER 246MM	2
FRITSCH ABDOMINAL RETRACTOR, 75 MM WIDE	2
MIKULICZ ABDOMINAL RETRACTOR	2
MIKULICZ ABDOMINAL RETRACTOR	2
HABERER ADOMINAL SPATULA, MALLEAB., TAP.	1
KIRSCHNER RETRACTOR, COMPLETE	1
NON-TRAUM.INTEST.CLAMP,DOYEN,CVD.170 MM	2
GUIDE NEEDLE, ANG., KNIFE SHAPE, 12 CH	1
Reusable Ligaclip Applier- LIGACLIP straight applier for large size clip 26.7 cm long (for open surgery)	1
Reusable Ligaclip Applier- LIGACLIP straight applier for medium size clip 19.1	1

cm long (for oipen surgery)	
Reusable Ligaclip Applier-LIGACLIP straight applier for small size clip 19.1 cm long (for open surgery)	1
<u>URETHRA SET</u>	1 Set
FORCEPS, GROSS-MAIER, CVD., 26.5 CM	2
TOWEL FORCEPS, BACKHAUS, SHARP, 11 CM	6
TOWEL FORCEPS F. PAPER DRAPES, 11.5 CM	4
SCALPEL HANDLE, NO. 3, 12 CM	1
SCALPEL HANDLE, NO. 4, 13.5 CM	1
TC-DISS. SCISSORS, FINE, CVD., 14.5 CM	1
DISSECTING SCISSORS, KILNER, CVD., 15 CM	1
SCISSORS, POTTS, ANGLED UPW., 19.5 CM	1
SCISSORS, POTTS -Millin's, with one ball end	1
SCISSORS, IRIS 115mm straight	1
DEVINE UROLOGICAL SCISSORS, curved chisel ended blades180mm	1
PYRA- MAYO UROLOGICAL SCISSORS, 200mm	1
THOMSON WALKER BLADDER SCISSORS, 200mm	1
MAYO HARRINGTON DISSECTING SCISSORS, 230mm	1
SCISSORS, IRIS 115mm curved	1
TC-DISS. SCISSORS, FINE, CVD., 18 CM	1
TC-SCISSORS, MAYO-LEXER, CVD., 16 CM	1
OPERATING SCISSORS, SH/BL, STR., 14.5 CM	1
TISSUE FORCEPS, 1X2 T., SLIM, 14.5 CM	2
TISSUE FORCEPS, 1X2 T., SLIM, 20.5 CM	2
ATR. FORCEPS, DE BAKEY, 2 MM, 16 CM	2
ATR. FORCEPS, DE BAKEY, 2 MM, 20 CM	2
DISSECTING FORCEPS,ADLERKREUTZ200MM	2
RUSSIAN DISSECTING FORCEPS,160MM	2
RUSSIAN DISSECTING FORCEPS,200MM	2
HAEM. FORCEPS, MOSQUITO, CVD., 12 CM	6
FORCEPS, KOCHER, 1X2 T., STR., 14 CM	2
DISS. FORCEPS, BABY-MIXTER, CVD., 18.5CM	1
TC-NEEDLEHOLDER, CRILE-WOOD, 15 CM	1
TC-NEEDLEHOLDER, MAYO-HEGAR, 20 CM	1
HOOKLET, SHARP, 2-PR., 16.5 CM	2
HOOKLET, DESMARRES, 8 MM, 16 CM	2
HOOKLET, DESMARRES, 12 MM, 16 CM	2
RETRACTOR, KOCHER, 61X25 MM, 23 CM	2
SKIN HOOKLET, GILLIES, NO. 1, 18 CM	2
NERVE HOOK, CUSHING, NO. 1, 19 CM	1
ANASTOM. FORCEPS, DERRA, NO. 3, 17.5 CM	1
URETHRAL BOUGIE, V. BUREN, 10 CH, 27 CM	1
URETHRAL BOUGIE, V. BUREN, 14 CH, 27 CM	1
URETHRAL BOUGIE, V. BUREN, 18 CH, 27 CM	1

URETHRAL BOUGIE, V. BUREN, 22 CH, 27 CM	1
URETHRAL BOUGIE, V. BUREN, 26 CH, 27 CM	1
CLUTTON'S URETHRAL DILATOR SET OF 12-260mm	3
PAEDIATRIC URETHRAL DILATOR SET OF 7-218mm	1
TURNER WARWICK RING RETRACTOR	2
HEGRORES STAFF (SEMI-CIRCULAR BOUGIE)	2
SCOTTS RETRACTOR	1
TOT NEEDLE SET	1
TURNER WARWICK RETROGRADE BOUGIE 180mm	3
KILNER'S SKIN HOOK 185	4
KILNER ALAE SKIN RETRACTOR 180mm	4
GILLIES SKIN HOOK 185	4
HAJEK CHEEK RETRACTOR 165mm	2
CZERNY'S RETRACTOR 175mm	2
GROOVED DIRECTOR, NELATON, CVD., 16 CM	1
PROBE, BUTTON END, Ø 1.5/1.5 MM, 14.5 CM	1
PROBE, BOWMAN, CYLINDR., NS, NO. 00/0	1
NEEDLE CASE, ROUND, PERF., F. 55-309-65	1
BOWL, METAL, H = 40, Ø 80 MM, 0.14 L	1
BOWL, METAL, H = 55, Ø 128 MM, 0.35 L	1
KIDNEY DISH, 250X140X40 MM	1
YAUNKER'S SUCTION TUBE	3
AMERICAN PATTERN SUCTION TIP WITH STILLETTE	2
FERGUSSON SUCTION TIP WITH STILLETTE	2
DOYEN'S MOUTH GAG	1
VAGINAL RETRACTOR, DOYEN, 66X47 MM	1
VAGINAL RETRACTOR, DOYEN, 78X47 MM	1
VAGINAL RETRACTOR, BREISKY, 130X30 MM	1
VAGINAL RETRACTOR, BREISKY, 130X40 MM	1
VAGINAL RETRACT., DOYEN, 70X30 MM, 25 CM	2
VAGINAL SPECULUM, KRISTELLER, SET, NO. 3	1
BONE RONGEUR, RUSKIN, CVD., 19 CM	1
BONE RONGEUR, RUSKIN, CVD., 24 CM	1
BONE RONGEUR, CVD., 22.5 CM	1
BONE CUT. FORCEPS, RUSKIN, CVD., 18.5 CM	1
BONE CUTT. FORCEPS, STILLE-LISTON, 28 CM	1
ELEVATOR, LANGENBECK, 10 MM, 19.5 CM	1
ELEVATOR, MARTIN-LANGENB., 7 MM, 17 CM	1
RASPATORY, LAMBOTTE, 15 MM, 21.5 CM	1
RASPATORY, LAMBOTTE, 10 MM, 21.5 CM	1

RASPATORY, LAMBOTTE, 20 MM, 21.5 CM	1
BONE FILE, FLAT, 20 MM, 22 CM	1
OSTEOTOME, LEXER, 10 MM, 22 CM	1
OSTEOTOME, LEXER, 15 MM, 22 CM	1
OSTEOTOME, LEXER, 25 MM, 22 CM	1
GOUGE, LEXER, 10 MM, 22 CM	1
GOUGE, LEXER, 15 MM, 22 CM	1
GOUGE, LEXER, 25 MM, 22 CM	1
OSTEOTOME, LAMBOTTE, 50 MM, 24 CM	1
MALLET, RELPASE FREE, 620 GR., 26.5 CM	1
VAGINAL SPECULUM, KRISTELLER, SET, NO. 2	1
DINGMAN'S MOUTH GAG WITH 3 BLADES	1
skin grafting Measure board	1
HUMBYS SKIN GRAFTING KNIVES 300mm	1
<u>SUPPLEMENT MICRO URETHRAL</u>	<u>1 Set</u>
SCALPEL HANDLE F. MICROBLADE, 13.5 CM	1
MICRO SCISSORS, BAYON., CVD., 20 CM	1
YASARGIL FCPS., BAJO., TIPS 0,9MM, 22CM	1
TISSUE FORCEPS, BAYON., 1X2 T., 18.5 CM	1
DRESSING FORCEPS, POTTS-SMITH, 21 CM	2
MICRO NEEDLEHOLDER, BAYON., CVD., 23 CM	1
JACOBSON TWIN PROBE, 18,5CM	1
YASARGIL SUTURE GUIDE/PROBE, CVD, 18,5CM	1
<u>GENITAL SET</u>	<u>1 Set</u>
FORCEPS, GROSS-MAIER, CVD., 26.5 CM	2
TOWEL FORCEPS, BACKHAUS, SHARP, 11 CM	6
TOWEL FORCEPS F. PAPER DRAPES, 11.5 CM	4
SCALPEL HANDLE, NO. 3, 12 CM	1
SCALPEL HANDLE, NO. 4, 13.5 CM	1
IRIS SCISSORS, SH/SH, CVD., 11.5 CM	1
TC-DISS. SCISSORS, FINE, CVD., 14.5 CM	1
TC-DISS. SCISSORS, FINE, CVD., 18 CM	1
TC-SCISSORS, MAYO-LEXER, CVD., 16 CM	1
OPERATING SCISSORS, SH/BL, STR., 14.5 CM	1
TISSUE FORCEPS, 1X2 T., SLIM, 14.5 CM	2
TISSUE FORCEPS, 1X2 T., SLIM, 20.5 CM	2
ATR. FORCEPS, DE BAKEY, 2 MM, 16 CM	2
ATR. FORCEPS, DE BAKEY, 2 MM, 20 CM	2
FORCEPS, KOCHER, 1X2 T., STR., 14 CM	4
FORCEPS, MOSQUITO, 1X2 T., CVD., 12.5 CM	6
HAEM. FORCEPS, MOSQUITO, CVD., 12 CM	6

FORCEPS, KOCHER, 1X2 T., STR., 20.5 CM	2
FORCEPS, GROSS-MAIER, STR., 26.5 CM	2
PERITON. FORCEPS, MIKULICZ, HEAVY, 20 CM	4
FORCEPS, MIXTER-BABY, SL. CVD., 14 CM	1
DISS. FORCEPS, BABY-MIXTER, CVD., 18.5CM	1
DISS. FORCEPS, OVERHOLT, NO. 2, 20 CM	1
DISS. FORCEPS, OVERHOLT, NO. 3, 21.5 CM	1
TC-NEEDLEHOLDER, CRILE-WOOD, 15 CM	1
TC-NEEDLEHOLDER, MAYO-HEGAR, 20 CM	2
TC-NEEDLEHOLDER, DE BAKEY, 18 CM	1
RETRACTOR, ROUX, SET, NO. 1-3, 17 CM	2
RETR., VOLKMANN, SEMISH., 4-PR., 22.5 CM	2
RETRACTOR, MIKULICZ, 90X35 MM, 25 CM	2
RETRACTOR, MARTIN, 110X27 MM, 26.5 CM	1
RETRACTOR, KADER, 30 MM WIDE, 28 CM	1
WOUNDSPREADER, SHARP, 3X4 T., 16 CM	1
ATR. TISSUE FORCEPS, ALLIS, 15.5 CM	2
GROOVED DIRECTOR, NELATON, CVD., 16 CM	1
PROBE, BUTTON END, Ø 1.5/1.5 MM, 14.5 CM	1
NEEDLE CASE, ROUND, PERF., F. 55-309-65	1
BOWL, METAL, H = 40, Ø 80 MM, 0.14 L	1
BOWL, METAL, H = 55, Ø 128 MM, 0.35 L	1
KIDNEY DISH, 250X140X40 MM	1
<u>PHIMOSIS SET</u>	<u>1 Set</u>
FORCEPS, GROSS-MAIER, CVD., 26.5 CM	2
TOWEL FORCEPS, BACKHAUS, SHARP, 11 CM	4
TOWEL FORCEPS F. PAPER DRAPES, 11.5 CM	2
SCALPEL HANDLE, NO. 3, 12 CM	2
TC-DISS. SCISSORS, FINE, CVD., 14.5 CM	1
DISSECTING SCISSORS, KILNER, CVD., 15 CM	1
IRIS SCISSORS, SH/SH, CVD., 11.5 CM	1
TC-SCISSORS, MAYO-LEXER, CVD., 16 CM	1
ATR. FORCEPS, DE BAKEY, 2 MM, 16 CM	2
TISSUE FORCEPS, 1X2 T., SLIM, 14.5 CM	2
HAEM. FORCEPS, MOSQUITO, CVD., 12 CM	8
FORCEPS, MOSQUITO, 1X2 T., STR., 12.5 CM	4
FORCEPS, PEAN, DELICATE, STR., 14.5 CM	2
PROBE, BOWMAN, BUTTON, NS, NO. 7/8	1
GROOVED DIRECTOR, DOYEN, CVD., 14.5 CM	1
TC-NEEDLEHOLDER, CRILE-WOOD, 15 CM	1
NEEDLE CASE, ROUND, PERF., F. 55-309-65	1
BOWL, METAL, H = 55, Ø 128 MM, 0.35 L	1
<u>VASECTOMY SET</u>	<u>1 Set</u>

FORCEPS, GROSS-MAIER, CVD., 26.5 CM	2
TOWEL FORCEPS, BACKHAUS, SHARP, 11 CM	4
TOWEL FORCEPS F. PAPER DRAPES, 11.5 CM	2
SCALPEL HANDLE, NO. 3, 12 CM	2
TC-DISS. SCISSORS, FINE, CVD., 14.5 CM	1
IRIS SCISSORS, SH/SH, CVD., 11.5 CM	1
OPERATING SCISSORS, SH/BL, STR., 14.5 CM	1
DRESSING FORCEPS, SEMKEN, 12.5 CM	1
ATR. FORCEPS, DE BAKEY, 2 MM, 16 CM	1
TISSUE FORCEPS, SEMKEN, 1X2 T., 12.5 CM	1
TISSUE FORCEPS, 1X2 T., SLIM, 14.5 CM	1
HAEM. FORCEPS, MOSQUITO, CVD., 12 CM	4
FORCEPS, PEAN, DELICATE, STR., 14.5 CM	2
FORCEPS, MIXTER-BABY, SL. CVD., 14 CM	1
TC-NEEDLEHOLDER, CRILE-WOOD, 15 CM	1
NEEDLE CASE, ROUND, PERF., F. 55-309-65	1
BOWL, METAL, H = 55, Ø 128 MM, 0.35 L	1
1. The Instrument and Container should be Imported and CE or FDA USA approved.	
2. The Instrument and Container should be of the same parent company.	
<u>CUT DOWN SET</u>	<u>1 Set</u>
FORCEPS, GROSS-MAIER, CVD., 26.5 CM	2
TOWEL FORCEPS, BACKHAUS, SHARP, 11 CM	4
SCALPEL HANDLE, NO. 3, 12 CM	1
TC-DISS. SCISSORS, FINE, CVD., 14.5 CM	1
IRIS SCISSORS, SH/SH, STR., 11.5 CM	1
STRABISMUS SCISS., BL/BL, CVD., 11.5 CM	1
OPERATING SCISSORS, SH/BL, STR., 14.5 CM	1
DRESSING FORCEPS, SEMKEN, 12.5 CM	1
ATR. FORCEPS, DE BAKEY, 2 MM, 16 CM	1
TISSUE FORCEPS, SEMKEN, 1X2 T., 12.5 CM	1
TISSUE FORCEPS, 1X2 T., SLIM, 14.5 CM	1
FORCEPS, MOSQUITO, 1X2 T., CVD., 12.5 CM	2
HAEM. FORCEPS, MOSQUITO, CVD., 12 CM	2
FORCEPS, PEAN, DELICATE, STR., 14.5 CM	2
FORCEPS, MIXTER-BABY, SL. CVD., 14 CM	1
TC-NEEDLEHOLDER, CRILE-WOOD, 15 CM	1
RETRACTOR, DELIC., BLUNT, 2-PR., 16.5 CM	2
HOOKLET, DESMARRES, 12 MM, 16 CM	2
WOUNDSPREADER, ALM, SHARP, 4X4 T., 10 CM	1
NEEDLE CASE, ROUND, PERF., F. 55-309-65	1
BOWL, METAL, H = 55, Ø 128 MM, 0.35 L	1
<u>SUTURE SET LARGE</u>	<u>1 Set</u>
SCALPEL HANDLE, NO. 3, 12 CM	1

DRESSING FORCEPS, MEDIUM WIDE, 14.5 CM	1
TISSUE FORCEPS, 1X2 T., 14.5 CM	1
TISSUE FORCEPS, 1X2 T., SLIM, 14.5 CM	1
FORCEPS MICRO-MOSQUITO, CVD., 12 CM	4
FORCEPS, GROSS-MAIER, CVD., 20.5 CM	1
RETRACTOR, DELIC., SHARP, 2-PR., 16.5 CM	2
SPREADER, WULLST., SHARP, 3X3 T., 13 CM	1
TC-NEEDLEHOLDER, CRILE-WOOD, 15 CM	1
TC-SCISSORS, LEXER, FINE, CVD., 16 CM	1
STRABISMUS SCISS., BL/BL, CVD., 11.5 CM	1
OPERATING SCISSORS, SH/BL, CVD., 16.5 CM	1
BOWL, METAL, H = 40, Ø 80 MM, 0.14 L	1
TC-NEEDLEHOLDER, MAYO-HEGAR, 18.5 CM	1
<u>SUTURE SET SMALL</u>	<u>1 Set</u>
SCALPEL HANDLE, NO. 3, 12 CM	1
TISSUE FORCEPS, 1X2 T., SLIM, 14.5 CM	2
DRESSING FORCEPS, MEDIUM WIDE, 14.5 CM	1
FORCEPS MICRO-MOSQUITO, CVD., 12 CM	2
FORCEPS, GROSS-MAIER, CVD., 20.5 CM	1
TC-NEEDLEHOLDER, CRILE-WOOD, 15 CM	1
BOWL, METAL, H = 19, Ø 40 MM, 0.02 L	1
OPERATING SCISSORS, SH/BL, CVD., 14.5 CM	1
TC-DISSECTING SCISSORS, CVD., 14.5 CM	1
MICROSTOP MINISSET CONTAINER 310X189X90MM	1
TRAY, PERFORATED, 235X130X50MM	1
LOGISTIC FRAME, RED, F. CONTAINER	1
IDENTIFICATION LABEL, W. TEXT, W/O HOLE	1
IDENT. LABEL, MINISSET CONT., W. TEXT	1
<u>SUTURE REMOVING SET</u>	<u>1 Set</u>
KIDNEY DISH, 250X140X40 MM	1
OPERATING SCISSORS, SH/BL, CVD., 14.5 CM	1
DRESSING FORCEPS, MEDIUM WIDE, 14.5 CM	1
TISSUE FORCEPS, 1X2 T., SLIM, 14.5 CM	1
IRIS SCISSORS, SH/SH, STR., 11.5 CM	1
<u>WOUND DRESSING SET LARGE</u>	<u>1 Set</u>
TAMPON FORCEPS, ULRICH, STR., 27 CM	2
TOWEL FORCEPS, BACKHAUS, SHARP, 11 CM	6
SCALPEL HANDLE, NO. 4, 13.5 CM	2
HAEM. FORCEPS, MOSQUITO, STR., 12.5 CM	4
FORCEPS, MOSQUITO, 1X2 T., STR., 12.5 CM	4
HAEMOSTATIC FORCEPS, PEAN, STR., 14.5 CM	4
DISS. FORCEPS, MIXTER-BABY, CVD., 13 CM	2
DISS. FORCEPS, OVERHOLT, NO. 2, 20 CM	2

FORCEPS, KOCHER, 1X2 T., STR., 14 CM	4
RETRACTOR, DOUBLE, ROUX, NO. 1, 14.5 CM	2
RETRACTOR, DOUBLE, ROUX, NO. 2, 16 CM	2
RETRACTOR, DOUBLE, ROUX, NO. 3, 17 CM	2
RETRACTOR, LANGENBECK, 30X14 MM, 22 CM	2
RETRACTOR, VOLKMANN, SH., 4-PR., 22.5 CM	2
RETR., VOLKMANN, SEMISH., 6-PR., 22.5 CM	2
DRESSING FORCEPS, MEDIUM WIDE, 14.5 CM	2
TISSUE FORCEPS, 1X2 T., SLIM, 14.5 CM	2
FORCEPS, POTTS-SMITH, 1X2 T., 18 CM	2
TC-DISS. SCISS., TOENNIS, CVD., 17.5 CM	1
STRABISMUS SCISS., BL/BL, CVD., 11.5 CM	1
TC-SCISSORS, LEXER, FINE, CVD., 16 CM	2
RASPATORY, FARABEUF, STR., 15.5 CM	1
BONE CURETTE, VOLKM., OVAL, NO. 1, 17 CM	1
BONE RONGEUR, ZAUFAL-JANSEN, 18 CM	1
TC-NEEDLEHOLDER, CRILE-WOOD, 15 CM	1
TC-NEEDLEHOLDER, MAYO-HEGAR, 20 CM	1
PROBE, BUTTON END, Ø 2.0/2.0 MM, 20 CM	1
NEEDLE CASE, ROUND, PERF., F. 55-309-65	1
KIDNEY DISH, 250X140X40 MM	1
<u>WOUND DRESSING SET SMALL</u>	<u>1 Set</u>
SCALPEL HANDLE, NO. 3, 12 CM	1
OPERATING SCISSORS, SH/BL, CVD., 14.5 CM	1
DISSECT. SCISSORS, BL/BL, CVD., 14.5 CM	1
TISSUE FORCEPS, 1X2 T., 14.5 CM	1
TISSUE FORCEPS, 1X2 T., SLIM, 14.5 CM	1
DRESSING FORCEPS, DELICATE, 14.5 CM	1
SPLINTER FORCEPS, FEILCHENFELD, 9 CM	1
TOWEL FORCEPS, TOHOKU, BLUNT, 10.5 CM	2
HAEM. FORCEPS, MOSQUITO, CVD., 12 CM	2
FORCEPS, PEAN, DELICATE, CVD., 16.5 CM	1
FORCEPS, KOCHER, 1X2 T., CVD., 16 CM	1
FORCEPS, GROSS-MAIER, STR., 22.5 CM	1
TC-NEEDLEHOLDER, CRILE-WOOD, 15 CM	1
RETRACTOR, DELIC., SHARP, 2-PR., 16.5 CM	2
WOUNDSPREADER, BLUNT, 3X4 T., 13.5 CM	1
A-V SHUNT SET	1
MAIER POLYPUS FORCEPS, WITH RATCHET, CVD	2
BACKHAUS TOWEL HOLDING FORCEPS, 110MM,	4
TOWEL CLAMP, 115 MM LENGTH	2
SCALPEL HANDLE, NO. 3	2

DISSECT.SCISS.,METZENBAUM,145MM,CVD.DURO	1
SCISSORS, DELICATE, STRAIGHT, 95 MM	1
IRIS AND LIG. SCISS., ANGL.TO SIDE,110MM	1
DISSECT. SCISSORS, JAMESON-WERBER,130MM	1
OP. SCISSORS, STR., BL/SH, 145 MM, S	1
TISSUE FORCEPS, AM. PATT., 1X2 T., 145MM	2
NON-TRAUMATIC VESSEL FORCEPS 150 MM	2
ATR.-FORCEPS "ULTRA-LIGHT", STR.,150MM	1
IRIS DISS. FORCEPS, STR., 100MM	2
MICRO-HALSTED HEMOST.FORC., CVD., 125 MM	4
HALSTED MOSQUITO FORCEPS, STRAIGHT,125MM	2
PEAN ARTERY FORCEPS, STRAIGHT, 130 MM	2
MICRO-ADSON HEMOSTATIC FORCEPS, 140 MM	1
BABY-MIXTER FORCEPS, 140 MM	1
MINI BULLDOG CLAMP,STRAIGHT, 35 MM LONG	2
MINI BULLDOG CLAMP,CURVED, 45 MM LONG	2
MUELLER VESSEL CLIP, FOR VEIN, STRAIGHT	2
MUELLER VESSEL CLIP FOR VEIN, CURVED	2
MICRO NEEDLE HOLDER, CURVED, 160 MM	1
DUROGRIP-NEEDLEHOLDER,RYDER,135MM,DELIC.	1
DUROGRIP CRILE NEEDLE HOLDER, 150 MM	1
RETRACTOR, FINE PATTERN, 2 BLUNT PRONG	2
DESMARRES, LID RETRACTOR	2
WEITLANER RETRACTOR,2X3 TEETH,SEMI SHARP	1
LABORATORY DISH, 0.16 L	1
LABORATORY DISH, 0.4 L	1
KIDNEY TRAY, 250 MM	1
MAJOR BASIC SET FOR CHILDREN	1
MAIER POLYPUS FORCEPS, WITH RATCHET, CVD	2
BACKHAUS TOWEL HOLDING FORCEPS, 110MM,	4
TOWEL CLAMP, 115 MM LENGTH	4
SCALPEL HANDLE, NO. 3	2
DISSECTING SCISSORS,CVD 115MM,DUROTIP	1
DISSECT.SCISS.,METZENBAUM,145MM,CVD.DURO	1
JAMISON SCISSORS, SLIGHTLY CVD	1
LIGATURE SCISS ORS, CVD., 145 MM	1
OP. SCISSORS, STR., BL/SH, 145 MM, S	1

DISSECTING FORCEPS, SLEND. PATT., 145 MM	1
TISSUE FORCEPS, AM. PATT., 1X2 T., 145MM	2
NON-TRAUMATIC VESSEL FORCEPS 150 MM	2
ADSON FORCEPS, 1X2 TEETH, 120 MM	2
ADSON FORCEPS, FINE SERRATED JAWS, 120MM	2
HALSTED MOSQUITO FORCEPS, CURVED, 125MM	6
BABYCRILE ARTERY FORCEPS, CURVED, 140 MM	6
KOCHER FORCEPS, STR., 1X2 TEETH, 140MM	2
POLYPUS A. SPONGE A.DRESSING FORC.,175MM	2
MIKULICZ PERITONEUM FORCEPS, 140 MM	4
MICRO-ADSON HEMOSTATIC FORCEPS, 140 MM	2
BABY-MIXTER FORCEPS, 140 MM	2
BABY-MIXTER ARTERY FORCEPS,180MM	2
NEEDLEHOLDER, CONVERSE 130 MM	1
CRILE NEEDLE HOLDER, 150 MM	1
HEGAR-MAYO NEEDLE HOLDER, 150MM	1
LANGENBECK-GREEN RETRACTOR,6X16MM,DELIC.	2
LANGENBECK RETRACTOR, 28X10MM, 210MM	2
LANGENBECK RETRACTOR, 40X10MM, 210MM	2
DESMARRES, LID RETRACTOR	2
BABY-ROUX RETRACTOR, 135MM	2
ROUX RETRATOR, SMALL	2
FRITSCH ABDOMINAL RETRACTOR, 40 MM WIDE	2
RETRACTOR, FINE PATTERN, 2 SHARP PRONGS	2
VOLKMANN RETRACTOR, SEMI-SHARP,4-PRONGED	2
SPATULA, MALLEABLE, 200 X 17 MM	1
ADSON-BABY RETRACTOR, W JOINT, 140 MM	1
BABY-BALFOUR ABDOMINAL RETRACTOR	1
BABY-FINOCCHIETTO RIB SPREADER	1
BABY-ALLIS INTESTINAL FORCEPS, 130 MM	1
NON-TRAUM.HOLDING FORC.,ALLIS,155 MM	1
BABY-KOCHER INT.CLAMP, CUR., 130 MM	2
NON-TRAUM.INTEST.CLAMP,DOYEN,CVD.170 MM	2
BABY-DERRA FORCEPS, MEDIUM PATTERN,170MM	2
VOLKMANN SPOON, SHARP, SIZE 000	1
PROBE, DOUBLE ENDED, 145 MM, DIAM. 1,0MM	1
BOWMAN LACHRYMAL PROBE, 0,7/0,8 MM	1

KIDNEY TRAY, 250 MM	1
REDON SPIKE, CHAR. 10, SLIG. CVD., TRIANG. TIP	1
REDON SPIKE, CHAR. 12, SLIG. CVD., TRIANG. TIP	1
BOWL, METAL, H = 30, Ø 61 MM, 0.07 L	1
<u>LAPAROTOMY SET</u>	<u>3 Sets</u>
FORCEPS, GROSS-MAIER, CVD., 26.5 CM	2
TOWEL FORCEPS, BACKHAUS, SHARP, 11 CM	4
TOWEL FORCEPS F. PAPER DRAPES, 11.5 CM	4
SCALPEL HANDLE, NO. 3, 12 CM	2
SCALPEL HANDLE, NO. 7, SOLID, 16 CM	1
TC-DISSECTING SCISSORS, CVD., 11.5 CM	1
TC-DISS. SCISSORS, FINE, CVD., 14.5 CM	1
TC-DISS. SCISS., TOENNIS, CVD., 17.5 CM	1
SCISSORS, JAMESON, CVD., 15.5 CM	1
TC-DISS. SCISSORS, CVD., SERR., 18 CM	1
OPERATING SCISSORS, SH/BL, STR., 14.5 CM	1
DRESSING FORCEPS, MINI-ADSON, 12 CM	1
FORCEPS, MINI-ADSON, 1X2 T., 12 CM	1
TISSUE FORCEPS, 1X2 T., SLIM, 14.5 CM	2
FORCEPS, POTTS-SMITH, 1X2 T., 18 CM	2
ATR. FORCEPS, DE BAKEY, 1.5 MM, 16 CM	2
ATR. FORCEPS, DE BAKEY, 1.5 MM, 20 CM	2
HAEM. FORCEPS, MOSQUITO, CVD., 12 CM	6
HAEM. FORCEPS, MOSQUITO, CVD., 14 CM	6
FORCEPS, KOCHER, 1X2 T., STR., 14 CM	2
FORCEPS, KOCHER, 1X2 T., STR., 18.5 CM	2
HAEM. FORCEPS, MOSQUITO, CVD., 18 CM	2
FORCEPS, FOERSTER, SERR., CVD., 18 CM	2
PERITON. FORCEPS, BABY-MIKULICZ, 14.5 CM	4
PERITONEAL FORCEPS, MIKULICZ, 18.5 CM	2
FORCEPS, MIXTER-BABY, SL. CVD., 14 CM	2
DISS. FORCEPS, BABY-MIXTER, CVD., 18.5 CM	2
TC-NEEDLEHOLDER, HALSEY, 13 CM	1
TC-NEEDLEHOLDER, CRILE-WOOD, 15 CM	1
TC-NEEDLEHOLDER, DE BAKEY, 18 CM	1
TC-NEEDLEHOLDER, MAYO-HEGAR, 16 CM	1
PROBE, BUTTON END, Ø 1.0/1.0 MM, 14.5 CM	1

HOOKLET, SENN-GREEN, 10X6 MM, 16 CM	2
RETRACTOR, LANGENBECK, 30X11 MM, 22 CM	2
RETRACTOR, LANGENBECK, 40X11 MM, 22 CM	2
HOOKLET, DESMARRES, 14 MM, 16 CM	2
RETRACTOR, DOUBLE, BABY-ROUX, 12.5 CM	2
RETRACTOR, DOUBLE, ROUX, NO. 1, 14.5 CM	2
RETRACTOR, BALFOUR, LATERAL BLADE 58mm, CENTRE BLADE 45X80mm	2
RETRACTOR, BALFOUR, LATERAL BLADE 90mm, CENTRE BLADE 80X80mm	2
BABY BALFOUR, LATERAL BLADE 27mm, CENTRE BLADE 21X24mm	2
RETRACTOR, FRITSCH, 33X40 MM, 24 CM	2
HOOKLET, SHARP, 2-PR., 16.5 CM	2
RETRACTOR, DELIC., SHARP, 4-PR., 16.5 CM	2
RETR., VOLKMANN, SEMISH., 4-PR., 22.5 CM	2
SPATULA, MARTIN, MALLEAB., 16 MM, 20 CM	1
SPREADER, ADSON, BLUNT, 3X4 T., 13.5 CM	1
ABD. RETRACTOR, BALFOUR-BABY, 12.5 CM	1
TISSUE FCPS., ALLIS-BABY, 4X5 T., 13 CM	1
ATR. TISSUE FORCEPS, ALLIS, 15.5 CM	1
ATR. TISSUE FORCEPS, ALLIS, 20 CM	1
ATR. INT. FCPS., DOYEN-B., CVD., 13.5 CM	2
ATR. INTEST. FCPS., DOYEN, CVD., 17 CM	2
ANASTOM. FORCEPS, DERRA, NO. 2, 17 CM	2
NEEDLE CASE, ROUND, PERF., F. 55-309-65	1
BOWL, METAL, H = 40, Ø 80 MM, 0.14 L	1
BOWL, METAL, H = 55, Ø 128 MM, 0.35 L	1
KIDNEY DISH, 250X140X40 MM	1
GUIDE NEEDLE, ANG., KNIFE SHAPE, 8 CH	1
GUIDE NEEDLE, ANG., KNIFE SHAPE, 10 CH	1
DOYEN'S RETRACTOR 230mm, 30X40mm	2
DOYEN'S RETRACTOR 230mm, 65X85mm	2
MORRIS RETRACTOR 230mm, 30X40mm	2
MORRIS RETRACTOR 230mm, 65X65mm	2
KELLY'S RETRACTOR 260mm, 55mm	2
DEAVER'S RETRACTOR ADULT 300mm	2
DEAVER'S RETRACTOR CHILD 215mm	2
KELLY'S RETRACTOR 260mm, 55mm	2
CZERNY'S RETRACTOR 175mm	2

LANGENBECK RETRACTOR 215mm, 65X25mm	2
GRAEME RECTAL SPECULUM WITH OBLIQUE ENDS 65X18MM	1
LANGENBECK RETRACTOR 215mm, 65X25mm	2
SPECIFICATIONS FOR SURGICAL INSTRUMENTS <ul style="list-style-type: none"> • All the instruments should be made of high grade stainless steel. The quality of steel should comply with the DIN standards. • It should be of high quality and precision. • It should be light weight, strong and durable. • It should be non-magnetic. • All instruments should be autoclavable. • The manufacturer should have a direct repair facility available in India. • All instruments should be autoclavable at a minimum of 134deg. <ul style="list-style-type: none"> • The Instruments should be CE and FDA certified. • For special instruments in which both CE and FDA certification is not available either CE or FDA certification alone may be considered. • Copies of CE and FDA certification must be provided. • All instrument set should be supplied with their container preferably with tray and silicon mat. 	

(26) SPECIFICATION FOR UROLOGY WORKSTATION

Urology Workstation with all necessary modalities for Nerve sparing radical prostatectomy, partial Nephrectomy, Retroperitoneal Lymphadenectomy, Induration Penis Plastics, Cystectomy, Nephro-Ureterectomy, etc.

The Work Station comprising advance Electro surgery unit with Vessel Sealing and Monopolar & Bipolar TUR, Argon Plasma Coagulation unit and Water Jet Resection unit with optional Suction unit, on single cart.

- Electro surgery unit should be Microprocessor controlled
- TFT display with focused view of current active mode
- Visual and audible alarms during activation
- Facility to store 99 programs
- Two Vessel Sealing outputs
- Should have Bipolar CUT/COAG facility
- Should have AutoStart and AutoStop facility for Bipolar modes
- Automatic control of output power according
- Visual indicator for the actual power being delivered depending on tissue resistance
- Vessel Sealing for Laparoscopic and open surgeries
- Monopolar CUT – 200 to 300w and Monopolar COAG – 60 to 200 w
- Bipolar CUT – 1 to 100 w and Bipolar COAG – 1 to 120
- Special mode for Vessel Sealing with Autostop function
- FDA approved instruments for 7 mm Vessel Sealing
- Reusable Vessel Sealing instruments for Open Surgery
- Automatic instrument recognition for vessel sealing instruments
- 5 mm Laparoscopic instruments for Vessel Sealing with cutting facility
- Should have Universal Socket for Monopolar, Bipolar and Neutral electrode
- Should have continuous patient monitoring for neutral electrode
- Should have minimum three modes of Argon Plasma Coagulation including basic Argon Beam Coagulation, Pulsed Argon Beam Coagulation and Argon Beam Coagulation for Micro-surgical Applications

- Adjustable argon flow rates and automatic monitoring of argon supply
- Visual and audible indicator for Argon Cylinder content
- Should be supplied with argon beam applicators for open and laparoscopic surgeries
- Should have facility to connect with central gas supply
- Should have facility for activation of unit by foot pedal of the Electro surgical unit
- Should be supplied with **Water Jet System** for Nephrectomy, Prostatectomy, etc.
- Pressure Range : 1 – 80 bar
- Volume Flow : 1 – 65 ml/min
- Should have monochrome LCD display for clear view of various parameters on screen
- Should adapt any sterile saline solution bag (disposable) as separation medium
- Should be compatible with Electro Surgical Workstation
- Should have facility to individually configure programs for different specialties
- Water Jet activation should be via footswitch and ReMode facility for switching between two different User Settings
- Should have facility for various Applicators suitable for Urology procedures
- Should have Suction & Irrigation unit and should be configurable to continuous suction or single foot pedal operation
- Should have facility to integrate centralized suction on necessity.
- All units of Workstation should be FDA & CE certified

(27) TECHNICAL SPECIFICATION OF SUCTION IRRIGATION SET FOR UROLOGY

- Urology set for suction, Power supply: 100-240 VAC, 50/60 Hz, consisting of: Suction Apparatus, Mains cord, Suction bottle, 0,5 ltr, sterilisierbar, bottle cap, for suction bottle ,Silicone-tubing set for suction, for use with suction bottle, autoclaveable, bottle stand for suction bottle, Connecting cord, length 100 cm, Connecting Cable System requirements for use with SCB-PC: SCB-R-UI-software-release V03.20.00.xx or higher
- Silicone Tubing Set, for suction, sterilizable, for use with Suction Bottle
- One-Pedal Footswitch, digital, two-stage
- Connection Cable (Transducer/Generator)
- Ultrasonic Lithotripsy Probe, with oscillating tip and suction channel, \varnothing 3.5 mm, length 40 cm

(28) (1) Specification for URS set 8 Fr

1. Uretero-Renoscope, 8 Fr/9.8Fr., 12°, one-step, conical, 8-13.5 Fr., length 43 cm, autoclavable, with angled eyepiece, fiber optic light transmission incorporated, 2 lateral irrigation ports and 1 working channel 5 Fr. for instruments upto 5 Fr., - sealing and tray for cleaning, sterilization and storage.
2. Distal chip diameter of 8Fr.
3. Detachable instrument port with sealing system and quick release lock, one instrument channel.
4. Distal end of sheath atraumatically shaped with rounded tip.
5. Grasping Forceps for stone fragments, double action jaws, 4 Fr., rigid, length 60 cm- 2 pcs
6. Grasping Forceps for large stone fragments, double action jaws, 5 Fr., rigid, length 60 cm. - 2 pcs
7. Grasping Forceps for large stone fragments, Triprong jaws, 4 Fr., rigid, length 60 cm. - 2 pcs
8. Grasping Forceps for large stone fragments, Triprong jaws, 5 Fr., rigid, length 60 cm. - 2 pcs
9. Deatchable Instrument Port with sealing system and quick release lock, 2 channels, for use with uretero-renoscopes
10. Stone therapy with laser, ultrasound, electro hydraulic or ballistic lithotripsy

_ Rigid auxiliary instruments can be used through the straight instrument channel. Use of flexible auxiliary instruments or two different instruments such as laser fiber or electro hydraulic probe and stone extractor to stabile and retrieve the concrement

Accessories:

Handle.....	1
Guide for Lithocast hand piece.....	1
Membrane seal (pack of 10).....	1
Membrane retainer, standard.....	1
Membrane retainer with Luer.....	1

(2) Specification for URS set 6Fr

1. Uretero-Renoscope, 6/7.5Fr., 12°, one-step, conical, 8-13.5 Fr., length 43 cm, autoclavable, with angled eyepiece, fiber optic light transmission incorporated, 2 lateral irrigation ports and 1 working channel 3Fr. for instruments upto 3 Fr., sealing and tray for cleaning, sterilization and storage.
2. Distal chip diameter of 6Fr.
3. Detachable instrument port with sealing system and quick release lock, one instrument channel.
4. Distal end of sheath atraumatically shaped with rounded tip.
5. Grasping Forceps for stone fragments, double action jaws, 3Fr., rigid, length 60 cm- 2 pcs
6. Grasping Forceps for stone fragments, Triprong jaws, 3 Fr., rigid, length 60 cm. - 2 pcs
7. Deatchable Instrument Port with sealing system and quick release lock, 2 channels, for use with uretero-renoscopes
8. Stone therapy with laser, ultrasound, electro hydraulic or ballistic lithotripsy

Rigid auxiliary instruments can be used through the straight instrument channel. Use of flexible auxiliary instruments or two different instruments such as laser fiber or electro hydraulic probe and stone extractor to stabile and retrieve the concrement

Accessories:

Handle.....	1
Guide for Lithocast hand piece.....	1
Membrane seal (pack of 10).....	1
Membrane retainer, standard.....	1
Membrane retainer with Luer.....	1

(29) COLOUR DOPPLER SYSTEM WITH ADVANCED 2D facility.

1. Description of Function:

2. Operational Requirements:

2.1 Latest generation Electronic Phased array Colour Doppler system with Minimum 1200 Electronic independent channels, and desirably 4000 Electronic independent channels. System should be DICOM ready and capable of being interfaced with HIS/RIS/PACS.

2.2 Should be field up gradable to next generation system on site. All new software should be upgraded free of cost for at least 3 years

2.3 Frequency compounding or better technology for better resolution and penetration.

3. Technical Specifications:

3.1 Latest generation Electronic Phased array Colour Doppler system with Minimum 1200 Electronic independent channels, and desirably 4000 Electronic independent channels

3.2 256 gray shades for sharp contrast resolutions

3.3 Radiology, OB & GY, Urology, TRUS, Probes to be supplied which should be latest generation wide band transducers.

3.4 Harmonic Imaging- System should have Harmonics on all the probes following modes in harmonic with separate setting for it

- 3.5 Trapezoidal Image on B / Colour.
- 3.6 Automated Gain control for additional level of flexibility to image quality control.
- 3.7 Real time high frequency 2D for higher resolution and low frequency Doppler for higher sensitivity in all probes..
- 3.8 Frame rate should be 1000 FPS or more
- 3.10 High-definition acoustic zoom for enlarging sections of 2D and Colour flow images with more acoustic information for greater clarity and detail while maintaining an optimal frame rate.
- 3.10 Modes –2D, M-Mode, Steerable PW/CW Doppler, Colour Doppler, and High Definition Colour flow with Colour power angio imaging. Triplex mode for simultaneous 2D, Duplex, and Colour Doppler, Colour Power Angio, Directional power angio.
- 3.11 Monitor should be 17" or more, high-resolution Colour Monitor.
Tilt and Swivel monitor should be able to view in all angles and all light conditions.
- 3.12 Colour Flow Imaging for
- Increased lateral & spatial resolution.
 - Detection of even subtle areas of turbulence, displaying a more physiological blood flow appearance without loss of frame rate.
 - Colour flow with capability of automatically picking up Colour flow as a function of focal depth
- 3.13 Tissue Colourization (B-Colour) for improved contrast resolution
- 3.14 Application software for Adv Urological and Peripheral Vascular (All application package should be built into the system)
- 3.15 Cine loop memory- more than 1000 frames.
- High Frame rate review for better clarity of playback images study in slow motion.
 - Quad loop with memory for pre and post image comparison of any procedure.
 - Memory- 256 frames or more in quad loop. M Mode & Doppler Scroll Memory-40 seconds or more.
 - Frame grabber facility for post analysis.
- 3.16 Various maps for pre and post processing.
- 3.17 Minimum 80 GB hard drive for image storage and retrieval.(Standard with system)
- 3.18 Three or more transducer ports.
- 3.19 Facility for high definition digital acquisition, review and editing of complete patient studies.
- 3.20 PC based Peripheral system comprising of dedicated computer at least 80- 100 GB storage space (Hard disc) with 1 GB RAM or more with a Microprocessor speed of more than 3.00 GHz, frame grabber incorporated with DVD writer and a high quality Colour Laser printer. CD/DVD produced should be playable on any system.

4. System Configuration Accessories, spares and consumables:

- 4.1 Colour Doppler System with all application packages for serial studies with High frame rate review with a special urology applications. Harmonic imaging capability in all modes. Digital Storage and Retrieval.
- 4.2 Convex probe 2 – 5 MHz with Biopsy kit – 01.
- 4.3 Linear probe 5 – 12 MHz. – 01, with biopsy kit
- 4.4 Endo cavity for TV & TR applications 5-8MHz - 01. with dual biopsy kit
- 4.5 B/W thermal printer of latest model.
- 4.8 Colour laser printer for direct printing of images from the system (with CE or FDA mark) –min dpi of 1200.

4.9 DVD/CD Recorder with DICOM media transfer.

4.10 Specifications of Abdominal, Small parts and vascular ultrasound are listed in the following tables

TABLE 1. GENERAL ABDOMINAL ULTRASOUND

SPECIFICATIONS MINIMUM /DESIRABLE

B- MODE

TRANSDUCERS- Curve linear array(CLA), Phase CLA, PA CLA, PA

Frequency Range(MHz) 2-5 2-10

Penetration 15 18-30

SPECTRAL DOPPLER AND FLOW IMAGING CLA, PA CLA, PA

Frequency Range 2-5/ 2-10

Calculation of Waveform indices Auto and manual Auto and Manual

Range of gate registration(mm) <1

Penetration (cm.) 15- 30

TABLE 2. SPECIFICATION FOR SMALL PARTS ULTRASOUND, VASCULAR

ULTRASOUND

SPECIFICATIONS MINIMUM/ DESIRABLE

DYNAMIC IMAGING

TRANSDUCERS- Linear array(LA) desirable matrix 1x1.5

Frequency Range (MHz) 7-12; desirable 5-15

Penetration(cm.) 6-10 8-15

SPECTRAL DOPPLER AND FLOW IMAGING

Frequency Range(MHz) 7-10 /5-15

Penetration(cm.) 6-8 /6-10

Range of gate registration <1

TABLE 3. SPECIFICATION FOR ENOCAVITY (TV/ TR) ULTRASOUND,

SPECIFICATIONS MINIMUM /DESIRABLE

DYNAMIC IMAGING

TRANSDUCERS- biplanar

Frequency Range (MHz) 5-8 /5-9

Penetration(cm.) 6-10/ 8-15

SPECTRAL DOPPLER AND FLOW IMAGING

Frequency Range(MHz) 5-8 /5-9

Penetration(cm.) 6-8 /6-10

BIOPSY TRUS GUIDED

6. Power Supply:

6.1 Power input to be 220-240VAC, 50Hz fitted with Indian plug.

6.2 Resettable overcurrent breaker shall be fitted for protection.

6.3 Suitable Servo controlled Stabilizer/CVT

6.4 Online UPS of suitable rating with voltage regulation and spike protection for 30 minutes back up.

7. Standards, Safety and Training:

- 7.1 Should be FDA or CE approved product
- 7.2 Electrical safety conforms to standards for electrical safety IEC-60601 / IS-13450
- 7.3 The product shall comply to IEC 60601-2-37 ed1: Medical Electrical Equipment - Part 2-37: Particular Requirements for the Safety of Ultrasonic Medical Diagnostic and Monitoring Equipment
- 7.4 Type of protection against electric shocks -- Class I Degree of protection against electric shocks for ultrasound probes Type "BF" For ECG electrodes Type "CF"
- 7.5 Manufacturer/Supplier should have ISO certification for quality standards.
- 8. Documentation:
 - 8.1 User manual in English.
 - 8.2 Service manual in English.
 - 8.3 List of important spare parts and accessories with their part number and costing available in stock with the supplier.
- 9. Maintenance and Serviceability
 - 9.1 Remote Service Network Connectivity
 - 9.2 Optional Service agreement
 - 9.3 Online phone Support
 - 9.4 Clinical application support

(30) Specifications for Intensive Care Ventilator

Fully loaded Advance Intensive Care Ventilator

1. Should have Advanced technology ventilator for use in ICU, suitable for ventilating all categories of patients from neonates to adults.
2. Should have Microprocessor controlled system with individual selection of various ventilation parameters & PEEP.
3. The system should have the facility for both Pressure triggering & Flow triggering.
4. Should have the following modes of ventilation:
 - a. Volume control
 - b. Pressure control
 - c. Pressure Regulated Volume Control with on-demand flow (PRVC)
 - d. Volume support with back-up ventilation
 - e. Pressure support with back-up ventilation
 - f. CPAP
 - g. SIMV (Volume Control) + Pressure support
 - h. SIMV (Pressure Control) + Pressure Support
 - i. NIV
5. The system should have the following parameters:
 - a. Tidal Volume: 5 ml to 2000 ml
 - b. CMV Frequency Infant: 5– 100 breaths / min Adult 5– 100 breaths / min
 - c. SIMV frequency 1 – 40 breaths/ min
 - d. Inspiratory time 10% - 80% of breath cycle time
 - e. Pause time 5 – 30% of breath cycle time
 - f. Pressure level 0 – (100 – PEEP)
 - g. PEEP 0 – 40 cm H₂O
 - h. Trigger Pressure 0 -10 – 0 cm H₂O below PEEP
 - i. Inspiratory rise time – 20% of breath cycle time
 - j. I : E ratio 1 : 10 – 4 : 1
6. Should have following audio – visual alarms:
 - a. Airway pressure
 - b. High continuous pressure
 - c. FiO₂
 - d. Expired minute volume
 - e. Apnea
 - f. End expiratory pressure

- g. Respiratory rate
 - h. Gas failure
 - i. Battery
7. Inlet should be connect to gas pipe line
 8. Having built-in battery back-up for minimum 120 minutes
 9. Unit having supplied with suitable heated humidifier & ultrasonic nebulizer (less than 3 micron particle) for effective uninterrupted Nebulization during mechanical ventilation.
 10. 12.1" Color Touch Screen TFT user interface screen.
 11. It having possible to display following loops for each breath:
 - a. Pressure – volume Flow – volume Flow – pressure
 - b. Screen should display following waveforms: Flow time, Pressure time , Volume time
 - c. Access through touch screen & main rotary dial.
 - d. Direct access to vital settings: PEEP, O2 concentration, Respiratory rate & Volume (or Pressure)
 - e. 72 hour trend display of up-to 31 parameters.
 - f. Scroll / Zoom functions
 12. One set of patient tubes one each for adult & infant having supplied with system.
 13. Having the gas flow from 0 to 3.0 l / s
 14. Having single – piece autoclavable interchangeable expiratory cassette for complete dis-infection capability.
 15. Having user-friendly & have sturdy design.
 16. Having CE & US FDA approved.
 17. Each ventilator having supplied with standard accessories including –
 - (a) Reusable patient circuit (Pediatric) – 02
 - (b) Reusable patient circuit (Adult) – 02
 - (c) Ultrasonic humidifier with stand accessories – 01
 - (d) Re-usable Humidification chamber (Pediatric) – 01
 - (e) Re-usable Humidification chamber (Adult) – 01
 - (f) Air Hose – 01
 - (g) O2 Hose – 01
 - (h) CART / TROLLEY – 01
 - (i) Support Arm for circuit – 01
 - (j) Re-usable expiratory cassette - 02
 18. Should be CE/FDA certified

(31) TECHNICAL SPECIFICATIONS FOR ADVANCE LAPAROSCOPIC- ENDOSCOPIC SURGERY SET

A Full High Definition **Advance Laparoscopy** Surgery Set should consist of the following items :

- 1) Full HD Video Image Processor**
- 2) 3 Chip Full HD Autoclavable Camera Head**
- 3) Powerful LED cold light source**
- 4) 26" Full HD Medical Grade Monitor**
- 5) High Flow Co2 Gas Insufflator**
- 6) HD Laparoscop HD Endoscopy Recording System**
- 7) Basic video cart**
- 8) online UPS**

1). HD Video Image Processor : Should have following specifications :

- A full high definition processor should have resolution of 1920x1080 pixels.
- Should have compatibility for selecting Progressive / Interlaced output

- Optical image enhancement of capillary vessels and fine patterns in the superficial layer of mucosa for early detection of lesions.

- Should have a USB slot so as to take still pictures of Endoscope images.
- Should Have SD-SDI, DVI-D out put for HD Image quality.
- Output aspect ratio maximum 16:9
- Automatic Gain & Iris control communication between Light source & Camera.

2) 3 Chip Full HD Autoclavable Camera Head : Should have following specifications :

- The full HD camera head should have resolution of 1920x1080 pixels.
- Should have motorized optical zoom ranging from 0.8x to 1.8x and can be varied seamlessly.
- Should have motorized optical fine focus function which can be varied steplessly from coarse to fine image.
- Should have programmable buttons which can be configured through the processor.
- The camera head must be autoclavable.

3) Powerful 300W Xenon with NBI : Should have following specifications :

- A Powerful 300 Watt Xenon Lamp / LED light source with emergency lamp facility.
- Automatic light intensity control to achieve ideal illumination through Servo-diaphragm method. - NBI Filter.

Should have Fibe optic cable, size 4.8 mm, length 250 cm heat-resistant

4) 26" Full HD Medical Grade Monitor : Should have following specifications :

- Should have minimum 26 inches size
- A medical grade high definition monitor with resolution of maximum 1920x1200 pixel
- Aspect ration maximum 16:10
- LCD Screen preferable

5) High Flow Co2 Gas Insufflator :

Specifications CO2 Insufflator / Thermoflator:

1. Electronic CO2 insufflator / Thermoflator with integrated SCB module along with pin index connection. Should have an adjustable flow rate of 0 to 30 litres per minute and a pressure range adjustable between 0-30 mm Hg.
2. Pressure and flow rate should be displayed on the front panel. Provided with silicon autoclavable tubing with luer lock attachment.
3. Instrument should work on a supply of 220-240 V, with a frequency of 50 HZ single phase.
4. Optical and acoustic warning signals for pressure exceeding set limits.
5. Provision for preheating gas to body temperature.
6. Fully automatic gas refill.
7. Wrench Kit : Suitable for connecting the insufflator to CO2 cylinder.

8. High pressure hose of length of 200 to 300 cms.
9. Should be CE/FDA certified

6) High Definition Endoscopy Recording System : Should have following specs

- A high definition video recorder system with 2 channel real time recording facility for capturing real time Endoscopy and Hand movements time synchronized from Surgical camera is required
 - Should have internal hard disk drive of 500GB and should have facility of recording on Blu Ray Disc / DVD Disc or USB memory stick if required by user.
 - The recorder should have two inputs of DVI, HD-SDI, Composite video & S-video inputs for recording from various sources on 2 channels.
 - The recorder should have one output each for DVI , HD-SDI, Composite video & S-video for routing the image if required
 - Should also have an facility for one channel audio recording in real time with Endoscopy image
 - Should be able to edit the archived videos like cutting , cropping etc.,
- The recording should be MPEG 4 AVC / H.264 format with a maximum native resolution of 1920x1080 pixels depending on the input selected.

7)Trolley : Imported Quality laparoscopy tower cart with good quality of castors lockable with a provision of mounting an 20Kg CO2 cylinder on the cart.

8)Optional Item Online UPS for Safety. The supplier need to provide a **pure sine wave UPS** with a battery back up of 30 min.

All items should be CE and FDA certified.

9) SPECIFICATIONS FOR LED LIGHT SOURCE:

Cold Light LED Light Source 175Watts, high-performance LED and one light outlet, power supply 110 - 240 VAC, 50/60 Hz consisting of: LED 175, Mains Cord , Connecting Cable for integration with touch controlled or remote controlled OR System, length 100 cm

(32) TECHNICAL SPECIFICATION OF HOT & COLD STERILIZER

General Specification

Hot and Cold Water Sterilizer electrically operated double tanks each of atleast 30 liters per hr capacity. The chamber is of stain less steel. The unit will be incorporated with low water protection and Automatic Pressure Cut-Off Device. Special Arrangement for cooling of Sterile Water to required temperature

Electrical & other details

The Heating Load in Hot Boiler and Cold Boiler should be atleast 6 KW each. i.e. Total Load is 12 KW. The Sterilizer will be made of atleast **SS AISI 316 Steel** with the thickness of 1.5mm i.e. 16 gauge
Electrical Load : 12 KW in 3 phases, 440 volts, AC Supply

Boiler items at a minimum should have :

- a) 1 no. Safety Valve
- b) 1 no. Water Filter made of Stainless Steel
- c) 1 no. Steam Release Valve
- d) 1 no. Pressure Gauge
- e) 1 no. Dial Thermometer
- f) 1 no. Double Acting Valve
- g) 1 no. Steam Trap
- h) 1 no. Water Collection Valve and
- (i) Water Level Indicator.

Certification

IS-3829 marked.

Company should have ISO 9001-2008, ISO 13485-2003 and CE certified.

Manufacturing Experience

Company should have manufacturing experience more than 10years.

(33) X RAY VIEW BOX SPECIFICATION

LED Light Source – Intensity approx 10,000 lux - Intensity adjustable – Wall mounting / Desk Mounting

Sizes: 500mm x 510mm x 45mm depth approx-

850mm x 510mm x 45mm depth approx

1210mm x 510mm x 45mm depth approx

1560mm x 510mm x 45mm depth approx

Preferable to have CE / FDA certification

Abdul Javed
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