

PVMS OF OPERATION THEATER

DRAFT

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DRAFT

Clinical Specialty	Structure Trolley For Patient Transport
Generic Name	Structure Trolley For Patient Transport
Clinical Purpose	
TECHNICAL SPECIFICATIONS	
<p>2 sectional Patient Shifting Trolley. Made of powder coated steel. Back section should be adjustable from 0 – 70deg. Should have Trendelenburg -14deg / Revere Trendelenburg +7deg positions. Leg Section should be adjustable 0 – 45deg. Patient Safe Working Load capacity min 225 kg or more. Standard accessories IV rod, Oxygen Bottle Holder, Wire basket for emergency instrumentation. 4 Bumper at all corner to protect trolley</p>	

Clinical Specialty	SUCTION MACHINE HEAVY DUTY
Generic Name	SUCTION MACHINE HEAVY DUTY
Clinical Purpose	
TECHNICAL SPECIFICATIONS	
<p>Reciprocating, oil free pump & piston mechanism. Heavy duty Mobile Suction Unit with twin jars of capacity up to 4 or 5 liter each, autoclavable. Aspiration rate up to 40, 50 and 60 liters/minutes or more at 650-900mm.Hg. Vacuum continuously adjustable Foot vacuum regulator 10 x bacterial filter Explosion proof footswitch Complete aspiration set Overflow safety Device Noise Level 45 dB or less. 220V/50Hz. Original trolley with lockable wheels.</p>	

Clinical Specialty	MULTIPURPOSE ELECTRO-MECHANICAL OPERATION TABLE
Generic Name	OT Table
Clinical Purpose	
TECHNICAL SPECIFICATIONS	
<ul style="list-style-type: none"> • The table and its system strong, sturdy enough to hold weight of 225 kg or more • 5 Sectional Operation Table with Single Leg Section • Table top equipped with radiolucent material. • Width 540 mm or more, length 2000mm or more • The mattress covers with washable, antistatic material. • X-Ray cassette tunnel throughout the table. • Single Leg Sections • Fulfils X-rays and C-arm requirements <p>he following Motor driven movements controlled through hand set controller.</p> <ul style="list-style-type: none"> • Height adjustment: 595 to 890 mm or more. • Trendelenburg/Reverse Trendelenburg: 26° / -26° or better • Backrest adjustment 70 Deg. / -15 Deg. or better • Leg section adjustment motor driven: 20 deg. / -90 deg. or better • Lateral tilt 20 deg / -20 deg. • 220-230 V, connection • Hand Control Unit • Wireless / IR Hand Control Unit • Override panel in the column for Back up control in emergency cases • Battery Backup control of table in case of main power failure. 	
<p>Accessories:</p> <ul style="list-style-type: none"> • Leg traction device • Upper limb traction device • Arm rest with clamp • Fixation strap • Anesthesia screen • Goepel leg rest • Arm and Hand Table with Swivel-ball leg slides. • Arm Operating Table with one support leg. • Back and Kidney elevator. • Large width body strap • Adjustable bottle holder rod • Nailing device for lower limbs 	

Clinical Specialty	MULTIPURPOSE HYDRAULIC OPERATION TABLE
Generic Name	OT Table
Clinical Purpose	
TECHNICAL SPECIFICATIONS	
Table Top (Radiolucent) With antistatic mattress 5 sections and equipped with X-ray cassette holder. Sturdy table for maximum patient weight of 180 kg in normal position.	
TABLE TOP IS ARRANGED AS:	
<ul style="list-style-type: none"> • Head plate • Back plate • Seat plate • Two separate leg plates. • Base of the table stainless steel cover, 4 swivel castors 	
MOVEMENT:	
<ul style="list-style-type: none"> • X-ray cassette tunnel should be full length of the Table Top • up and down movement height range: 710-1020mm • Trendelenberg/Reverse Trendelenberg 25/18⁰ • lateral tilt 20⁰ • Back plate: 70⁰/-30⁰ • Manual Leg plate movement : up 15⁰/down 90⁰ 	
Accessories:	
<ul style="list-style-type: none"> • Arm rest with clamp • Anesthesia screen • Large width body strap • Adjustable bottle holder rod 	
Kidney Bridge Height adjustment : 0 to 150 mm	

Clinical Specialty	ELECTRO-MECHANICAL OPERATION TABLE
Generic Name	OT Table
Clinical Purpose	
TECHNICAL SPECIFICATIONS	
<ul style="list-style-type: none"> • The table and its system strong, sturdy enough to hold weight of 225 kg or more • 5 Sectional Operation Table with Single Leg Section • Table top equipped with radiolucent material. • Width 540 mm or more, length 2000mm or more • The mattress covers with washable, antistatic material. • X-Ray cassette tunnel throughout the table. • Single Leg Sections • Fulfils X-rays and C-arm requirements 	

he following Motor driven movements controlled through hand set controller.

- Height adjustment: 595 to 890 mm or more.
- Trendelenburg/Reverse Trendelenburg: 26° / -26° or better
- Backrest adjustment 70 Deg. / -15 Deg. or better
- Leg section adjustment motor driven: 20 deg. / -90 deg. or better
- Lateral tilt 20 deg / -20 deg.
- 220-230 V, connection
- Hand Control Unit
- Wireless / IR Hand Control Unit
- Override panel in the column for Back up control in emergency cases
- Battery Backup control of table in case of main power failure

Accessories:

- Anesthesia Screen (01 No)
- Arm Rest with straps (01 Pair)
- IV Rod (01 No)
- Devon Strap (Body strap) Large width (01 No)
- Leg and Body Strap.

Optional (If any):

- **Orthopedic Extension Device**
 - Extension Device Height : 700 – 1160 mm
 - Total Length: 1857
 - Pelvic Support pad angle +/-20 degree and +/-40 degree.
 - Perineal post pad.
 - Traction device.
 - Stainless steel Accessory stand.

Clinical Specialty	ELECTRONIC OPERATING TABLE
Generic Name	OT Table
Clinical Purpose	

TECHNICAL SPECIFICATIONS

Table Top (Radiolucent) With antistatic mattress, Six sections including split sections (split leg will be counted as two sections while the special head section will not be counted as section” and equipped with X-ray cassette holder. Sturdy table for minimum patient weight of 250kg in normal position.

TABLE TOP IS ARRANGED AS:

- Head plate
- Back plate (two section)
- Seat plate (one /two sections)
- Two separate leg plates (one section).
- Base of the table stainless steel cover, 4 swivel castors

- Sliding table top upto 300 mm (150mm to each direction)
- X-ray cassette tunnel should be full length of the Table Top

MOVEMENT (remote controlled):

- Position of the table should be operated electro-hydraulically (height)
- up and down movement height range: 750-1000mm
- Trendelenberg/ Reverse Trendelenberg 25-30⁰
- lateral tilt 20⁰
- Back plate: up 70⁰/down 40-50⁰
- Leg plate: up 20⁰/down 90⁰
- Operating Voltage: 220V, 50Hz with battery backup and manual override in case of electric supply failure.

Accessories:

- Arm rest with clamp
- Fixation strap
- Anesthesia screen
- Adjustable leg rest paeds
- Large width body strap
- Adjustable bottle holder rod
- Shoulder support
- U Shape Head Rest for general Surgery

Optional (If any):

ORTHOPAEDIC ACCESSORIES

- Leg traction device with boots, straps etc

NEUROSURGERY ACCESSORIES:

- Horse Shoe Head rest
- Multi Poise Head rest
- Frontal sitting attachment
- Posterior sitting attachment

OPHTHALMOLOGY/ENT ACCESSORIES

- Eye/ ENT Head rest for peadiatric /Adult(As per requirement)

UROLOGY ACCESSORIES

- Kidney elevator/ bridge
- Knee crutches with pads
- Liquid Basin
- Accessories trolley

Clinical Specialty	<u>ELECTRO-HYDRAULIC OPERATION TABLE</u>
Generic Name	OT Table
Clinical Purpose	

TECHNICAL SPECIFICATIONS

- The table and its system strong, sturdy enough to hold weight of 300 kg or more
- 5 Sectional Operation Table with Single Leg Section
- Table top equipped with radiolucent material.
- Width 540 mm or more, length 2000mm or more
- The mattress covers with washable, antistatic material.
- X-Ray cassette tunnel throughout the table.
- Single Leg Sections
- Fulfils X-rays and C-arm requirements
- Motorized 5 Wheel for easy movement of Table

The following Motor driven movements controlled through hand set controller.

- Height adjustment: 650 mm to 1000 mm or more.
- Trendelenburg/Reverse Trendelenburg: 35° / -35° or better
- Backrest adjustment 70 Deg. / -45 Deg. or better
- Head plate 45 to -45 deg. or better,
- Leg plate adjustment motor driven: 70 deg. / -95 deg. or better
- Lateral tilt
- 220-230 V, connection
- Hand Control Unit
- Wireless / IR Hand Control Unit
- Override panel in the column for Back up control in emergency cases
- Battery Backup control of table in case of main power failure

Accessories:

- Arm rest with clamp
- Fixation strap
- Anesthesia screen
- Adjustable leg rest paeds
- Large width body strap
- Adjustable bottle holder rod
- Shoulder support

Optional (If any):

ORTHOPAEDIC ACCESSORIES

- Leg traction device with boots, straps etc.
- Accessory Trolley.

NEUROSURGERY ACCESSORIES:

- **Wilson Frame** complete with Patient Care kit
 - Can be used on any general surgical table
 - Allows 360 degree unrestricted radiolucency
 - Allows unrestricted C-arm access
- **Sugita Head Frame** with following accessories
 - Basal Frame complete
 - Quarter Frame
 - Slide Adjuster for Retractor

- Head Holder with Standard Head Pins
- Table Attachment
- Spatula 6 mm & 4 mm

OPHTHALMOLOGY/ENT ACCESSORIES

- Eye/ ENT Head rest.

UROLOGY ACCESSORIES

- Kidney elevator/ bridge
- Knee crutches with pads
- Liquid Basin
- Accessories trolley

Clinical Specialty	OPERATING LIGHT WITH SATELLITE.
Generic Name	OT light
Clinical Purpose	

TECHNICAL SPECIFICATIONS

LED shadow less operation theatre ceiling light, hermetically sealed dust proof light.
 Individual lens reflector system
 Adjustable Light intensity 160000 LUX at 1 meter distance
 Satellite combination of 160000 LUX.
 Centrally Adjustable Color temperature 3800° to 5500° Kelvin
 Sterile Touch controls with handle to control light intensity and Light Field Diameter.
 Electronic Control Panel with Touch Technology
 Color rendition index of 95 or better
 Adjustable Light field diameter 190-280 mm or better with uniform light end to end.
 Depth of illumination 1300 mm or better
 Light head radiates heat away from the operative site
 Service Average LED life 50000 hours or better
 220-240 Volts,
 Two numbers autoclave able handle
 Battery backup 2 hours or better

Clinical Specialty	OPERATING LIGHT LED CEILING MOUNTED WITH CAMERA SYSTEM
Generic Name	OT LIGHT
Clinical Purpose	

TECHNICAL SPECIFICATIONS

LED shadow less operation theatre ceiling light, hermetically sealed dust proof light.
 Individual lens reflector system
 Adjustable Light intensity 160000 LUX at 1 meter distance

Satellite combination of 160000 LUX.
 Centrally Adjustable Color temperature 3800° to 5500° Kelvin
 Sterile Touch controls with handle to control light intensity and Light Field Diameter.
 Electronic Control Panel with Touch Technology
 Color rendition index of 95 or better
 Adjustable Light field diameter 190-280 mm or better with uniform light end to end.
 Depth of illumination 1300 mm or better
 Light head radiates heat away from the operative site
 Service Average LED life 50000 hours or better
 220-240 Volts,
 Two numbers autoclave able handle
 Battery backup 2 hours or better
Integrated Digital Camera System: (are of same manufacturer)
 Resolution: Full HD (1,920 x 1,080 Pixels)
 Video outputs per wireless receiver: 2x HD-SDI or 1x HDMI/DVI-D
 Video transmission: Wireless

Clinical Specialty	MOBILE OPERATION LIGHT (LED TYPE)
Generic Name	OT LIGHT
Clinical Purpose	
TECHNICAL SPECIFICATIONS	
<p>Mobile LED emergency Shadowless Operation Theater Light mounted on a mobile stand</p> <p>Hermetically dust proof LED head</p> <p>Maximum luminance in 1m distance 130,000 lux or above (in total light field)</p> <p>Color temperature 4200 deg kelvin or better</p> <p>Light field diameter adjustable 15 – 30 cm (required lux should be available within max. light field area)</p> <p>Light head diameter minimum 700mm</p> <p>Illumination depth 600-700mm</p> <p>Color rendering index 94</p> <p>Temp. rise in surgical surface <2 deg C</p> <p>220 V / 50 Hz 1 phase</p> <p>Battery backup with maintenance free batteries</p> <p>Built in rechargeable battery with at least 2 hour battery backup from the same manufacturer</p> <p>Maintenance free battery, automatic changeover to battery in case of main power failure and back again</p>	

Each unit supplied with
Autoclave able light handle 902)

Clinical Specialty	ELECTROSURGICAL UNIT
Generic Name	Diathermy
Clinical Purpose	
TECHNICAL SPECIFICATIONS	
<p>Microprocessor based electrosurgical unit for normal and under water cutting usages. Automatic self test function. Operation in Radio Frequency range. Controls for cutting, coagulation, spray and blends. Mono polar cutting power of 300 watts. Bipolar cutting power of 80 watts. Mono polar coagulation power of 100 Watts. Bipolar coagulation power of 50 Watts. Spray coagulation mode. Floating output with bipolar coagulation. Different gradations of blending of cutting and coagulation power. Digital display of all controls and set values of cutting and coagulation power. Audio and visual alarms on fault occurrence. Earth free patient circuit. Reusable Silicon patient plate. Double paddle foot switch, explosion proof. Monopolar handle with cord. Bipolar forceps with cord. Trolley with two shelves having anti static lockable wheels. 220V, 50 Hz. Accessories/ electrodes: Attachment for Monopolar Coagulation Handle with 2 Activating Buttons Knife Electrode, 25mm Long Surgical Electrode, Ball-Shaped, 4mm Dia Wire Loop Electrode, 10mm Dia Needle Electrode, Str. Isolated, 125 mm Ball Electrode, 5mm Dia Needle Electrode, 100mm Bipol. Cable for Forceps with Flat Socket Bipolar Coagulation Forceps, 220mm</p>	

Clinical Specialty	ultrasonic disector system
Generic Name	ultrasonic disector system
Clinical Purpose	

TECHNICAL SPECIFICATIONS

Hand Held Ultrasonic Dissector System used for bloodless cutting and coagulation
 Reusable generator (up to 100 uses) with LED feedback indicator.
 Ultrasonic shears with 5mm diameter and 39cm shaft length.
 14.5mm Active Blade.
 .Dual mode Energy Button
 Active Blade Blade vibrations: .55,500/second
 Ability to seal vessel up to 5mm

Accessories:

Each Unit supplied with:

- Reusable Generator with LED indicator
- Laparoscopic Shear 39cm Long with audio indicator
- Open Shear 23cm long with audio indicator
- Torque Wrench
- Reusable Battery
- User Manual
- Foot switch and Cable
- Generator mobile cart

Sterilization Tray

Clinical Specialty	Advance Surgical Bipolar Energy Divice with Cutting and Coagulation Monopolar & Bipolar with VESSEL SEALING SYSTEM.
Generic Name	Advance Surgical Bipolar Energy Divice with Cutting and Coagulation Monopolar & Bipolar with VESSEL SEALING SYSTEM.
Clinical Purpose	

TECHNICAL SPECIFICATIONS

Vessel Sealing system with numerous advantages :
 Optically supported "Quick Step" Control, Perfect over view -
 "Maxi-display. Personal Programmability & Super functionality.

Special Features

- User-friendly maxi- touch screen display
- Two monopolar and two bipolar outputs
- Cost-efficient and highly reliable system
- Optically supported "Quick Step" control
- Over 40 different currents for all medical fields
- System for bipolar vessel sealing
- 99 storage locations for user-specific programs

Argon plasma coagulation with maxium® Beamer
Future-oriented system, updatable and upgradable
Monopolar, spark-controlled cutting with up to 360 watts
Monopolar and bipolar coagulation with automatic functions
Bipolar cut and coagulation mode for Bipolar Resection (TUR-P, TCR)

Instruments:

Reusable Instruments
Validated cleaning
Autoclavable at 134°C (273°F)

Additional benefits

Efficient, time-saving sealing process
Reduced tissue damage by lateral heat spread
Minimized tissue adhesion and corresponding contact surface incrustation

Technical Specification :

Power requirement	100-240 V
Nominal frequencies	300/400/600 khz
Pwr.input in standby mood	40 watts
Max power input	600 watts

Output power

Cutting Power	max. 360 watts
Cogulation Power	max.320 watts

Safety

PCS and NE indicators (LED)

Approval/mark of conformity : CE 0297, in compliance with 93/42/EEC

Accessories:

Reusable Laparoscopic Instrument 5mm,

Sealer 370MM, **5 MM,**
Bipolar Sealing System
Dissect ■ Seal
Autoclavable at 134°C (273°F)

Application in Gynae Surgery

Abdominal Hysterectomy.
Vaginal Hysterectomy.
Colon Resection.
Laparoscopically assisted
vaginal hysterectomy.
Appendectomy
Cholecystectomy
Gastrectomy

Reusable Open Share Forceps

BIPOLAR FORCEPS, CVD., 18 CM and 28CM

Bipolar Vessel Sealing System

The reusable sealing system

No instrument exchange required

Permanent occlusion of veins, arteries and tissue bundle's with subsequent dissection

Autoclavable at 134°C (273°F)

Reusable Open Share bipolar Scissor

BIPOL-SCISSORS, CVD., 28 CM

Autoclavable at 134°C (273°F)

ELCETR. HDL., 2 SWITCH, 4 M,	1
KNIFE ELECTRODE, SYN, 30 MM	1
NON STICK RED-FCPS., STR., BL. 1,0 MM, 20 CM	1
BIP.-CABLE, 5M	1
NEUTRAL PLATE RUBBER 15X26CM	1
FOOT SWITCH DOUBLE EXPLOS PR	1
Imported Trolley	

Clinical Specialty	SOLID STATE ELECTROSURGICAL UNIT WITH ARGON PLASMA SYSTEM
Generic Name	SOLID STATE ELECTROSURGICAL UNIT WITH ARGON PLASMA SYSTEM
Clinical Purpose	
TECHNICAL SPECIFICATIONS	
<p>Microprocessor based electrosurgical unit for normal and under water cutting usages. Automatic self test function with display screen. Operation in Radio Frequency range. Digital Controls for cutting, coagulation, spray and blends. Mono polar cutting power of 300 watts. Mono polar coagulation power of 120 Watts. Bipolar coagulation power of 60 Watts. Spray coagulation mode. Floating output with bipolar coagulation. Different gradations of blending of cutting and coagulation power. Digital screen for display of all controls and set values of cutting and coagulation power. Audio and visual alarms on fault occurrence. Earth free patient circuit. Reusable Silicon patient plate Double paddle foot switch, explosion proof. Monopolar handle with cord. Bipolar forceps with cord. Trolley with two shelves having anti static lockable wheels. 220V, 50 Hz.</p>	

Accessories:

Accessories/ electrodes:

Attachment for Monopolar Coagulation (one set).

Handle with 2 Activating Buttons

Knife Electrode, 25mm Long

Surgical Electrode, Ball-Shaped, 4mm Dia

Wire Loop Electrode, 10mm Dia

Needle Electrode, Str. Isolated, 125 mm

Ball Electrode, 5mm Dia

Needle Electrode, 100mm

Bipolar Coagulation Forceps, 220mm

Optional

Argon plasma beam attachment with argon cylinders (two) for cutting and coagulation.

Complete with its handle and electrodes/forceps controlled by foot switch.

Clinical Specialty	BLOOD WARMER
Generic Name	BLOOD WARMER
Clinical Purpose	
TECHNICAL SPECIFICATIONS	
Microprocessor controlled unit for reliable transfusion and infusion for intra and post-operative hypothermia. Dry warming system. On line warming with tubing. Pre-selected temperature settings over the range 35°C to 39°C. Indications/ display for different temperatures. Blood warming device with safety cut out at 41/42 °C. Visual and audible alarm for low and high temperature	

Clinical Specialty	WARMER BLANKET
Generic Name	WARMER BLANKET
Clinical Purpose	
TECHNICAL SPECIFICATIONS	
Microprocessor controlled patient warming system for prevention of hypothermia. Temperature control range of 30 - 42°C. Individual control of blankets. Set and actual temperature display. Low noise fan. Heat conducting fabric for uniform distribution of heat. Fully automatic system for wide range of application. Complete system with filters. Automatic stop in case of overheating. Coupling for different type of blankets.	

220V, 50Hz operation.

Accessories:

Blankets should be washable, resistant to disinfectant and its cover should be blood and fluid resistant, replaceable type. The blanket sizes are approximate.

Arm shoulder blanket. 170x30 cm

Torso blanket 45x90 cm

Leg blanket 45x90 cm

Recovery Blanket 120x200 cm

Clinical Specialty	ENTOX APPRATUS WITH CYLINDER
Generic Name	ENTOX APPRATUS WITH CYLINDER
Clinical Purpose	
TECHNICAL SPECIFICATIONS	
ENTONOX should be ready-to use medical gas mixture consisting of 50% nitrous oxide and 50% oxygen for use in all situations where healthcare professionals need to administer an analgesic with rapid onset and offset.	
ENTONOX APPARATUS SHOULD CONSIST ON:	
<ul style="list-style-type: none">• ENTONOX cylinder and trolley with wheels.• ENTONOX cylinders.• Demand Valve.• Filters• Cylinder key• Face mask etc.	
Attested by Linde/ Fine Gas	

Clinical Specialty	MOBILE SUCTION PUMP
Generic Name	Suction Machine
Clinical Purpose	
TECHNICAL SPECIFICATIONS	
Heavy duty Mobile Suction Unit with twin jars of capacity up to 4 or 5 litre each, autoclavable (polysulfone/ Polycarbonate). 40 – 50 liters/minutes at 640-750mm Hg. Noise level should not exceed 50dB. Vacuum continuously adjustable 10X bacterial filter Complete aspiration set with tubing Overflow safety Device Foot vaccum regulator 220V/50Hz. I Phase Trolley with lockable wheels	

Clinical Specialty	CEILING MOUNTED ANESTHESIA PENDANT
Generic Name	CEILING MOUNTED ANESTHESIA PENDANT
Clinical Purpose	

TECHNICAL SPECIFICATIONS

Ceiling mounted Anesthesia Pendant system, powder coated, Hygienically smooth surface, impact and disinfectant resistant

- Shelves – 2Pcs
- Drawer – 2 Pcs
- No. of Arms: 2
- Length of first arm: 1000mm
- Length of second arm: 800mm
- Max. degree of rotation at each arm: 350° or batter
- Max. loading capacity: 640 Kg or batter
- Braking system: Electromagnetic brakes to control horizontal movement.
- Electrical Sockets British Standard – 16 to 20 Pcs
- LAN Data ports RJ45 for PC – 1 Pc
- Telephone Outlets RJ11 – 1 Pc
- Oxygen Outlet: 2 Pcs
- Medical Air 4 Bar: 2 Pcs
- Vacuum Outlet: 2 Pcs
- Nitrous Oxide Outlet: 2 Pcs
- AGSS Outlet: 1 Pc
- I.V Pole – 1 Pc
- Basket for accessories

Clinical Specialty	CEILING MOUNTED SURGICAL PENDANT
Generic Name	CEILING MOUNTED SURGICAL PENDANT
Clinical Purpose	

TECHNICAL SPECIFICATIONS

Ceiling mounted Surgical Pendant system, powder coated, Hygienically smooth surface, impact and disinfectant resistant

- Shelves – 3 or 4Pcs
- Drawer – 1 or 2 Pcs
- No. of Arms: 2
- Length of first arm: 1000mm
- Length of second arm: 800mm
- Max. degree of rotation at each arm: 350° or batter
- Max. loading capacity: 640 Kg or batter
- Braking system: Electromagnetic brakes to control horizontal movement.
- Electrical Sockets British Standard – 16 to 20 Pcs

- LAN Data ports RJ45 for PC – 1 Pc
- Telephone Outlets RJ11 – 1 Pc
- Oxygen Outlet: 2 Pcs
- Medical Air 4 Bar: 2 Pcs
- Vacuum Outlet: 2 Pcs
- Nitrous Oxide Outlet: 2 Pcs
- AGSS Outlet: 1 Pc
- I.V Pole – 1 Pc
- Basket for accessories

Clinical Specialty	WALL MOUNTED ULTRA VIOLET LIGHT FOR OPERATION THEATRE
Generic Name	UV Light
Clinical Purpose	

TECHNICAL SPECIFICATIONS

Theatre disinfection germicidal lamp for environment sterilization. The system should have UV lights (alternate system of disinfection will also be acceptable for equivalent requirement) which would be used for destruction of reproduction capacity of microorganism having following features;

- The lamp should be concealed wall mounted one.
- 24 hrs working in the presence of humans.
- Ozone free unit.
- Reduction of bacteria and viruses upto 90%.
- Length of lamp should be around 700 – 1000 mm.
- Air circulation fan filters for removing organic and inorganic pollutants.
- Lamp life will not be less than 10,000 hrs.
- 220V, 50 Hz.

Clinical Specialty	VACUUM EXTRACTOR
Generic Name	VACUUM EXTRACTOR
Clinical Purpose	

TECHNICAL SPECIFICATIONS

Reciprocating, oil free pump & piston mechanism.
 Noise level of maximum 45dB.
 Aspiration rate of 30 liter per min at 500-640 mmHg
 Vacuum continuously adjustable
 Suction bottle, autoclave able 2 liters (polysulfone/Polycarbonate).
 10 X bacterial filter
 Vacuum Extractor with various combination of silicon cups
 Silicon cup 40, 50 and 60 mm
 With foot vacuum regulator.

OPTIONAL: (separate price)

- Additional cups
- Silicon cup 40 mm
- Silicon cup 50 mm
- Silicon 60 mm

Clinical Specialty	AUTOMATIC WATER DISPENSER FOR SCRUB AREA
Generic Name	AUTOMATIC WATER DISPENSER FOR SCRUB AREA
Clinical Purpose	

TECHNICAL SPECIFICATIONS

Three stations Knee Operated scrub station.
Made of stainless steel.
Anti-splash basin.
1/2-siphon
Removable front panel.
3-knee controls, 3-water tapes with a mixing valve.
Water pipe hoses for cold and hot water 1/2".
Stainless steel brackets/ fittings to fix the Sink to the Wall.
Hand Disinfectant Point.
Soap dispenser unit.
Hand washing brush dispenser made of SS.

Clinical Specialty	OPERATING LAPROSCOPE ADULT WITH INSTRUMENT SET FOR GENERAL SURGERY
Generic Name	
Clinical Purpose	

TECHNICAL SPECIFICATIONS

Imaging/Endoscope System

Imaging System /Endoscope Camera System (CCU & Camera head) should be Full HD 1920 x 1080p or better and should have backward and forward compatibility and modularity for futures upgrade and with latest image enhancement modules for better image quality and identifications of the land marks and pathology for better outcomes of the surgery.

The system must comprises of following

a. CCU (Camera Control Unit)

Full HD 1080p Video Processor with integrated documentation functions for image and video capturing with Three chip full HD camera Heads with following technical data or Better or Equivalent

- i- Connections :- 2 x DVI-D , 1 x 3G-SDI output , 4 USB Connection (2 x front , 2 back) 3 Link connections or better o equivalent

- ii- Max. Resolution : _ 1920 x 1080p
- iii- Power Supply :- 100-120 VAC, 50/50 Hz, 200-240 VAC, 50/60 HZ
- iv- Power Consumption :- 62 VA
- v- Power cable :- 300 cm or better
- vi- DVI-D cable :- 300 cm or better
- vii- Silicone Keyboard with Touch pad
- viii- USB flash Drive :- 32 GB or Better

Special Features :-

- i- Image Enhancements modes up to 5 or better
- ii- Picture-in Picture mode control via camera head buttons
- iii- Control of peripheral devices i.e. light source, insufflator, recording system parameter via camera head buttons or better
- iv- Still image capturing in Full HD Quality (JPEG) Format via camera head buttons
- v- Video Capturing in Full HD Quality (MPEG4 Format) via Camera head buttons
- vi- Grid and pointer mode for teaching and training purpose or Better
- vii- Image rotation 180 degree via camera head buttons
- viii- 20 individual preset or better
- ix- 20 Patient data back up or better
- x- Should have compatibility with future upgrade like with Flexible Scope, 3D , ICG Camera heads or better or Equivalent

Camera Head :-

Digital Three Chip camera head with 2x optical Parfocal Zoom or better , 2 Freely programmable camera head buttons with following technical data

- i- Image sensor 3x1/3" CCD chip
- ii- Pixel :- 1920 x 1080p per chip (50/60 Frames/Second) or better
- iii- CCD chip Support :- 16:9 input format
- iv- Focal length :- 15-31 mm (2x optical zoom)
- v- Minimum light sensitivity :- 1.17 lux or better
- vi- Weight :- 200-300 g
- vii- Sterilization compatibility :- Starred® 100s, NX100NX Steris® system 1 , V-Pro1 Sterilization method
- viii- CF- Defibrillation according to EN 60601

Medical Grade Monitor 26"/27" LED

Medical Grade Monitor should be from same manufacturer of imaging system or should be manufactured in Japan, USA or Germany and should be have recommendation for endoscopic MIS surgery with following technical data

- 1- Resolution :- 1920x1080p or Better
- 2- Aspect Ratio:- 16:9 or better
- 3- Color system PAL/NTSC
- 4- Power Supply 85-264 VAC, 50/60 Hz
- 5- Video Inputs : DVI, S-Video, Composite

- 6- Video Outputs:- HD15 Pins/DVI-D, S-Video, Composite
- 7- VISA 100 mounted
- 8- Monitor power Supply
- 9- DVI-D Cable
- 10-BNC/BNC Video Cable
- 11-Pointer and grid option should be available
- 12-Laparoscopic and flexible endoscopy view can be displayed on same monitor

Telescope:

- 10 mm Straight Forward "0" degree
- 10 mm Straight "30" degree view
- 10 mm Straight "0" degree with parallel Eye piece with instrument channel
- 5 mm straight forward "0" degree.
- 5 mm forward oblique "30" degree

Insufflator 40-50 liters (Complete Unit):

The insufflator should be 40-50 liters with integrated preheating module with Touch keys for precise pre-selection of set values , Optical and acoustic alarm signals in the event of patient over pressure, system should be fully automatic, electronically controlled gas refill with following parameters

- i- Gas Flow 0-50 l/min
- ii- Pressure : 0-50 l/mmHg (3990Pa)
- iii- Certified to : - IEC 601-1,CE acc. To MDD

Unit should complete with

- High pressure hose with pin index connector CO₂ bottle with pin index connector
- Silicone tubing set for insufflations
- CO₂ gas filter disposable
- Universal Wrench
- Main cord

Light Source: (Xenon 300 or LED 175)

- Digital and Automatically adjustable intensity and manual override
- Lamp Xenon 300 watts /LED 175
- Number of hours of lamp use should be indicated in Xenon 300 light source
- Color temperature 6000k-6300K
- Light intensity adjustment: 0 to 100 percent
- Lamp life min 500/ 40,000 hours
- Objective (f): 23mm (min)

Fiber Optic Light Cable:

- Size min 6mm or more, diameter
- Length: min 200 to 300 cm
- Heat resistant

Suction & Irrigation System:

- Complete with following accessories.

- Suction / irrigation unit
- Mains Cord
- Silicon Tubing Set for Suction Sterilize able
- Suction & Irrigation Tube, Anti-reflex surface, with two-way stopcock, for single hand control
- Bacterial Filter non-sterile (pack of 10)
- Suction Bottle 1.5 Lt, sterilizable
- Irrigation liquid water bottles 1 Lt, Sterilizable
- Bottle cap for suction bottle 1.5 Lt Sterilizeable

Accessories:

- Storage boxes for instruments and optics of the same manufacturer as that of the instrument and optics to be suitable for the purpose.
- UPS (sine wave online power suitable for running the whole set of the instruments for back up time of 30 minutes).
- Disinfection boxes
- Cleaning set for the instruments. Standard complete cleaning set as per manufacturer recommendation for cleaning of tubular shafts and other instruments.
- Cylinders 240 CFT new (2 each):
Bull nose connection for Full Height cylinder for CO2.
- Diathermy Leads (autoclave able)
- Bipolar forceps and lead

LIST OF INSTRUMENTS REQUIRED FOR GENERAL SURGERY

Note: the minor variation in size and type of the instruments would be acceptable
The size of instruments are approximate. The mentioned shape and style of instruments is for reference and may be quoted their equivalent.

1. Hasson Cone
Trocar size 10/11 mm (with color code) with, cannula & multifunction valve, length 10.5 cm, pyramidal tip & conical tip one
2. Trocar size 6 mm (with color code) cannula & multifunction valve length 6cm, conical tip & 8.5 cm pyramidal tip
3. Reduction sleeve 11/5 mm (Compatible)
4. Veress pneumo peritoneum needle with spring loaded blunt sty let with leur lock 7cm and 13cm
5. Maryland dissecting forceps slightly curved with Cannula pin for unipolar coag 5mm-36 cm, insulated, rotatable
6. Dissecting forceps insulated rotatable needle nose
7. REDDICK-OLSEN Dissecting and Grasping Forceps, heavy.
 - Dissecting and Grasping Forceps, alligator jaws with connector pin for unipolar coagulation, size 5mm. (rotatable, straight)
 - Dissecting and Grasping Forceps, (Kelly's). With connector pin for unipolar coagulation, size 5mm. 36 cm length, double action jaw
 - Dissecting and Grasping Forceps, (Kelly's). With connector pin for

- unipolar coagulation, size 5mm. 36 cm length, double action jaw Grasping Forceps, 2x4 teeth with connector pin for unipolar coagulation, size 5mm double action jaw with ratchet.
- Berci Multifunction Grasping Forceps, 1x2 teeth with connector pin for unipolar coagulation, size 5mm
 - Bowel Grasping Forceps, two rows of a traumatic teeth without connector pin for unipolar coagulation, size 10mm.
 - Bowel Grasping Forceps With connector pin for unipolar coagulation, size 10mm.
 - Babcock Grasping Forceps rotating, dismantling with connector pin for unipolar coagulation, size 10mm.(with ratchet).
 - Babcock Grasping Forceps rounded without connector pin for unipolar coagulation, size 10mm.
8. Claw forceps, single/double/action jaw, 2x3teeth,size 10mm, length 36, 01short, rotating consisting of: Metal handle with ratchet, Outer Tube, Insulated, Forceps Insert.
 9. Clip applicator (medium large) & medium, dismantling, rotating, ratchet for ethican clips and titanium clip
 10. Sawahle's Tenaculum forceps, rotating, size 10 mm, length 36 cm, Metal handle with ratchet, Outer Tube, Insulated, and Forceps Insert.
 11. Metzenbaum scissors, curved rotating, with connector pin for unipolar coagulation, size 5 mm, length 36 cm, blade length 12mm: Insulated Handle, Outer Tube, insulated
 12. Curved/angled scissors, rotating, size 5mm, length 36cm: Insulated Handle, outer tube, Insulated
 13. Micro Scissor curved 5mm, insulated with diathermy
 14. Hook scissor single action jaws, size 5 mm, length 36 cm: Insulated Handle, Outer Tube, insulated, Insert
 15. Scissor straight 5mm insulated with diathermy
 16. L Shaped dissecting electrode /diathermy size 5mm, insulated, length 36 cm (L Hook Dissector)
 17. Coagulating and Dissecting Electrode, spatula-shaped, blunt with connector pin for unipolar coagulation, size 5 mm, working length 36cm
 18. Suction irrigation and coagulation tube with lateral holes and two way stop, cock for single handle
 19. (Injection) Aspiration needle 5mm
 20. Biopsy forceps insulated (5mm)
 21. Bipolar diathermy electrode
 22. Palpation probe, size 3mm
 23. Cohen Uterine Cannula, with 2 cones, large and small spring-loaded fixation for forceps with LUER-lock adaptor for cleaning
 24. Uterine Tenaculum Forceps, length 22cm
 25. Suction and Coagulation Cannula, 3mm, with connector pin for unipolar Coagulation, 30cm
 26. High Frequency Cords, with 4mm banana plug for HF electrosurgical generator. High Frequency Cord for bipolar instruments for use with compatible electro surgical & generator
 27. Dissecting Needles, High Frequency Needle 5mm length 31 cm, with connector

pin for unipolar coagulation. Spare Needle diameter 0.7 mm length 31cm, with connector pin for unipolar coagulation.

28. Ring applicator compatible with currently available silastic rings by multiple puncture approach Ring applicator compatible with available silastic rings by single puncture approach Silastic rings

29. Needle holder 5 mm

30. Needle Grasper 5 mm

31. Thread manipulator 5 mm

32. Retractor 10 mm (3 blade)

33. Knot Pusher

34. Trocar and cannula 10 mm (15 cm)

Local Disinfectant to be supplied along with the system.

OPTIONAL:

FULL HD IMAGE / RECORDING AND DATA ARCHIVING SYSTEM.

User friendly software designed specifically for medical purposes

- Captures still HD images, video sequences (from 3 sources), and audio files
- Resolution of still images should be 1920x1080 and that of video 720x576p MPEG2 1280x720p MPEG2 and 1920 X 1080 MPEG2
- Picture in Picture supported.
- Cryptzone Security module.
- Writes multi-session and multi-patient CDs/DVDs
- Controllable via Touch Screen, camera head buttons, footswitch mouse and keyboard
- Fully controllable from inside and outside the sterile field
- Supports network storage on file servers
- Supports FTP storage
- USB support for storage on USB drives
- Customizable print-outs for the documented information
- Prints to any connected printer (local or network)
- Buffer system to insure reliability
- Medical grade unit with CE mark
- Mother Board Embedded FLEX-ATX
- Processor: Intel Core 2 DUO T7400
- Grabber-card: DVI-D, S- Video, Composite;
- Optional: AGP Slot onboard
- RAM: 2GB DDR2 PC800
- Harddisk: 500 GB
- Drive: SATA Slim DVD+RW/-RW/+R/-R
- PCI Slots: 3 x PCI
- LAN: 2 x 10/100/1000 Mbps onboard
- I/O Ports: 2 x PS/2, 3 x Serial, 2 x RJ45 (LAN), 5 x USB 2.0 (1 x Front), 6 x Audio (1 X Line In, 5 X Line Out and 1 X Microphone), VGA out, 1 DV, 1 DVI out, HDMI out.
- Dongle: Slot for USB- Dongle inside the computer case
- DICOM and HL7 interface
- 19" Touch screen should be medical grade. System should be operated via 19"

touch screen attached with Trolley (Local/Imported) with easily adjustable Swivel armed.

The DICOM 3 interface shall be installed to the system in order to allow the surgeon to view all the DICOM 3 images stored in the PACS system on a digital light box within the operating rooms. Furthermore, all intra operative images recorded can be sent via the DICOM 3 interface to the PACS system for further processing.

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

Clinical Specialty	ENDOSCOPY VIDEO ASSISTED ANAL FISTULA TREATMENT FOR GENERAL SURGERY
Generic Name	
Clinical Purpose	

TECHNICAL SPECIFICATIONS

8 Degree rigid Telescope or Equivalent
 Angled eye piece outer diameter 3.3 multiply 4 mm working length 18 cm, working channel 2.5mm.

Consisting of:

-sterilization tray
 -Obturator
 Coagulating Electrode, 7 Fr., unipolar, length 53 cm

Fistula Brush 3-Ring Handle, Outer Sheath, 1 Pcs
 Fistula Brushes with 4,0mm; 4,5mm and 5,0mm-
 Outer Diameter

Distending Speculum, with 3 blade
 outer diameter 27 mm, working length 6 cm, with
 abturator

Click Line Grasping Forceps, rotating,
 size 2 mm, length 30 cm, with connector pin
 for unipolar
 coagulation, double action jaws, with LUER lock
 adaptor for cleaning,

Clinical Specialty	Video Choledochoscope
Generic Name	

Clinical Purpose	
TECHNICAL SPECIFICATIONS	
Angle of View:	90
Direction of View:	0
Inner Diameter:	1.2mm or better
Outer Diameter:	2.8mm or better
Deflection of Tip:	270 /270 or better
Working Length:	60cm
<u>Special Feature or Equivalent</u>	
Excellent Image Quality due to CMOS Technology.	
Integrated Light Source allows easier work.	
Video Choledochoscope Adopter for use with existing HD Camera.	
<u>Instruments and Accessories</u>	
Case for Choledochoscope.	
Pressure Compensation Cap for ventilation during sterilizations.	
Leakage tester with bulb and monometer.	
Cleaning Brush.	
Applicator and Guide Tube for Choledochoscope for use with trocar size 6mm.	
Grasping Forceps Size 10mm double action Jaws with silicon pads for introduction of Choledochoscope in the biliary Duct.	
Micro Knife pointed opening the hepatic duct and the bile duct size 5mm length 31cm.	
Biopsy Forceps, 1mm double action Jaws length 100cm flexible.	
Grasping Forceps, 1mm double action Jaws length 100cm flexible.	
Stone Basket Sterile, Single use length 120cm package of 10.	
LEUR Adopter with seal.	
Seal for Instruments port package of 10.	
Cleaning Adopter for instruments port.	

Clinical Specialty	Video Colonoscope with Video Processing System
Generic Name	Video Colonoscope with Video Processing System
Clinical Purpose	
TECHNICAL SPECIFICATIONS	
Working channel diameter: 3.8 mm	
Sheath diameter: 12.9 mm	
Working length: 1400 mm	
Deflection up/down: 180°/180° or better	

Deflection left/right 160°/160 or better

Following accessories are included:

Case for colonoscope
Pressure compensation cap
Suction valve
Air/water valve
Leakage tester
Cap (package of 10)
Tube, for suction/biopsy channel
Irrigation tube, for suction/irrigation
Biopsy forceps, for single use package of 10
Cleaning brush, for single use package of 10
Valve brush, for video endoscopes

HD Camera System

Camera Control Unit, max. resolution 1920 x 1080 Pixel, progressive scan with inbuilt HD Video Recording and snap shooting power supply 100 - 240 VAC, 50/60 Hz

Special Feature or Equivalent

Inbuilt video recording and snap shooting controllable via camera head button
Video endoscope Adapter
DVI- Connecting Cable
BNC/BNC Video Cable
S-Video (Y/C) Connecting Cable
Connecting Cable, for controlling peripheral units
Silicone Keyboard DIN AT, US for use with video endoscopes
Cold Light Fountain XENON/LED Light Source with integrated including an insufflation pump, power supply 100 - 240 VAC, 50/60 Hz,

Consisting of:

Water Bottle
Irrigation Bottle Holder
Irrigation Adaptor, for water bottle System

Fiber Optic Light Cable, with straight connector, extremely heat-resistant, diameter 4.8 mm, length 250 cm

Same brand HD Monitor, max. screen resolution 1280 x 1024, image format 4:3, power supply 100 - 1240 VAC, 50/60 Hz, wall-mounted with VESA 100 adaption, Video inputs: DVI, VGA, S-Video, Composite, Video outputs: DVI, S-Video, Composite including: External 24 VDC Power Supply Mains Cord
Suction Pump set, power supply: 230 VAC, 50/60 Hz 1

Consisting of:

Bakterial filter
Suction bottle, 2l

Bottle cap with handle
 connecting tube, short
 Patient tube

Clinical Specialty	Video Gastroscopy unit for General Surgery
Generic Name	Video Gastroscopy unit
Clinical Purpose	

TECHNICAL SPECIFICATIONS

Working channel: 2.8 mm
 Diameter: 9.3 mm
 1100
 Working length: mm
 Bending section: Up: 210° Down: 100°
 120°/120°

Left/Right:
Special features:

- High resolution
- 8x magnification for optimal diagnostics
- 2x electronic zoom, adjustable in 4 steps as required
- Image Enhancement System
- Fatigue-free working with an ergonomically formed control body
- Excellent deflection
- More effective irrigation of the optics due to a recessed air/water nozzle with directional flow channel

Following Accessories are included:

- 1x Transport Case
- ETO
- 1x Cap
- Suction valve
- 1 x Air-Water Valve
- 1x Leakage tester
- 1x Caps for biopsy channel (10 pcs.)
- 1x Irrigation tube
- 1x Y irrigation tube
- 1x Bite protector (single-use)
- 1x Biopsy forceps (single-use)

- 1x Cleaning brush (single-use)
- 1x Valve brush for video endoscopes
- 1x Cover for transportation of flex. endoscopes

Electro Video Endoscopy System

GI Camera Control Unit, max. resolution 1920 x 1080 Pixel, with integrated Image Capture Module and power supply 100 - 240 VAC, 50/60 Hz

Special features:

- High definition HD, max. resolution 1080p
- Full screen image WIDE VISION
- Still image function (PiP)
- Individual contrast and brightness adjustment in 3 levels
- Automatic control of XENON 100 to 300 light intensity
- White balance with save function
- Select from three defined Image Enhancement System modes. Modes can be used to complement the image in various examinations in addition to the white light
- Digital Zoom Function
- USB port on front panel for storing images and video sequences
- USB port on rear for connecting compatible USB printers
- Wide range of possible connections (DVI , HD-SDI, RGB, S-Video, Composite)
- Straight forward HD documentation system possible
- Flat, watertight keyboard

Consisting of:

Camera Control Unit
Videoendoscope Adapter
Mains Cord
DVI-D Connecting Cable
BNC/BNC Video Cable
S-Video (Y/C) Connecting Cable
Connecting Cable, for controlling peripheral units
Silicone keyboard, german, PS/2
for use with GI video endoscopes

Cold Light Fountain XENON / LED, with integrated insufflation pump, for use with Videoendoscopes,
one 100 to 300 Watt Xenon lamp, Power Supply: 100-240VAC, 50/60Hz

Consisting of:

Cold light fountain XENON 100 to 300 Watt
 Mains cord
 Water bottle
 Bottle holder
 Rinsing connector for
 water bottle

26" HD Monitor, Resolution: 1280 x 1024 Video Inputs: DVI, VGA, S-Video,
 Composite Video Outputs: DVI, S-Video,
 Composite

Consisting of:

Monitor Power
 Supply
 DVI-D Connecting Cable
 BNC/BNC
 Video Cable

Equipment cart,

Clinical Specialty	BINOCULAR MAGNIFYING LOUPES
Generic Name	BINOCULAR MAGNIFYING LOUPES
Clinical Purpose	
TECHNICAL SPECIFICATIONS	
<p>Binocular Prismatic Loupeswith fatigueless view. Magnification: 5.5x – 6.0x Working Distance: 550-350 mm. Field of View: 60-40 mm. Titanium or sport frame or head band designed Specifically to use with Loupes in different colors.</p> <p>Each Unit supplied with:</p> <ul style="list-style-type: none"> • Storage case • Flip paddle • Protective lens cap • Protective shield • Screw driver • Cleaning cloth • Head strap • User Manual 	

Clinical Specialty	MODULAR OPERATION THEATRE
Generic Name	MODULAR OPERATION THEATRE

TECHNICAL SPECIFICATIONS

Wall Paneling System

- **Material** – Stainless steel AISI304 with gauge / thickness of metal sheet of min. 1 mm.
- **Finish** – Powder Coated in any RAL Color with antimicrobial protection.
- **Joints** – The wall panels are fixed on the sub-structure leaving intermediate space between the panels and are filled with silicon seal / gasket. resistant to UV, detergents, bactericidal products,
- **Corners** – Wall to wall and wall to ceiling connections are rounded / coved made of metal sheet powder coated finishing like the wall panels and smoothly integrated with the wall panels.
- **Services / utilities Outlet Panel** – A removable element of 200mm or more should be provided for the on-wall utility and service outlets.
- **Sub-Structure Profiles** - Floor rails are made of galvanized steel sheet of appropriate thickness with base height. Fastened with screws and dowels over leveled screed. The sectional supports are suitable to support to the wall panels,

CLEAN ROOM SUSPENDED CEILING SYSTEM

General Description – The clean room suspended ceiling system is made of specified material having specialized durable powder coating with integrated antimicrobial protection on the face side in specified color.

- **Material** – Ceiling panels are made of galvanized steel sheet 0.63mm or 0.80mm thick,
- **Finish** – The ceiling panels are powder coated in RAL 9010 color having bactericidal properties.
- **Dimension** – 600 x 600 mm
-

PERIPHERAL LIGHTS FOR OPERATING ROOM

- Clean room Luminaires of recessed type for linear fluorescent lamps, designed for clean room suspended ceilings
- Dimension: 600 x 1200mm or 600 x 600mm
- Lamp: T5/ LED
- Power: 3 x 54W
- Protection Class: IP65
- Built-in Battery Backup upto 2 hours

X-RAY VIEWER FOR OPERATING ROOM

Recessed / Built-in type, LED X-Ray viewer integrate able with the modular wall system

- No. of Films : 2 or 3
- Effective Life of LED Lights: 50,000 hours
- Flickering: No (Absolutely)

CLEAN ROOM FLOORING

- Static dissipative homogenous vinyl flooring of 615mm x 615mm tile size of 2.0 mm thickness sliced from highly compressed solid block of homogenous material.
- Conductive chips compressed inside forming a dense network of tiny black veins giving life-time or permanent static dissipative functionality to the floor.
- The flooring offers an electrical resistance
- Factory molded corners and Coved Corner
- Copper taping for grounding

AUTOMATIC SLIDING DOOR FOR OPERATING ROOMS WITH ELECTRONIC PRIVACY GLASS

- Single wing of thickness 40mm with 1.5mm Stainless Steel AISI 304 brushed finish or powder coated outer skin fully
- Door acoustically and thermally isolated with highly pressured polyurethane foam
- **Handles** – Stainless Steel “C” shaped long handles from internal and external side of the door wing
- **Inspection Window** – 300 x 1500 mm double glazed (safety glass) with electronic privacy having control button provided near the door accessible from inside of the OT
- **Safety Sensor** – 2 set of photocells in door frame along with infrared sensor at door drive level on inner and outer side of the door

MEDICAL CABINET FOR OPERATING ROOM

The construction of the cabinets' body is self-supporting, welded – without the inside frames and rivets, entirely made of stainless steel

- The cabinet body is built-into the supporting profile integrated with modular wall system.
- The cabinet body and doors are flushed with wall panel surface. Cabinets' are sealed with a hermetic removable silicone seal.
- The doors are made of double steel plates with glazing. Safe Glass, set in double steel sheet window frame
- The shelves with height adjustments, made of stainless steel 1 mm thick, supported from the bottom by trapeze profile
- **Shelves** – Five adjustable shelves
- **Dimension:** As Per Required size

CEILING MOUNTED ANESTHESIA PENDANT

Ceiling mounted Anesthesia Pendant system, powder coated, Hygienically smooth surface, impact and disinfectant resistant

- Shelves – 3 or 4Pcs
- Drawer – 1 or 2 Pcs
- No. of Arms: 2
- Length of first arm: 1000mm
- Length of second arm: 800mm
- Max. Degree of rotation at each arm: 350° or batter
- Max. Loading capacity: 640 Kg or batter
- Braking system: Electromagnetic brakes to control horizontal movement.

- Electrical Sockets British Standard – 16 to 20 Pcs
- LAN Data ports RJ45 for PC – 1 Pc
- Telephone Outlets RJ11 – 1 Pc
- Oxygen Outlet: 2 Pcs
- Medical Air 4 Bar: 2 Pcs
- Vacuum Outlet: 2 Pcs
- Nitrous Oxide Outlet: 2 Pcs
- AGSS Outlet: 1 Pc
- I.V Pole – 1 Pc
- Basket for accessories

CEILING MOUNTED SURGICAL PENDANT

Ceiling mounted Surgical Pendant system, powder coated, hygienically smooth surface, impact and disinfectant resistant

- Shelves – 3 or 4Pcs
- Drawer – 1 or 2 Pcs
- No. of Arms: 2
- Length of first arm: 1000mm
- Length of second arm: 800mm
- Max. degree of rotation at each arm: 350° or batter
- Max. loading capacity: 640 Kg or batter
- Braking system: Electromagnetic brakes to control horizontal movement.
- Electrical Sockets British Standard – 16 to 20 Pcs
- LAN Data ports RJ45 for PC – 1 Pc
- Telephone Outlets RJ11 – 1 Pc
- Oxygen Outlet: 2 Pcs
- Medical Air 4 Bar: 2 Pcs
- Vacuum Outlet: 2 Pcs
- Nitrous Oxide Outlet: 2 Pcs
- AGSS Outlet: 1 Pc
- I.V Pole – 1 Pc
- Basket for accessories

DOUBLE DOME LED OPERATING LIGHT WITH HD CAMERA// WITH CAMERA PREPARATION

High-performance LEDs of different chromaticity is provided for illumination of the surgical site. The light head shall ensure shadow-free illumination while providing deep-cavity light at the same time

TECHNICAL SPECIFICATION

- No. of dome: 2 (Main and Satellite)
- Light Intensity: 160,000 lx / 160,000 lx
- Light intensity adjustment: 30-100%
- Color temperature (Adjustable): 4300K / 4600K
- Light field diameter: 170 - 220 mm
- Color rendering index [Ra(1-8)]: 95
- Red color rendering index [R9]: >85
- Endo-mode lighting: 5%
- Temperature of light surface after 60min: <40°C

- Increase of temperature near doctor's head: <1°C
- Average service life of the LEDs (hours): 40,000 Min

INTEGRATED HD CAMERA

HD Camera for the Teaching and education purpose integrated with the OT Light and the LCD Monitor should be placed on the Third Arm of the OT light

TECHNICAL SPECIFICATION

- Resolution: 1920 x 1080i
- Image Sensor: 1/3" CMOS sensor
- Effective Pixel number: approx. 2,000,000 Min
- White Balance: Auto
- Focus System: Auto
- Zoom: 10x Optical Zoom / 12x Digital OR batter
- Signal-to- noise ratio : > 50 dB
- Signal System: 1080i/50Hz
- Aspect (height-to-width) ratio: 16:9

LAMINAR AIR FLOW CEILING SYSTEM

Laminar flow ceiling system should be round base form to produce a germ- and particle lean area through unidirectional homogeneous, low turbulence laminar air flow. Specially designed and suited for the use in Operating room in accordance with the international standards.

All components for the receptacle of the filter element are made of corrosion-proof materials. Air tight welded filter intake made of aluminum

Clean Room Guarantee: The Company Should Provide validation report for the clean room standard class 100 validations.

TECHNICAL DATA

- Total Air Flow: 6360 m³/h
- Air Velocity: 0.25 m/s
- Avg. illumination: 500 lux
- Filter Class to EN 1822: H14 | 99.998%
- Initial Pressure drop: 115 Pa
- Final Pressure drop (Recommended): 240 Pa
- Diameter: 3000mm According to Standard
- Positive pressure should be maintain inside the OT to prevent contamination of air from outside OT

The return grills have a textile fluff separator for the insertion in exhaust openings in the operating theaters. The Fluff separator shall be easily removed without tools for cleaning and disinfection purposes. Textile fluffs are normally taken away by vacuum cleaning from the separator on daily basis.

- 25% of the return air volume will be exhausted near the ceiling.
- 75% of the return air volume will be exhausted near the floor.
- In order to achieve symmetric removal of the air from the room, 8 exhaust grills are mandatory in each OT arranged in the corners.

HYGIENIC AIR HANDLING UNIT

(Local provision for the theaters) (If already not installed

- HVAC System
- Fan Type : Plug-fan
- Filter: At least two stage filtration G4 and F9
- Fan efficiency :70% or batter
- Temperature range adjustable for heating and cooling

Telemedicine

- Medical grade 2 way audio 1 way video communication system for the teaching and the documentation of the patient history the procedure
- Can be integrated with the available equipment in the operating room like endoscope/ microscope /laparoscope etc
- Can be accessible from the surgeon office and the remote area easily
- Can switch and route HD Image within the hospital like conference room and the auditorium or may be internationally
- Should have the protection for the reachability (Password)
- Easily can route the image to more then 10 place
- Upgradeable system
- Should Provide the Pure HD Recording and the transmission 1920*1080

Clinical Specialty	OPERATING HEAD LIGHT XENON WITH LIGHT SOURCE
Generic Name	
Clinical Purpose	
TECHNICAL SPECIFICATIONS	
Operating prism loupes to be supplied on a spectacle frame. The frames to be supplied in three sizes with five available nose bridges to allow maximum comfort and security for the surgeon. 300/400 Watt To be easily identifiable by colour coding and simple to clip on when needed. To have a pocket size light source with Brightness Control and a compatible plug in charger. Complete system with xenon light source	