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<th>Obstetrics and Gynecology</th>
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</thead>
<tbody>
<tr>
<td>Generic Name</td>
<td>Desktop Fetal Heart Rate Detector</td>
</tr>
<tr>
<td>Clinical Purpose</td>
<td>Fetal heart rate detector is used to measure the fetus’ heart rate and rhythm during late pregnancy and labor.</td>
</tr>
</tbody>
</table>

**TECHNICAL SPECIFICATIONS**

- Desktop type
- LCD display with visualization of at least fetal heart rate.
- Ultrasound working frequency in the range 2MHz or more
- High sensitivity equipment compatible probe: 2 MHz or more
- Heart rate measurement range not smaller than 50-210 bpm
- Audio output reproduction of the fetal heart rate with integrated speaker and headphones.
- Integrated Audio volume control system
- Battery backup for 2hrs or more.

**Accessories:**
- 10 bottles of gel for patient application.
- Local trolley with lockable casters
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<th>Clinical Specialty</th>
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</thead>
<tbody>
<tr>
<td><strong>Generic Name</strong></td>
<td><strong>CTG Machine</strong></td>
</tr>
<tr>
<td><strong>Clinical Purpose</strong></td>
<td>Cardiotocography (CTG) Machine is used for the recording of the fetal heart beat and uterine contractions during pregnancy</td>
</tr>
</tbody>
</table>

**TECHNICAL SPECIFICATIONS**

- Single, Twin or Triplet Ultrasound
- Color LCD Display
- Fetal monitor for Antepartum monitoring
- FHR range: 50-200 bpm
- Ultrasound transducer with marker and recorder for FHR
- Sensitive frequency 2Mhz or less
- Alarms: Low Bradycardia, High Tachycardia,
- Strip chart recorder/ printer
- Paper width size: 110 mm or more (The manufacturer shall ensure the availability of printing paper minimum for the next five years)
- Paper/record Speed: 1,2,3 cm/min
- 220V/50Hz AC

**Accessories:**
- Mobile Imported Trolley
- 20 paper roles
- 20 bottles of gel
<table>
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<tr>
<th>Clinical Specialty</th>
<th>Obstetrics and Gynecology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generic Name</td>
<td>Electric Delivery Bed</td>
</tr>
<tr>
<td>Clinical Purpose</td>
<td>Delivery Bed is used during labor for delivery purpose.</td>
</tr>
</tbody>
</table>

**TECHNICAL SPECIFICATIONS**

Multiple delivery positions in a single unit  
Capability of mobility of transportation within the hospital  
Electric functions:  
  • Height adjustment  
  • Back section adjustment  
  • Leg section height adjustment  
  • Trendelenburg  
Extra safety features:  
  • Manual Trendelenburg  
  • Manual quick release for back section  
Mattress base 3 sectional  
Safe working load 200 kg  
Trendelenburg 10° Approx.  
Back section angle 70° Approx.  
Leg section angle 15° Approx.  
Height Approx. min-max 650 mm - 900 mm  
Bed width Approx. 1000 mm  
Mattress base width Approx. 750 mm  
Mattress base length Approx. min – max (1300–1900 mm)  
Integrated battery back up  
Remote Control Operations  

**Accessories:**  
  • Knee crutches, pair  
  • Squatting bar / Hand Bar  
  • Infusion rod  
  • Arm rest  
  • Bowl
<table>
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<th>Clinical Specialty</th>
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</thead>
<tbody>
<tr>
<td>Generic Name</td>
<td><strong>Manual Delivery Table</strong></td>
</tr>
<tr>
<td>Clinical Purpose</td>
<td>Delivery Bed is used during labor for delivery purpose.</td>
</tr>
</tbody>
</table>

**TECHNICAL SPECIFICATIONS**

Refer to the specifications of Manual Delivery Table as defined in the PVMS of Medical Furniture.
<table>
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<tr>
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</thead>
<tbody>
<tr>
<td>Generic Name</td>
<td>Daignostic Colposcope</td>
</tr>
<tr>
<td>Clinical Purpose</td>
<td>Colposcope is used to examine an illuminated, magnified view of the cervix and tissues of the vagina and vulva. (For OPD and Indoor)</td>
</tr>
</tbody>
</table>

**TECHNICAL SPECIFICATIONS**

- 5-step / Zoom magnification
- Standard fiber optic cold light illumination System
- Working distance 200 - 300 mm
- Fine focusing
- Viewing tube Straight / inclined / tilt able
- Red-free filter
  (Suspension system, roll able floor stand) / up right stand

**Standard Accessories :**

- Computer System to be provided locally for reporting purpose. Core i7 or latest with 1 TB hard drive, 21 Inch LCD, Printer 3 CPM and PC Trolley.
<table>
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<th>Clinical Specialty</th>
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</thead>
<tbody>
<tr>
<td>Generic Name</td>
<td>Operative Colposcope</td>
</tr>
<tr>
<td>Clinical Purpose</td>
<td>Colposcope is used to examine an illuminated, magnified view of the cervix and tissues of the vagina and vulva.</td>
</tr>
</tbody>
</table>

**TECHNICAL SPECIFICATIONS**

- Capability to integrate with Gynecological chair
- 5-step / Zoom magnification
- Standard fiber optic cold light illumination System
- Working distance 200 - 300 mm
- Fine focusing
- Viewing tube Straight / inclined / tilt able
- Red-free filter
- Suspension system, roll able floor stand
- Full HD Video Camera preferably from the same manufacturer
- Full HD Video Recorder preferably from the same manufacturer

**Standard Accessories :**

- Computer System to be provided locally for reporting purpose. Core i7 or latest with 1 TB hard drive, 21 Inch LCD, Printer 3 CPM and PC Trolley.
- Cryo Surgical Unit with complete accessories compatible for use with colposcope (3rd party equipment acceptable)
- Large loop excision of transformation zone (LLETZ) loop electrode 10mm x 5mm
<table>
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<tr>
<th>Clinical Specialty</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Generic Name</td>
<td>Vacuum Extractor</td>
</tr>
<tr>
<td>Clinical Purpose</td>
<td>Vacuum Extractor is used to guide the baby out of birth canal</td>
</tr>
</tbody>
</table>

**TECHNICAL SPECIFICATIONS**

- Oil free, noise free and vibration free suction unit
- Noise level of maximum 45 db.
- Aspiration rate of 30 liter per min at 0-640 mmHg
- Vacuum continuously adjustable
- Vacuum meter in mmHg or KPa and regulator on / off switch
- Triple flow safety device
- Change over valve
- (2) suction bottle, autoclave able 2 liters each (polysulfone / Polycarbonate).
- (2) suction tubing of silicone tubing with coupling connection

**Accessories**

- 10X bacterial filter
- Imported Trolley

**Optional:**

- Foot vacuum regulator
- Autoclave able silicon cups of following size. Quantities to be defined by the end-user.
  - 50 mm, 60 mm and 70 mm
<table>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Generic Name</strong></td>
<td>Patient Examination Chair</td>
</tr>
<tr>
<td><strong>Clinical Purpose</strong></td>
<td>For the purpose of patient diagnostic and treatment</td>
</tr>
</tbody>
</table>

**TECHNICAL SPECIFICATIONS**

- Electrical movements UP/DOWN, backrest and leg rest.
- Chair capability to have relaxing and protecting sitting position
- Seat movement is self-balanced with backrest, chair can be settled as horizontal position
- Metal basin for liquids placed under the seat
- Paper roll support at back side of the chair
- Soft padded revolving and removable armrest
- Adjustable head rest
- Lifting Capacity: 160 kg
<table>
<thead>
<tr>
<th>Clinical Specialty</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Generic Name</td>
<td><strong>Doctor Stool</strong></td>
</tr>
<tr>
<td>Clinical Purpose</td>
<td>To be used by the doctor to use the colposcope and to examine and treat the patient</td>
</tr>
</tbody>
</table>

**TECHNICAL SPECIFICATIONS**

- Shape: circular,
- Size: Approx. 38 x 8 cm
- Structure should be made of nonmagnetic steel
- Smooth 360° rotation.
- Poly urethane seat surface.
- Bottom ring for footrest
- Smooth movements through five castors.
- Hydraulically Operated Doctor Stool
- Soft padded revolving and removable armrest
- Lifting Capacity: 160 kg
<table>
<thead>
<tr>
<th>Clinical Specialty</th>
<th>Gynecology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generic Name</td>
<td><em>Diagnostic And Operating Laproscope</em></td>
</tr>
<tr>
<td>Clinical Purpose</td>
<td>Laparoscope is used for the surgical procedure in which fine instruments are inserted through abdominal wall to view the organs in the abdomen or permit small scale surgery.</td>
</tr>
</tbody>
</table>

**TECHNICAL SPECIFICATIONS**

The laparoscope and all allied components of these specifications shall be provided with full HD minimum of 1920 x 1080 pixels

**Telescope**

- Diameter 10 mm, 0° working length 290-310 mm.
- 10 mm straight, 30° view working length 290-310 mm.
- 5 mm straight forward “0” degree.
- 5 mm forward oblique “30” degree (For view of in-depth corners)

**Camera Full HD**

- Camera control unit and video camera Head, Pal system.
- Resolution 1920 x 1080 pixels
- Power supply 100-240 VAC 50 Hz

**Monitor**

Medical graded Full HD LCD/LED 26 inch from the same manufacturer.

**Imported Trolley 5 shelves**

**Light Source**

300 watt Xenon / LED with all standard accessories, (The replacements of lamps shall be the responsibility of supplying firm during warranty period)

Light guide cable, diameter 6mm or more, Length minimum 200 to 300 cm

**Electronic CO2 insufflator**

40-50 liter/min, complete in all respect with all standard accessories.

Clip applicators.

Trocar with trocar sleeve 10mm Approx.

Trocar with trocar sleeve 5mm Approx.

High flow veress needle.

Suction Irrigation System complete in all respects with all standard accessories.

Reducing sleeve.

Integrated / separate medical graded video recorder with storage capacity of 500 GB or more.

**Standard Accessories:** (Following accessories are of for complete system however end user may avail among these as per their need and expertise)

(i) Compatible electro surgical unit with complete accessories in all aspects

(ii) Online 2KVA UPS with 120 min backup to be provided locally.

(iii) CO2 Cylinder 240CFT with complete accessories (to be supplied locally) certified by respective agency.

(iv) Imported storage boxes for instruments and optics.

(v) Imported disinfection boxes.
(vi) Standard cleaning set as per manufacturer recommendations for cleaning of tubular shafts and other instruments.
(vii) Diathermy leads Autoclaveable.
(viii) Bipolar forceps and lead.
(ix) Uterine Manipulator/elevator (self-retaining)
(x) Ligasure (depending on user need and expertise)
   a) Ligasure with paddle and compatible UPS
   b) Ligasure hand piece / forceps and lead
   c) Trolley (three shelves) for ligasure

**LIST OF INSTRUMENTS REQUIRED**

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

(xi) **Hasson Cone:**
    Trocar size 10/11 mm (with color code) with cannula & multifunction valve, length 10.5 cm, pyramidal tip & conical tip one.

(xii) Trocar size 5/6 mm (with color code) cannula & multifunction valve length 6cm, conical tip & 8.5 cm pyramidal tip.

(xiii) Reduction sleeve 11/5 mm (Compatible).

(xiv) Veresspneumo peritoneum needle with spring loaded blunt sty let with leur lock 7cm and 13cm.

(xv) Maryland dissecting forceps slightly curved with Cannula pin for unipolar coagdia 5mm, length 30-36 cm, insulated, relatable.

(xvi) Dissecting forceps insulated rotatable needle nose.

(xvii) Reddick-Olsen dissecting and grasping Forceps, heavy.

(xviii) Dissecting and Grasping forceps, alligator jaws with connector pin for unipolar coagulation, size 5mm. (rotatable, straight)

(xix) Dissecting and Grasping Forceps, (Kelly’s) with connector pin for unipolar coagulation, size 5mm. length 30-36 cm length, double action jaw.

(xx) Dissecting and grasping forceps, (Kelly’s) with connector pin for unipolar coagulation, size 5mm36 cm length, double action jaw grasping forceps with teeth with connector pin for unipolar coagulation, size 5mm double action jaw with ratchet.

(xxii) Multifunction grasping forceps, 1x2 teeth with connector pin for unipolar coagulation, size 5mm

(xxii) Bowel grasping forceps, two rows of traumatic teeth without connector pin for unipolar coagulation, size 5/10mm.

(xxiii) Bowel grasping Forceps With connector pin for unipolar coagulation, size 5/10mm.

(xxiv) Babcock Grasping Forceps rotating, dismantling with connector pin for unipolar coagulation, size 5/10mm. (with ratchet).

(xxv) Babcock Grasping Forceps rounded without connector pin for unipolar coagulation, size 5/10mm.

(xxvi) Claw forceps, single/double/action jaw, with teeth, size 5/10mm, length 33-36, 01short, rotating consisting of metal handle with ratchet, outer tube, insulated, forceps insert.

(xxvii) Clip applicator (medium large) & medium, rotating, ratchet with clips.

(xxviii) Tenaculum forceps, rotating, size 5/10 mm, length 33-36 cm, and metal handle with ratchet, outer tube, insulated, and forceps insert.

(xxix) Metzenbaum scissors, curved rotating, with connector pin for unipolar coagulation, size 5 mm, length 33-36 cm insulated handle, outer tube, insulated.
(xxx) Curved/angled scissors, rotating, size 5mm, length 33-36cm: insulated handle, outer tube, insulated.

(xxxi) Micro scissors curved 5mm, insulated with diathermy.

(xxxii) Hook scissors single action jaws, size 5 mm, length 33-36 cm: insulated handle, outer tube, insulated, insert.

(xxxiii) Scissor straight 5mm insulated with diathermy.

(xxiv) L Shaped dissecting electrode /diathermy size 5mm, insulated, length 33-36 cm (L-hook dissector).

(xxv) Coagulating and dissecting electrode, spatula-shaped, blunt with connector pin for unipolar coagulation, size 5 mm, working length 33-36cm.

(xxvi) (Injection) Aspiration needle 5mm.

(xxvii) Biopsy forceps insulated (5mm).

(xxviii) Bipolar diathermy electrode.

(xxix) Uterine cannula, with 2 cones, large and small spring-loaded fixation for forceps with luer-lock adaptor for cleaning.

(xl) Uterine tenaculum forceps, length 22cm.

(xli) Suction and coagulation cannula, 3mm, with connector pin for unipolar coagulation, 30cm.

(xlii) Dissecting electrode l and j shaped.

(xliii) Needle holder 5 mm

(xliv) Needle grasper 5 mm

(xlv) Crocodile forceps

(xlvi) 5mm port for specimen removal

(xlvii) Thread manipulator 5 mm

(xlviii) Retractor 10 mm (3 blade)

(xlix) Knot pusher

(l) Endo bag

(li) LAVH vaginal tube

(lii) LAVH vaginal ball

(liii) Myomectomy screw

(liv) Dye cannula

(lv) LOD needle with monopolar lead

(lvi) Bipolar forceps

**Optional**
- Harmonic scalpel (Generic specs to be define by the end-user)
Clinical Specialty | Obstetrics and Gynecology
---|---
Generic Name | Morcellator
Clinical Purpose | A morcellator is a surgical instrument used for division and removal of large masses of tissues during laparoscopic surgery.

**TECHNICAL SPECIFICATIONS**

Control Unit
- Speed from 50-1000 Rpm
- Variable speed modes
- Continuously controllable by paddle
- Systems with all attachments and standard accessories.
Clinical Specialty | Obstetrics and Gynecology
---|---
Generic Name | Diagnostic and Operative Hysteroscope
Clinical Purpose | Hysteroscopy is used to look inside the uterus in order to diagnose and treat causes of abnormal bleeding. Hysteroscopy is done using a hysteroscopy, a thin lighted tube that is inserted into the vagina to examine the cervix and inside of the uterus.

TECHNICAL SPECIFICATIONS

**Telescope**
Diameter 5mm or better with fore oblique vision of $0^\circ$
Diameter 5mm or better with fore oblique vision of $30^\circ$
Outer sheath
Inner Sheath

**Cold Light source**
300 watts xenon/LED light source.
In case of halogen lamps firm shall provide the standby.
Compatible Suction irrigation unit with complete accessories
Video system with 26”Medical Graded Monitor
Endoscope HD video camera 3 chip/CMOS
Electrosurgical unit (As per specifications defined in Operation theatre PVMS)
Hystroflator for hysteroscopy, Specifications to be defined by the end-user.

**Accessories:**
- Scissors 5fr
- Graspers 5fr
- Loop electrode
- Needle electrode
- Hook electrode
- Instrument Tray
- Light Guide Cable
- Imported Trolley (4 shelves )

**Optional**
- Further Surgical instruments for the hysteroscopy may be defined by the end-user.
- **Myosure (Hysteroscopic Morcellator)**
  - Shavers (blades of different sizes)
  - Shaver system with leads and paddle
  - Trochar and cannula

* End user may avail diagnostic /operative hysteroscope as per their need and expertise
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</thead>
<tbody>
<tr>
<td>Generic Name</td>
<td>Resectoscope for Gynecology</td>
</tr>
<tr>
<td>Clinical Purpose</td>
<td>A Resectoscope is a type of endoscope used in surgeries of the uterus, prostate, bladder, or urethra. The device may be used to extract tissue for biopsy, remove growths, or ablate diseased or damaged tissue</td>
</tr>
</tbody>
</table>

**TECHNICAL SPECIFICATIONS**

- Telescope 30degree, Approx. 4mm, autoclaveable length 30cm
- Obturator
- Outer Sheath
- Inner Sheath
- Hand piece
- Guide wire
- Cannula for dye injection in fallopian tube
- Bipolar diathermy hook
- Loops of different sizes for resection
- Suction Irrigation unit
- Irrigation tubing
- Sucker tubing
- Light Source (xenon/LED)
<table>
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</thead>
<tbody>
<tr>
<td>Generic Name</td>
<td>Simulators</td>
</tr>
<tr>
<td>Clinical Purpose</td>
<td>Teaching Aid. The clinical simulators will be used in Skill lab of any teaching hospital.</td>
</tr>
</tbody>
</table>

**TECHNICAL SPECIFICATIONS**

1. Birthing Simulator  
2. CPR Model  
3. Laparoscope Simulator  
4. Neonate intubation training model  
5. Breast Examination Simulator  
6. Gynecological Examination Model

**Note:**  
The generalized specifications of Simulators to be prepared by the end-user. The end-user shall certify the generalization of specifications and get it approved from the concerned committee and competent authority before the process of procurement.
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</thead>
<tbody>
<tr>
<td>Generic Name</td>
<td><strong>Entonox Apparatus With Cylinder</strong></td>
</tr>
<tr>
<td>Clinical Purpose</td>
<td>Cardiotocography (CTG) Machine is used for the recording of the fetal heart beat and uterine contractions during pregnancy</td>
</tr>
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</table>

**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:**
- ENTONOX cylinder and trolley with wheels.
- ENTONOX cylinders.
- Demand Valve.
- Filters
- Cylinder key
- Face mask etc.

Attested by Linde/ equivalent