

List of equipments for the department of Surgery

Sl. No.	Name of Equipments
1	ERCP scope with complete ERCP instruments
2	General surgery instrument set (complete set) for various surgeries
3	High defination Laproscopic system
4	Modular & Integraterd OT
5	Linear staplers for open and lap surgery (All sizes)
6	Ultrasonic cutting and coagulation device with advance bipolar vessel sealing

Tender Technical Specifications for ERCP Scope with Complete ERCP Instruments :

HD UPPER & LOWER GI SCOPE WITH NBI CAPABILITY & ERCP :

A. Upper GI Scope (Adult) :

1. Direction of view should be zero degree.
2. Minimum of 140 degree of field of view.
3. Range of observation at least from 2 mm to 100 mm.
4. Angulations of tip up at least 210 degrees and down 90 degrees with right and left movement of at least 100 / 100 degrees.
5. Insertion tube diameter of less than 10 mm.
6. Distal end diameter of not more than 10.5 mm.
7. Instrument channel of more than 2.8 mm.
8. Working length of not less than 1030 mm.
9. NBI capable scope compatible with the HD video system specified.

B. Lower GI Scope (Adult) :

1. Direction of view should be zero degree.
2. Minimum of 140 degree of field of view.
3. Range of observation at least from 2 mm to 100 mm.
4. Angulations of tip up at least 180 degrees and down 180 degrees with right and left movement of at least 160 / 160 degrees.
5. Inner diameter optimal.
6. Distal end diameter of not more than 13 mm.
7. Instrument channel of more than 3.7 mm.
8. Working length of not less than 1600 mm or better.
9. Should be compatible with the HD video system specified.
10. Endotherapy compatible.
11. Fully immersible in disinfectant solution.
12. NBI capable scope.
13. Auxiliary Water Jet Channel to clean the mucosal surface.
14. Water pump to be connected to auxiliary water jet channel.
15. Variable scope stiffness.

C. Duodeno Videoscope HD with NBI (Side Viewing for ERCP) :

1. Field of vision more than 100 deg.
2. Direction of view 5 deg backward / oblique.
3. Depth of view app 5 – 60 mm.
4. Distal end outer diameter about 13 mm.

5. Insertion tube outer diameter less than 13 mm.
6. Bending angulations should be at least up 120 deg, down 90 deg, Right 110 deg, Left 90 deg.
7. Working length not below 1200 mm.
8. Instrumental channel not less than 4 mm.
9. NBI capable ERCP scope compatible with HD video system specified.

D. HD Video Processor with NBI, Light :

1. Light weight at less than 12 Kgs.
2. PAL type video signal.
3. Class I protection against electrical shock.
4. Controls for color adjustment, to enhancement and balance settings.
5. Controls to freeze images enhance a portion of frozen image (zoom & post-processing).
6. Patient and physician data input key board.
7. Light Source : High Intensity Xenon Lamp.
8. Compatibility with the Gastroscope, Colonoscope, Duodenoscope and Enteroscope.
9. At least 26" LED / LCD HD colour monitor.
10. Monitor should be capable of displaying NBI and standard image simultaneously.

E. HD Data Storage and Retrieval System :

1. **Documentation** : Should be from the same endoscope manufacturer company and have the following specifications :
 - Documentation & retrieval system for digital still images (JPEG), video sequences (MPEG 1 & 2) and audio files. Integrated DVD / CD writer and USB down load facility.
 - Frame Grabber Board with digital I / Os Slot Bracket, for digital I / Os PS / 2 Compact Keyboard in English with speech control and software protection.
 - Connecting Cable (2x) Headset, Headset Extension Cable, length 10 m S-Video (Y / C) Connecting Cable, length about 180 cm 400A Mains Cord, 400B Mains Cord.
 - Colour laser printer for printing of reports which can be connected to the documentation system.
 - Network Isolator for galvanic decoupling of devices with RJ-45 network connection (1 Gbit), incl. rack mount, RJ-45 network cable, length 5 m. MPEG2 Network Integration for one MPEG2-Device. 19" Touch Screen Monitor, Trolley / Wall Mounted, RS-232, VGA, DVI-D resolution of 1280 x 1024, incl. 3 Touch Screen covers power supply consisting of : 19" Touch Screen RS-232 Cable, length 600 SVGA Cable, length 600 cm Touch Pen 2, should also be supplied with foot switch to control recording of images.

2. **Endoscope Trolley** : Separate equipment trolley from the same endoscope manufacturer company and have the following specifications :
 - Equipment cart, with 4 antistatic dual wheels, with locking wheels, 3 shelves, mains switch in the trolley, 1 drawer unit with lock, integrated cable conduits in the vertical beams, 1 set of non-sliding stands for units, double rear panel with integrated electrical sub distributors with 12 sockets, holder for power supplies, potential earth connectors and cable winding on the outside, 2 scope holders, 2 equipment rail sidewise. Approximate dimensions of equipment trolley : 530 x 1455 x 645 (w x h x d), shelf : 430 x 480 mm (w x d), castor diameter : at least 125 mm.

F. Suction Machine :

Should have :

1. Suction capacity of around 30 liters / minute.
2. Maintenance free cylinder and piston system.
3. Hydrophobic bacterial filter to protect the pump.
4. Easy to clean.
5. Should be medical grade and CE / FDA certified.

Technical Data :

Suction Capacity : around 30 liters / minute.

Vacuum : up to 85 kPa / 640 mm Hg.

Line Voltage : 230 V AC, 50 / 60 Hz.

Dimensions : 345 mm x 245 mm x 282 mm (H x W x D).

Protection Class : Protection class I; BF; IPX I.

G. Accessories (To Provide Cleaning Brush) :

1. Leakage Tester.
2. Cleaning Brush.
3. Standard Biopsy Forceps : 2 each (for UGIE & LGI Scope).
4. Spiked Biopsy Forceps : 2 each (for UGIE & LGI Scope).
5. Polypectomy Snare : 2 each (for UGIE & LGI Scope).
6. Endoscopic Needle for Injection : 2 each (for UGIE & LGI Scope).
7. Endoscopic FNAC Attachment : 1 each (for UGIE & LGI Scope & ERCP Scope).
8. Guide Wires 2 Types (0.025 "F, 0.035 "F in Diameter); Length 450 cm, Non-Kinkable with Stripes to Detect Movement – 4 Nos.

9. **Stone Extracting Dormia Basket : 4 Nos.**

- a. 4 basket wire design.
- b. Stiffer wire construction that can be opened in the bile duct while maintaining its original shape for easy stone capture.
- c. Basket opening width 22 mm.
- d. Working length 1950 mm.
- e. Reusable.

10. Stone Extracting Balloon : 4 Nos.

- a. Pre-calibrated syringes for reliable inflation.
- b. Working length – 1950 mm.
- c. Balloon diameter 15 / 18 / 20 mm.
- d. Sheath design-over the wire distal wire guided.
- e. Distal tip – 5,5 Fr.
- f. Multiple sizing balloon.

11. Mechanical Lithotripter Basket : 4 Nos.

- a. Rotatable basket.
- b. Unique double sheath to aid cannulation.
- c. Basket opening width – 30 mm.
- d. Working length 1950 mm.
- e. Compatible with mechanical lithotripter.

12. Mechanical Lithotripter Handle : 2 Nos.

- a. Basket rotation mechanism.
- b. Easy attachment to sheath.
- c. Ratchet to prevent loss of traction on stone.
- d. Easy application of pressure using T lever design.
- e. Reusable handle.
- f. Compatible with lithotripter basket.

13. Triple Lumen Sphincterotome for Side Viewing Duodenoscope Only (Wire Guided Triple Lumen) : 4 Nos.

- a. Insulated cutting wire 20 mm.
- b. Distal tip 4.5 F.
- c. Working length – 1700 mm.
- d. Pre-curved design.
- e. C-Hook to be attachable to the V-holder or endoscope control handle.
- f. Distal tip length – 3 mm.

14. Triple Lumen Needle Knives : 2 Nos.

- a. Separate lumen for guide wire, cutting wire and contrast injection.
- b. Unique safety coating.
- c. Pre-curved and tapered tip.
- d. Working length – 1700 mm.
- e. Pre-curved design.
- f. C-Hook to be attachable to the V-holder or endoscope control handle.
- g. Distal tip length – 3 mm.

15. Balloon Dilation System for CBD Strictures : 2 Nos.

Optional Accessories :

- a. Double pigtail stents – 7 F and 10 F size, 7 cm & 10 cm long; – 5 each.
- b. Plastic Stents – straight 7 F and 10 F; 7 cm and 10 cm long; – 5 each.

H. Cautery System : 1 No.

- a. Suitable compact Cautery System.
- b. Both Monopolar and bipolar facility.
- c. Endoscopic current mode.
- d. Capable of endoscopic coagulation and cutting and snaring.
- e. Standard accessories for open use also.

I. Accessories Sterilization Tray : 2 Nos.

- a. Suitable size to allow easy sterilization of the accessories.
- b. Able to use commonly used chemical means for sterilization.

J. Environmental Factors :

1. The unit shall be capable of being stored continuously in ambient temperature of 0 – 50 deg C and relative humidity of 15 – 90%.
2. The unit shall be capable of operating continuously in ambient temperature of 10 – 40 deg C and relative humidity of 15 – 90%.

K. Power Supply :

1. Power input to be 220-240VAC, 50Hz fitted with Indian plug.
2. UPS of suitable rating with voltage regulation and spike protection for 60 minutes back up.
3. Shall be certified to be meeting safety standard IEC 60601-2-18 part 2 Particular requirements for the safety of endoscopic equipment.
4. Should be FDA, CE, UL or BIS approved product.
5. Manufacturer should be ISO certified for quality standards.

L. Documentation :

1. User / Technical / Maintenance manuals to be supplied in English.
2. Certificate of calibration and inspection.
3. List of Equipments available for providing calibration and routine Preventive Maintenance Support.
As per manufacturer documentation in service / technical manual.
4. List of important spare parts and accessories with their part number and costing.
5. Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out.

GENERAL SURGERY

MAJOR BASIC SET	1
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. 4, 13.5 CM	2
SCALPEL HANDLE, NO. 3, 12 CM	1
TC-DISS. SCISSORS, FINE, CVD., 14.5 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-DISS. SCISSORS, CVD., SERR., 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
DRESSING FORCEPS, REES, ISOLATED, 20 CM	1
FORCEPS, KOCHER, 1X2 T., STR., 14 CM	6
FORCEPS, PEAN, DELICATE, STR., 14.5 CM	6
FORCEPS, MOSQUITO, 1X2 T., CVD., 12.5 CM	6
HAEM. FORCEPS, MOSQUITO, CVD., 12 CM	6
HAEM. FORCEPS, MOSQUITO, STR., 18.5 CM	2
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	2
PERITON. FORCEPS, MIKULICZ, HEAVY, 20 CM	6
DISS. FORCEPS, OVERHOLT, NO. 1, 20.5 CM	2
DISS. FORCEPS, OVERHOLT, NO. 2, 20 CM	2
DISS. FORCEPS, OVERHOLT, NO. 3, 21.5 CM	2
DISS. FORCEPS, BABY-MIXTER, CVD., 18.5CM	2
TC-NEEDLEHOLDER, CRILE-WOOD, 15 CM	2
TC-NEEDLEHOLDER, MAYO-HEGAR, 20 CM	2
TC-NEEDLEHOLDER, DE BAKEY, 18 CM	2
RETRACTOR, ROUX, SET, NO. 1-3, 17 CM	1
RETRACTOR, LANGENBECK, 30X11 MM, 22 CM	2
RETRACTOR, LANGENBECK, 40X11 MM, 22 CM	2
RETRACT., KOCHER-LANG., 55X11 MM, 21.5CM	2
RETR., VOLKMANN, SEMISH., 4-PR., 22.5 CM	2
RETRACTOR, DELIC., SHARP, 2-PR., 16.5 CM	2
HOOKLET, CUSHING, 10 MM, 20.5 CM	2
TENACULUM FORCEPS, CZERNY, 4X4 T., 21 CM	1
ATR. TISSUE FORCEPS, ALLIS, 15.5 CM	1
BONE CURETTE, VOLKM., OVAL, NO. 0, 17 CM	1
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
GUIDE NEEDLE, ANG., KNIFE SHAPE, 10 CH	1
GUIDE NEEDLE, ANG., KNIFE SHAPE, 12 CH	1
CONTAINER MS, 60X30X16 CM, HANDLE GREY	1
Tray DIN, 480x255x33 mm	1
Tray DIN, 480x255x73 mm	1
COLOR-TAG, RED	2
CODING LABEL, WITH TEXT, WITHOUT HOLE	2

The Instrument should be CE & FDA USA approved.

The Instrument and Container should be of the same parent company.

It should have reusable microbial barriers instead of disposable filters. The microbial barriers should be easy to remove and clean.

MINOR BASIC SET	1
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. 4, 13.5 CM	1
SCALPEL HANDLE, NO. 3, 12 CM	1
TC-DISS. SCISSORS, FINE, CVD., 14.5 CM	1
TC-DISSECTING SCISSORS, CVD., 17.5 CM	1
TC-DISS. SCISSORS, CVD., SERR., 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, 18 CM	2
ATR. FORCEPS, DE BAKEY, 2 MM, 16 CM	2
FORCEPS, KOCHER, 1X2 T., STR., 14 CM	4
FORCEPS, PEAN, DELICATE, STR., 14.5 CM	4
FORCEPS, MOSQUITO, 1X2 T., CVD., 12.5 CM	4
HAEM. FORCEPS, MOSQUITO, CVD., 12 CM	4
FORCEPS, KOCHER, 1X2 T., STR., 20.5 CM	2
FORCEPS, MIXTER-BABY, SL. CVD., 14 CM	1
DISS. FORCEPS, BABY-MIXTER, CVD., 18.5CM	1
HAEM. FORCEPS, MOSQUITO, CVD., 18 CM	2
TC-NEEDLEHOLDER, CRILE-WOOD, 15 CM	1
TC-NEEDLEHOLDER, MAYO-HEGAR, 18.5 CM	2
RETRACTOR, ROUX, SET, NO. 1-3, 17 CM	1
RETRACTOR, LANGENBECK, 30X11 MM, 22 CM	2
RETRACTOR, LANGENBECK, 40X11 MM, 22 CM	2
RETR., VOLKMANN, SEMISH., 4-PR., 22.5 CM	2
RETRACTOR, DELIC., SHARP, 2-PR., 16.5 CM	2
HOOKLET, CUSHING, 10 MM, 20.5 CM	2
ATR. TISSUE FORCEPS, ALLIS, 15.5 CM	1
BONE CURETTE, VOLKM., OVAL, NO. 0, 17 CM	1
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
GUIDE NEEDLE, ANG., KNIFE SHAPE, 10 CH	1
CONTAINER MS, 60X30X14 CM, HANDLE GREY	1
Tray DIN, 480x255x73 mm	1
COLOR-TAG, RED	2
CODING LABEL, WITH TEXT, WITHOUT HOLE	2

The Instrument should be CE & FDA USA approved.

The Instrument and Container should be of the same parent company.

It should have reusable microbial barriers instead of disposable filters. The microbial barriers should be easy to remove and clean.

SUPPLEMENT FOR GALLBLADDER	1
SCALPEL HANDLE, NO. 3L, LONG, 21.5 CM	1
TC-DISSECTING SCISSORS, CVD., 26 CM	1
DRESS. FORCEPS, ISOL., W/O CONN., 25 CM	1
ATR. FORCEPS, DE BAKEY, 2 MM, 25 CM	2
ATR. FORCEPS, DE BAKEY, 3.5 MM, 25 CM	2
FORCEPS, BENGOLEA, STR., 26 CM	2
FORCEPS, BENGOLEA, CVD., 26 CM	1
FORCEPS, MIXTER, ANG., LONGIT., 22.5 CM	2
FORCEPS, MIXTER, ANG., LONGIT., 26 CM	2
TC-NEEDLEHOLDER, DE BAKEY, 26.5 CM	1
ATR. ORGAN SEIZING FORCEPS, 25 CM	2
RETRACTOR, FRITSCH, 45X75 MM, 25.5 CM	2
RETRACTOR, MIKULICZ, 125X50 MM, 25 CM	2
RETRACTOR, MIKULICZ, 160X50 MM, 25 CM	1
ABDOM. SPATULA, HABERER, 37/45 MM, 30 CM	1
TC-SCISSORS, DE BAKEY, 45°, 23 CM	1
VASCULAR SCISSORS, 45°, 16.5 CM	1
BILE DUCT DILATOR, BAKES, 3 MM, 32 CM	1
BILE DUCT DILATOR, BAKES, 4 MM, 32 CM	1
BILE DUCT DILATOR, BAKES, 5 MM, 32 CM	1
BILE DUCT DILATOR, BAKES, 6 MM, 32 CM	1
BILE DUCT DILATOR, BAKES, 7 MM, 32 CM	1
BILE DUCT DILATOR, BAKES, 8 MM, 32 CM	1
BILE DUCT DILATOR, BAKES, 9 MM, 32 CM	1
BILE DUCT DILATOR, BAKES, 10 MM, 32 CM	1
GALLSTONE SCOOP, NO. 00, 3.4 MM, 32 CM	1
GALLSTONE SCOOP, NO. 0, 4.3 MM, 32 CM	1
GALLSTONE SCOOP, NO. 1, 5.5 MM, 32 CM	1
GALLSTONE SCOOP, NO. 2, 6.6 MM, 32 CM	1
GALLSTONE SCOOP, NO. 3, 8.0 MM, 32 CM	1
GALLSTONE SCOOP, NO. 4, 11 MM, 32 CM	1
GALLSTONE FORCEPS, DESJARDINS, NO. 1	1
GALLSTONE FORCEPS, DESJARDINS, NO. 2	1
GALLSTONE FORCEPS, DESJARDINS, NO. 1	1
CONTAINER MS, 60X30X14 CM, HANDLE GREY	1
Tray DIN, 480x255x73 mm	1
COLOR-TAG, RED	2
CODING LABEL, WITH TEXT, WITHOUT HOLE	2
<i>The Instrument should be CE & FDA USA approved.</i>	
<i>The Instrument and Container should be of the same parent company.</i>	
<i>It should have reusable microbial barriers instead of disposable filters. The microbial barriers should be easy to remove and clean.</i>	

SUPPLEMENT, GASTRO INTESTINAL	1
SCALPEL HANDLE, NO. 3L, LONG, 21.5 CM	1
SCALPEL HANDLE, NO. 4L, LONG, 20.5 CM	1
TC-DISSECTING SCISSORS, CVD., 26 CM	1
TC-DISS. SCISSORS, FINE, CVD., 28.5 CM	1
TC-SCISSORS, MAYO-STILLE, STR., 17 CM	1
DRESS. FORCEPS, ISOL., W/O CONN., 25 CM	1
ATR. FORCEPS, DE BAKEY, 2 MM, 25 CM	2
ATR. FORCEPS, DE BAKEY, 3.5 MM, 25 CM	2
ATR. FORCEPS, DE BAKEY, 3.5 MM, 30 CM	2
TC-NEEDLEHOLDER, DE BAKEY, 26.5 CM	1
TC-NEEDLEHOLDER, DE BAKEY, 31 CM	1
TC-NEEDLEHOLDER, MAYO-HEGAR, 30 CM	1
RETRACTOR, FRITSCH, 45X75 MM, 25.5 CM	2
RETRACTOR, MIKULICZ, 125X50 MM, 25 CM	2
RETRACTOR, MIKULICZ, 160X50 MM, 25 CM	1
ABDOM. SPATULA, HABERER, 37/45 MM, 30 CM	1
FORCEPS, KOCHER, 1X2 T., STR., 26 CM	2
FORCEPS, BENGOLEA, STR., 26 CM	2
ATR. ORGAN SEIZING FORCEPS, 25 CM	2
ATR. TISSUE FORCEPS, ALLIS, 20 CM	2
ATR. TISSUE FORCEPS, ALLIS, 24.5 CM	2
ATR. KIDNEY PEDI. FORCEPS, GUYON, 23 CM	1
ATR. BRONC. FCPS., LEES, CVD/ANG., 26 CM	1
ATR. INTEST. FCPS., KOCHER, CVD., 25 CM	2
ATR. INTEST. FCPS., KOCHER, STR., 25 CM	2
DISS. FORCEPS, ZENKER, SL. CVD., 29.5 CM	2
DISS. FORCEPS, ZENKER, ST. CVD., 28.5 CM	2
DISS. FORCEPS, OVERHOLT, NO. 4, 28 CM	2
GROOVED DIRECT., BRUNNER, PLASTIC, 18 CM	1
CONTAINER MS, 60X30X14 CM, HANDLE GREY	1
Tray DIN, 480x255x73 mm	1
COLOR-TAG, RED	2
CODING LABEL, WITH TEXT, WITHOUT HOLE	2
<i>The Instrument should be CE & FDA USA approved.</i>	
<i>The Instrument and Container should be of the same parent company.</i>	
<i>It should have reusable microbial barriers instead of disposable filters. The microbial barriers should be easy to remove and clean.</i>	

SUPPLEMENT SET FOR RECTUM	1
SCALPEL HANDLE, NO. 4L, LONG, 20.5 CM	1
TC-DISSECTING SCISSORS, CVD., 28.5 CM	1
DRESS. FORCEPS, ISOL., W/O CONN., 25 CM	1
ATR. FORCEPS, DE BAKEY, 2 MM, 30 CM	2
TISSUE FORCEPS, 1X2 T., SLIM, 30 CM	2
TC-NEEDLEHOLDER, DE BAKEY, 31 CM	2
RETRACTOR, MIKULICZ, 125X50 MM, 25 CM	2
PELVIS RETRACTOR, 180X60 MM, 23.5 CM	1
FORCEPS, OVERHOLT, FINE, CVD., 29.5 CM	2
DISS. FORCEPS, ZENKER, ST. CVD., 28.5 CM	2
DISS. FORCEPS, ZENKER, SL. CVD., 29.5 CM	2
ATR. RECTUM FORCEPS, HAYES, ANG., 28 CM	1
ATR. RECTUM FORCEPS, RESANO, 28 CM	1
ATR. TANGENT. FORCEPS, SATINSKY, 28.5 CM	1
ATR. FORCEPS, DE BAKEY, ANG., 26 CM	1
ATR. TISSUE FORCEPS, ALLIS, 24.5 CM	2
CONTAINER MS, 47X30X14 CM, HANDLE GREY	1
Tray 3/4, 410x255x73 mm	1
COLOR-TAG, RED	2
CODING LABEL, WITH TEXT, WITHOUT HOLE	2
<p><i>The Instrument should be CE & FDA USA approved.</i></p> <p><i>The Instrument and Container should be of the same parent company.</i></p> <p><i>It should have reusable microbial barriers instead of disposable filters. The microbial barriers should be easy to remove and clean.</i></p>	

SUPPLEMENT SPLEEN/LIVER	1
TISSUE FORCEPS, ALLIS, 5X6 T., 19 CM	6
TISSUE FORCEPS, BABCOCK, 24 CM	3
INTESTINAL FORCEPS, DOYEN, STR., 23.5 CM	4
DRESSING FORCEPS, MEDIUM WIDE, 20 CM	2
SCISSORS, MAYO-HARRINGTON, CVD., 23 CM	1
SCISSORS, MAYO-HARRINGTON, STR., 23 CM	1
TC-NEEDLEHOLDER, MAYO-HEGAR, 24 CM	1
DISSECT. FORCEPS, MIXTER, CVD., 22.5 CM	3
DISS. FORCEPS, MIXTER, ANG., 17.5 CM	6
HAEMOSTATIC FORCEPS, PEAN, CRV., 20 CM	6
TISSUE FORCEPS, 1X2 T., SLIM, 20.5 CM	2
CLAMP FORCEPS, MOYNIHAN, CVD., 23 CM	4
TC-DISS. SCISSORS, FINE, CVD., 18 CM	4
SCISSORS, ANGLED 40°, 18.5 CM	4
ATR. FORCEPS, PEAN, STR., 18.5 CM	2
ATR. FORCEPS, PEAN, STR., 20.5 CM	2
ATR. FORCEPS, POTTS, STR., 23.5 CM	2
BULLDOG CLAMP, DE BAKEY, STR., 7.5 CM	10
BULLDOG CLAMP, DE BAKEY, STR., 8.5 CM	10
BULLDOG CLAMP, DE BAKEY, STR., 10 CM	10
ATR. TANGENTIAL FORCEPS, SATINSKY, 22 CM	4
ATR. TANGENTIAL FORCEPS, SATINSKY, 26 CM	4
ATR. FORCEPS, DE BAKEY, ANG., 20 CM	4
ATR. FORCEPS, OCHSNER, CVD., 22 CM	4
ATR. FORCEPS, DE BAKEY, 2 MM, 25 CM	4
ATR. FORCEPS, DE BAKEY, 2 MM, 20 CM	4
APPLYING FORCEPS F. BULLD. CLAMPS, 24 CM	4
CONTAINER MS, 60X30X14 CM, HANDLE GREY	1
Tray DIN, 480x255x73 mm	1
COLOR-TAG, RED	2
CODING LABEL, WITH TEXT, WITHOUT HOLE	2

The Instrument should be CE & FDA USA approved.

The Instrument and Container should be of the same parent company.

It should have reusable microbial barriers instead of disposable filters. The microbial barriers should be easy to remove and clean.

LAPAROTOMY SET	1
SCALPEL HANDLE, NO. 4, 13.5 CM	1
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. 4L, LONG, 20.5 CM	1
SCALPEL HANDLE, NO. 3, 12 CM	1
TC-DISS. SCISSORS, FINE, CVD., 14.5 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, FINE, CVD., 28.5 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
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	6
FORCEPS, PEAN, DELICATE, STR., 14.5 CM	6
FORCEPS, MOSQUITO, 1X2 T., CVD., 12.5 CM	6
HAEM. FORCEPS, MOSQUITO, CVD., 12 CM	10
HAEM. FORCEPS, MOSQUITO, STR., 18.5 CM	2
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. 4, 22 CM	2
FORCEPS, OVERHOLT, FINE, CVD., 29.5 CM	2
DISS. FORCEPS, OVERHOLT, NO. 3, 27.5 CM	2
FORCEPS, MIXTER, ANG., LONGIT., 22.5 CM	2
TC-NEEDLEHOLDER, CRILE-WOOD, 15 CM	2
TC-NEEDLEHOLDER, MAYO-HEGAR, 20 CM	2
TC-NEEDLEHOLDER, MASSON, 26.5 CM	1
TC-NEEDLEHOLDER, DE BAKEY, 18 CM	2
TC-NEEDLEHOLDER, DE BAKEY, 26.5 CM	2
RETRACTOR, ROUX, SET, NO. 1-3, 17 CM	1
RETRACTOR, LANGENBECK, 30X11 MM, 22 CM	2
RETRACTOR, LANGENBECK, 40X11 MM, 22 CM	2
RETRACT., KOCHER-LANG., 55X11 MM, 21.5CM	2
RETR., VOLKMANN, SEMISH., 4-PR., 22.5 CM	2
RETRACTOR, FRITSCH, 45X75 MM, 25.5 CM	2
RETRACTOR, MIKULICZ, 125X50 MM, 25 CM	2
RETRACTOR, MIKULICZ, 160X50 MM, 25 CM	1
ABDOM. SPATULA, HABERER, 37/45 MM, 30 CM	1
ATR. ORGAN SEIZING FORCEPS, 25 CM	2
ATR. TISSUE FORCEPS, ALLIS, 24.5 CM	2
BONE CURETTE, VOLKM., OVAL, NO. 0, 17 CM	1

GROOVED DIRECTOR, NELATON, CVD., 16 CM	1
PROBE, BUTTON END, Ø 1.5/1.5 MM, 20 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
GUIDE NEEDLE, ANG., KNIFE SHAPE, 10 CH	1
GUIDE NEEDLE, ANG., KNIFE SHAPE, 12 CH	1
CONTAINER MS, 60X30X16 CM, HANDLE GREY	1
Tray DIN, 480x255x33 mm	1
Tray DIN, 480x255x73 mm	1
COLOR-TAG, RED	2
CODING LABEL, WITH TEXT, WITHOUT HOLE	2
<i>The Instrument should be CE & FDA USA approved.</i>	
<i>The Instrument and Container should be of the same parent company.</i>	
<i>It should have reusable microbial barriers instead of disposable filters. The microbial barriers should be easy to remove and clean.</i>	

HERNIA & APPENDIX SET	1
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. 4, 13.5 CM	2
SCALPEL HANDLE, NO. 3, 12 CM	1
TC-DISS. SCISSORS, FINE, CVD., 18 CM	1
TC-DISS. SCISSORS, CVD., SERR., 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
ATR. FORCEPS, DE BAKEY, 2 MM, 16 CM	2
FORCEPS, KOCHER, 1X2 T., STR., 14 CM	6
FORCEPS, PEAN, DELICATE, STR., 14.5 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
DISS. FORCEPS, OVERHOLT, NO. 2, 20 CM	2
DISS. FORCEPS, OVERHOLT, NO. 3, 21.5 CM	2
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	1
RETRACTOR, LANGENBECK, 30X14 MM, 22 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, 10 CH	1
GUIDE NEEDLE, ANG., KNIFE SHAPE, 12 CH	1
CONTAINER MS, 60X30X14 CM, HANDLE GREY	1
Tray DIN, 480x255x73 mm	1
COLOR-TAG, RED	2
CODING LABEL, WITH TEXT, WITHOUT HOLE	2
<p><i>The Instrument should be CE & FDA USA approved.</i></p> <p><i>The Instrument and Container should be of the same parent company.</i></p> <p><i>It should have reusable microbial barriers instead of disposable filters. The microbial barriers should be easy to remove and clean.</i></p>	

THYROIDECTOMY SET	1
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. 4, 13.5 CM	1
SCALPEL HANDLE, NO. 3, 12 CM	1
TC-DISS. SCISSORS, FINE, CVD., 18 CM	1
TC-DISS. SCISSORS, FINE, CVD., 20.5 CM	1
TC-DISS. SCISSORS, CVD., SERR., 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, 18 CM	2
ATR. FORCEPS, DE BAKEY, 2 MM, 16 CM	2
HAEM. FORCEPS, MOSQUITO, CVD., 12 CM	4
FORCEPS, MOSQUITO, 1X2 T., CVD., 12.5 CM	4
FORCEPS, KOCHER, 1X2 T., STR., 14 CM	12
FORCEPS, KOCHER, 1X2 T., STR., 20.5 CM	2
DISS. FORCEPS, BABY-MIXTER, CVD., 18.5CM	2
DISS. FORCEPS, OVERHOLT, NO. 2, 20 CM	2
DISS. FORCEPS, OVERHOLT, NO. 3, 21.5 CM	2
TENACULUM FORCEPS, BRAUN, 4X4 T., 16 CM	2
ATR. TISSUE FORCEPS, BABCOCK, 16 CM	2
ATR. TISSUE FORCEPS, ALLIS, 20 CM	2
LIGATURE NEEDLE, DESCHAMPS, BLUNT, 20 CM	1
LIGATURE NEEDLE, DESCHAMPS, BLUNT, 21 CM	1
GROOVED DIRECTOR, PAYR, CVD., 22 CM	1
TC-NEEDLEHOLDER, CRILE-WOOD, 15 CM	1
TC-NEEDLEHOLDER, MAYO-HEGAR, 20 CM	2
TC-NEEDLEHOLDER, DE BAKEY, 18 CM	1
RETR., VOLKMANN, SEMISH., 4-PR., 22.5 CM	2
RETRACTOR, ROUX, SET, NO. 1-3, 17 CM	1
RETRACT., KOCHER-LANG., 40X18 MM, 21.5CM	2
TRACHEA RETRACTOR, JACKSON, DBL., 18 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
GUIDE NEEDLE, ANG., KNIFE SHAPE, 8 CH	1
GUIDE NEEDLE, ANG., KNIFE SHAPE, 10 CH	1
CONTAINER MS, 60X30X14 CM, HANDLE GREY	1
Tray DIN, 480x255x73 mm	1
COLOR-TAG, RED	2
CODING LABEL, WITH TEXT, WITHOUT HOLE	2
<p><i>The Instrument should be CE & FDA USA approved.</i></p> <p><i>The Instrument and Container should be of the same parent company.</i></p> <p><i>It should have reusable microbial barriers instead of disposable filters. The microbial barriers should be easy to remove and clean.</i></p>	

SUPPLEMENT FOR THYROID	1
ATR. FORCEPS, DE BAKEY, 1.5 MM, 16 CM	2
ATR. FORCEPS, DE BAKEY, 1.5 MM, 20 CM	2
RETRACTOR, ZENKER, ANG., 35X9 MM, 25 CM	1
RETRACT. ZENKER, ANG, 60X12 MM, 26.5 CM	1
RETRACTOR, ZENKER, ANG., 75X12 MM, 28 CM	1
DISS. FORCEPS, HEISS, SLIGHT CVD., 20 CM	1
DISS. FORCEPS, HEISS, STRONG CVD., 20 CM	1
DISS. FORCEPS, BABY-ADSON, CVD., 18 CM	1
DISS. FORCEPS, BABY-MIXTER, CVD., 18.5CM	1
FORCEPS, KOCHER, 1X2 T., STR., 14.5 CM	8
FORCEPS MICRO-MOSQUITO, CVD., 12 CM	8
TC-DISS. SCISSORS, FINE, CVD., 14.5 CM	1
TC-DISS. SCISSORS, FINE, CVD., 18 CM	1
TC-DISS. SCISSORS, FINE, CVD., 20.5 CM	1
GROOVED DIRECTOR, KOENIG, NO. 1, 20 CM	1
GROOVED DIRECTOR, KOENIG, NO. 2, 20 CM	1
LIGATURE NEEDLE, DESCHAMPS, BLUNT, 21 CM	1
LIGATURE NEEDLE, DESCHAMPS, BLUNT, 21 CM	1
LIGATURE NEEDLE, STR., MALLEAB., 20 CM	1
SUCT. TUBE, YASARG., Ø 2.0 MM, WL:150 MM	1
SUCT. TUBE, YASARG., Ø 2.5 MM, WL:150 MM	1
CONTAINER MS, 47X30X14 CM, HANDLE GREY	1
Tray 3/4, 410x255x73 mm	1
COLOR-TAG, RED	2
CODING LABEL, WITH TEXT, WITHOUT HOLE	2

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TRACHEOTOMY SET	1
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	1
TC-DISS. SCISSORS, FINE, CVD., 14.5 CM	1
TC-DISS. SCISSORS, FINE, CVD., 18 CM	1
OPERATING SCISSORS, SH/BL, STR., 14.5 CM	1
TISSUE FORCEPS, 1X2 T., SLIM, 14.5 CM	2
ATR. FORCEPS, DE BAKEY, 2 MM, 16 CM	2
FORCEPS, MOSQUITO, 1X2 T., CVD., 12.5 CM	4
HAEM. FORCEPS, MOSQUITO, CVD., 12 CM	4
FORCEPS, KOCHER, 1X2 T., STR., 14 CM	2
FORCEPS, PEAN, DELICATE, STR., 14.5 CM	2
DISS. FORCEPS, OVERHOLT, NO. 2, 20 CM	1
DISS. FORCEPS, BABY-MIXTER, CVD., 18.5CM	1
TC-NEEDLEHOLDER, CRILE-WOOD, 15 CM	1
RETRACTOR, LANGENBECK, 30X14 MM, 22 CM	2
RETRACTOR, DOUBLE, ROUX, NO. 1, 14.5 CM	2
RETRACTOR, DELIC., SHARP, 1-PR., 16.5 CM	2
RETRACTOR, DELIC., SHARP, 4-PR., 16.5 CM	2
TRACHEAL DILATOR, LABORDE, 14 CM	1
WOUNDSREADER, SHARP, 3X4 T., 13.5 CM	1
NEEDLE CASE, ROUND, PERF., F. 55-309-65	1
BOWL, METAL, H = 55, Ø 128 MM, 0.35 L	1
GUIDE NEEDLE, ANG., KNIFE SHAPE, 8 CH	1
GUIDE NEEDLE, ANG., KNIFE SHAPE, 10 CH	1
CONTAINER MS, 30X30X14 CM, HANDLE GREY	1
Tray 1/2, 243x255x73 mm	1
COLOR-TAG, RED	2
CODING LABEL, WITH TEXT, WITHOUT HOLE	2
<p><i>The Instrument should be CE & FDA USA approved.</i></p> <p><i>The Instrument and Container should be of the same parent company.</i></p> <p><i>It should have reusable microbial barriers instead of disposable filters. The microbial barriers should be easy to remove and clean.</i></p>	

CUT DOWN SET	1
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
CONTAINER MS, 30X30X14 CM, HANDLE GREY	1
Tray 1/2, 243x255x73 mm	1
COLOR-TAG, RED	2
CODING LABEL, WITH TEXT, WITHOUT HOLE	2
<p><i>The Instrument should be CE & FDA USA approved.</i></p> <p><i>The Instrument and Container should be of the same parent company.</i></p> <p><i>It should have reusable microbial barriers instead of disposable filters. The microbial barriers should be easy to remove and clean.</i></p>	

SUPPLEMENT SET FOR PERMAGNA	1
SKALPELLGRIFF NR:3 XL	1
DISSECTING SCISSORS, CVD., 350MM	1
TC LIGATUR SCISSORS, 350MM	1
KERSTING SIGMOID ANASTOM.FCP, 31CM	1
FORCEPS, DE BAKEY, 3,5MM, STR. 35CM	1
FORCEPS INSULATED 350MM	1
FORCEPS, SIMS-MAIER, 350MM	1
KELLY DRESSING FORCEPS 320MM	1
TAMPON FORCEPS, ULRICH, 350MM	1
DISS. FORCPES ZENKER, CVD. 350MM	1
ZENKER DISSECT. CLAMP, 35 CM, CVD.	1
ZENKER DISSECTING FCPS., CURV. 35CM	1
MUELLER NEEDLEHOLDER CURVED TC 360MM	1
TC-NEEDLEHOLDER, MULLER 350MM	1
MULLER RETRACTOR 250X30MM/60MM	1
HOESEL RETRACTOR, 220X40 MM	1
TISSUE FORCEPS, ALLIS, 295MM	1
TISSUE FORCEPS, ALLIS, 350MM	1
TC-DISSECTING SCISSORS, CVD., 30 CM	1
DRESSING FORCEPS, 30.5 CM	1
TISSUE FORCEPS, 1X2 T., 30.5 CM	1
ATR. ORGAN SEIZING FORCEPS, 26 CM	1
DISS. FORCEPS, OVERHOLT, NO. 3, 27.5 CM	1
HAEMOSTATIC FORCEPS, PEAN, STR., 26 CM	1
HAEMOSTATIC FORCEPS, PEAN, CRV., 26 CM	1
FORCEPS, KOCHER, 1X2 T., STR., 31 CM	1
FORCEPS, KOCHER, 1X2 T., CVD., 26 CM	1
CONTAINER MS, 60X30X14 CM, HANDLE GREY	1
Tray DIN, 480x255x73 mm	1
COLOR-TAG, RED	2
CODING LABEL, WITH TEXT, WITHOUT HOLE	2

The Instrument should be CE & FDA USA approved.

The Instrument and Container should be of the same parent company.

It should have reusable microbial barriers instead of disposable filters. The microbial barriers should be easy to remove and clean.

SUPPLEMENT FOR DEEP RECTUM SURGERY	1
TISSUE FORCEPS, ALLIS, 295MM	3
MUELLER REKTUM-ATRAUMA, S-FORM, 37CM	1
FORCEPS, DE BAKEY, 3,5MM, STR. 35CM	1
TC-NEEDLEHOLDER, MULLER 350MM	1
MÜLLER RECTAL SCISSOR 32,5CM	1
MULLER RETRACTOR 250X30MM/60MM	1
LLOYD DAVIS RECTAL OCCLUSION FORCEPS	1
DE BAKEY SUCTION TUBE D 3 MM, 275 MM	1
DISS. FORCEPS, ZENKER, SL. CVD., 29.5 CM	1
DISS. FORCEPS, ZENKER, ST. CVD., 28.5 CM	1
KERSTING SIGMOID ANASTOM.FCP, 31CM	1
WUNDHAKEN, 250X30/60MM	1
CONTAINER MS, 47X30X14 CM, HANDLE GREY	1
Tray 3/4, 410x255x73 mm	1
COLOR-TAG, RED	2
CODING LABEL, WITH TEXT, WITHOUT HOLE	2

The Instrument should be CE & FDA USA approved.

The Instrument and Container should be of the same parent company.

It should have reusable microbial barriers instead of disposable filters. The microbial barriers should be easy to remove and clean.

RECTAL AND HAEMORRHOIDAL SET	1
FORCEPS, GROSS-MAIER, CVD., 26.5 CM	2
TOWEL FORCEPS, BACKHAUS, SHARP, 11 CM	4
SCALPEL HANDLE, NO. 7, SOLID, 16 CM	1
TC-DISSECTING SCISSORS, CVD., 17.5 CM	1
TC-SCISSORS, MAYO-LEXER, CVD., 16 CM	1
DRESSING FORCEPS, 18 CM	1
TISSUE FORCEPS, 1X2 T., 14.5 CM	1
FORCEPS, KOCHER, 1X2 T., STR., 14 CM	4
DISS. FORCEPS, OVERHOLT, NO. 1, 20.5 CM	1
TC-NEEDLEHOLDER, MAYO-HEGAR, 18.5 CM	1
SIMS RECTAL SPECULUM 80X20 MM	1
SPHINCTEROSCOPE, KELLY, 27X50 MM	1
HAEMORRHOIDAL-LIGATOR, RUDD, 27.5 CM	1
HAEMORRHOIDAL FORCEPS, MCGIVNEY, 19.5 CM	1
YEOMAN REKTAL BIOPSIEZANGE 42 CM	1
FISTULA PROBE, STR., 16.5 CM	1
FISTULA PROBE, SLIGHT CVD., 16.5 CM	1
FISTULA PROBE, 90° CVD., 16.5 CM	1
FISTULA PROBE, STRONG CVD., 16.5 CM	1
KIDNEY DISH, 250X140X40 MM	1
BOWL, METAL, H = 40, Ø 80 MM, 0.14 L	1
BOWL, METAL, H = 55, Ø 128 MM, 0.35 L	1
CONTAINER MS, 60X30X14 CM, HANDLE GREY	1
Tray DIN, 480x255x73 mm	1
COLOR-TAG, RED	2
CODING LABEL, WITH TEXT, WITHOUT HOLE	2
<p><i>The Instrument should be CE & FDA USA approved.</i></p> <p><i>The Instrument and Container should be of the same parent company.</i></p> <p><i>It should have reusable microbial barriers instead of disposable filters. The microbial barriers should be easy to remove and clean.</i></p>	

INCISION & DRAINAGE SET	1
FORCEPS, GROSS-MAIER, CVD., 20.5 CM	1
SCALPEL HANDLE, NO. 3, 12 CM	1
HAEM. FORCEPS, MOSQUITO, CVD., 12 CM	1
DRESSING FORCEPS, MEDIUM WIDE, 14.5 CM	1
TISSUE FORCEPS, 1X2 T., SLIM, 14.5 CM	1
TC-DISS. SCISSORS, FINE, CVD., 14.5 CM	1
PROBE, BUTTON END, Ø 2.0/2.0 MM, 14.5 CM	1
BONE CUR., VOLKM., OVAL, NO. 000, 17 CM	1
BONE CURETTE, VOLKM., OVAL, NO. 0, 17 CM	1
TC-SCISSORS, LEXER, FINE, CVD., 16 CM	1
SCALPEL HANDLE, NO. 4, 13.5 CM	1
TC-NEEDLEHOLDER, CRILE-WOOD, 15 CM	1
BOWL, METAL, H = 40, Ø 80 MM, 0.14 L	1
KIDNEY DISH, 250X140X40 MM	1
CONTAINER MS, 30X30X14 CM, HANDLE GREY	1
Tray 1/2, 243x255x73 mm	1
COLOR-TAG, RED	2
CODING LABEL, WITH TEXT, WITHOUT HOLE	2
<p><i>The Instrument should be CE & FDA USA approved.</i></p> <p><i>The Instrument and Container should be of the same parent company.</i></p> <p><i>It should have reusable microbial barriers instead of disposable filters. The microbial barriers should be easy to remove and clean.</i></p>	

SUTURE SET LARGE	1
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
CONTAINER MS, 30X30X14 CM, HANDLE GREY	1
Tray 1/2, 243x255x73 mm	1
COLOR-TAG, RED	2
CODING LABEL, WITH TEXT, WITHOUT HOLE	2

The Instrument should be CE & FDA USA approved.

The Instrument and Container should be of the same parent company.

It should have reusable microbial barriers instead of disposable filters. The microbial barriers should be easy to remove and clean.

SUTURE SET SMALL	1
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

The Instrument should be CE & FDA USA approved.

The Instrument and Container should be of the same parent company.

It should have reusable microbial barriers instead of disposable filters. The microbial barriers should be easy to remove and clean.

VARICOSE VEIN STRIPPING SUPPL. SET	1
FORCEPS, GROSS-MAIER, CVD., 26.5 CM	2
TOWEL FORCEPS, BACKHAUS, SHARP, 11 CM	6
TOWEL FORCEPS, TOHOKU, BLUNT, 10.5 CM	4
SCALPEL HANDLE, NO. 4, 13.5 CM	1
SCALPEL HANDLE, NO. 3, 12 CM	2
SCALPEL HANDLE F. MICROBLADE, 13.5 CM	1
TC-DISSECTING SCISSORS, CVD., 14.5 CM	1
TC-DISSECTING SCISSORS, CVD., 17.5 CM	1
TC-DISSECTING SCISSORS, CVD., 20.5 CM	1
TC-LIGATURE SCISSORS, CVD., SERR., 17 CM	1
TC-SCISSORS, MAYO-LEXER, CVD., 16 CM	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	2
TISSUE FORCEPS, 1X2 T., 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., 14.5 CM	6
HAEM. FORCEPS, MOSQUITO, CVD., 12 CM	10
FORCEPS, MOSQUITO, 1X2 T., CVD., 12.5 CM	6
HAEM. FORCEPS, HARTMANN, CVD., 10 CM	2
FORCEPS, KOCHER, 1X2 T., STR., 18.5 CM	2
DISS. FORCEPS, BABY-MIXTER, CVD., 18.5CM	2
TC-NEEDLEHOLDER, CRILE-WOOD, 15 CM	1
TC-NEEDLEHOLDER, MAYO-HEGAR, 18.5 CM	2
RETRACTOR, DELIC, SHARP, 4-PR., 16.5 CM	2
HOOKLET, DESMARRES, 10 MM, 16 CM	2
RETRACTOR, LANGENBECK, 30X14 MM, 22 CM	2
RETRACTOR, LANGENBECK, 40X11 MM, 22 CM	2
RETRACT., KOCHER-LANG., 55X11 MM, 21.5CM	2
SPREADER, ADSON, BLUNT, 4X5 T., 33 CM	1
SEPTUM ELEVATOR, FREER, SH/BL, 18 CM	1
VARICOSE VEIN SET, NABATOFF, COMPLETE	1
PHLEBODISSECTOR, VARADY, 18 CM	1
PHLEBEXTRACTOR, VARADY, 18 CM	1
PHLEBEXTRACTOR, VARADY, 18 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
GUIDE NEEDLE, ANG., LANCET SHAPE, 12 CH	1
GUIDE NEEDLE, ANG., LANCET SHAPE, 14 CH	1
CONTAINER MS, 60X30X14 CM, HANDLE GREY	1
Tray DIN, 480x255x73 mm	1
COLOR-TAG, RED	2
CODING LABEL, WITH TEXT, WITHOUT HOLE	2
<p><i>The Instrument should be CE & FDA USA approved.</i></p> <p><i>The Instrument and Container should be of the same parent company.</i></p> <p><i>It should have reusable microbial barriers instead of disposable filters. The microbial barriers should be easy to remove and clean.</i></p>	

SUPPLEMENT MAMMA AMPUTATION	1
TENACULUM FORCEPS, BRAUN, 4X4 T., 16 CM	1
TENACULUM FORCEPS, CZERNY, 4X4 T., 21 CM	1
TC-DISSECTING SCISSORS, CVD., 26 CM	1
FORCEPS, KOCHER, 1X2 T., STR., 20.5 CM	2
HAEMOSTATIC FORCEPS, PEAN, CVD., 14 CM	8
DISS. FORCEPS, BABY-ADSON, CVD., 18 CM	1
RETRACTOR, KOCHER, SHARP, 6-PR., 22.5 CM	2
RETRACTOR, LANGENBECK, 60X20 MM, 21 CM	1
CONTAINER MS, 30X30X14 CM, HANDLE GREY	1
Tray 1/2, 243x255x73 mm	1
COLOR-TAG, RED	2
CODING LABEL, WITH TEXT, WITHOUT HOLE	2
<p><i>The Instrument should be CE & FDA USA approved.</i></p> <p><i>The Instrument and Container should be of the same parent company.</i></p> <p><i>It should have reusable microbial barriers instead of disposable filters. The microbial barriers should be easy to remove and clean.</i></p>	

AMPUTATION INSTRUMENTS	
RETRACTOR, VOLKMANN, SH., 1-PR., 21.5 CM	1
OSTEOTOME, LEXER, 15 MM, 22 CM	1
MALLET, PLASTIC HANDLE, 460 GR., 24 CM	1
BONE FILE, BAYONET SHAPE, 13 MM, 25 CM	1
RASPATORY, LAMBOTTE, 15 MM, 21.5 CM	1
BONE CURETTE, VOLKM., OVAL, NO. 1, 17 CM	1
BONE CURETTE, VOLKM., OVAL, NO. 2, 17 CM	1
BONE CURETTE, VOLKM., OVAL, NO. 4, 17 CM	1
RETRACTOR, PERCY, F. AMPUTATION	1
BONE RONGEUR, RUSKIN, CVD., 24 CM	1
RASPATORY, SEDILLOT, CVD., 23 CM	1
ELEVATOR, LANGENBECK, 7 MM, 19.5 CM	1
HOOK HANDLE, F. WIRE SAWS	2
WIRE SAW, GIGLI, FOURFOLD, 30 CM	1
WIRE SAW, GIGLI, FOURFOLD, 40 CM	1
WIRE SAW, GIGLI, FOURFOLD, 50 CM	1
CONTAINER MS, 30X30X14 CM, HANDLE GREY	1
Tray 1/2, 243x255x73 mm	1
COLOR-TAG, RED	2
CODING LABEL, WITH TEXT, WITHOUT HOLE	2
<p><i>The Instrument should be CE & FDA USA approved.</i></p> <p><i>The Instrument and Container should be of the same parent company.</i></p> <p><i>It should have reusable microbial barriers instead of disposable filters. The microbial barriers should be easy to remove and clean.</i></p>	

KIRSCHNER FRAME	1
ABD. RETRACTOR, KIRSCHNER,CURVANG., CPL.	1
HOOK ON BLADE, KIRSCHNER, 98X50 MM	2
CONTAINER MS, 60X30X14 CM, HANDLE GREY	1
Tray DIN, 480x255x73 mm	1
COLOR-TAG, RED	2
CODING LABEL, WITH TEXT, WITHOUT HOLE	2

The Instrument should be CE & FDA USA approved.

The Instrument and Container should be of the same parent company.

It should have reusable microbial barriers instead of disposable filters. The microbial barriers should be easy to remove and clean.

EMERGENCY SUPPLEMENT FOR VESSELS	1
BULLDOG CLAMP, DE BAKEY, CVD., 8.5 CM	2
ATR. FORCEPS, LELAND-JONES, ANG., 19 CM	2
ATR. TANGENTIAL FORCEPS, SATINSKY, 22 CM	1
ATR. FORCEPS, POTTS, CVD., 23 CM	1
ATR. FORCEPS, DE BAKEY, 2 MM, 25 CM	2
TC-NEEDLEHOLDER, DE BAKEY, 23 CM	1
NEEDLE CASE, ROUND, PERF., F. 55-309-65	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
<p><i>The Instrument should be CE & FDA USA approved.</i></p> <p><i>The Instrument and Container should be of the same parent company.</i></p> <p><i>It should have reusable microbial barriers instead of disposable filters. The microbial barriers should be easy to remove and clean.</i></p>	

SUPPLEMENT FOR VASCULAR SURGERY	1
SPREADER, ADSON, BLUNT, 4X5 T., 33 CM	1
WOUNDSPREADER, BLUNT, 3X4 T., 16 CM	1
SCISSORS, ANGLED 60°, 18 CM	1
TC-SCISSORS, DE BAKEY, 60°, 22 CM	1
TI-ATRAUMA-FORCEPS, 1.5 MM, 20.5 CM	2
TI-ATRAUMA-FORCEPS, 1.5 MM, 24.5 CM	2
ATR. FORCEPS, DE BAKEY, 2 MM, 25 CM	2
RING STRIPPER, ROUND, Ø 2.0 MM, 50 CM	1
RING STRIPPER, ROUND, Ø 3.0 MM, 50 CM	1
RING STRIPPER, ROUND, Ø 4.0 MM, 50 CM	1
RING STRIPPER, ROUND, Ø 6.0 MM, 50 CM	1
RING STRIPPER, ROUND, Ø 7.0 MM, 50 CM	1
RING STRIPPER, ROUND, Ø 8.5 MM, 50 CM	1
RING STRIPPER, ROUND, Ø 10.0 MM, 50 CM	1
RING STRIPPER, ROUND, Ø 12.0 MM, 50 CM	1
RING STRIPPER, ROUND, Ø 14.0 MM, 50 CM	1
HANDLE F. STRIPPERS, ROUND, 11.5 CM	1
VESSEL CANNULA, MALLEAB., Ø 4 MM, 15 CM	1
VESSEL CANNULA, MALLEAB., Ø 3 MM, 15 CM	1
DURA DISSECTOR, DAVIS, DBL., 24.5 CM	1
INTIMA SPATULA, BLUNT, 3 MM, 18.5 CM	1
INTIMA SPATULA, BLUNT, 3 MM, 21.5 CM	1
HOOKLET, CUSHING, 14 MM, 20.5 CM	1
NERVE HOOK, CUSHING, NO. 2, 19 CM	1
NERVE HOOK, CUSHING, NO. 2, 28 CM	1
SUTURE HOOK, Ø 3.0 MM, 26 CM	1
TUNNELING-FORCEPS, CVD., 39.5 CM	1
TC-NEEDLEHOLDER, HEGAR-VASCULAR, 20.5 CM	1
TC-NEEDLEHOLDER, DE BAKEY, 26.5 CM	1
TC-NEEDLEHOLDER, RYDER-MARTIN, 20 CM	1
BULLDOG CLAMP, DE BAKEY, CVD., 8.5 CM	2
ATR. FORCEPS, POTTS, ANG., 55 MM, 22 CM	2
ATR. FORCEPS, LELAND-JONES, ANG., 18 CM	2
ATR. LIGATURE FORCEPS, DE BAKEY, 24 CM	1
ATR. AORTA FCPS., BAHNSON, CVD., 23.5 CM	1
LIGATURE FORCEPS, DE BAKEY, S-SH, 27 CM	1
ANASTOM. FORCEPS, DERRA, NO. 3, 17.5 CM	1
ATR. TANGENTIAL FORCEPS, SATINSKY, 22 CM	1
ATR. TANGENTIAL FORCEPS, SATINSKY, 26 CM	1
ATR. TANGENT. FORCEPS, SATINSKY, 26.5 CM	1
ATR. TANGENT. FORCEPS, SATINSKY, 27.5 CM	1
ATR. TANGENT. FORCEPS, SATINSKY, 28.5 CM	1
ATR. FORCEPS, POTTS, CVD., 23 CM	1
ATR. FORCEPS, POTTS, CVD., 26 CM	1
ATR. FORCEPS, POTTS, CVD., 31 CM	1
ATR. ANEURYSM FORCEPS, DE BAKEY, 31 CM	2
CONTAINER MS, 60X30X16 CM, HANDLE GREY	1
Tray DIN, 480x255x33 mm	1
Tray DIN, 480x255x73 mm	1
COLOR-TAG, RED	2
CODING LABEL, WITH TEXT, WITHOUT HOLE	2
<i>The Instrument should be CE & FDA USA approved.</i> <i>The Instrument and Container should be of the same parent company.</i> <i>It should have reusable microbial barriers instead of disposable filters. The microbial barriers should be easy to remove and clean.</i>	

THORAX SET	1
FORCEPS, GROSS-MAIER, CVD., 26.5 CM	2
TOWEL FORCEPS, BACKHAUS, SHARP, 11 CM	10
TOWEL FORCEPS, TOHOKU, BLUNT, 10.5 CM	6
SCALPEL HANDLE, NO. 4, 13.5 CM	2
SCALPEL HANDLE, NO. 3L, LONG, 21.5 CM	1
TC-DISSECTING SCISSORS, CVD., 20.5 CM	1
TC-DISSECTING SCISSORS, CVD., 23 CM	1
TC-DISSECTING SCISSORS, CVD., 26 CM	1
TC-DISSECTING SCISSORS, CVD., 30 CM	1
TC-LIGATURE SCISSORS, CVD., SERR., 23 CM	1
TC-SCISSORS, MAYO-LEXER, CVD., 16 CM	1
OPERATING SCISSORS, SH/BL, CVD., 14.5 CM	1
DRESSING FORCEPS, MEDIUM WIDE, 14.5 CM	1
TISSUE FORCEPS, 1X2 T., 14.5 CM	2
TISSUE FORCEPS, 1X2 T., 20.5 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
ATR. FORCEPS, DE BAKEY, 2 MM, 30 CM	2
HAEM. FORCEPS, MOSQUITO, CVD., 12 CM	6
FORCEPS, KOCHER, 1X2 T., STR., 14.5 CM	6
FORCEPS, KOCHER, 1X2 T., STR., 24 CM	2
FORCEPS, GROSS-MAIER, STR., 26.5 CM	2
PERITONEAL FORCEPS, MIKULICZ, 20.5 CM	4
DISS. FORCEPS, OVERHOLT, NO. 2, 20 CM	1
DISS. FORCEPS, OVERHOLT, NO. 1, 20.5 CM	1
DISS. FORCEPS, OVERHOLT, NO. 4, 22 CM	1
DISSECT. FORCEPS, RUMEL, NO. 3, 23.5 CM	1
DISSECTING FORCEPS, RUMEL, NO. 4, 24 CM	1
DISS. FORCEPS, ZENKER, ST. CVD., 28.5 CM	1
DISS. FORCEPS, OVERHOLT, NO. 1, 27 CM	1
ATR. TANGENT. FORCEPS, SATINSKY, 26.5 CM	1
ATR. TANGENTIAL FORCEPS, SATINSKY, 22 CM	1
ATR. ANEURYSM FORCEPS, DE BAKEY, 31 CM	1
LIGATURE FCPS., DE BAKEY, S-SH., 24.5 CM	1
ATR. FORCEPS, POTTS, CVD., 26 CM	1
LIGATURE FORCEPS, DE BAKEY, S-SH, 27 CM	1
ATR. ORGAN SEIZING FORCEPS, 25 CM	1
ATR. TISSUE FORCEPS, ALLIS, 24.5 CM	1
TC-NEEDLEHOLDER, CRILE-WOOD, 15 CM	1
TC-NEEDLEHOLDER, MAYO-HEGAR, 20 CM	1
TC-NEEDLEHOLDER, DE BAKEY, 18 CM	1
TC-NEEDLEHOLDER, DE BAKEY, 26.5 CM	1
TC-NEEDLEHOLDER, DE BAKEY, 31 CM	1
TC-NEEDLEHOLDER, MASSON, 26.5 CM	1
RETR., VOLKMANN, SEMISH., 4-PR., 22.5 CM	2
RIB SPREADER, BURFORD, ALU, 300 MM	1
RIB CONTRACTOR, BAILEY-GIBBON, 20 CM	1
LUNG SPATULA, ALLISON, 33 CM	2
STERNAL CHISEL, LEBSCH, 24.5 CM	1
MALLET, WILLIGER, 140 GR., 16.5 CM	1
RIB SHEARS, BRUNNER, RIGHT HAND, 32 CM	1
RIB RASPATORY, DOYEN, R., ADULT, 17 CM	1
RIB RASPATORY, DOYEN, L., ADULT, 17 CM	1
OSTEOTOME, MINI-LAMBOTTE, 15 MM, 17 CM	1
RASPATORY, SEMB, NO. 2, 12 MM, 22 CM	1
RASPATORY, SEMB, NO. 4, 13 MM, 22 CM	1
BONE HOLD. FORCEPS, SEMB, CVD., 19.5 CM	1
BONE CUTT. FORCEPS, LISTON, CVD., 22 CM	1
BONE RONGEUR, CVD., 22.5 CM	1

TC-SIDE NIPPER, W. TRANSM., 17.5 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
GUIDE NEEDLE, ANG., LANCET SHAPE, 12 CH	1
GUIDE NEEDLE, ANG., LANCET SHAPE, 14 CH	1
GUIDE NEEDLE, ANG., LANCET SHAPE, 16 CH	1
CONTAINER MS, 60X30X16 CM, HANDLE GREY	1
Tray DIN, 480x255x33 mm	1
Tray DIN, 480x255x73 mm	1
COLOR-TAG, RED	2
CODING LABEL, WITH TEXT, WITHOUT HOLE	2
<p><i>The Instrument should be CE & FDA USA approved.</i></p> <p><i>The Instrument and Container should be of the same parent company.</i></p> <p><i>It should have reusable microbial barriers instead of disposable filters. The microbial barriers should be easy to remove and clean.</i></p>	

EMBOLECTOMY SET	
FORCEPS, GROSS-MAIER, CVD., 26.5 CM	1
TOWEL FORCEPS, BACKHAUS, SHARP, 11 CM	2
TOWEL FORCEPS, TOHOKU, BLUNT, 10.5 CM	6
SCALPEL HANDLE, NO. 4, 13.5 CM	4
SCALPEL HANDLE, NO. 3, 12 CM	1
TC-DISSECTING SCISSORS, CVD., 14.5 CM	1
TC-DISSECTING SCISSORS, CVD., 17.5 CM	1
DISSECT. SCISSORS, FINE, S-SHAPE, 23 CM	1
SCISSORS, ANGLED 60°, 18 CM	1
TC-SCISSORS, MAYO-LEXER, CVD., 16 CM	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	2
ATR. FORCEPS, DE BAKEY, 2 MM, 16 CM	2
FORCEPS, KOCHER, 1X2 T., STR., 14.5 CM	4
HAEM. FORCEPS, MOSQUITO, CVD., 12 CM	6
FORCEPS, KOCHER, 1X2 T., STR., 18.5 CM	2
DISS. FORCEPS, BABY-MIXTER, CVD., 18.5CM	2
TC-NEEDLEHOLDER, CRILE-WOOD, 15 CM	1
TC-NEEDLEHOLDER, DE BAKEY, 18 CM	1
TC-NEEDLEHOLDER, MAYO-HEGAR, 18.5 CM	2
RETR., VOLKMANN, SEMISH., 4-PR., 22.5 CM	2
RETRACTOR, LANGENBECK, 30X14 MM, 22 CM	2
RETRACTOR, LANGENBECK, 40X11 MM, 22 CM	2
RETRACT., KOCHER-LANG., 55X11 MM, 21.5CM	2
HOOCKET, CUSHING, 14 MM, 20.5 CM	1
SPREADER, ADSON, SHARP, 3X4 T., 26 CM	1
WOUNDSREADER, SHARP, 3X4 T., 13.5 CM	1
RING STRIPPER, ROUND, Ø 2.0 MM, 50 CM	1
RETRACT., OLLIER, BL., 37X30 MM, 24.5 CM	1
RING STRIPPER, ROUND, Ø 4.0 MM, 50 CM	1
RING STRIPPER, ROUND, Ø 6.0 MM, 50 CM	1
RING STRIPPER, ROUND, Ø 7.0 MM, 50 CM	1
RING STRIPPER, ROUND, Ø 8.5 MM, 50 CM	1
RING STRIPPER, ROUND, Ø 10.0 MM, 50 CM	1
RING STRIPPER, ROUND, Ø 12.0 MM, 50 CM	1
RING STRIPPER, ROUND, Ø 14.0 MM, 50 CM	1
HANDLE F. STRIPPERS, ROUND, 11.5 CM	1
DURA DISSECTOR, DAVIS, DBL., 24.5 CM	1
BULLDOG CLAMP, DE BAKEY, STR., 8.5 CM	2
BULLDOG CLAMP, DE BAKEY, CVD., 8.5 CM	2
ANASTOM. FORCEPS, DERRA, NO. 3, 17.5 CM	1
ATR. FORCEPS, LELAND-JONES, ANG., 18 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., LANCET SHAPE, 12 CH	1
GUIDE NEEDLE, ANG., LANCET SHAPE, 14 CH	1
GUIDE NEEDLE, ANG., LANCET SHAPE, 16 CH	1
CONTAINER MS, 60X30X16 CM, HANDLE GREY	1
Tray DIN, 480x255x33 mm	1
Tray DIN, 480x255x73 mm	1
COLOR-TAG, RED	2
CODING LABEL, WITH TEXT, WITHOUT HOLE	2
<i>The Instrument should be CE & FDA USA approved.</i>	
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<i>It should have reusable microbial barriers instead of disposable filters. The microbial barriers should be easy to remove and clean.</i>	

LYMPHADENECTOMY SET	
FORCEPS, FOERSTER, SERR., STR., 25 CM	1
TOWEL FORCEPS, BACKHAUS, SHARP, 13 CM	4
SCALPEL HANDLE, NO. 3, 12 CM	8
SCALPEL HANDLE, NO. 4, 13.5 CM	1
SCALPEL HANDLE, NO. 3L, LONG, 21.5 CM	1
SCISSORS, MAYO, STR., 17 CM	1
SCISSORS, MAYO, CVD., 17 CM	1
DISSECTING SCISSORS, CVD., 18 CM	1
DISSECTING SCISSORS, CVD., 20.5 CM	1
SCISSORS, SIMS, BL/BL, CVD., 23 CM	1
OPERATING SCISSORS, SH/BL, STR., 14.5 CM	1
DRESSING FORCEPS, 14.5 CM	2
DRESSING FORCEPS, 20 CM	1
TISSUE FORCEPS, 1X2 T., 14.5 CM	2
TISSUE FORCEPS, 1X2 T., 20.5 CM	1
TISSUE FORCEPS, ALLIS, 5X6 T., 15.5 CM	6
TISSUE FORCEPS, BABCOCK, 16 CM	2
HAEM. FORCEPS, MOSQUITO, STR., 12.5 CM	10
HAEM. FORCEPS, MOSQUITO, CVD., 12 CM	10
FORCEPS, CRILE-RANKIN, STR., 16 CM	4
FORCEPS, CRILE-RANKIN, CVD., 16 CM	4
FORCEPS, KOCHER, 1X2 T., STR., 26 CM	2
PARAMETRIUM CLAMP, BENT HEAVY, 26 CM	2
PARAMETRIUM CLAMP, ANGLED, 26 CM	2
DISS. FORCEPS, GEMINI, STR. CVD., 25 CM	1
PERITONEAL FORCEPS, MIKULICZ, 20.5 CM	4
RETRACTOR, FRITSCH, 45X75 MM, 25.5 CM	2
RETRACTOR, MIKULICZ, 125X50 MM, 25 CM	1
RETRACTOR, MIKULICZ, 160X50 MM, 25 CM	1
ABDOM. SPATULA, MALLEABLE, 40 MM, 33 CM	2
ABD. RETRACTOR, KIRSCHNER, CURVANG., CPL.	1
NEEDLEHOLDER, MAYO-HEGAR, 20.5 CM	1
NEEDLEHOLDER, MAYO-HEGAR, 24 CM	1
NEEDLEHOLDER, CRILE-WOOD, GROOVED, 15 CM	1
SUCTION TUBE, YANKAUER, COMPL., 31 CM	1
CONTAINER MS, 60X30X16 CM, HANDLE GREY	1
Tray DIN, 480x255x33 mm	1
Tray DIN, 480x255x73 mm	1
COLOR-TAG, RED	2
CODING LABEL, WITH TEXT, WITHOUT HOLE	2

The Instrument should be CE & FDA USA approved.
The Instrument and Container should be of the same parent company.
It should have reusable microbial barriers instead of disposable filters. The microbial barriers should be easy to remove and clean.

SUPPLEMENT EMERGENCY THORACOTOMY	1
RASPATORY, SEDILLOT, CVD., 23 CM	1
RIB RASPATORY, DOYEN, L., ADULT, 17 CM	1
RIB RASPATORY, DOYEN, R., ADULT, 17 CM	1
RASPATORY, SEMB, NO. 2, 12 MM, 22 CM	1
RASPATORY, SEMB, NO. 5, 15 MM, 23 CM	1
BONE HOLDING FORCEPS, LANGENBECK, 21 CM	1
BONE RONGEUR, RUSKIN, CVD., 24 CM	1
RIB SHEARS, GIERTZ-STILLE, 24.5 CM	1
RIB CONTRACTOR/DISTRACT., SELLERS, 20 CM	1
LUNG SPATULA, ALLISON, 29.5 CM	1
ATR. ORGAN SEIZ. FCPS., SCHEIBE, 23 CM	2
CONTAINER MS, 30X30X14 CM, HANDLE GREY	1
Tray 1/2, 243x255x73 mm	1
COLOR-TAG, RED	2
CODING LABEL, WITH TEXT, WITHOUT HOLE	2

The Instrument should be CE & FDA USA approved.

The Instrument and Container should be of the same parent company.

It should have reusable microbial barriers instead of disposable filters. The microbial barriers should be easy to remove and clean.

SUTURE REMOVING SET	1
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
<p><i>The Instrument should be CE & FDA USA approved.</i></p> <p><i>The Instrument and Container should be of the same parent company.</i></p> <p><i>It should have reusable microbial barriers instead of disposable filters. The microbial barriers should be easy to remove and clean.</i></p>	

WOUND DRESSING SET LARGE	
TAMPON FORCEPS, ULRICH, STR., 27 CM	1
TOWEL FORCEPS, BACKHAUS, SHARP, 11 CM	2
SCALPEL HANDLE, NO. 4, 13.5 CM	6
HAEM. FORCEPS, MOSQUITO, STR., 12.5 CM	2
FORCEPS, MOSQUITO, 1X2 T., STR., 12.5 CM	4
HAEMOSTATIC FORCEPS, PEAN, STR., 14.5 CM	4
DISS. FORCEPS, MIXTER-BABY, CVD., 13 CM	4
DISS. FORCEPS, OVERHOLT, NO. 2, 20 CM	2
FORCEPS, KOCHER, 1X2 T., STR., 14 CM	2
RETRACTOR, DOUBLE, ROUX, NO. 1, 14.5 CM	4
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
CONTAINER MS, 30X30X14 CM, HANDLE GREY	1
Tray 1/2, 243x255x73 mm	1
COLOR-TAG, RED	2
CODING LABEL, WITH TEXT, WITHOUT HOLE	2

The Instrument should be CE & FDA USA approved.

The Instrument and Container should be of the same parent company.

It should have reusable microbial barriers instead of disposable filters. The microbial barriers should be easy to remove and clean.

WOUND DRESSING SET SMALL	1
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
BOWL, METAL, H = 30, Ø 61 MM, 0.07 L	1
CONTAINER MS, 30X30X14 CM, HANDLE GREY	1
Tray 1/2, 243x255x73 mm	1
COLOR-TAG, RED	2
CODING LABEL, WITH TEXT, WITHOUT HOLE	2

The Instrument should be CE & FDA USA approved.

The Instrument and Container should be of the same parent company.

It should have reusable microbial barriers instead of disposable filters. The microbial barriers should be easy to remove and clean.

Tender Technical Specifications for HD Laparoscopic System :

Laparoscopic Surgery Set with High Definition Camera :

1. Description of Function :

- 1.1. Laparoscope is used for minimally invasive surgery and comprises of telescope and associated instruments and units.

2. Operational Requirements :

- 2.1. The set for Laparoscopic surgery should have units/groups of items/components as given below, which should be quoted individually. They could be offered bundled in a comprehensive system or separately for each individual group, which should be adaptable with all major international brands.

3. Technical Specifications :

3.1. CAMERA CONTROL UNIT & CAMERA :

High Definition Endoscopic Camera System should have following features :

- a. Digital HD technology.
- b. Progressive scan.
- c. Consistent use of 16 : 9 format for input and output for HDTV function.
- d. CCD chip having hi-fidelity image transmission.
- e. System should have integrated Parafocal Optical Zoom (F 14-30mm, 2 X) to enhance image size.
- f. System should be able to optimize all the settings and should be ready as soon as connected to camera control unit.
- g. Camera control unit should be compatible with all camera heads i.e., Single Chip or Three Chip.
- h. Should be compatible for remote controlled operation of various features.

Technical Specifications :

- i. Image Sensor 3 x 1/3 CCD Chip.
- ii. Pixels 1920 x 1080.
- iii. AGC Microprocessor controlled.
- iv. Lens F14 – 30 mm.
- v. Video Outputs Composite to BNC, Y/C to S-VHS, RGB to D socket, HDTV DVI- D, DV for recording.
- vi. Input Key Board for Character Generator, 5 pole DIN Socket.

3.2. MONITOR : 26" Diagonal Screen

Two Wide Screen Monitors having the following features :

- a. HDTV Display in 16 : 10 HDTV format.
- b. LCD Crystal display.
- c. 26" Diagonal Screen.
- d. Resolution: 1920 x 1200 pixels.
- e. SDI / HD-SDI, Composite, S-Video RGB, DVI-D and VGA input.
- f. All required cables and connectors, which should be specified.
- g. TFT screen stand/Fixtures for connecting to Pendant System / Ceiling Light Arm.

h. Dustproof and Drip water protected.

3.3. TELESCOPES :

1. 5 mm & 10 mm diameter, 30-35 cm long, 30 degree angle of view : **2 Each.**
2. 5 mm & 10 mm diameter, 30-35 cm long, 0 (ZERO) degree angle of view : **1 Each.**
3. Low risk of object burn.
4. Colour coded for identification.
5. Autoclavable.
6. Fiberoptic light transmission incorporated.

3.4. INSUFFLATOR : 1 No.

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 preheating of gas to body temperature.
8. Facility for easy evacuation of smoke and mist.
9. Memory for retention of previous pressure settings.
10. 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.

3.5. LIGHT SOURCE : 1 No.

1. LED or Xenon 300 watts.
2. Manual and automatic adjustment of light intensity.
3. Lamp life 500 hrs or more.
4. Display of lamp life/Bulb usage meter warning light.
5. Standby mode with emergency lamp with visual indicator.
6. Long (250 cm or more) fluid and fibre-optic light cable of diameter 4.8-5 mm.

3.6. SUCTION – IRRIGATION UNIT : 1 No.

1. Pump for irrigation and suction.
2. Maximum irrigation pressure 400 mm Hg.
3. Suction pressure 0.75 bar.
4. Control from control panel and / or foot pedal.
5. Overflow protection on suction bottles.
6. Accessories should include silicone tubings, bacterial filter and bottles with cap.

3.7. VIDEO – CART : 1 No.

- a. Made of Stainless Steel / Epoxy coated metal.
- b. Portable on 4 antistatic dual castors, 2 with locking brakes.
- c. Required number of shelves for housing all the units of the set.
- d. Adjustable arm for fixation to either side for fixing the TFT monitor.
- e. One drawer unit with lock and key.
- f. Cable Manager.
- g. Power box with concealed wiring for providing electrical connections of proper rating to all the units.

3.8. IMAGE MANAGEMENT SYSTEM : 1 No.

- a. Documentation system for digital storage of still images, video sequences and audio files.
- b. Latest processor & HDD, which should be specified.
- c. Largest possible RAM, which should be specified.
- d. Integrated DVD / CD writer with maximum speed which should be specified.
- e. Compact key board with drape.
- f. Cordless mouse.
- g. All types of connecting cables (BNC, DVI) and connectors, which should be specified.
- h. Flat screen colour monitor of 1024 x 768 resolution with all connectors and connection cables (BNC, S-VIDEO(Y/C), VGA), which should be specified.
- i. Separate mobile cart with lock and key for housing all the components of the image management system.

3.9. CARBON DIOXIDE CYLINDER : 1 No.

Two large size cylinders with required regulators and connecting pipe to the insufflators.

3.10. SUITABLE CAUTERY SYSTEM CAPABLE OF BIPOLAR AND MONOPOLAR COAGULATION AND CUTTING : 1 No.

HAND INSTRUMENTS & OTHER ACCESSORIES :

Sl. No. :	Instrument :	Specifications :	Quantity :
1.	Reusable Veress 10 & 13 cm Pneumoperitoneum Needle.	Spring loaded blunt stylet luer lock length 10 / 15 cm.	8 Each.
2.	Reusable Trocar : 5 mm.	Multifunctional valve, insufflation stopcock and threaded sleeves, pyramidal tip, length (10.5 cm).	10 Nos.
3.	Reusable Trocar : 10 / 11mm & 12 mm.	Multifunctional valve, insufflation stopcock and threaded sleeves, pyramidal tip, length (10.5 cm).	8 & 4 Nos. Each.
4.	Safety Trocar with Port.	10 mm length approx 10.5 mm.	10 Nos.
5.	Spare Sealing Trocar Caps for Trocar.	5 – 6 mm.	50 Nos.

Sl. No. :	Instrument :	Specifications :	Quantity :
6.	Spare Sealing Trocar Caps for Trocar.	10 – 11 mm.	50 Nos.
7.	Reducer Sleeve.	10 / 11 mm to 5 / 4 mm.	12 Nos.
8.	Reducer Sleeve.	12 mm to 6 / 5 mm.	12 Nos.
9.	Suction and Irrigation Cannula.	Size 5 mm, length 36 cm, used with suction and irrigation handle.	3 Nos.
10.	Grasping Forceps – Toothed 2 x 4 Teeth.	Double action jaws, rotating with connector pin for unipolar coagulation, size 5 mm, length 33 – 36 cm, dismantling facility.	3 Nos.
11.	Grasping Forceps – Toothed 2 x 3 Teeth.	Double action jaws, rotating with connector pin for unipolar coagulation, size 5 mm, length 33 – 36 cm, dismantling facility.	3 Nos.
12.	Maryland Forceps.	Double action jaws , rotating with connector pin for unipolar coagulation, size 5mm, length 33-36cm, dismantling facility.	3 Nos.
13.	Grasping Forceps – Atraumatic.	Double action jaws, rotating with connector pin for unipolar coagulation, size 5 mm, length 33 – 36 cm, dismantling facility.	3 Nos.
14.	Grasping Forceps – Allis.	Double action jaws, rotating with connector pin for unipolar coagulation, size 5 mm, length 33 – 36 cm, dismantling facility	3 Nos.
15.	Grasping Forceps – Rt Angled.	Double action jaws, rotating with connector pin for unipolar coagulation, size 5 mm, length 33 – 36 cm, dismantling facility.	3 Nos.
16.	Grasping Forceps – Mixer.	Double action jaws, rotating with connector pin for unipolar coagulation, size 5 mm, length 33 – 36 cm, dismantling facility.	3 Nos.
17.	Grasping Forceps – Plain Dissection & Grasping.	Double action jaws, rotating with connector pin for unipolar coagulation, size 5 mm, length 33 – 36 cm, dismantling facility.	3 Nos.
18.	Grasping Forceps – Babcock.	Double action jaws, rotating with connector pin for unipolar coagulation, size 5 mm, length 33 – 36 cm, dismantling facility.	3 Nos.
19.	Fan Shaped Retractor.	Rotating, size 5 mm, length 33 - 36 cm, dismantling facility.	1 No.

Sl. No. :	Instrument :	Specifications :	Quantity :
20.	Nathanson Liver Retractor.	Set of four sizes (45, 55, 78, 95 mm), sandblasted to eliminate light reflection.	1 No.
21.	Hook Scissors.	Double action jaws, rotating with connector pin for unipolar coagulation, size 5 mm, length 33 – 36 cm, dismantling facility.	3 Nos.
22.	Micro Scissors.	Single / Double action jaws, size 5 mm, length 33 – 36 cm.	2 Nos.
23.	Laparoscopic Knife.	5 mm, 30 – 36 cm length.	2 Nos.
24.	Rotating Metzenbaum Scissors.	Double action jaws, rotating with connector pin for unipolar coagulation, size 5 mm, length 33 – 36 cm, dismantling facility.	4 Nos.
25.	Bipolar Coagulating Forceps.	Size 5 mm, length 33 – 36 cm fenestrated.	2 Nos.
26.	Bipolar Coagulating Forceps.	Size 5 mm, length 36 cm, 3 mm width of jaws.	2 Nos.
27.	Maryland Bipolar.	Double action jaws, rotating with connector pin for bipolar coagulation, size 5 mm, length 33 – 36 cm, dismantling facility.	2 Nos.
28.	CO2 Connector.	Compatible with CO2 "B" type cylinder.	3 Nos.
29.	High Frequency Cord.	For 5 mm & 10 mm hand instruments with monopolar electrodes, spatula tip.	2 Nos.
30.	High Frequency Cord.	For 5 mm & 10 mm hand instruments with monopolar electrodes, hook tip.	2 Nos.
31.	Knot Pushers.	Eye type, length 33 – 36 cm.	3 Nos.
32.	Needle Holder Coaxial Type.	Size 5 mm, tungsten tip, straight handle with ratchet, single moving jaw, length 33 – 36 cm.	2 Nos.
33.	Assistant Needle Holder.	Size 5 mm, tungsten tip, straight handle with ratchet, single moving jaw, length 33 – 36 cm.	2 Nos.
34.	Clip Applicator – Medium Large.	Rotatable, provision for locking the shaft conveniently, 10 mm, compatible with clip LT 300.	2 Nos.
35.	Clip Applicator – Large.	Rotatable, provision for locking the shaft conveniently, 10 mm, compatible with clip LT 400.	2 Nos.
36.	Grasping Forceps – Toothed 2x 3 Teeth.	Double action jaws, rotating with connector pin for unipolar coagulation, size 10 mm, length 33 – 36 cm, dismantling facility.	3 Nos.
37.	Grasping Forceps – Toothed 2x4 Teeth.	Double action jaws, rotating with connector pin for unipolar coagulation, size 10 mm, length 33 – 36 cm, dismantling facility.	3 Nos.

Sl. No. :	Instrument :	Specifications :	Quantity :
38.	Suction Irrigation Cannula.	10 mm.	2 Nos.
39.	Babcock Grasper.	Double action jaws, rotating with connector pin for unipolar coagulation, size 5 mm, length 33 – 36 cm, dismantling facility.	2 Nos.
40.	Stone Extractor.	10 mm single / double action Jaws.	2 Nos.
41.	Hassan Cone.	Adaptable to 10 mm trocar.	4 Nos.
42.	Bowel Grasper.	10 mm fenestrated, rotatable.	2 Nos.
43.	Blunt Obturator.	For 11 mm port.	6 Nos.
44.	L – Hook.	Size 5 mm, length 33 – 36 cm with pin for cautery. Well insulated hook with small un- insulated working part.	3 Nos.
45.	Spatula.	Size 5 mm, length 33 – 36 cm with pin for cautery.	2 Nos.
46.	Fascia Closure Instrument.	Size 2.8 mm, length 17 cm.	6 Nos.
47.	Washers.	For 5 & 10 mm cannula and reducers.	50 Nos. Each
48.	Container Systems : Metal & Plastic.	For sterilization and storage of telescopes, hand instruments and other accessories, Different sizes.	2 Nos.

4. System Configuration Accessories, Spares and Consumables :

- 4.1. System as specified.
- 4.2. **ACCESSORIES** : All possible accessories of the equipment should be quoted. The specific accessory and its quantity will be decided on the basis of actual requirement.
- 4.3. The system should be capable of accepting standard accessories of major international brands, which should be specified and for which suitable adaptor, if required, is to be provided.
- 4.4. The codes and rates of all relevant individual accessories should be quoted separately with clear mention of period of validity of rates.
- 4.5. ALL ITEMS SHOULD BE FROM THE SAME COMPANY

5. Environmental Factors :

- 5.1. The unit shall be capable of being stored continuously in ambient temperature of 0 – 50 deg C and relative humidity of 15 – 90%.
- 5.2. The unit shall be capable of operating continuously in ambient temperature of 10 – 40 deg C and relative humidity of 15 – 90%.

6. Power Supply :

- 6.1. Power input to be 220 – 240 VAC, 50 Hz fitted with Indian power-plug.
- 6.2. Electronic Voltage corrector / stabilizer of appropriate ratings for power supply to the whole set meeting BIS Standards / Specifications. (Input 160 – 260 V and output 220 – 240 V and 50 Hz).
- 6.3. Optional UPS of adequate rating for power supply to the system for 60 minutes.

7. Standards, Safety :

- 7.1. Should be FDA, CE, UL or BIS approved product.
 - 7.2. Manufacturer and Supplier should have ISO certification for quality standards.
 - 7.3. Electrical safety conforms to standards for electrical safety IEC 60601-1 General Requirements (or equivalent BIS Standard).
 - 7.4. Shall meet internationally recognized standard for Electro Magnetic Compatibility (EMC) for electro medical equipment : IEC-60601-1-2 : latest edition Or Equivalent BIS) or should comply with 89 / 366 / EEC; EMC – directive as amended.
 - 7.5. Certified to be compliant with IEC 60601-2-2 Medical Electrical Equipment Part 2-2 : Particular requirements for the safety of equipment mentioned above – wherever applicable.
- 8. Training :**
- 8.1. Comprehensive training for staff of user department and support services till familiarity with the system.
- 9. Warranty & Service :**
- 9.1. Comprehensive warranty for 5 years and 5 years Comprehensive Maintenance Service after warranty. The cost of CMC must be quoted in the price bid.
 - 9.2. Percentage of uptime guarantee of the equipment during warranty and CMC period for which commitment is to be given must be specified with acceptance of applicable penalty clauses in case of failure to do so.
 - 9.3. After sales service must be provided in the city of installation. In situations requiring service / repair of the unit outside the city of installation, the expenditure on account of this will have to be borne by the supplier.
- 10. Documentation :**
- 10.1. Product Literature in original along with that of accessories and indigenous components if any. Photocopies / computer generated copies are not acceptable.
 - 10.2. Statement of compliance with tender specifications with clear and unambiguous links to relevant portions of product literature / authentic document, which should be highlighted. Alternatives provided for noncompliant specifications with justification must be described in detail with supporting literature.
 - 10.3. Certificate of compliance with standards and approvals stated above.
 - 10.4. Certificate of manufacturer/principal regarding authorization of service facility provided by the supplier.
 - 10.5. List of Equipment available in the Service Centre for providing calibration and routine Preventive Maintenance Support as per manufacturer documentation in service / technical manual.
 - 10.6. List of important spare parts and accessories, which are required for maintenance and repair, with their part number and costing.
 - 10.7. Terms and conditions of warranty and CMC including schedules of visit by service personnel with check list of services to be carried out.
 - 10.8. Commitment for supply of log book with check list for daily, weekly, monthly and quarterly preventive maintenance with contact details of service personnel along with the equipment. The job description of the hospital technician and company service engineer should be clearly spelt out in the log book.
 - 10.9. List of users of quoted model with performance certificate from major hospitals.

SPECIFICATION OF THE MODULAR and INTEGRATED OT

S.No.	Description
1	<p>OR WALL STRUCTURE</p> <p>SUBSTRUCTURE</p> <ul style="list-style-type: none"> • Sub-construction made of roll shaped galvanized and powder coated precision steel profiles, strength 2mm. Vertical columns separately height adjustable. Horizontal beams force- and form-fit with columns fixed by M8 threaded bolts. Decoupled guidance in floor- and ceiling profiles incl. special attachment profiles for decoupled connection of the ceiling. • Additional cross beams for wall installations of equipment, made of ST37-2, primed strength 2mm incl. installation material <p>WALL SYSTEM</p> <ul style="list-style-type: none"> • Wall paneling, made of stainless steel, material no. 1.4301 (AISI 304) 1mm, strengthened with fire proof gypsum board 12,5 mm, incl. adjustable bolts for quick attachment/detachment of panels to/from sub-construction allowing for 3.0mm joint between the panels. • Panel width should be 1200mm; below 1200mm could be variable depending on the floor plan. • Panels made of one piece from floor to suspended ceiling. • Wall coating with antibacterial coating as part of the powder coating process to enable high quality of the walls and not be painted at site • The wall color & colour schemes should be discussed with us before implementation • The vertical joints between the panels to be filled with liquid silicone or silicone profile.
2	<p>OR CEILING</p> <ul style="list-style-type: none"> • Dipling-type clamping cassette ceiling, galv. sheet steel, 0,6 mm, non-perforated, white powdercoated surface, coffered ceiling rid 1200 x 600 mm, incl. substructure and pendant, U-profile for wall fixation. • Connection to Laminar Air Flow ceiling and cut-outs for ceiling pendants and operating lights should be included
3	<p>LAMINAR FLOW</p> <p>The Laminar flow system should be integrated into the ceiling and should have the following features</p> <p>The requirements of following standards Should be met: Field of application for medical purposes in accordance with EN ISO 14644-1, ONORM H6020-2007, DIN 1946 2008 and/or VDI 2083.</p> <p>Housing design: The housing combination consists of a top part (gray room area) in stainless steel and the lower part (clean rooms) in aluminum in high-density (densely welded without silicone or without similar encapsulants) and corrosion-resistant material with a disinfectant-resistant surface coating visible side in RAL 9010 running. An inbuilt shaft recess for the OT light should be provided Access to the tripod suspension and/or the tripod electronics is should be provided in the housing by removal of the partitioned inspection openings.</p>

The crossbars present in the air current should have a width of up to 30 mm. Wider crossbar areas should to prevent incorrect air suction and negative current characteristics.

Filter holder:

The horizontal filter holder should be fitted in a stable profile frame directly in the housing.

The differential pressure measurement port and the DEHS test port should be easily accessible after removal of the outlet unit and should be marked accordingly.

The DEHS raw concentration measurement port should be placed directly at the air outlet side and should be marked accordingly.

Supply air outlet - with horizontal filter plane

Size 2.8 x 2.8 mtrs

Material: ALUMINIUM welded seal-tight (without silicone or similar fillers) and stainless steel

Coated on all sides in RAL 9010.

Housing dimensions about : 2.8 x 2.8 x 420 mm

Including HEPA filter

Including fabric frame clamped on both sides

Including central tripod design

Including frontal DEHS raw concentration measurement port

Technical data:

Feed air flow rate: 7.070 m³/h , Feed air speed: 0.25 m/s

Filter housing: 8 pcs. Filter class: H13

Filter made of micro glass fibre with two sided

Filter housing: Galvanised steel sheet

Initial filter resistance: 105 PA (+/-10%)

4	SPIRAL AIR SUPPLY OUTLET FOR CORRIDOR AND ROOMS
	<ul style="list-style-type: none"> • Spiral air supply box and outlet with Hepa Filter H13, Dimension 624 x 624 x 417 mm, with aluminium frame and grip protection, supply air 450 m³/h (in accordance to the requirements and the room sizes). Sufficient number to be provided to ensure a high quality of ventilation. • The air ducts connectivity to the Spiral Supply box and outlets to the AHU's provided for each of the OR's should also be done in the Scope
5	AIR DUCTS FOR RETURN AIR IN OPERATING ROOMS & CORRIDOR
	<p>Exhaust air cabinet installed in corner, made of stainless steel, standard channel cross section appr. 625 x 425 mm.</p> <p>Exhaust channel as cabinet with upper and lower inlet, for room height 3.000 mm. Incl. wall cut-outs, revision door, sealing frame, traverses and fixation elements.</p>
6	CEILING LIGHT IN OR
	<ul style="list-style-type: none"> • Clean room light fixture 3 x 55 W, VLT 622 0/90/2 with electronic ballast, for flush integration into the clamping cassette ceiling, including tubes TC-L, 3 x 55W
7	General Lights for OR & Corridor
	<p>Clean room lighting fixture 3 x 40 W, - non-dimmable, VLT 622 0/90/2 with electronic ballast,</p> <p>flush mounted into the ceiling with tube of approximate size 600 x 600 mm</p>
8	SLIDING DOOR HERMATICALLY SEALED LARGE SIZE

	<p>OR sliding door, 1-door Frame dimensions (W X H) 1600 x 2100 mm Sliding door tightly closing on three sides, sliding rail made of anodized aluminium, abrasion resistant plastic reels with ball bearings, floor guides made of hard plastic, door frame made of stainless steel 1.4301 (AISI 304) brushed w. 280 grain, door leaf made of stainless steel 1.4301 (AISI 304) brushed w. 280 grain, outside door handle bow-shaped, made of stainless steel, inside door handle shell type, flush integrated graduated rod, integrated and prepared for Euro-standard locking cylinder, strength of door leaf 40 mm, core made of high-strength composite board, drive cover hinged, stainless steel. Door window, double glazing centrally in the door leaf 400 x 600 mm Microprocessor controlled automatic door drive. opening/closing speed 0,1 - 0,5 m/s, actuation by push-buttons inside and outside, pre-programmed for person, bed and permanent opening.</p> <ul style="list-style-type: none"> - should include knee switch panel for automatic door, both sides - should include magic button for touch free door activation, both sides - should include foot switch for actuation of automatic door, both sides
9	<p>SLIDING DOOR HERMATICALLY SEALED SMALL SIZE</p>
	<p>OR sliding door, 1-door Frame dimensions (W X H) 1000 x 2100 mm Sliding door tightly closing on three sides, sliding rail made of anodized aluminium, abrasion resistant plastic reels with ball bearings, floor guides made of hard plastic, door frame made of stainless steel 1.4301 (AISI 304) brushed w. 280 grain, door leaf made of stainless steel 1.4301 (AISI 304) brushed w. 280 grain, outside door handle bow-shaped, made of stainless steel, inside door handle shell type, flush integrated graduated rod, integrated and prepared for Euro-standard locking cylinder, strength of door leaf 40 mm, core made of high-strength composite board, drive cover hinged, stainless steel. Door window, double glazing centrally in the door leaf 400 x 600 mm Microprocessor controlled automatic door drive. opening/closing speed 0,1 - 0,5 m/s, actuation by push-buttons inside and outside, pre-programmed for person, bed and permanent opening.</p> <ul style="list-style-type: none"> - should include knee switch panel for automatic door, both sides - should include magic button for touch free door activation, both sides - should include foot switch for actuation of automatic door, both sides
10	<p>HINGED DOORS</p>

	<p>Single leaf door, flush on both sides, clear dimensions: 1000 x 2100 mm two sealing levels with silicone hollow chamber seal, hinges and door handle fittings of stainless steel, mortise lock with stainless steel face plate, door leaf made of stainless steel surface according to DIN 1.4301 brushed, door frame made of stainless steel surface according to DIN 1.4301 brushed</p>
11	DOUBLE HINGED DOOR - AUTOMATIC
	<p>Hinged door door, two door leaf, with automatic door drive Frame stainless steel, grinded; material strength 1.5 mm Door leaf made of stainless steel, grinded; material strength 1.0 mm Door handles of stainless steel, Outer width of frame: 2000 x 2100 mm Opening width: 1800 x 2050 mm Usable clearance: 1800 x 2050 mm 5 operating buttons (opening for persons, opening for beds; permanent opening) 2 blow bars Positioning of buttons and blow bar can be selected individually</p>
12	INTERNAL WINDOW GLAZING WITH AUTOMATIC VENETIAN BLINDS
	<p>Installation of double glazing 2 x ESG 5.0mm, flush integrated in wall surface, above window sill, connection frame in wall color, depth approx. 100 mm, glazing incl. joint profiles, fixation parts and sealing. Size approx. 1800 x 1000 mm as per layout Venetian Blids Electrically Driven upto 60% black out Installed between the double glazing</p>
13	MAIN CONTROL PANEL
	<ul style="list-style-type: none"> o Control panel Digital clock / Display of operation modes <ul style="list-style-type: none"> - Time of day - Elapsed time clock - Countdown Display of alarm and disturbance reports For example: <ul style="list-style-type: none"> - insulation monitoring - load monitoring - medical gases - UPS Air conditioning <ul style="list-style-type: none"> - System in use - Maintenance required - System malfunctioning - Operating mode of air conditioning system - Temperature <ul style="list-style-type: none"> - Display of actual temperature - Setting of set point temperature - Control of area lighting / Switching and dimming <ul style="list-style-type: none"> - Two groups of room lights

	- General dimming
14	GLASS CABINET TO KEEP SUTURE MATERIAL ETC
	Should be flushmounted integrated in the wall panel, frame and body made of stainless steel 1.4301, 2 glass doors with surrounding gasket, 2 shelves made of 8 mm security glass.
15	EQUIPMENT CABINET
	Wall cabinet for surgical instruments, flush integrated in panel wall, frame and body made of stainless steel 1.4301, 2 stainless steel doors with surrounding gasket, 5 shelves made of stainless steel, shelves adjustable in 50 mm steps. Dimensions H x W x D: 2000 x 900 x 670 mm
16	X RAY VIEWER
	X-ray viewer type 80 x 43: Wall integrated model, with shutters and brightness control, brightness control approx. 50%.
17	FLAT MONITOR INSTALLATION
	The wall should have a provision for installation of monitor of 42" (exact dimentions can be got from the client) should have a security glass in the top flushed to the wall
18	WRITING BOARD
	The writing board should be made of frosted tounged Glass which should be seamlessly part of the OR wall with a a magnetic strip behind it to hold the DUSTER AND PEN
19	NURSERS WORKSTATION INSIDE THE OR
	Nurses work station, with keyboard shelf as built-in element in wall niche approx. 300mm deep, incl preparation for monitor fixation of the workstation
20	NURSERS MANGERS DESK
	Nurses work station, with keyboard shelf as per the drawing in the OT layout approx. 400 * 200mm
21	2 BAY Scrub SINKS
	<ul style="list-style-type: none"> • The Surgical scrub sink should be designed for providing surgeons with a convenient sink for Pre Op scrub up. • The Scrub Station should be made of Solid Mineral Surface and should be moulded and designed as per the high aesthetics of the theatre complex • fresh water and waste water piping ready for connection. 2 x optoelectronic tap, 4 x soap- and disinfectant dispenser, 1 x brush dispenser
22	3 BAY Scrub SINKS
	The Surgical scrub sink should be designed for providing surgeons with a convenient sink for Pre Op scrub up. <ul style="list-style-type: none"> • The number of bays – double bay or three bay, will depend upon the actual requirements and may vary. • The Scrub Station should be made of Solid Mineral Surface and should be moulded and designed as per the high aesthetics of the theatre complex • fresh water and waste water piping ready for connection. with 3 x optoelectronic tap, 6 x soap- and disinfectant dispenser, 1 x brush dispenser
23	OR FLOORING

	<ul style="list-style-type: none"> • The flooring inside the OT should be done with medical grade vinyl tiles/rolls having conductive properties inside the OT area and Anti-Static in the Central corridor of the OT • The area where the OT table is placed should have a separate colour coding • A substrate floor will be provided; having a flatness tolerance of $\pm 3\text{mm}$ over a one square meter area. • On to this sub-floor, a self-leveling compound of minimum thickness requirement of 3mm with the requisite primer should be applied to level the floor to true flatness. • Copper grounding strips of not less than 0.05mm thick, 50mm width, should be laid flat on the above floor and connected to copper wire of grounding / separate earth point. • The floor finish should be 2mm thick Anti-static conductive vinyl flooring, laid on a semi conductive adhesive base. • The vinyl flooring should be homogenous material incorporating carbon encapsulated granules throughout its full thickness and has a conductive backing. • It should have excellent resistance to static and rolling loads and be classified 34-43 in accordance to EN 649. • It should display excellent resistance to chemical products such as detergents, acids and alkaline products • It should have fungistatic and bacteriostatic treatment throughout the total thickness of the material. • It should be non-absorbent, impervious and non-porous.
24	FLOORING IN COMMON AREA AND ROOMS
	Flooring seamless with perfectly curved flash-covings, resistance to mechanical stress and dynamic loads and having ESD protection characteristics, 2mm thick, washable vinyl, with self-leveling compound & primer for proper installation.
25	ELECTRICAL WIRING
	<p>The Structure should contain separate cable pathways for the routing of electrical services and a variety of openings and rear enclosures for the fixing of electrical components. Cable sizes for power sockets, earth and potential equalization wiring should be provided according to the specific requirements of the site. The Complete Electrical Wiring and installation of the Operation Theatre complex within the modular OT should be done as per high standards and should ensure connectivity to the individual Electrical Distribution Boxes (UPS backed) provided by us. Detailed electrical drawing should be provided.</p> <p>Special High Quality Electrical Distribution boxes controlling each OR individually should be provided from a central distribution panel. This should be of utmost high quality for use in an hospital environment</p>
25	GAS PIPE LINE MEDICAL IN THE OT COMPLEX
	Medical gas outlets should be connected to the wall panels & Pendants from pipes running within the substructure. The piping used should be medical grade copper tube. The modular wall panel should have outlets CE Certified for the medical gases as per the final drawings. The piping should be connected to the central gas systems of the hospital provided in the OT Complex. One wall of the OR should have a back-up gas connections (1 O ₂ , 1 N ₂ O, 1 Vacuum, 1 Air) other than the ones installed in the pendants
26	AC DUCTING

	<p>Ducting should be made of Aluminum (INSIDE OT ONLY), with curves & bends where indicated for easy flow of air and ensured to be air tight by applying silicon sealant after fabrication. Hangers should be provided to ducts & should be suspended by means of G.I. coated rods. Thermal insulation with fiber glass & with aluminum foil for supply & return air ducts. Joints will be lapped with Nitrile rubber tape for better insulation. The ducts should be connected to HVAC system provided by the Institution Outlets and Inlets would be brought upto the OT area from where the same is to be connected to the Laminar flow and return air system as weell as to the common area and rooms in the OR COMPLEX</p>
27	<p>SURGICAL PENDANT</p>
	<p>The Surgical Equipment Pendant should be a combination of: - A supply column, carried by 2 swivel arms of 800 mm length each, for holding the endoscopy equipment The pendant should not have any sharp edges or any construction that may be an obstacle for the surgical staff.</p> <p>The 2 swivel arms, carrying the supply column, should have the maximum degree of rotary motion in the horizontal plan and should be able to with hold a weight of not less than 115 kg.</p> <p>The supply column should be equipped with 5 height adjustable shelves of W X D X H : minimum 770 mm X 500 mm X40 mm and a drawer. The shelves size should be able to accommodate the requested endoscopy equipment.</p> <p>The supply column should have the following gas outlets: 2x Oxygen 2x Compressed Medical Air 1x Vaccum 1x CO2</p> <p>Additionally, the supply column should have 12 electrical sockets with face plate.</p> <p>The pendant's ceiling fixture should also be provided and should take into account the distance between the true ceiling and the false ceiling. The Equipment should be having MDD & CE Certification</p>
28	<p>ANESTHESIA PENDANT</p>
	<p>The Anaesthesia Pendant should consist of one swivel arm of length 1000 mm with a gas supply column.</p> <p>The pendant should not have any sharp edges or any construction that may be an obstacle for the surgical staff.</p> <p>The arms should be made of a swivel unit having a maximum degree of rotary motion in the horizontal plan.</p> <p>The supply column should be equipped with one height adjustable shelf and a drawer.</p>

The supply column should have the following gas outlets:

- 1x Oxygen
- 2x Nitrous Oxide
- 1x Compressed Medical Air
- 1x Exhaust Anaesthetic Gas Scavenging
- 1x Vacuum

The supply column should have 6 electrical sockets with face plates.

The pendant's ceiling fixture should also be provided and should take into account the distance between the true ceiling and the false ceiling.

The Equipment should be having MDD & CE Certification

29

OPERATION THEATRE LIGHTS DOUBLE COMBINATION

LED OPERATION THEATRE LIGHT DOUBLE COMBINATION WITH 2 MONITOR ARMS

The LED OT LIGHT ASSEMBLY should consist of the following:

- One spring arm carrying the Main Surgical Light.
- One spring arm carrying Satellite Surgical Light with a built-in Surgical (Light) Camera
- One spring arm for carrying a 19" Touch Screen.

The assembly should not have any sharp edges or any construction that may be an obstacle for the surgical staff.

The Main and Satellite Light should have the following specifications:

Features:

- * Light mixing takes place right inside the LED engines.
- * Cool light in variable temperature
- * Space saving design
- * Light field adaptable
- * Intuitive operation
- * Compatible with laminar flow systems
- * Easy to position via the cardanic suspension
- * Optimized ergonomics
- * Variable Adjustable colour temperature –
- * The touch panel to control various functions like field , illumination , colour temp etc

Specifications:

- Min. Illuminance : 160,000 lux + 120,000 Lux (+/- 10%)
- Light Field Diameter : 22 - 32 cm + 20 - 30 cm (+/- 5%)
- Color Temperature : 3,800 - 4,800 K, variable
- Color rendering index (CRI) : 95
- Luminous efficacy : 280 lm/W

Illumination depth : >100 cm
 Dimming Range : 30 - 100%
 LED Service Life : 40,000 h
 Light Head Suspension : fully cardanic
 Dimming Range: 30-100%

The spring arms carrying the 19" Touch Screen should be of type ACROBAT 3000 and should have the maximum degree of rotary motion in the horizontal plan.

The Surgical Camera should be a built-in the centre of light should be HD camera having the following specifications:

- Electronic control of zoom and aperture size.
- Automatic adjustment of the white balance.

I. CENTRAL CONTROL MANAGEMENT SYSTEM

1 19" TOUCH SCREEN (Spring arm mounted)

The Touch Screen should be a medical grade 19" flat screen with 1280x1024 (SXGA) resolution. It should communicate with the Management System via an RS-232 cable.

The Touch Screen should be mounted on a pendant (as specified in section 2) and should be located within the sterile field for the doctor's control or his assistant.

All medical devices, Archiving system, and Communication systems should be controlled from this touch screen.

2 19" TOUCH SCREEN (Located at the Nurse Station)

The Nurse Station, located outside the sterile field within each operating room, should consist of:

A
 19" Touch worktop Screen

The circulating nurse will be able to assist the surgeon or his assistant by controlling the same functions as those of the sterile area Touch Screen,

The Touch Screen should be a medical grade 19" flat screen with 1280x1024 (SXGA) resolution. It should communicate with the Management System via an RS-232 cable.

II. MONITORING & VISUALIZATION

1 26" FULL 3D HD FLAT MEDICAL GRADE LCD SCREEN (Desktop mounted)

The surgical display screens should be medical grade 26" FULL HD (1080P) Medical Grade The system should have facility to display in 3D and 2D modes. It should have the following inputs:

Ø DVI-D for 3D signal

- Ø HD-SDI for 2D signal in HD
- Ø S-Video for 2D signal in standard resolution

The display screens should also have the following optical specifications:

LCD Panel 26 inch (16:9 aspect ratio)
 Screen Dimensions- 643mm (W) × 396 mm (H) ×87mm(D)
 Number of pixels 2,073,600 pixels (1,920 × 1,080)
 Viewing angle- Horizontal: 178 degrees, Vertical: 178 degrees (3D : TBD)
 Contrast Contrast 1000:1
 Luminance -350cd/m2
 Reaction Time – 6-8ms
 Display mode
 Dual display mode
 Triple display mode
 PIP and POP mode
 Mirror image mode

The display screens should comply the highest safety standards:

- Ø Fanless cooling prevents the introduction of contaminants into the sterile field.
- Ø Low voltage (24 VDC) external power supply maybe located 30m away from the screen, removing any electrical concern.
- Ø Front sealed, anti-glare overlay guarantees the highest level of defence against liquid ingress.

2 26" FULL 3D HD FLAT MEDICAL GRADE LCD SCREEN (Spring arm mounted)

The surgical display screens should be medical grade 26" FULL HD Medical Grade The system should have facility to display in 3D and 2D modes. It should have the following inputs:

- Ø DVI-D for 3D signal
- Ø HD-SDI for 2D signal in HD
- Ø S-Video for 2D signal in standard resolution

The display screens should also have the following optical specifications:

LCD Panel 26 inch (16:9 aspect ratio)
 Screen Dimensions- 643mm (W) × 396 mm (H) ×87mm(D)
 Number of pixels 2,073,600 pixels (1,920 × 1,080)
 Viewing angle- Horizontal: 178 degrees, Vertical: 178 degrees (3D : TBD)
 Contrast Contrast 1000:1
 Luminance -350cd/m2
 Reaction Time – 6-8ms
 Display mode
 Dual display mode
 Triple display mode
 PIP and POP mode

	<p>Mirror image mode The display screens should comply the highest safety standards:</p> <p><i>Ø Low voltage (24 VDC) external power supply maybe located 30m away from the screen, removing any electrical concern.</i></p> <p><i>Ø Front sealed, anti-glare overlay guarantees the highest level of defence against liquid ingress.</i></p>
3	<p>FIBER OPTIC CABLE FOR THE FLAT SCREEN AND ENDOSCOPIC CAMERA / In Light Camera & connected Video Sources from Surgical Pendant</p> <p>The fiber optic cable connecting the Flat Screen and Endoscopic Camera to the system should consist of: 6x color-coded strands transmitting the DVI-D signal</p> <p>The fiber optic cable should be flexible enough to sustain the spring arm's motion in the horizontal and vertical plane.</p>
4	<p>32" Medical Grade FLAT SCREEN (Wall mounted)</p> <p>At least 32" Large Screen should be mounted on a selected wall within the OR.</p> <p>The surgical display screens should be medical grade 32" FULL HD Medical Grade The system should have facility to display in 3D and 2D modes. It should have the following inputs:</p> <p><i>Ø DVI-D for 3D signal</i> <i>Ø HD-SDI for 2D signal in HD</i> <i>Ø S-Video for 2D signal in standard resolution</i></p> <p>The display screens should also have the following optical specifications:</p> <p>LCD Panel 26 inch (16:9 aspect ratio) Screen Dimensions- 643mm (W) × 396 mm (H) ×87mm(D) Number of pixels 2,073,600 pixels (1,920 × 1,080) Viewing angle- Horizontal: 178 degrees, Vertical: 178 degrees (3D : TBD) Contrast Contrast 1000:1 Luminance -350cd/m2 Reaction Time – 6-8ms Display mode Dual display mode Triple display mode PIP and POP mode Mirror image mode The display screens should comply the highest safety standards:</p>
III. <u>CENTRAL DEVICE CONTROL MANAGEMENT SYSTEM</u>	
1	CENTRAL CONTROL UNIT

The main purpose for the implementation of the Integrated OR is the ability to provide full control for the Surgeon or his assistant of the OR equipment, and environment via a Touch Screen. The system should be simple, user friendly, secure and upgradeable.

The successful bidder should design, construct and complete a seamless Management System consisting of a medical grade Central Control Unit that provides full flexibility to the Surgeon or his assistant and to the OR nurse for the control of all functions, systems and devices available in the operating room via a SINGLE Touch Screen located within the sterile field and simultaneously from mouse and keyboard located in the Nurse Station, which positioned outside the sterile field.

The Central Control Unit should be able to manage the medical and non-medical devices inside the operating room. Therefore it should integrate the endoscopy equipment, Archiving and Communication Systems. In addition, it should be able to control 32 different Endoscopic units and to store up to 100 individual presets (by doctor and procedure, or both) for the endoscopy equipment that can be accessed for quick set up for individual physicians. The system should also provide an overview display of up to 12 units simultaneously.

Furthermore, the Central Control Unit should be able to display on the Touch Screen an exact replica of the actual endoscopy devices' front panel. This is necessary for the ease of control and to ensure that any person familiar with the key functions of the medical devices will also be able to operate the device by using the Touch Screen.

The Central Control Unit should also be able to display on the Touch Screen alert text messages, whenever a warning signal is emitted from a faulty device.

The Management System's functions should include but not limited to:

- . The ability to integrate and to control the medical devices, Archiving and Communication systems from a SINGLE Touch Screen located inside the sterile field.

- . The ability to identify any errors or malfunctions of the connected device.

- . The ability to call up any type of endoscopic equipment on the Touch Screen menu and be able to control all its functions simultaneously on the Touch Screen or directly from the machine itself.

- . The ability to control all the motions of the operating table via the Touch Screen.

- . The ability to display an identical image of the actual device panel on the Touch Screen.

- . The ability to switch on or off the room lights.

- . The ability to switch on or off the room's green light (Endoscopy procedure). IF Providing RGB lighting

- . The ability to route any image source to any destination via the Touch Screen.

- . The ability to connect to a telephone system within the sterile field and control it via the Touch Screen.

IV. Full HD IMAGE/VIDEO RECORDING AND DATA ARCHIVING SYSTEM

1	Full HD IMAGE/VIDEO RECORDING AND DATA ARCHIVING SYSTEM
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- Ø Should be user friendly software designed specifically for medical purposes

- Ø Captures still Full HD (1080P) images, & Full HD (1080P) video sequences (from 3 sources), and audio files

- Ø Resolution of both still images & videos should be 1920x1080 p

- Ø Should Write multi-session and multi-patient CDs/DVDs

- Ø Controllable via Touch Screen, camera head buttons, footswitch mouse and keyboard

- Ø Fully controllable from inside and outside the sterile field

- Ø Should Support network storage on file servers
- Ø Should Support FTP storage
- Ø USB support for storage on USB drives
- Ø Customizable print-outs for the documented information
- Ø Should Print to any connected printer (local or network)
- Ø HIPAA compliant
- Ø Buffer system to insure reliability
- Ø Medical grade unit with CE mark
- Ø Chipset: Intel® 855GME + Intel® 6300ESB Embedded Chipset
- Ø Processor: Intel® Pentium® M 735
- Ø Graphic: Intel® Extreme Graphics 2 Controller onboard
- Ø Grabber-card: DVI-D, SDI, S- Video, Composite;
- Ø Audio: AC97/DD5.1 onboard
- Ø RAM: 2GB
- Ø Harddisk: 500 GB SATA 3.5"
- Ø Drive: Multiform Slim line DVD RW
- Ø PCI Slots: 3 x PCI
- Ø LAN: 3 x 10/100/1000 Mbps onboard
- Ø I/O Ports: 2 x PS/2, 2 x Serial, 3 x RJ45 (LAN), 4 x USB 2.0 (1 x Front), 3 x Audio (Line In, Line Out and Microphone), VGA;
- Ø DICOM and HL7 interface

The DICOM 3 interface should 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 should be sent via the DICOM 3 interface to the PACS system for further processing.

The HL7 interface system should be connected to the Image and Data Archiving system to allow the patients demographics to be downloaded directly to the patients data file.

IV. AUDIO VISUAL COMMUNICATION

1	AV RACK BASED LOCAL COMMUNICATION CENTER
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The Local Communication Center installed inside the OR should be rack-based and should house the following Control /Video/Audio equipment:

- Control equipment
 - . 1x RS232 control module
 - . 16x Relays control modules
- Video equipment

. Video Matrix

8x 8 DVI-D matrix

. Fiber optic-to-DVI-D transmitters and receivers for the transmission of the HD DVI-D signal over long distances:

. 4x Fiber optic-to-DVI-D transmitters to transmit the HD DVI-D signal in optical format to the Communication Center, the Surgical Displays and the Large Screen.

. 4x Fiber optic-to-DVI-D receivers to convert the HD DVI-D signal from optical format back to its original electrical format.

- Audio equipment

. Audio Mixer with 3 inputs and one output

. Audio Matrix switcher capable of integrating up to:

- 8x Audio Sources such as the Wireless Microphone.

- 8x Audio Destinations such as the OR's Active Speaker.

. Additional Audio Distributor and Audio Mixer.

. Fiber optic converters for optical isolation of any ingoing/outgoing audio/video signal to/from the OR

. Medical Isolation Transformer for isolating the AC input power supplying the Communication Center.

Audio/Video routing should be possible via the 19" Touch Screen (same Touch Screen that controls Medical and non-medical devices) located inside the sterile field and via Medical Grade Touch Screen available at the Nurse Station:

Video routing should make efficient use of the provided video matrix system to route any video source to any video destination in its optimal signal quality.

For instance, the digital DVI-D video matrix is intended to switch the HD digital signal from the HD Endoscopic camera to any of the Flat Screens without conversion to any lower level signal. The other video matrix should ensure the connection and routing of a variety of video sources such as the Overhead Camera, Room Camera, etc...

The OR should integrate at least the following Video Sources and Destinations:

Sources	Destinations
Endoscopic Camera	2x 26" Flat Screens
Surgical Camera	Large Screen
Room Camera	Touch Screen's video preview
Connection to one SD auxiliary Video Source	Archiving System

The OR should integrate at least the following Audio Sources and Destinations:

Sources	Destinations
Wireless Microphone	Loudspeaker
Archiving System	Archiving System
Telephone	Telephone

The OR Communication Center should also include the required software and hardware components for integrating the following telemedicine features:

- Patch Panels.
- Telephone module.

Patch Panels All relevant flush mounted video patch panels for integration of the various Video Sources should be installed

2 ROOM CAMERA

A Room Camera should be installed on a selected wall in the OR.

The Room Camera should have the following technical specifications:

Video Signal PAL

Effective Pixels 768 (H), 492 (V), 752 (H) X 585 (V)

Horizontal Resolution 460 TV lines 450 TV lines

Vertical Resolution 350 TV lines 400 TV lines

Lens ×12 Power Zoom, f=5.4 to 64.8 mm, F1.8 to F2.7

Angle of View (H) 4.3 to 48.8 degrees

Minimum Illumination 7 lx (F1.8)

Illumination Range 7 to 100,000 lx

Auto Exposure Auto Iris, AGC

Shutter Speed 1/60 to 1/10,000

Gain Auto/Manual

White Balance ATW / One Push Hold, Indoor Preset, Outdoor Preset

S / N Ratio >48 dB

Pan / Tilt Horizontal ±100° (Max speed 80° sec),

Vertical ±25° (Max speed 50° / sec)

Video Output RCA pin jack

S Video Output 4 pin mini DIN

Audio Output RCA pin jack

*Control Terminal RS-232C, 8-pin mini DIN,
9600 bps, Data 8 bit, Stop 1 bit.*

3 BI-AMPLIFIED ACTIVE LOUDSPEAKER

A bi-amplified active Loudspeaker, dedicated for videoconferencing and audio playback, should be installed on a selected wall in the OR.

The Loudspeaker should have the following technical specifications:

	<p><i>Input Signal</i> <i>Analog</i></p> <p><i>Maximum short time sine wave acoustic output at 1 m on axis in half space, averaged from 100 Hz to 3 kHz</i> $\geq 100 \text{ dB SPL}$</p> <p><i>Maximum peak acoustic output per pair with music material</i> $\geq 108 \text{ dB SPL @ 1m}$</p> <p><i>Drivers</i></p> <p><i>Bass</i> 5"</p> <p><i>Treble</i> 3/4" metal dome</p> <p><i>Crossover frequencies</i> 3 kHz</p> <p><i>Free Field Frequency Response</i> 58 Hz - 20 kHz ($\pm 2 \text{ dB}$)</p> <p><i>Amplifier power</i></p> <p><i>Bass</i> 40 W</p> <p><i>Treble</i> 40 W</p>
4	WIRELESS HEADMIC
	<p>The Integrated Communication System should be provided with a Wireless Headmic to enable the user to initiate telephone calls,, recording audio comments on the archiving system, etc...</p> <p>The Wireless Headmic should be based a high-quality state-of-the-art RF transmission with a high level of operational reliability and ease of use.</p> <p>The Headmic Transmitter and Receiver should permit wireless transmission based on the use of:</p> <ul style="list-style-type: none"> Ø further optimized PLL synthesizer and microprocessor technology, Ø the HDX noise reduction system, Ø the pilot tone squelch control, Ø the true diversity technology (rack-mount receiver only), Ø and the scan function for scanning the channel banks for free channels.
5	TELEPHONE MODULE
	<p>An analogue Telephone module should be connected to the system and should allow the surgeon or his assistant to affect telephone calls from the Touch Screen or the Nurse Station.</p> <p>The system should also supply the ability to store telephone numbers for quick dialling via the Touch Screen located in the sterile field or via the Nurse Station outside the sterile field.</p>
6	1-WAY VIDEO 2-WAY AUDIO STREAMER
	<p>The Audio/Video Streamer should provide independent streaming channels offering real time image and sound that can be accessed from any networked station provided with authorisation key.</p>

Therefore, an Audio/Video Encoder should be installed in the Communication Center. The Encoder should be capable of accepting S-video and Audio signals and should streams these signals over the hospital's LAN in MPEG4 compressed Data. Furthermore, the encoder should be capable of 1-way Audio communication between the OR and the remote location.

Furthermore, the Streamer should be provided with an intuitive user interface that offers the user the capability to watch, from any networked station, the desired Video Source (i.e. HD Endoscopic Camera, Room Camera, etc...) from the selected OR.

Provision of high speed multicast LAN with active LAN sockets and Remote PCs is responsibility of Hospital and shall be provided to the Integrating company for the purpose of streaming videos

ALL THE ELECTRONIC EQUIPMENT LIKE MONITORS, CENTRAL DEVICE CONTROL SYSTEM, DATA RECORDING AND ARCHIVING SYSTEM ETC SHOULD BE FROM THE SAME MANUFACTURING COMPANY FOR PROPER SYSTEM COMPATIBILITY AND FUNTIONING.

Linear Staplers (all sizes) for Open & lap surgery

1. Linear stapler 30mm with controlled tissue compression accommodates tissue between 1.0 mm – 2.5 mm, parallel jaw closure, longer staple legs, locking trigger in handle & remote retaining pin, heavy wire option.
2. Linear stapler 60mm with controlled tissue compression accommodates tissue between 1.5 mm – 2.5 mm, parallel jaw closure, longer staple legs, locking trigger in handle & remote retaining pin, heavy wire option.

Cartridge for Linear Staplers

1. Proximate linear stapler standard cartridge 30 mm with yellow (Heavy) reloads compatible with Linear Stapler 30 mm.
2. Proximate linear stapler standard cartridge 60 mm with yellow (Heavy) reloads compatible with Linear Stapler 60 mm.

Linear Cutters (all sizes) for Open & lap surgery

1. Reusable 55 mm linear cutter & stapler complete set with autoclavable Handle, Blue & Green reload, knife & no knife module.
2. Selectable staple height linear cutter 55 mm having 6 rows of staple line, having cartridge with selectable closed staple height of (1.5 mm/1.8 mm/ 2 mm) & integrated new knife blade. Linear cutter gives intermediate locking position for easy issue manipulation & two sided firing for easy handling, staple line of 61 mm & cut line of 58 mm.
3. Selectable staple height linear cutter 75 mm having 6 rows of staple line, having cartridge with selectable closed staple height of (1.5 mm/1.8 mm/ 2 mm) & integrated new knife blade. Linear cutter gives intermediate locking position for easy issue manipulation & two sided firing for easy handling, staple line of 81 mm & cut line of 78 mm.

Cartridge for Linear Cutters for Open Surgery

1. Universal linear cutter cartridge 55mm with option of closed staple height of 1.5 mm /1.8 mm/2 mm compatible with selectable staple height linear cutter 55 mm.
2. Universal linear cutter cartridge 75mm with option of closed staple height of 1.5 mm /1.8 mm/2 mm compatible with selectable staple height linear cutter 75 mm.

Circular Staplers (All Sizes)

Intra – Luminal Staplers with Curved shaft anvil detachable

21 mm with Lumen Size 12.4 mm

25 mm with Lumen size 16.4 mm, 25 mm with lumen size 20.4.

33 mm Lumen size 24.4 diameter head.

With adjustable staple height (1.0 – 2.5 mm) for controlled tissue compression, longer staple leg 5.5 mm.

Non- slip gripping surface.

Laposcopic Staplers

60 MM ENDOPATH CUTTER – STRAIGHT AND WITH ARTICULATION

45 MM ENDOPATH CUTTER – STRAIGHT AND WITH ARTICULATION

Cartridges for Lap. Staplers

60 MM BLUE CARTRIDGE FOR 60 MM STAPLER

60 MM GOLD CARTRIDGE FOR 60 MM STAPLER

60 MM GREEN CARTRIDGE FOR 60 MM STAPLER

60 MM WHITE CARTRIDGE FOR 60 MM STAPLER

45 MM BLUE CARTRIDGE FOR 45 MM STAPLER

45 MM GOLD CARTRIDGE FOR 45 MM STAPLER

45 MM GREEN CARTRIDGE FOR 45 MM STAPLER

45 MM WHITE CARTRIDGE FOR 45 MM STAPLER

Skin Stapler & Staple remover

1. Multi-directional disposable skin stapler with coated rectangular staples (Kryotex) having dimension of 6.9 mm x 3.9 mm with 35 numbers of staples with alignment indicator.
2. Squeeze Handle Staple extractor

ULTRASONIC CUTTING AND COAGULATING DEVICE WITH ADVANCE BIPOLAR VESSEL SEALING SYSTEM

- System should have a universal connector to connect Ultrasonic energy and Advanced RF energy instruments.
- Ultrasonic and bipolar energy in the system must work separately and at no point in combination.
- System should have automatic instrument recognition.
- System should be CE approved.
- System should have a touch screen display for fast and setup, operation and on-screen diagnostics.
- System should have a high-resolution display with wide viewing angles.
- System should have the ability for software updates via USB memory stick.
- System should be a single generator that provides Ultrasonic energy and Advanced RF energy technology for soft tissue dissection and vessel sealing
- System should have a potential equalization terminal for compatibility with other medical systems requiring such connections
- System should conform to the following international standards EN (IEC) 60601-1, EN (IEC) 60601-1-2, EN (IEC) 60601-2-2, EN (IEC) 60601-1-8
- System should provide Class 1 protection against electric shock
- System should have a single footswitch for operating ultrasonic energy or advanced RF energy instruments
- System should have the ability to select handswitch or footswitch activation or both for Ultrasonic and advanced RF energy instruments and the ability to change selection during use
- System should have English language as default
- System should not have minimal lateral thermal spread more than 1 mm.
- System should not have an auto switch off mechanism.
- System should have standby mode to ensure safety.
- System should come equipped with system diagnostics and troubleshooting guide to pin point any problems in the systems.
- System should have onscreen warning display system for generator overheating, generator software upgrade, handpiece errors and instrument errors
- System should be able to power ultrasonic energy instruments with 55.5 KHz frequency and have the ability to power ultrasonic energy instruments in the frequency range of 30-80 KHz in future
- The hand piece for the system should come with an inbuilt transducer.
- System should be compatible for open surgery and for laparoscopic surgery.
- System should be compatible with both 5mm and 10mm instruments.
- System should have atleast 5 power settings levels with power level display for ultrasonic energy instruments.
- System should be able to power energy instruments with microprocessor controlled bipolar electrosurgical radiofrequency technology with a quasi-sinusoidal forced impedance output.
- System should be equipped with smart advanced RF energy technology to measure the tissue impedance and control the power delivery.
- System should be equipped with advanced RF energy technology that can simultaneously seal and transect vessels up to and including 7mm, large tissue pedicles and vascular bundles.

- System should be equipped with advanced RF energy technology that provides temperature controlled energy delivery which should maintain tissue temperature approximately at 100 degree Celsius.
- System should have Advanced RF Energy hand instruments with a unique electrode configuration to minimize the lateral thermal spread.
- System should have Advanced RF Energy hand instruments with technology to deliver high compression uniformly across seal area.
- System should have Advanced RF Energy hand instruments that provide tissue / vessel seal strength to withstand bursting pressure of 7 times the systolic pressure.
- All hand probes for open and lap procedures should be able to simultaneously cut and coagulate tissues.
- System should be able to power advanced RF energy hand instruments of 5mm shaft diameter for both open & laparoscopic procedures with round trip (5mm tip width) in the following shaft lengths (14cm, 25cm , 35cm & 45cm) and should be both hand & foot activated.
- Systems should be able to power ultrasonic energy hand instruments of 5mm shaft diameter for both open & laparoscopic procedures with the following specifications

- System should comprise of the following Hardware:
 - 1 Generator
 - 2 Footswitch & Cable
 Accessories:
 - 1 Handpiece (Transducer)
 - 2 Handpiece (Blue)
 - 3 Generator Cart
 - 4 Adaptors for ultrasonic
 - 5 advanced RF energy instruments

Open Surgery Instruments (Ultrasonic cutting and coagulation device):

1. 9cm shaft, curved, tapered tip for precise dissection, seals 5 mm vessels, as well as lymphatic with 16 mm active blade & 240-degree activation, triggers support multiple hand positions.
2. 17cm shaft, curved, tapered tip for precise dissection, seals 5 mm vessels, as well as lymphatic with 16 mm active blade & 240-degree activation, triggers support multiple hand positions.
3. 5mm Hand Activated Curved Coagulating Shears capable of sealing blood vessels upto 5mm in diameter, 23 cm shaft length, ergonomic handle
4. Curved Blade having telescoping shaft (10cm-14cm) with integrated hand activation control buttons.
5. Dissecting Hook having telescoping shaft (10cm-14cm) with integrated hand activation control buttons.

Open Surgery Instruments (Bipolar vessel sealing device):

1. Hand probes with 5mm shaft diameter, 14cm long with 5mm tip width.
2. Hand probes with 5mm shaft diameter, 25cm long with 5mm tip width.
3. Hand probe with, 22cm long shaft and 40mm jaw length

Laparoscopic Surgery Instruments (Ultrasonic cutting and coagulation device):

1. 5mm Lap Hand Activated Curved Coagulating Shears capable of sealing blood vessels upto 5mm in diameter, 36 cm shaft length, ergonomic handle.
2. 5mm Lap Hand Activated Curved Coagulating Shears capable of sealing blood vessels upto 5mm in diameter 45 cm shaft length, ergonomic handle.
- 3.
4. 5mm Lap Dissecting Hook, 32 cm long

Laparoscopic surgery instrument (Bipolar vessel sealing device):

1. Laparoscopic probe probes with 5mm shaft diameter, 35cm long with 5mm tip width.
 2. Laparoscopic probes with 5mm shaft diameter, 45cm long with 5mm tip width.
 3. Articulating Laparoscopic probe probes with 5mm shaft diameter, 35cm long with 5mm tip width, Probe should have ability to articulate 45- 50* both sides.
-

Should have European CE and FDA approved.

Rates for all consumables items should be quoted separately in price price-bid.