

Technical Specification for IVF Laboratory Set UP

Sr. no	Name of Item	Description	Technical Specification
1	Ovum Aspiration Pump (Digital) With connecting tube with hydrophobic filter, and foot pedal actuator	Precision built, regulated, vacuum pump for ovum aspiration * Rapid suction response at the needle tip and is able to hold constant vacuum settings accurately, for long periods * Boost feature to clear blockages in Aspiration needle * Ultra-quiet, vibration-free operation. * Foot Pedal allows hands-free operation.	Power Supply: universal input 100- 240 V AC, 50/60 Hz Low pressure: 0 to -550 mm Hg Set and actual pressure :digital display for both available Pre filter as standard : built in for safety
2	Heating block	To keep temperature at 37 degrees Celsius	18 cavities for 14cc tubes
3	IVF Test Tube warmer	IVF test tube warmer fits 14 to 18 test tubes * 18 Nos of test tubes at one time of 14ml/15ml/10ml round bottom type * Adjustable temperature * Block covers 2/3 of the tube which gives better uniform heat to the tubes * Blocks should have port to check temperature	Set point: Ambient to 50° C
4	Test Tube Heater	Clear front panel allows continuous observation of test tube contents. * Redundant temperature controller prevents overheating. * Accepts (6) Falcon test tubes * Operating temperature is preset to 36.9°C or can be factory reset to meet individual requirement. * Unit should come with a polycarbonate stand.	For keeping the temperature at 37 degrees celcius

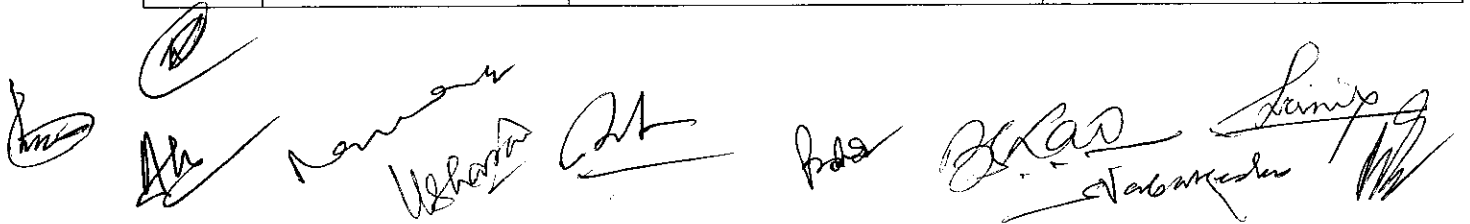
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08/06/2020 Ushama [Signature] [Signature]

5	IVF Work station Integrated Laminar Flow	Work station:	<p>Working chamber should be approximately (Depth X Width X Height) 450-650mm X 1600-1900mm X 600-700mm.</p> <p>HEPA filters : Class H-14 HEPA Filters in accordance with EN1822. Filter Efficiency 99.999% for 0.3 Micrometer particles size.</p> <p>Access of maintenance should be from front of the laminar flow, so that cabinet need not be moved.</p> <p>Filters: Carbon Pre Filters for VOC absorption and HEPA Filtration.</p> <p>Heating : Electrical</p> <p>Flow: Flow meter to regulate flow rate of gas through bubble flask (vertical Flow)</p> <p>Noise level: upto 55 Db</p> <p>Light damping facility to adjust light intensity.</p> <p>Unit should be workable on standard UPS supply</p> <p>Working chamber tabletop should be made up of stainless steel. SS table should be integrated with two rectangular glass heating stage and should be of minimum size: 210 x 110 mm and should flushed with SS table controlled by electronic temperature controller with digital display.</p> <p>Integrated Humidification System.</p> <p>Provision for heated system for Stereozoom microscope</p> <p>External data output via USB</p> <p>Should have provision for fixing two Stereozoom microscopes in 1A above.</p> <p>Special Heating Surface with Thermal Sensors. Temp accuracy $\pm 0.4-0.7^{\circ}\text{c}$</p> <p>Inbuilt LCD monitor 19' to 21' of medical grade with video grabber and adequate memory</p>
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			<p>for seeing microscope images on the screen. HEPA Filter Alarm indicator. Should have adequate Electrical Sockets(>2) Variable Fan speed. Warming blocks for holding atleast 3 or more follicular fluid tubes (qty 5) Warming block for 60mm dish (qty-5) Warming block for NUNC 4 well dish (qty 5) Revolving Chairs – 2 (stainless steel) for IVF Lab CCD Camera - 1(chip)</p> <p>Laminar Flow:</p> Stainless Steel Table top Leveling Jacks HEPA Filter (0.3 Microns) Used one Pre-filter of 10 Microns 3- Pin Socket (5 amps) with switch
6	IVF Antivibration Table for ICSI procedure	Air damped Anti-vibration table are designed to meet requirements for all models of inverted Microscopes. * The plate on top can either be stainless steel or stone.	* Standard Size : 1150mm x 720mm x 790-830mm
7	CO2 Incubator	150 Litres to 220 liters Medical device for human I.V.F.	Humidity: Active sterile humidity control through vaporizing module operating at 90 -120°C Measuring range 0-98% RH /Range 60-95% RH. humidity levels Stainless Steel Interior Perforated shelves for uniform heat distribution/shelf adjustment) Air-jacketed with good insulation LED/LCD touch Display of chamber temp. and CO2 level. CO2 Control range: 0 to 20% CO2 Control accuracy: + 0.1% Temperature Control: Panel heated interior chamber and door. Intelligent temperature control system for dry inner

			<p>chamber. Range 30 to 45OC starting 5OC above ambient temperature. Stability/ Uniformity +0.1OC/0.3OC. Over</p> <p>System should have built in decontamination cycle for complete elimination of bacteria, fungi, spores, mycoplasma etc. System must have on board graphic capability /data logging to enable user to obtain historical performance. Incubator must have a fully automatic start routine function</p> <p>Data logging facility –built in Diagnostic system: Optical and Acoustic alarm. Alarm messages are retained in non permanent memory. Set points should be saved in case of power interruption.</p> <p>Short recovery times: for all adjustable parameters through optimized microprocessors control less than 4 minute. Incubator must offer direct access port to enable comparative CO2 measurement by external device. Multiple inner glass doors TCD / IR Co2 Sensor based system.</p> <p>Lockable main door-preferable. Fast humidity recovery by direct humidification system Certified Medical Device. Incubator for human embryo culture.</p> <p>With accessories: CO2 Regulator and inline filter with each incubator. UPS 3 KVA with each incubator. Unit should have with them appropriate stands to place the Incubator.</p> <p>Classification: Safety class 1, class 11A for all usage according to EC directive/FDA/BIS.</p>
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8	Tri-gas Bench top Incubator	Compact, humidified TRI-gas incubator designed to maintain optimal environment for development of ova or embryos.	<p>Two or more Chambers for placing Petri dishes Each Chamber must have a heated base plate Each Chamber preferably must have heated lid. Constant temperature 37 degree C. in the dishes Fast recovery in less than 2 minutes. Inbuilt alarm alert for low Co2 and temperature Storage Humidity: 5% to 95% relative humidity non-condensing. Operating temperature 5 to 40 degree C. for safe operation. Temperature Control range ambient 5 to 40 degree C. Temperature measurement accuracy + - 0.2 degree C. Temperature control accuracy + - 0.1 degree C. Flow control range 0 ml/minutes to 900 ml/minutes. Dishes per Chamber minimum 4. Power: Universal input 100-240 V, 50/60 Hzs With UPS backup for half an hour. Alarm contacts for remote monitoring Accessories premix/auto mix, inbuilt mixer Accessories: On line gas filters and Table for placing the Incubator.</p>
9	Trinocular Stereozoom Microscope		<p>Parallel optics Typical Zoom Ratio 10:1 or more Zoom range: 0.6 – 8.0X Diopter adjuster, Rubber Eye-Shield, Reticle Lead. Eyepiece tube : trinocular tube for camera attachment Eyepiece inclination :for fatigue free observation C-mount TV adapter Power Cord BE Halogen Lamp 6V-20W with reflector Trinocular port Eyepiece with diopter adjustment :10X (f.n 22) Trinocular observation tube</p>

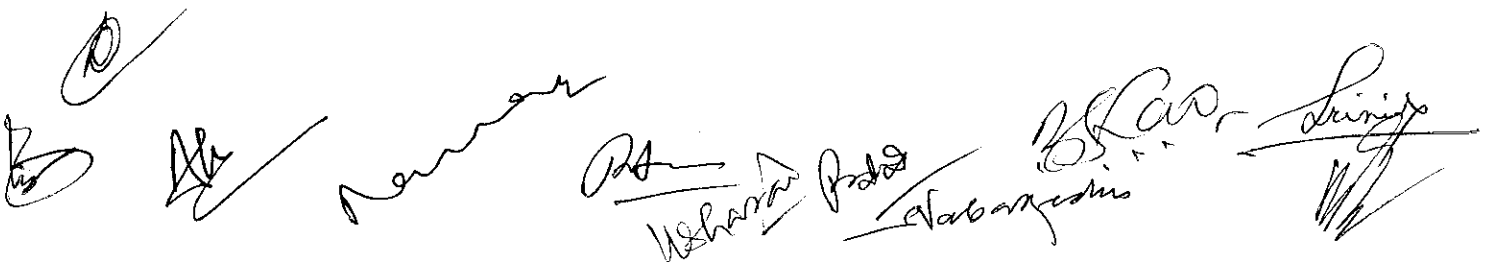
			<p>with inclination at 30 degree, inter pupillary distance adjustment 48mm -76mm. Working Distance Up to 92 mm Plane achromatic objective 1X Resolution of at least 600lp/mm. Transmitted light stage with halogen illuminator of at least 30 watt. Scientific Digital Camera for microscopy with control software, progressive scan CMOS/CCD having resolution of 5 M-pixel or better, metal body, 1024X768 live preview with upto 25 images per second, capacity for fast, full Colour live image capture in real time, photographs in color or in gray steps. Coaxial coarse and fine focusing knob mechanism should be built in Stand with ESD capability. Episcopic illumination :integrated epi illuminator with LED base system . A suitable operating system with printer and UPS for imaging through digital camera.(Monitor) Adapters for camera : C-mount adapter for CCD/digital camera. Basic Magnification Continuously Variable between 6.5X and 50X. Sturdy Stand Capable of taking additional optics and documentation accessories viz, Photomicrography system, Digital Imaging and Image analysis Systems. Accessory: Two spare halogen lamp</p>
10	Sparmed Tower Air Cleaner to clean & sterilize (CODA Tower)	<p>Advanced equipment designed to purify air of VOC's, CAC's, Particles, micro organisms, toxins, solvents and odour. * Consists of HEPA filter, potassium permanganate impregnated activated carbon filter and prefilter.</p>	66 x 53 x 190 Width x Depth x Height (in cm)

	<p>OR</p> <p>Lab purification system :</p>	<p>* Colour LED on front panel to show carbon filter replacement time</p> <p>* 2 speed options - Full speed and half speed.</p> <p>* Ultra quiet - Noise level is less than 50dB (A) at full speed and less than 42 dB (A) at half speed.</p> <p>* Long Lasting with zero maintenance.</p>	<p>OR</p> <p>Portable unit – floor or wall mounted</p> <p>Effective removal of VOC & CAC</p> <p>3. Exciting media: UV 254 nm bulbs</p> <p>UV- C light source for cleaning air</p> <p>No Ozone Generation Green technology : No harmful by-product.</p> <p>Effective coverage: up to 1000 sqft</p> <p>Replaceable filters</p> <p>Power : 220V, 3Phases, 50-60Hz</p>
11	<p>CryoCan (Liquid Nitrogen Storage Containers)</p>	<p>For sperm, oocyte, embryo and blastocyst storage</p>	<p>Built in aluminum with super insulation and resin neck</p> <p>Should comply with international regulation of transport of dangerous material</p> <p>Size:</p> <ol style="list-style-type: none"> 42 to 48 liters with neck diameter 120 mm-160mm-2No, 21 lit with neck diameter 50 mm --- 1no. <p>Static evaporation loss rate- 0.25 – 0.35 liters / day</p> <p>Should be provided with SS canister, 11-12 canister each with 42 to 48lit container and 6 canister with 21 lit . Each canister to be provided with Goblets with different color visio tubes. Diameter of canister should range between 65 to 75 mm</p> <p>Should have separate digital temperature indicator with alarm</p>

			<p>Should have temperature indicator with alarm should be attachable with container Facility for filling liquid nitrogen Static holding time - 125 -145 days. With Essential Accessories:</p> <ol style="list-style-type: none"> 1. Transparent Spectacles for eye protection from fumes of liquid nitrogen-four. 2. Cryo Gloves to protect hands from cold burn.-4 pairs 3. Liquid nitrogen transfer pump – two 4. Moving Trolley with each canister
12	Inverted microscope with micromanipulator System.		<p>Inverted microscope basic unit (100-240V)12V-100W consisting of Lamp house with 100W halogen/LED Halogen lamp12-100W System to be compatible with any standard Manipulator System Good Optics Sturdy stand with built in 12V 37W halogen/LED light illumination /LED transmitted light illumination 5X nosepiece to accommodate up to five different objectives Should have port of camera(HD/USB minimum 2 MP or more) Objective suitable for phase contrast and bright field. Universal condenser for bright field and phase contrast Microscope can further be upgraded Built in Heated central Stage Oil/Air System for Pipette setting and control. Digital Channel temperature controller Heated Surfaces Single lever controlled— Pneumatic/Hydraulic/Electrical/Mechanical System of controls preferred</p>

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13	PETRI PLATE WARMER		Should be a medical device for use in Human IVF with following specification Hot plate & test tube warmer with temp range 30-45°C and digitally Controlled temperature of hot plate with temp accuracy +/-0.2C. – (01). Heating time < 10 minutes.
14	Centrifuge Machine		With Digital Timer ,G force and Digital RPM indicator with maximum RCF of 800G. Swing out rotor Should accept 8 tubes . should have adaptor to hold different size tube(6, 14, 15 ml) Should be fully programmable Microprocessor controlled Digital Temperature, RCF and Time. Safety Lid interlock to prevent opening during centrifugation. Should have brushless A/C motor To be supplied with all accessories including appropriate table for placing them. Maintain desired heating(30 to 40 degree C. Should have programmed acceleration and deceleration
15	VOC Meter for ART Lab		Handheld monitor with option of wall mounting Capable of detecting contamination at 0.1ppm level or lower Facility of data storage and data logging Multi Gas Sensor Detection Upto 3 second response. Warning and Alarm levels VOC sensor calibration with easy calibration kit Operating Humidity up to 95% relative humidity(non condensing) Weight less than 1 Kg


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16	Sperm Counting Chambers		<p>Counting Chamber with cover Slip(Glass) Cover Slip with Grid built in with 100 squares Reusable No Calibration required Optimal depth 10 microns Should be provided with cleaning brush and cleaning paper 99% accuracy for pre and post wash semen analysis Valid CE/US FDA/BIS Certification NO DILUTION REQUIRED FOR SPERM COUNT CALCULATION</p>
17	Pipetter and Denudation System		<p>MECHANICAL ADJUSTABLE VOLUME PIPETTOR Manually operated air displacement digital pipettors to dispense media accurately and safely.</p> <ol style="list-style-type: none"> 1. Large, clear display for the set volume. 2. The volume-setting mechanism to provides secure setting of the desired volume. 3. Autoclavable 4. Set of three with Volume dispensing in (micro litre). <ul style="list-style-type: none"> • 1-10 µl • 10-100 µl • 100-1000µl <p><u>Denudation System</u> It should be a medical device for use in Human IVF. Each system should consist of following items</p> <ol style="list-style-type: none"> 1) Denudation Pipette Rack Should have slots for placing at least two denudation holder with pipette. 2) Denudation Pipette Holder Adjustable handle to accept all sizes of pipettes 3) Denudation Pipette Flexible polycarbonate pipettes used for manipulation of oocytes

			<p>and embryo</p> <p>Pipette tips should be suitable to get easily attached & detached with holder</p> <p>Size: 135-140 μm, pack of 10 or 20.</p> <p>Size: 170-175 μm, pack of 10 or 20.</p> <p>Size: 275-300μm, pack of 10 or 20.</p>
18	Co2 Analyzer		<p>Sensor for Co2 measurement 0 to 10%</p> <p>Temperature Sensor: measurement sensor 0 to 100 degree C.</p> <p>Measurement and documentation of multiple Incubators</p> <p>Real time data logging.</p> <p>Data download via USB.</p> <p>PC- software for analysis and management of measurements</p> <p>Rechargeable battery or mains adapter.</p> <p>Should be supplied with case and USB data cable.</p>
19	Gas Inline Filter		<p>For removal of volatile organic contaminants (VOC) and chemical Air contaminants (COC) and other particulates in Gas.</p> <p>To be fitted between Gas cylinder and the incubators</p> <p>Compact with standard connectors</p>

The image contains several handwritten signatures and initials in black ink. At the top right, there are three distinct signatures. Below them, there are several other marks, including a circled signature, a signature with a long underline, and a signature that appears to be 'Ushant'. At the bottom right, there is a large, stylized signature.

SPECIFICATIONS FOR ADVANCED ELECTRO SURGICAL UNIT with VESSEL FUSION

- ✓ An integrated system with 300W output generator and a single touch screen for Monopolar, Bi-Polar and Vessel Fusion integrated in one generator.
- ✓ The system must be micro-processor controlled which should identify the tissue type with a feedback of at least 434000 times/second on real time basis, and adjust the power to get the desired surgical effect on the tissue.
- ✓ System should have 2 monopolar output, 1 bipolar output and 1 Vessel Sealing output.
- ✓ The Monopolar output must have Cut, Blend, "Haemostasis with division (HWD)", Soft Coag, Fulgurate and Spray mode.
- ✓ The Bi-Polar must have Low, Standard and Macro mode with Auto Bi-Polar control.
- ✓ System should have separate monopolar, bipolar & Vessel Sealing foot pedal.
- ✓ The system should have one different Vessel Fusion output which should be able to seal artery, veins along with tissue bundle up to and including 7mm in diameter, and fused vessels should be able to withstand more than 3 times of normal systolic blood pressure.
- ✓ The Vessel seal system should be of minimum of 300W at a rated load of 20 ohms.
- ✓ The vessel sealing system should have simple audio visual feedback display from the generator. This should include :
 - System should have System Error Indicator
 - System should have System status indicators such as Self test, ready for use, ready for sealing/seal cycle complete, sealing in process
 - Seal cycle incomplete alert,
 - System should have usage limit indicator
 - System should have instruments status indicator.
- ✓ The vessel sealing system should support open and laparoscopic hand instruments
- ✓ The vessel sealing hand instruments should have cutting independent of sealing.
- ✓ There should be an option of enabling or disabling the footswitches.
- ✓ Vessel sealing system should read with alarm indication even if sealing is not completed.
- ✓ Surgeon should have the facility to control the power from the sterile zone with a sliding control 3-button hand switching device.
- ✓ The system should have demo mode facility and recall facility to recall the last setting used by user.
- ✓ System should have bipolar resection with saline facility in-built in the integrated in main unit software without any interfacing cable.
- ✓ System should be compatible of REM polyhesive contact quality monitoring system.
- ✓ System should have audio-visual alarm facility, to indicate any breakage of direct contact between the patient and patient plate.
- ✓ All open surgery including head and neck and thyroid can be precisely controlled with very less thermal spread by using sealing technique.
- ✓ Integrated seal with choice of cut of 10 mm & 5 mm should be there.
- ✓ System should have 5 mm vessel sealing instrument with Blunt tip & Maryland Jaw for dissection and faster procedure.
- ✓ Both Footswitch and hand control mode should be available.
- ✓ System should be Compatible with Argon Coagulator and smoke evacuator
- ✓ Vessel sealing System should be US FDA approved.
- ✓ Vessel sealing all hand instruments should have US FDA approved.
- ✓ Argon machine should be compatible with any diathermy machine
- ✓ The system should be upgradable and should have RS232, USB, Ethernet port for on field software downloads, upgrades and serviceability.
- ✓ Monopolar and Bipolar and Vessel sealing footswitch.

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08/06/2020
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- ✓ Three Button Hand switching pencils – Power Setting can be changed by the Monopolar pencil from sterile field.
- ✓ Contact quality monitoring return electrode .
- ✓ Universal adaptor-
- ✓ Open & laparoscopic 5mm seal and cut instrument with hand switch activation capability should provide with the system -
- ✓ 36mm jaw length, 180 degree rotatable instrument with curved blade

Accessories list with each Vessel Sealer :

1. Footswitch : Monopolar, Bipolar, Vessel sealer & Bipolar resection – 1 No each
2. Maryland jaw curved 5mm sealer – divider instrument for Lap – 18 Nos.
3. Maryland jaw curved 5mm sealer – divider instrument for open - 18 Nos.
4. Blunt tip jaw 10mm sealer-divider instrument for Lap- 12 Nos.
5. Blunt tip 5mm sealer – divider instrument for Lap- 18 Nos.
6. Curved tip, Shaft, length 18-20cm sealer-divider instrument-12 Nos.
7. Fine Tapered tip curved, 18-22cm length sealer-divider instrument – 18 Nos.
8. Disposable Monopolar Pencil – 200Nos.
9. Disposable Adult Patient Plate – 200 Nos.
10. Bipolar Cable disposable -100 Nos.
11. Bipolar Forceps -5 Nos.

The bottom of the page contains several handwritten signatures and initials in black ink. From left to right, there is a signature that appears to be 'Dr. S. S. S.', followed by 'AM', 'AB', 'R. S.', 'S. S.', 'S. S.', and 'S. S.'.

ELECTRO SURGICAL DIATHERMY UNIT :

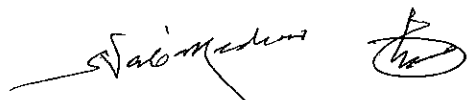






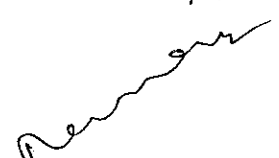
	Specification
1	Instant response technology ensures that the power delivered remains virtually constant, regardless of the tissue type and should have smart tissue sensing technology which monitors changes in tissue impedance >400,000 times per second to adjust energy output accordingly.
2	Improved performance at lower power setting minimizes the risk of tissue damage and neuromuscular stimulation.
3	Three-section touch screen with enhanced ease of use, Simple controls and intuitive information displays.
4	Unit should have Advance mode for a unique combination of monopolar hemostasis and dissection while using a lower power setting resulting in less char, less thermal spread and less arcing than a traditional coagulation mode
5	Three internal microcontrollers reduce system reaction time and increase the system processing speed.
6	Spray coagulation voltage of no more than 9000 volts peak-to-peak output for board, but superficial coagulation with limited capacitive coupling.
7	Closed loop coagulation for all the monopolar and bipolar modes.
8	A power efficiency rating of approximately 98 or more for cut Performance.
9	Three cut modes, all controlled by instant response technology, offer surgeons a Variety of choices. a. Low cut for delicate tissue or endoscopic cases. b. Pure cut for clean, precise cut c. Blend for cutting with homeostasis.
10	Coagulation modes: a. Desiccate for low Voltage contact coagulation suitable in endoscopic and Delicate tissue work. b. High crest factor for efficient non contact coagulation in most applications. c. Low crest factor for lower voltage coagulation in requirements. d. Spray for coagulating large tissue areas with superficial depth of necrosis.
11	Three Bipolar modes: a. Different setting in bipolar are controlled by the instant response System. b. Precise, Standard, Macro setting utilize low voltage to prevent sparking.
12	Unit Should have Auto Bipolar Mode and power can be change from the sterile field by Monopolar pencil.
13	System compatible with other devices, including : a. Argon coagulation system. b. Ultrasonic surgical aspirators. c. Smoke evacuator d. Bipolar current monitor
14	Compatible with and used as the electrosurgical energy source for: a. Control RF ablation system. b. Electroblade rotary resection system c. Pacemaker lead extraction system.
15	Compatible with and the exclusive electrosurgical generator for the computer Motion herms voice command system.
16	Unit should be advanced – microcontroller based Technology
17	Unit should perform self test During Power ON.
18	Unit should have Digital Wattage Indications for Bipolar, Monopolar Cut and Coagulation.
19	Unit should have isolated Monopolar and bipolar outputs.
20	Unit should have Split Type Patient Plate contact monitoring System for Maximum Patient Safety (Unit should not be deliver power until and unless Maximum area of the patient plate is not covered to completely minimize the risk' of post operative H. F. burns)
21	Unit should have Audio Visual Patient plate Error Monitoring System.
22	Unit should Have at least 3 monopolar coagulation modes.
23	Monopolar Coagulation Should consist Spray for Non-Contact Coagulation, Fulgurate for underwater coagulation, Desiccate/Force for open. Coagulation.
24	Unit should have at least Three Bipolar Mode including Precise, Standard and macro. And Auto bipolar mode
25	Unit should Have Facility to use monopolar and bipolar function without Switchover.


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26	Unit should have simultaneous coagulation facility in monopolar coagulation.
27	Unit should have HF leakage monitoring system.
28	Unit should be compactable with three button monopolar pencil which can use to adjust the power output of the machine from the sterile field.
29	Unit should have Time-out Facility to prevent accidental activation
30	There should be soft coagulation mode to do precise surgeries in soft organs like Liver
31	Unit Should Have US FDA and European CE Approved
32	OUTPUT WAVEFORMS: Bipolar Precise - more than 300 kHz sinusoid Standard - more than 300 kHz sinusoid Macro - more than 300 kHz sinusoid
33	Monopolar Cut Low - more than 300 kHz sinusoid. Similar to the Pure Cut mode except the maximum Voltage is limited to lower value. Pure - more than 300 kHz sinusoid Blend - more than 300 kHz sinusoid bursts of sinusoid, recurring at 27 kHz intervals. 50% duty cycle envelope.
34	Monopolar Coag Desiccate - more than 300 kHz sinusoid repeated at 39 kHz, 8% duty cycle Fulgurate - more than 300 kHz sinusoid damped sinusoidal bursts with a repetition frequency of 30 or 57 kHz into 500 ohms. Spray - more than 300 kHz sinusoid damped sinusoidal bursts with a randomized repetition centered at 28 KHz Frequencies include 21 kHz < 35 kHz.
35	Output is further modulated by a random 250 Hz envelope with a variable duty cycle.
36	Output power changes by less than 15% of 5 watts, whichever is greater as the line Voltage varies from 104-132 volts and 208-264 volts (at rated load).
37	The system should have current ammeter to make sure that while using bipolar the vessel is coagulated or not.
38	Should be able to activate two monopolar coagulation buttons at same time. There should have a option to enable or disable the shared coagulation facility.
39	Should have an option to enable and disable auto bipolar as per the requirement from the surgeon
40	Unit should be USFDA & CE approved.

Accessories List with Each Electro-Surgical Diathermy Unit:

1. Footswitch : Monopolar & Bipolar – 1 no's Each
2. Disposable Monopolar Pencil – 200 Nos.
3. Disposable Adult Patient Plate – 200 Nos.
4. Bipolar Cable disposable – 100 nos.
5. Reusable Bipolar Forceps – 5 Nos.

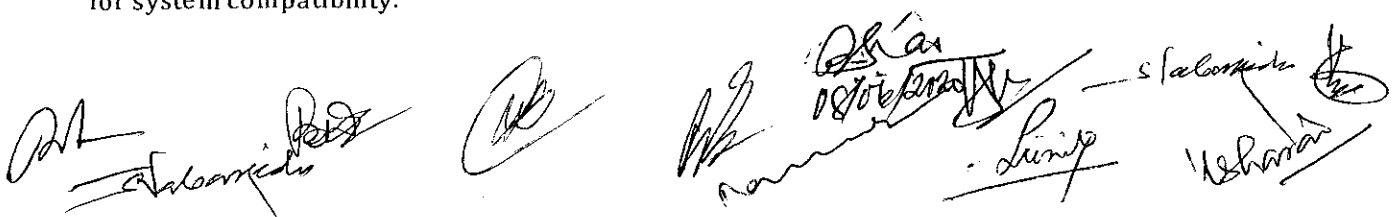











Technical Specification of Hysteroscope

SL.N.	INSTRUMENTS WITH SPECIFICATION
1	OFFICE HYSTEROSCOPE TELESCOPE: Forward-Oblique Office Hysteroscope Telescope 30°, enlarged view, diameter 2.9 mm, length 30 cm, autoclavable, fiber optic light transmission incorporated
2	OFFICE HYSTEROSCOPE SHEATH : Hysteroscope sheath for diagnostic continuous irrigation size 4.5mm outer sheath and 3.8mm inner sheath for use with 2.9mm hysteroscope telescope
3	OPERATING SHEATH: size 4.3 mm, with channel for semirigid 5 Fr. Operating instruments, with 1 stopcock and 1 LUER-Lock adaptor, for use with Continuous-Flow Operating Sheath
4	CONTINUOUS-FLOW OPERATING SHEATH: size 5 mm, with 1 stopcock and 1 LUER-Lock adaptor, for use with Operating Sheath
3	STANDARD HYSTEROSCOPE TELESCOPE: Forward-Oblique Hysteroscope Telescope 30°, enlarged view, diameter 4 mm, length 30 cm, autoclavable, fiber optic light transmission incorporated,
4	EXAMINATION SHEATH : Examination Sheath, diameter 5.1 mm, with 1 LUER-Lock adaptor
5	EXAMINATION SHEATH : Examination Sheath, diameter 5.2 mm, with 1 LUER-Lock adaptor
6	CF EXAMINATION SHEATH : Continuous-Flow Examination Sheath, diameter 6.2 mm, for use with Inner Sheath, with 1 LUER-Lock adaptor
7	CF OPERATING SHEATH : Operating Sheath, size 5.4mm, with 5 Fr. channel for operating instruments, with 1 stopcock and 1 LUER-Lock adaptor, for use as Inner
8	CF OPERATING SHEATH : Operating Sheath, Inner size between 4.9-5.0mm and outer size 6mm with 1 stopcock and 1 LUER-Lock adaptor, for use as Inner Sheath
9	SCISSOR : Scissors, blunt tips, 5 Fr., length 40 cm, single action jaws, semirigid,
10	SCISSOR : Scissors, pointed jaws, 5 Fr., length 40 cm, single action jaws, Semirigid
11	BIOPSY & GRASPING FORCEP : 5 Fr., length 40 cm, double action jaws, Semirigid
	PUNCH: semirigid, through-cutting, single action jaws, 5 Fr., length 40 cm
	BIOPSY SPOON FORCEPS : semirigid, double action jaws, 5 Fr., length 40 cm
12	PALPATION PROBE : Compatible with abovementioned sheath
13	POLYPECTOMY LOOP : Compatible with abovementioned sheath
14	BALL ELECTRODE : Compatible with abovementioned sheath
15	NEEDLE ELECTRODE : unipolar, 5 Fr., length 34 cm
16	BIPOLAR DISSECTION ELECTRODE: semirigid, 5 Fr., length 36 cm
17	UNIPOLAR CORD : High Frequency Cord with 4 mm plug HF-unit,300 CM
18	BIPOLAR CORD : High Frequency ,300 CM
	RESECTOSCOPE SHEATH: including connecting tube for in- and outflow, for continuous irrigation and suction, 22 Fr., oblique beak, fixed Inner Sheath 26055 XB with ceramic insulation, for use with Working Elements
	STANDARD OBTURATOR: for use with Resectoscope Sheaths
	WORKING ELEMENT: Cutting by means of a spring. Movable thumb ring. In rest position the electrode tip is inside the sheath.
	CUTTING LOOP: angled, 22 Fr.,
	COAGULATION ELECTRODE: pointed, 22 Fr
	COAGULATION ELECTRODE: ball end, 22 Fr., diameter 3 mm
19	DISINFECTION TRAY: Disinfection/Sterlization tray with sieve tray to lift, suitable for hysteroscopic instruments
20	STORAGE AUTOCLAVABLE TRAY: Storage hard plastic tray with sieves suitable for all hysteroscope instruments and should be autoclavable
21	IRRIGATION AND SUCTION DEVICE- ENDOMAT Controlled irrigation and suction unit for operating hysteroscope and TCRE procedure to maintain intrauterine cavity pressure as desirable by surgeon. Pressure of irrigation to be maintained between 0- 200 mm of Hg. Flow to be maintained between 0 - 500 ml/min. Suction pressure to be maintained between 0-50 K Pa. Should be consisting of : Main unit with digital display, Pump head, Indicator and preset and actual value for pressure, flow, suction, with sensor attachment for reusable dome. Automatic dome detection facility. Should be supplied with the following accessories: Hysteroscope reusable tubing set (2 nos), Reusable pressure dome (2 Nos.), Suction bottle of 5 L (2), suction bottle cap with stand and suction tubing set reusable 2 Nos.

The core Operating Hysteroscope like Telescopes, Controlled suction irrigation unit, hand instruments(bipolar forcep, unipolar forcep, HF needle etc.) should be from single manufacturer for system compatibility.



S. No. :	Specification :
1.	4K Camera System :
	<ul style="list-style-type: none"> The system should be Digital endoscopic video camera with maximum Resolution of 3840 X 2160 pixels, progressive scan to guarantee genuine 4K. The system should have facility of 3x Digital Zoom Lens or more. The system should have facility for capturing 4K UHD HD Stills and FULL HD Videos in External USB drive. System should have facility to offer various visualization modes for surgery and diagnosis by shifting the color spectrum like BLUE & GREEN light for recognition of the finest tissue Structures and their differentiation. Picture in Picture of visualization modes. Automatic adjustment of light intensity of light source. <p>Technical Specifications:</p> <p>Pixels: 3840 X 2160 Pixels AGC: Microprocessor controlled Lens: Integrated Zoom Lens f = 18 mm Color Space: BT.2020 emulation Control buttons: 3 (2 of them freely programmable). Video output: 1 Display Port 1.2 , 1 x DVI-D output, 1 x 12G-SDI output, 3 x camera input for communication with compatible camera modules, LAN connection, 4 x USB connection (2 x front, 2 x back). Input: Keyboard input for character generator. Power Supply: 200-240 VAC 50/60 Hz Certified to: IEC 601-1, 601-2-18, CSA 22.2 No. 601, UL 2601 and CE according to MDD, protection class1/cf defib.</p>
2.	31 – 32 Inch 4K Monitor :
	<p>The monitor should have :</p> <p>Color Space – BT.2020 emulation, Adobe RGB 97% Aspect ratio: 16:9 Screen Diagonal: 31.1" Effective Resolution: 3840 X 2160 Pixels Brightness: 350cd/ m2 Max. observation angle: 178° vertical/horizontal. Inputs : 1 x DP 1.2 ,2XDVI-D ,4 x 3G-SDI / 1X 12G SDI Outputs: 1 x DVI-D ,4 x 3G-SDI/1X 3GSDI Contrast ratio: 1500:1. Certified to: ANSI/AAMI ES60601-1:2005, UL 60601-1, CAN/CSA C22.2 NO.60601-1:14 & EN 60601-1. CE label according to MDD, class I.</p>
3.	55 – 58 Inch 4K Monitor :
	<p>The monitor should have:</p> <p>Color Space – BT.2020 emulation, Adobe RGB 97% Aspect ratio: 16:9 Screen Diagonal: 55.1" Effective Resolution: 3840 X 2160 Pixels Brightness: 350-500cd/ m2 Max. observation angle: 178° vertical/horizontal. Inputs: 1 x DP 1.2 ,2XDVI-D ,1 x 12G-SDI / 1X 12G SDI Outputs: 1 x DVI-D ,4 x 3G-SDI/1X 12GSDI Contrast ratio: 1500:1. Certified to: ANSI/AAMI ES60601-1:2005, UL 60601-1, CAN/CSA C22.2 NO.60601-1:14 & EN 60601-1. CE label according to MDD, class I.</p>
4.	Power LED 300 with Fiber Optic Cable :
	<ul style="list-style-type: none"> Should have touch display which provides an intuitive & user-friendly interface that directly displays relevant data Cold Light Fountain LED Light Source Lumens : 2100 and above Color Temperatures 6000K Light Outlets – 1 Lamp life of approx. 30,000 hrs 4.8mm Fiber Optic Cable and 300cm Long <p>Certified To: - IEC 601-1 & UL 544 CE According to MDD, protection class 1/CF</p>
5.	Image / Video Archiving, Routing & Streaming System:

	<ul style="list-style-type: none"> ➤ Medical grade documentation unit with CE. ➤ Controllable via Tablet interface of size 10" or more. ➤ Capture video & images in 4K, UHD, Full HD , 3D & audio files. ➤ Internal storage of 2TB & more. ➤ USB support for storage on USB drives. ➤ Eight number of connected inputs can be route to any number of eight destinations. ➤ Picture in Picture (PIP) & Picture & Picture (PAP) feature included ➤ Supports network storage on file servers. ➤ Wireless connection via built in Wi-Fi antenna. ➤ Offer two channel simultaneous recording for still images & videos. ➤ Shall have HL7 connectivity. ➤ Shall have DICOM connectivity. ➤ Integrated Patient Safety Checklist. ➤ Surgical video & image unicast streaming in Full High Definition (1920x10290) over local area network to multiple participants ➤ Offer Bi-directional video transmission & bi-directional audio transmission over LAN. ➤ Streaming picture with telestration and controllable to participants upto 4.
6.	Imported Endoscopic Trolley :
	Endoscopic Trolley Comaptible with the above system from the same manufacturer should be provided.
7.	Telescopes :
	Compatible Telescopes with the above system should be quoted with Dimensions as below: 1) 10 mm 0 Degree & 30 Degree with 29cm or more working Length – Each 1 Qty. 2) 5 mm 0 Degree and 30 Degree with 29Cm or more working Length – Each 1 Qty.
8.	Insufflation Unit :
	<ol style="list-style-type: none"> 1. Fully automatic, electronically controlled gas fill. 2. Flow rate of 30 – 40 litres per minute. 3. Optical and acoustic warning signals in case of malfunction or excessive pressure. 4. Connectible to medical gas pipeline. 5. Control by keys on front panel. 6. Clear and adjacent display of actual and preset flow rate, actual and preset pressure, gas consumed.. 7. Facility for easy evacuation of smoke and mist. 8. Memory for refention of previous pressure settings. <p>Should include pin-index connection to small / big gas cylinder with regulator, high pressure hose, mains cord, silicone tubing set, universal wrench and gas filter. Should be compatible to the Communicating Computer System, so as to function as an integral part of the digitally controlled Operating Room under the command of the operating Surgeon.</p>

Office Hysteroscopy Sets :

Justification to add :

- Ideal for Office Hysteroscopy procedures (without anesthesia).
- Advantageous for Nullupara and Post-menopausal patients.
- Atraumatic insertion in the cervical canal without dilation.
- Less trauma to patient.

S. No. :	Short Description :	Detailed Description :
1.	OFFICE HYSTEROSCOPE TELESCOPE WITH INTEGRATED INFLOW CHANNEL	Should be a 30° telescope with lens size 2 mm, Size with inbuilt irrigation channel 2.9 mm, length 27 cm, with irrigation adaptor, autoclavable, fiber optic light transmission incorporated. The telescope should have inbuilt inflow channel and does not require any assembling in its single flow version.
2.	DIAGNOSTIC OFFICE HYSTEROSCOPE SHEATH	Hysteroscope sheath for diagnostic continuous irrigation should be of size 3.6 – 3.8 mm, length 18cm, with suction adaptor, for use with 2.9 – 3.0 mm hysteroscope telescope with integrated inflow channel.

3.	OPERATIVE OFFICE HYSTEROSCOPE SHEATH	Hysteroscope sheath for Operative continuous irrigation should be of size 7.3 – 7.7 mm, length 18 cm, with operating channel 5Fr, leur lock adaptor and 1 stopcock, for use with 2.9 – 3.0 mm hysteroscope telescope with integrated inflow channel.
4.	OFFICE HYSTEROSCOPE TELESCOPE	Forward-Oblique Telescope 30°, enlarged view, diameter 1.9 – 2.1 mm, length 26 cm, autoclavable, fiber optic light transmission incorporated.
5.	DIAGNOSTIC OFFICE HYSTEROSCOPE SHEATH	Hysteroscope sheath for diagnostic continuous irrigation size 3.5 – 3.7 mm outer sheath and 2.7 – 2.9 mm inner sheath for use with 1.9 – 2.1 mm hysteroscope telescope.
6.	OPERATIVE OFFICE HYSTEROSCOPE SHEATH	Hysteroscope sheath for Operative continuous irrigation size 7.1 – 7.3 mm outer sheath with operating channel 5Fr, leur lock adaptor and 3.5 – 3.7 mm inner sheath for use with 2.9-3.0mm hysteroscope telescope. With stopcock & leur lock adaptor and inflow and outflow channel. Oval shape to facilitate easy entry in internal cervical Os.
7.	SEMI RIGID INSTRUMENTS FOR USE WITH OPERATING HYSTEROSCOPE :	
7. a)	SCISSOR	Scissors semi rigid, blunt tips, 5 Fr., length 33 – 36 cm, single action jaws.
7. b)	SCISSOR	Scissors semi rigid, pointed jaws, 5 Fr., length 33 – 36 cm, single action jaws, semi-rigid.
7. c)	BIOPSY & GRASPING FORCEP	Biopsy & Grasping Forceps semi rigid, 5 Fr., length 33 – 36 cm, double action jaws
7. d)	PUNCH FORCEP	Punch through Cutting semi rigid 5Fr, length 33 – 36 cm.
7. e)	TENACULAM FORCEP	Tenaculam grasping forceps, semi rigid, size 5Fr, length 33 – 36 cm.
7. f)	MYOMA FIXATION INSTRUMENT	Myoma Fixation instruments, semi rigid, size 5Fr, length 33 – 36 cm.
7. g)	NEEDLE ELECTRODE	Unipolar Needle Electrode, 5 Fr., length 37 cm, unipolar.
7. h)	DISSECTION ELECTRODE BIPOLAR	Bipolar Dissection Electrode, 5Fr, 36 cm, Bipolar.
7.i)	UNIPOLAR CORD	High Frequency Cord with 7 mm plug HF-unit, length of cable should be minimum 300 cm.
7. j)	BIPOLAR CORD	Bipolar High Frequency, should fit in most of the standard electrosurgical unit having banana plug one side, length should be not less than 250 cm.

Office Resectoscope Set :

Justification to add :

- No dilation of cervical canal.
- Procedure can be carried out in office settings without anaesthesia.
- Advantageous for Nulliparous and older patients.

1.	Telescope	Telescope 0°, diameter 2.9 mm, length 30 cm, autoclavable, fiber optic light transmission incorporated.
2.	Bipolar Working Element Set	Motion by means of a spring. The thumb support is movable. Return of the loop is controlled by the thumb and in rest position the electrode should rest inside the operating sheath, to be used with 2.9mm telescope. Should work in saline. Should consist of: Working Element, Cutting Loop (Package of 10, sterile, single use with 2 guide rods) and Bipolar High Frequency Cord.

The bottom of the page contains several handwritten signatures and initials in black ink. On the left, there is a signature that appears to be 'A. S. ...'. In the center, there are several overlapping signatures, including one that looks like 'B. S. ...'. On the right, there is a signature that appears to be 'S. ...' and another that looks like 'U. ...'. There are also some initials and marks scattered around these signatures.

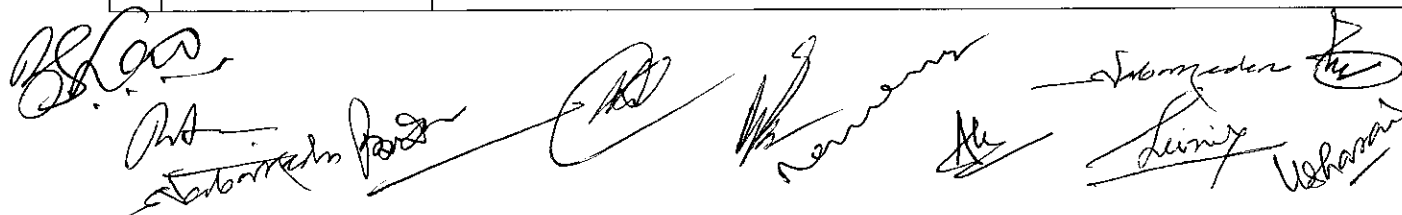
3.	Monopolar Working Element Set	Motion by means of a spring. The thumb support is movable. Return of the loop is controlled by the thumb and in rest position the electrode should rest inside the operating sheath, to be used with 2.9mm telescope. Should work in Glycine. Should consist of: Working Element, Cutting Loop (Package of 10, sterile, single use with 2 guide rods) and Monopolar High Frequency Cord.
4.	Resectoscope Sheath	Resectoscope sheath 15 Fr., oblique beak, rotating inner sheath with ceramic insulation, quick release lock, for continuous irrigation and suction, for use with Working Element.
5.	Obturator	Obturator , for use with the Resectoscope sheath.
6.	Telescope Bridge	Telescope Bridge with channel for semi rigid 5 Fr. operating instruments, for use with Resectoscope Sheath.
7.	Obturator	Obturator , for use with the Resectoscope sheath.
8.	Other Loops	Should also consists of : Bipolar and Monpolar pointed cutting electrode, Bipolar and Monpolar coagulation electrode, Bipolar and Monpolar longitudinal cutting loop to be used with Bipolar and Monpolar Working Elements (Each with package of 10, sterile, single use with 2 guide rods).

Standard Resectoscopes :

Justification to add :

- Advantageous to remove intra uterine pathologies of larger size due larger size of loop.

1.	Unipolar Working Element	Unipolar Working Element to be used with 26 FR Resectoscope sheath : Motion by means of a spring. The thumb support is movable. Return of the loop is controlled by the thumb and in rest position the electrode should rest inside the operating sheath, to be used with 4mm hysteroscopy telescope
2.	Cutting Loop Electrode for Unipolar	Cutting loop, 24Fr
3.	Roller Coagulating Electrode for Unipolar	Roller Electrode, cylindrical, diameter 5mm for use with 26Fr. Unipolar Resectoscope
4.	Pointed Electrode for Unipolar	Pointed electrode/Collin's HF knife electrode, 24Fr
5.	Vapor Cutting Electrode Unipolar	VAPOR CUTTING Electrode, 24Fr
6.	Coagulating Electrode, Ball End	Coagulating Electrode, ball end, diameter 3mm
7.	Bipolar Working Element Set	BIPOLAR Working Element to be used with 26Fr Resectoscope sheath: Motion by means of a spring. The thumb support is movable. Return of the loop is controlled by the thumb and in rest position the electrode should rest inside the operating sheath, to be used with 4mm hysteroscopy telescope. Should work in saline
8.	Bipolar Cutting Loop	BIPOLAR Cutting loop 24 Fr should work in saline
9.	Bipolar Cutting Electrode Pointed	Cutting Electrode 24Fr , bipolar, pointed, should work in saline
10.	Bipolar Coagulating Electrode Ball End	Coagulating Electrode 24Fr , bipolar, ball end should work in saline
11.	Resectoscope Sheath for Unipolar	Continuous Flow Resectoscope Sheath 26 Fr. , including connection tubes for in- and outflow, 2 LUER-lock adaptors, 26Fr, oblique beak, fixed inner tube, with ceramic insulation, for use with working element .



12.	Resectoscope Sheath for Bipolar	Continuous Flow Resectoscope Sheath 26 Fr., for Bi-Polar, including connection tubes for in- and outflow, 2 LUER-lock adaptors, 26Fr, oblique beak, rotating inner tube, with ceramic insulation, for use with working element. should work in saline
13.	Obturator	Obturator , for use with the Resectoscope sheath.

Hysteroscopic and Laparoscopic Morcellator :

Justification to add Hysteroscopic Morcellator :

Challenges with Conventional Resection ~

- Long learning curve.
- Intravasation (fluid overload).
- Uterine perforation (mechanical / HF).
- Lack of visualization : Higher perforation risk.
- Higher Dilatation.

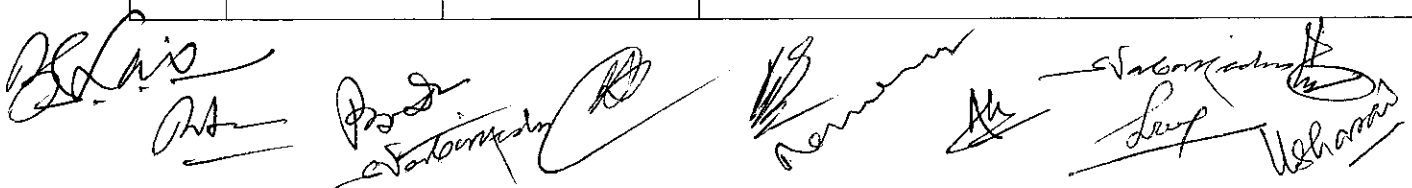
Hysteroscopic Morcellation ~

- Mechanical Morcellation.
- No current Application.
- No challenges with Fluid.
- Clear view field.
- Smaller outer diameter.

Justification to add Laparoscopic Morcellator :

- Removal of large Myomas & Uterus during Laparoscopic Surgery through Minimal invasive approach is possible with Morcellator.
- Faster recovery time post surgery due to less laparotomy incision.

S. No. :		Short Description :	Detailed Description :
1.	Hysteroscopic Morcellator	Telescope	Wide Angle Straight Forward Telescope 6° Set, with parallel eyepiece, length 20 cm, 19 Fr., autoclavable, fiber optic light transmission and working channel incorporated, with LUER-Lock connection for inflow, color code: green-blue, consisting of: Telescope 6°, Obturator and LUER-Lock Tube Connector.
		Shaver Handpiece	Ergonomically designed, with powerful motor, Easy hygienic processing, Removable Handle. Speed : 0 – 5000 Oscillations per minute.
		Shaver Blade	360° rotating straight, sterilizable, concave cutting edge, double serrated, oval cutting window, diameter 4 mm, length 32 cm, for use with shaver handpiece.
		Shaver Blade	360° rotating straight, sterilizable, concave cutting edge, double serrated, rectangular cutting window, diameter 4 mm, length 32 cm, for use with shaver handpiece .
		Bipolar Coagulation Electrode	Coagulation Electrode, Bipolar, for use with Gynecology Shaver System.
		Handle	Handle, adjustable, for use with shaver handpiece.
		Coagulation Electrode	Coagulation Electrode, bipolar, for use with Shaver.
		Control Cable	Control Cable, connectors 2x LEMO 5-pol 0°, length 100 cm, for transmission of foot switch control signal between Motor Unit and Irrigation / Suction System.
			Controlled Irrigation and Suction unit for operating Hysteroscope and TCRE procedure to maintain intrauterine cavity pressure as desirable by surgeon. pressure of irrigation to be maintained between : (Pressure 0 – 100 mmhg).
			Flow to be maintained Between : (Flow 0 – 200 ml / Min.)



			Suction Pressure To Be Maintained Between : Suction controlled pressure between 0 – (- 50 kPa).
			Should have two-pedal foot switch for controlling various functions.
			Should maintain a preset intrauterine pressure & simultaneous continuous flow.
			Should have a touch screen user interface with selection modes.
			Should be able to inform the current status of pressure and flow through visual or acoustic messages.
			Should have automatic instrument recognition with set parameters.
			Alternatively, Both the rollers can also work independently.
			Should have Blood / Mucous mode to rinse particles more rapidly to give clear view.
			Consisting of : Main Unit with Touch Screen Panel, Double roller pump, Pre-Configured procedure options, Possibility to create own procedures, Pump Head, Automatic dome detection facility, Controlled Suction / Irrigation function.
			Should be supplied along with following accessories :
			Single use Suction Tubing Set, Package of 10.
			Single use Irrigation Tubing Set, Package of 10.
			Suction Bottle 5.0 L.
			Suction Bottle Cap, Stand and Holder.
			Power Supply 100 – 120 / 230 – 240 V AC, 50 / 60 Hz, with Mains Cord and One-Pedal Footswitch-Two Stage, with proportional function and pump switch function. Automatic Handpiece recognition for Hysteroscopic and Laparoscopic Morcellator, Processor controlled number of revolutions and motor torque, continuously variable revolution range. The electronic device unit having maximum speed of 40,000 rotations per minute with pre-sets functions on RPM and should achieve 1200 rpm for the Laparoscopic morcellator and 5000 Oscillations for Hysteroscopic Morcellator. Electronic Drive unit should be compatible with Laparoscopic Morcellator and Hysteroscopic Morcellator from the same manufacturer.
4.	Laparoscopic Morcellator		Motor for Laparoscopic Morcellator should provide rotation for single direction of rotation. It should have clockwise direction of rotation. Motor should be Gearless.
			It should have two Reusable blades of diameter 12 mm and 15 mm.
			It should have 12 mm and 15 mm sets of Tenaculum forceps, obturator, cannula, protection cap, motor valve and one set of sealing cap for use with drive system.
			It should consist of 90 degree handle.
			It should consist of Spacer plates, package of 5pcs, maximum of height clearance 10mm, for use with instruments up to 16,5mm diameter.
			It should have oblique trocar sleeve for optimized tissue protection and works on

Dr. Cas

Dr. Subir Kumar

Dr. B

Dr. S

Dr. A

Dr. Sagar Kumar
Dr. Usharati

			peeling principle.
			Maintenance and care of the motor components (EC-motor), must be carried out with the universal spray.
			Type : IEC 601/1, CE acc to MDD.

Fiber Optic Ureter Probe and Portable Light Source :

Justification to add :

- Identification of Ureter during surgical intervention.
- Portable Light Source is recommended to have additional source for the illumination of Ureter Probe.

Specifications :

- Fiber Optic Ureter Probe, 7 Fr.
- Exact and powerful illumination of the operating field with absolutely white and specially focused light.
- 50,000 Luc LED light source.
- Weight 78 g.
- Battery life more than 120 minutes in continuous use.
- LED service life of more than 50,000 hours.

Environmental Factors :

- Shall meet IEC-60601-1-2 :2001(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility or should comply with 89/366/EEC; EMC-directive.
- The unit shall be capable of operating continuously in ambient temperature of 20 – 30 deg C & relative humidity of 15 – 90%.
- The unit shall be capable of being stored continuously in ambient temperature of 0 – 50 deg C & relative humidity of 15 – 90%.

Power Supply :

- Power input to be 220 – 240 V AC, 50 Hz fitted with Indian plug.
- UPS of suitable rating with voltage regulation and spike protection for 60 minutes back up.

Standards, Safety and Training :

- Should be FDA, CE, UL or BIS approved product.
- Manufacturer should have ISO certification for quality standards.
- Comprehensive training for lab staff and support services till familiarity with the system.
- Comprehensive warranty for 5 years with no fault warranty in the first year and 5 years CMC after warranty including UPS.
- Shall be certified to be meeting safety standard IEC 60601-2-18 part 2 Particular requirements for the safety of endoscopic equipment.
- All the items should be from single manufacturer for system compatibility.

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Subramanian *Vishwanath* *[Signature]* *[Signature]*