ECG/ETCO2 Monitor

1. Monitor should be completely modular with min 19” color capacitive LCD TFT display and Navigation through touch screen and knob both should be present.

2. Monitor should display ECG, SPO2, NIBP, Resp. 2 Temp, 4 IBP,& Sidestream/Microstream EtCO2 as standard feature

3. Monitor should have Transport monitor cum module facility for monitor of ECG , SPO2, NIBP, 4 IBP , 2X Temp with each monitor

4. Monitor should be upgradable with Cardiac output, PiCCO, BIS, NMT, AGM, EEGX4, ScVO2, & RM through External plug and play module. The monitor should be able to display at least 5 of these parameters simultaneously. Price should be quoted of each module separately

5. Monitor should have capability of simultaneously monitoring of Min 12 channel of waveform.

6. Monitor should be IT enabled for access to charting system. (HL7 compliant)

7. Parameter description should be as below

A. ECG - ECG: 3/5lead ECG;12-lead ECG data can be measured by standard lead placement - HR:15-350/min or broader,±1% or ±1 - pacer detector: sync with the pacing signal - ST analysis , QT analysis and arrhythmia analysis

B. Spo2 - Should be supplied with masimo SET technology with respective sensors. - Should display digital value and plethysmography

C. NIBP - By oscillometric principal of measurement with step wise deflation - Suitable for adult, pediatric, neonatal patients. - Should display systolic, diastolic, mean pressure in large easy to read display. - Should have manual/stat mode or automatic mode - Adjustable time intervals from 2-240 Minutes and adjustable alarm limits.

D. IBPs – simultaneous monitoring of 4 IBP's should be standard – - Range: max to 400 mmHg.

E. Temperature – two temperature one core and second skin simultaneous monitoring - Range Max to 50 deg C

F. EtCO2 – should be through Microstream/Sidestream method

8. Monitor should have non-volatile graphic and tabular trending of all monitored parameters as standard for minimum 120 hrs.

9. Monitor should have facility to record of 48 ECG full disclosure

10. Monitor should be ready for interface with select model of equipment like anesthesia machine, ventilators, Syringe pump of reputed companies displaying ventilation parameters, trend, waveforms & loops.

11. Monitor should have battery back up for 120 min

12. System should have facility of Remote viewing of data of each monitor on Mobile / Laptop/ Desktop without using any special server.

13. Monitor should have US FDA or European CE approved. Certificate must be enclosed

14. Six Central Stations:

a. 22 inch touch screen display

b. Minimum 16 beds view to be provided in each station

c. UPS with 15min backup

d. Dual display option (based on number of monitors to be connected)

e. Networking cost to be included

15. Scope of supply :

a. 5 Lead ECG Cable – 2 no with Each Monitor

b. Adult spo2 sensor with intermittent cable – 02 no with each

c. Pead Spo2 sensor with intermittent cable – 01 no with each

d. Adult & Pead NIBP cuff - 05 no with each

e. Skin & Rectal Temp probe – 01 no each

f. EtCO2 Water trap – 10 no with each

g. Sample Line – 10 no with each

h. IBP Intermittent cable – 02 no with each

i. IBP Disposable transducer – 10 no with each

j. Wall Mount – 01 no with each

ICU-Ventilator – neonatal & Child

1.Premature Neonates patients.

2. Should have facility for Invasive and Non-Invasive ventilation

3. Microprocessor controlled system with individual selection of various ventilation parameters & PEEP.

4. 12" inch size full colour, total touvh screen operation for big display to access from long distance.

5. Machine should be Compressed air (medical oil free air compressor of the same brand as ventilator).

6. Should have battery backup at least 30min.

7. It should allow the user to deliver conventional ventilation as well as HFOV.

8. Should have the following modes of ventilation:

- Assist/ Control
- Volume control
- Pressure control
- Pressure support
- SIMV with pressure support (Pressure and volume control)
- PEEP
- Inverse ratio Ventilation
- Non-invasive ventilation-BIPAP, CPAP and Nasal C PAP
- Apnea ventilation, user selectable, volume & pressure control
- HFOV.

9. Should have facility to measure and display of the following parameters:

- Airway Pressure (Peak & Mean)
- Tidal volume (Inspired & Expired)
- Minute volume (Inspired & Expired)
- Respiratory mechanics
- Spontaneous Minute Volume
- Total Frequency
- FiO2
- PEEP
- Plateau Pressure

- Use selector Alarms for all measured & monitored parameters
- Occlusion Pressure
- Pressure Flow & Volume curves

10. Automatic compliance and leakage compensation for circuit.

11. Conventional ventilation& HFO Ventilation Mode Parameters:

- BPM: 4to150
- Inspiratory Time: 0.1 to 3.0 sec
- CPAP Pressure: 0 to 35 mbar
- Inspiratory Pressure: 0 to 60 mbar
- FIO2: 21% to 100%
- Tidal Volume 2-300 ml with Volume Guarantee
- HFO Mode Parameters:
- HFO Frequency should be wide range with 3 to 20 Hz i. MAP-0-45M Bar
- I: E Ratio: 1:10 to 4:1, MAP-5-40m CmH2O, Delta P- 0-100 CmH2O, RR-4 to 150 bpm, Ti-0.1-5 sec, P-0-60m Bar.

12. Alarm No change a. Alarm :-

- Adjustable Alarm. - Low/high minute volume, low/high pressure, low/high tidal volume, low/high rate, apnea time, low/high oxygen
- Special alarm - O2 cell Failure, flow sensor, battery, power supply, gas supply, oxygen concentration,

13. Should have inbuild Nebulization assembly facility.

14. Ventilator, Compressor & Humidifier should be Same Trolley/cart mounting for easy transportation.

15. Humidifier

- Servo controlled heated Respiratory Humidifier. No change
- Display Should be of LED /LCD.
- Temperature control settings & Temperature range: 28-40 deg.
- Temperature should be adjustable.
- Jar should be autoclavable

16. Standard Accessories/spare & Consumable.

- Silicon breathing circuit circuit (Neonatal reusable) - 5 complete set.
- Nebulization assembly compatible circuit 5 complete set.

- Humidifier - 1 No.
- Hose for O2 connection with connector - 5 mts.
- Hose for compressed air with connector - 5 mts.
- Test lung - 1 No.
- g.HME filter – 10 no
- Inbuilt / integrated nebulizer-1 N0
- All sensors and other non-consumable items (other than reusable silicon ventilator circuits) should be free of cost during warranty and CMC.

17. Ventilator, Humidifier & Compressor Power Supply input to be 200- 240VAC, 50 Hz fitted with Indian conditions plug .

18. Suitable online UPS with commensurate capacity for all ventilators including compressor & Humidifier with maintenance free batteries for minimum Two hours back-up should be supplied.

Ventilator, Humidifier & Compressor Should be US FDA (510 K) approved Model should be offered. No change

1) Reusable consumables (other than reusable silicon ventilator circuits) should last during the warranty period. No change

2) Ventilator & Humidifier any additional reusable consumables are required during the warranty period those will be supplied free of charge by the supplier. No change

3) The life expectancy of the reusable consumable is expected to be of at least one year from the date of installation of the same. The reusable consumables will be procured at the prices accepted as per the contract.

Portable ultrasound with multiple probes including ECHO probe (including probes for pediatric/ infant evaluation)

General description:

Portable ultrasound with colour Doppler system should be compact, lightweight, easily portable, handy, sturdy and resistant to break & damage; with ability to perform general ultrasonography, high resolution ultrasonography, color Doppler imaging, intraoperative sonography; and be usable for anaesthesia, musculoskeletal, vascular, interventional, cardiac, transcranial Doppler, and point of care needs, and should he DICOM 3.0 compatible.

Specifications:

1) It should be suitable for vascular access (CVC placement, PICC), nerve blocks (lower as well as upper extremity), E-FAST examination, AAA Exam, small parts, applications in adults and paediatric patients and also suitable for echocardiography & interventions. Multiple preloaded applications presets should be available for the above.

2) The unit must have real time compound imaging for improved contrast resolution & eliminating ultrasound artifacts to achieve optimum image quality.

3) The unit must have automatic gain adjustment for B mode imaging

4) Scanning depth must be available up to 30 cm.

5) System should support transducer technologies like convex, linear and phased array.

6) Imaging modes of real time 2D, color Doppler, Pulsed wave Doppler, Continuous wave Doppler and Power Doppler must be available in all probes.

7) Simultaneous connectivity of at least 2 probes.

8) System must have fast start up to scanning in less than 60 seconds as essential in critical and emergency situation in ICU, emergency & OT.

9) Cine memory on all modes

10) DICOM ready system with facility to print along with printer, store, ready to connect to PACS

11) Flat LCD/TFT monitor of at least 10” with flicker free image

12) Alphanumeric soft keys keyboard with easy access scans controls, facility to sanitize the system keyboard to avoid cross contamination must be available

13) Onboard storage of at least 30,000 images, USB port for connectivity to computer and transferring images onto removable media.

14) Should be able to operate both on AC and battery. Battery pack should be self-recharging and should last at least for 2 hours when fully charged.

15) Transducers to be provide as standard.

a) High frequency linear transducer 6-12 MHz with 60mm size for vascular access, small parts, vascular, musculoskeletal, interscalene, Supraclavicular, Axillary, Musculocutaneus, Popliteal, Saphenous.

b) Convex transducer 2-5 MHz for deep nerve access specially Celiac, Sciatic nerve, Epidural, Subgluteal & abdominal applications.

c) Broad band phased array transducer, 1-5 MHz for accessing the cardiac function & other related application.

d) Intracavitatory probe with TRUS biopsy set with 20 compatible needle sets.

16) System should be supplied with trolley.

17) Valid US FDA/CE(European)/BIS certification

19) Onsite maintenance

21) Undertaking that parts shall be available for 10 years from date of hand-over

22) B/w Thermal Printer of latest model.

23) Colour inkjet/laser printer for direct printing of Images from the system.

24) (A) Please attach the original manufacture's product catalog and specification sheets, photocopy or computer printed will not be accepted.

25) (B) All information in the tender document must be supported with product data sheet. All information asked for must be provided in the same order as in the specification Incomplete and ambiguous information will not be accepted.

26) For all equipment Accessories, spares and available consumables of the equipment should be given.

Resuscitation cart - 1 for ICU and 1 for red area

Specifications:

- The trauma care crash cart should have 18g stainless steel (SS 304) tubular/Rectangular frame work. Two lockable plastic box units with 3 drawers should measure 305mm l x

380mm d x 320mm h.

- The trauma care crash cart should have following facilities: 6 nos. hand out bins to keep important supplies easily accessible of size approx. 110 mm W x 125 mm D x 75mm H. light weight plastic box with three drawers each to hold emergency medicines, Ambu. Bags, IV solutions, catheters.
- The trauma care crash cart should have facility to carry monitors, ECG, suction apparatus on open areas at top centre and bottom shelves
- The trauma care crash cart should have stainless steel saline rod made of 12 mm dia. 304 grade s.s. approx. 750 mm long and bent at top to have an arm of 400 mm approx. at the end of which of 6 mm dia. s.s. hook shall be welded with tig.
- The trauma care crash cart should have 12.5 cms dia non-rusting swivelling castor wheels. Two having locking arrangement.
- The trauma care crash cart should have pull out cardiac massage board made of plywood. The trauma care crash cart should have oxygen cylinder stand epoxy powder coated, on one side.

Certificates: Should have notified body CE/BIS/USFDA certification.

Point-of-care laboratory for quantitative estimation of cardiac enzymes, ABG and electrolytes

Technical specifications

1. Fully automatic, upgradeable, fast electrolyte & Blood gas analyzer.

2. Essential Measured parameters; pH, pCO2, pO2, SpO2 with CO-oximetry, tHb, Lactate, glucose, Na+, K+, Ca++, Cl- . Measurement of Mg++ preferable. All these parameters should be measured simultaneously.

3. Calculated parameters should include BE, BE ecf, HCO3, Anion Gap etc.

4. Sample volume-less than 150 micro litre.

5. Fast analysis time –less than 60 sec.

6. Maintenance free electrodes with individual electrodes ON/OFF facility.

7. Fully automatic liquid calibration of all parameters at user-defined intervals.

8. Continuous reagent level monitoring with graphic display.

9. Data display on well-illuminated, adequate size screen display.

10. Data print out on built in thermal printer

11. Built in auto Quality control facility.

12. Suitable UPS with at least 60 min backup.

13. Consumables including printer paper for one year (considering usage of appx. 20 samples/day) to be provided with the machine.

14. Cost of Reagents/consumables/accessories to be quoted for comparative evaluation.

15. Stand by blood gas cum electrolyte analyzer in case of breakdown.

16. Should have local service facility

17. Guarantee to supply spares & consumables for life of the equipment (10 years)

19. Compact, sturdy, easy to clean stand should be provided with the machine (preferably of same company)

18. UF-FDA & European CE (Conformité Européenne) approved.

Manikins for Skin Suturing

1. Soft skin allowing wound stitching multiple times

2. Scope of new wound creation and suturing

3. Light and compact

4. Transparent to allow the trainer to observe and access trainee competence

5. Magnetic system to represent tissue strength

6. Parallel knotting tubes should be elastic for a realistic tissue response

7. Latex free

8. 2 perioperative openings represented by: Small, shallow fixed cylinder for tying in a small opening

9. Large, deep removable cylinder, reversible for angled abdominal and gynecological depth tying

10. Skills to be gained: One-handed reef knot technique, Instrument tie, Surgeon's knot slip knot, tying in a small opening, tying at depth vertically in a large opening, Tying at depth, at an angle, in a large opening

11. It should be ISO certified.

ACLS Manikin Paediatric & Adult

1. Paediatric full body training manikin with anatomically correct landmarks and sternal notch.

2. Realistic size, weight and feel

3. Provision for upgradation to new guidelines

4. Airway and breathing features:

a. Anatomically accurate airways - oral and nasal passages

b. Bilateral Lungs

c. Allow mouth-to-mouth, mouth to mask and bag-valve-mask breathing

d. Allow insertion of oropharyngeal and nasopharyngeal airways

e. Allow insertion of supraglottic airway devices and endotracheal tube

f. Simulate airway occlusion which is relieved by jaw thrust, head tilt and chin lift

g. Realistic chest rises during ventilation

5. Carotid, brachial and femoral pulse locations with pulse synchronous with simulated ECG

6. ECG and arrhythmia simulation

a. Electrode placement areas for 4 lead monitoring

b. ECG rhythm generator with ECG rhythms including: V. fib, V. tach (fast, slow and polymorphic), A. fib, A. flutter, SVT, Sinus tach, Sinus with PVCs, Asystole, NSR, Junctional brady, Sinus brady, 2nd degree type I A-V block, 2nd degree type II A-V block, 2nd degree type II A-V block with PVCs, 3rd degree A-V block, PEA.

c. Adjustable heart rate

d. Remote control

e. Capable of teaching AED and manual defibrillation with simulated aed monitor.

f. Compatible with all standard brands and types of defibrillators and monitors.

7. Intraosseous leg

8. Compatible laptop and interface cables

a. 14 inches or more screen size

b. Motherboard with Intel i5 or better

c. 4 GB RAM d. 80 GB or more HDD

e. Microsoft Windows 7 OS or better

f. Appropriate software to connect the manikin to the laptop provided

i. Should be upgradable to changes according to latest/new ACLS guidelines.

ii. Performance feedback iii. Event log iv. Performance report for debriefing 9. Accessories

a. Face shields and lung bags: 50 each

b. Carrying bag Patient Monitor

The monitor’s color screen should be configurable and should provide multiple simulated parameters, each presenting multi-level alarms.

Simulated parameters should include HR, ECG, SpO2, BP, RR, Temperature, and etCO2

The System Must have a CE certificate

Adult Airway Management Trainer Adult & Pediatric

1. It should be a Adult upper torso with Tongue and teeth

2. It should be able to teach following Intubation Procedures

3. Tracheal (oral and nasal)

4. Esophageal

5. The Airway Management Trainer shall be an airway training manikin mounted on practice board.

6. It must be able to provide realistic and complete training in all intubation procedures tracheal-oral and nasal and the use of the Laryngeal Mask Airway and Combitube.

7. It should provide realistic anatomy, nostrils, Lips, teeth, tongue, pharynx-oral and nasal, larynx with glottis opneing, vallecula, arytenolids, vocal cords, sub glottis cricold ring, trachea, including carina lunga, esophagus and stomach.

8. It should be able to provide realistic complications as, laryngospasm, vomiting, and with excessive laryngoscope pressure on teeth will produce and audio signal.

9. It should be able to provide realistic checking for proper tube placement with visual inspection of lung expansion during ventilations, and auscultation of breathing sounds.

10. It should be able to establish and maintain an open airway by head tilt, chin lift, neck lift and jaw thrust.

11. It should permit realistic practice in lung ventilation, also with the use of Bag Mask Ventilation.

12. It should be supplied with separate model for demonstration airway anatomy.

13. It must be able to provide the possibilities for practical training in clearing the obstructed airway by suctioning liquid foreign mater from, oral cavity, oro- or naso pharynx, oro- or naso trachea, via endotracheal tube. Gastric drainage may also be practiced.

14. It should be provide practice of cricothyroidotomy & emergency tracheostomy.

15. It should be supplied with a sturdy carrying case, directions for use, sanitation kit, lubrication spray and a container of simulated stomach contents.

16. Demonstration at AIIMS Manufacturer must conforms to the International Quality Certification i.e. (FDA certificate)/ CE must be provided.

Basic Life Support (BLS) Adult & Pediatric

Technical Specification

- This manikin should focus on complete BLS training, where students learn quality CPR with real-time feedback from the manikin, BLS Protocol.
- The training system should have facility to get connected to a hand held control device for real-time CPR performance feedback with ventilation and compression as per AHA 2015 guidelines.
- The training system should allow further AHA and European resuscitation council guidelines to improve feedback with quality.

Features:

1. The manikin should be a full body adult CPR training manikin with anatomically correct landmarks and sternal notch allow the students to practice identification of all anatomical landmarks relevant to adult CPR.

2. Realistic resistances of chest compression allows the students to experience the amount of pressure needed to perform proper chest compression in a real life situation like.

3. The manikin should stimulate natural obstruction of the airway allows students to learn the important technique of opening the airway according to ILCOR guidelines. Occluded airway with hyperextension stresses proper head position.

4. Head tilt/chin lift and jaw thrust allows students to correctly practice airway manoeuvres necessary when resuscitating a real victim.

5. Ventilation of the manikin must be possible through the following procedures:

• Mouth to Mouth

• Mouth to Nose

• Mask to mouth (Both Pocket Mask and Bag-Valve Mask(BVM))

6. The manikin must show a realistic chest rise during ventilation. The manikin should have disposable airways and easily removable face skin to avoid cross contamination.

7. The feedback system should be wireless and a graphical user interface. Feedback should compile following features: ¾ Compression Depth ¾ Compression release (recoil) ¾ Compression frequency/score. ¾ Ventilation tidal volume/score ¾ Ventilation frequency/score. ¾ Correct hand placement. ¾ Session time.

8. Adjustable limits/thresholds for compression and ventilation (default set to Guidelines G2015)

9. Simple to use software for PC that measures the quality of CPR, providing real-time and summative feedback on compression rate, depth, release, hands-off time and other critical components of high quality CPR as defined in the American Heart Association Consensus Statement.

Trolleys/Fowler beds

Specifications

- Overall approx size 2090 mm L X 910 mm W X 610 mm H, Bed Frame size-1980 mm L X 910 mm W, with height adjustment.
- The main frame should be made from 60 x 30 x18 G ERW rectangle tubes.
- Two sections top should be made From18G CRCA sheet uniformly perforated.
- The backrest should be maneuvered by crank mechanism smoothly operated with trust bearing.
- The bows should be made of approximately 31.75mm OD x 18g ERW tube with head bow of 106cm H and leg Bow 81cm H.
- Both head and leg bow should have one.
- Tubular horizontal support approx.. 25mm dia x 18G ERW tube and three vertical supports of approx. 15.80mm dia X 18G ERW tubes.
- Bows should be provided with PVC shoes with nylon reinforcement molded to the bows in such a way that bolt or nut should not appear on top surface of the bed frame.
- Four IV Rod locations & one SS telescopic Saline rod with 12mm dia.to be provided supplied in KDC. 4 A Mattress suitable for the bed made of high density UP foam of 100 mm thickness covered with good quality rexine to be provided.

FINISH:- All components shall be thoroughly pre-treated chemically to remove rust and foreign matter like grease, oil etc by dip tank processes including separate degreasing, De-rusting, phosphating each followed by water rinsing & hot air drying to give phosphate coating conforming IS 3618-1966 class ‘C’. The treated metal

surface should then be coated with epoxy powder with paint film thickness of 60 microns and over baked at 180.

- Backrest should be at least 45% of the total top section length.
- Load bearing capacity should be 135kg.
- Food table should be along with cot with following dimension 560mm L x 400 mm W x 280 mm H made from SS 304 grade pressed on edges and maintained on folding legs of S.S.
- Backrest Section maneuvered by crank mechanism from foot end. Provision for location I.V. Rod
- Mattress For Bed Size : As Per Bed (4" Thick, 32 Density, Pu Foam) Standard

Certificates: Notified body CE/BIS/USFDA and ISO 13485

Spine boards with slings and scotch tape of all sizes

Specifications

- Product Size: 1840L x 450W x 55H mm.
- New Weight : 7.4kg
- Gross Weight: 9kg
- Load Bearing: Not more than 155kg.

Description:

- Spine board with safety belts is made of PE material with no discharge contaminator, and firmness to wear.
- Plastic spine board can be used as a floatable device also.
- The structure is allowed X-rays because of its completely translucent.
- It is compatible with most head immobilization devices and strap mechanisms.

Certificates: Notified body CE/BIS/USFDA and ISO 13485

Emergency Stretcher Trolley

Specifications

- Patient Stretcher Trolley Overall Size: 1905mm L x 710mm W x 660mm To 910 mm H.
- Stretcher dimension 1830 mm L x 555 mm W.
- Two section top.
- Height adjusted by foot operated maintenance free hydraulic pump.
- Height adjustment shall be obtained by hydraulically operated mono block type linear actuator pump foot operated actuation having stroke of 140 +/- 5 mm, push force 10 KN at 270 bars, number of complete pump stroke 22 to 24 for full stroke length.
- X-ray permeable removable stretcher, Backrest raised on ratchet.
- Quick Trendelenburg as well as reverse Trendelenburg positions shall be provided with easily accessible operating handle provided with two gas springs for easy action.
- S.S. saline rod with 12 mm dia S.S. rod shall telescope in SS socket tube approx. 15.8 mm dia x 18G welded on angular base bracket of 14G SS sheet.
- Nylon bracket provided to prevent colour damage.
- It could be placed at four different locations.
- Complete with sliding X-ray cassette holder, storage tray.
- Trolley shall be mounted on 125 mm dia non-rusting imported castor wheels two with brakes and two without.
- Castor housing and wheels made from high grade non floor-staining synthetic materials with integrated thread guards.
- Wheel centre having precision ball bearing to run smoothly.
- Complete with corner buffers, one on each corner.
- Covered handles.
- Oxygen cylinder arrangement.

- It shall have a pair of Stainless steel tuck down type railings made of 19 mm dia x 18G tube fitted with M.S. brackets.
- Effective railing height above main frame is approx. 235 mm & length of the railing is 1175 mm.
- All MS parts and 8 tank Pre-treated & powder coated & SS parts finished with Matt polish.
- Mattress should be provided with size 2 inch thickness PU foam which can be fixed to the trolley by Valero similar mechanism.

Certifications: BIS/notified CE/USFDA and ISO: 13485

ICU beds (should have facilities for propping up the patient along with railings and wheels)

pecifications

- Over all Size: Aprox 2120mm L x 1020 mm W x 450 mm To 770 mm H (Without Mattress). Bed frame size 2070mmL x 960 mm W Four section ABS detachable top.
- Bed should be electrically operated: Remote control or Integrated panel for easy to operate various positions like height, back, foot movement etc. by touching single fold protection button.
- It should have CPR button for emergency override to return the backrest to flat position quickly and instantly.
- Battery backup with inbuilt battery charger should be provided.
- The hand control box and the nurse hand control should have indications for power on and the battery charge.
- Degree indicator required for backrest, upper leg elevation &Trendelenburg / Reverse trendelenburge positions.
- All electro mechanical actuators needs to be compatible with class of IP 54.
- Backrest and upper leg section should retract as they are individually and simultaneously raised.
- Bed frame should be mainly made from 50 x 25 mm x 2 mm thick ERW tube with proper support.
- This frame should be fitted on the base mainly made of dia 80 x 1.6 mm ERW tubes with supportive C channel of thickness 2mm on various supporting links.
- The base frame should be mounted on 125mm dia non-rusting castor wheels with central and directional locking mechanism and pedal operated at the foot end of the bed.
- The bed should have easily detachable moulded head & foot side panels and four corner buffers.
- Bed should have split type swing down railings, 2 nos on each side made from non-rusting moulded material.
- There should be two locations on the head side of a bed to hold one stainless steel Saline rod 12 mm dia with 31.7mm dia, 18 g stainless steel outer covering tube holder with a knob to fix syringe pump holders.

- Quick manual backrest release system with operating lever on both side of top frame.
- Bed should have radio transluecent top(X-Ray transluecent back section), Radioluecent mattress and X-Ray cassette holder.
- All mild steel components should be thoroughly in-house pretreated chemically to remove rust, grease, oil, etc. by dip tank processes, including separate degrasing, pickling, phosphating each followed by water rinsing passivating and hot air drying to give phosphate coating.
- The treated metal surface should then be coated in-house with epoxy polyester powder with paint film thickness of 60 microns (minimum) and oven baked at 180 deg.
- To 200 deg. Centigrade. All Stainless Steel used should be of 304 grade

Certificates: Notified body CE/BIS/USFDA and ISO 13485

Labor cot

Technical Specifications

Delivery Bed Should have following essential specifications:

i. Height adjusted by imported hydraulic pump.Backrest adjustable on screw mechanism

ii. It should have collapsible side rails

iii. It should have three sectional mattress and seat section should have large perineal cut.

iv. Removable SS head and leg bows with laminated panels.

v. Should have wheels provided with locking system.

vi. Should have retractable foot section (section can be telescoped under)so as to convert bed into table.

vii. Should have infusion rods which have adjustable heights, quick release and attaches to all corners of bed.

viii. Should have adjustable leg rests available as an accessory.

ix. Should have push grip handles

x. Should have rectangular sliding stainless steel tray at perineal part of table.

xi. It should have catheter bag holder which can be attached on either side of bed.

xii. It should be able to give trendelenburg, reverse trendelburg and 70 degree sitting position both mechanically and electronically.

xiii. It should have adjustable foot supports for nursing staff

xiv. It should be easy to clean, sterilize (especially blood stains) and maintain.

xv. Frame should be of epoxy powder coated steel

xvi. Overall approx size: 2070 mm (L) x 850 mm (W) x 550 mm to 850 mm (H). Three section top.

- Power input to be 220-240VAC, 50Hz fitted with Indian plug
- UPS of suitable rating with voltage regulation and spike protection for 60 minutes back up.
- Should be European CE or US FDA. certificate to be enclosed
- Manufacturer should have ISO certification for quality standards. Comprehensive training for lab staff and support services till familiarity with the system.

Artificial self-inflating breathing bag - (adult, pediatric, infant and neonatal) with Face masks – Of all sizes

Technical Specifications

1. Self-inflating bag

2. Silicone made

3. Provided with closed ended reservoir with two valves

4. Patient valves pliable, well-sealed, have minimum dead space and no forward or backward leaks

5. The bag should have an oxygen inlet which fits into the standard oxygen tubing both from a cylinder and central supply

6. Face masks should be transparent, fit the patient outlet easily and have minimum dead space.

7. The system should withstand washing scrubbing and autoclaving procedures

8. Face masks: 3 sizes i.e. 00, 01, 02,: 3 set with each bag.

9. Should be provided with one set of oxygen tubing and reservoir with each self inflating bag.

10. Should have a safety valve to control maximum PIP

11. Option to control PEEP (optional)

12. European CE and USFDA approved and certificate should be provided. A maximum of 15% variation is allowed in the volumes of self inflating bags of different volumes as mentioned below:

1. 250 ml- 22 Nos.

2. 500 ml- 14 Nos.

3. 1500 ml- 04 Nos.