
PVMS OF PEDIATRIC

DRAFT

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Clinical Specialty	Pediatric Equipment
Generic Name	LED PHOTOTHERAPY UNIT
Clinical Purpose	<ul style="list-style-type: none"> ▪ Phototherapy Unit: Consists of exposure to daylight or to specific wavelengths of light using polychromatic polarised light, lasers, light-emitting diodes(LED), fluorescent lamps, dichroic lamps or very bright, full-spectrum light. ▪ The light is administered for a prescribed amount of time and, in some cases, at a specific time of day. ▪ One common use of the term is associated with the treatment of skin disorders & neonatal jaundice.
TECHNICAL SPECIFICATION	
<ul style="list-style-type: none"> • Overhead infant phototherapy unit: LED type • Selectable intensity levels • Spectral irradiance High irradiance / intensity mode Between: 30-40μW/cm²/nm • Wavelength range between 450-465 nm or better • LED lamps life 20,000 – 30,000 hours or more • Maximum noise level 30 dB (A) or less • Height adjustment 1300 mm to 1600 mm from light or better • Lamp unit tilting position • Operating Voltage 220 V/ 50 	
Accessories:	
<ul style="list-style-type: none"> • Eye protector pads 	
Optional (If Any)	

Clinical Specialty	Pediatric Equipment
Generic Name	Baby Resuscitation Trolley Fully Equipped
Clinical Purpose	<ul style="list-style-type: none"> ▪ Resuscitation is the process of correcting physiological disorders in an acutely unwell patient. It is an important part of intensive care medicine, trauma surgery and emergency medicine. Well known examples are cardiopulmonary resuscitation and mouth-to-mouth resuscitation. The trolley that provides Resuscitation facilities called resuscitation trolley
TECHNICAL SPECIFICATION	
<p>Baby resuscitation Trolley with warming system. Microprocessor controlled heating system. Fail safe system. Open intensive care system for pre-mature and newborn, mobile with antistatic castor, lockable, bumper guard.</p> <ul style="list-style-type: none"> ▪ Manual heat output control : 0% to 100% ▪ Skin and Manual temp control settings ▪ Display range of temperature: LED / LCD ▪ Heating power/ source : 500 W Quartz ▪ Selection for operating modes: Skin or Manual ▪ Pivot arm technology for heating. Head can be moved 60° in both directions allowing X-Ray procedure without moving the baby. ▪ Integrated observation lamp ▪ Integrated baby bed 760 x 600 mm with secured Plexiglas side panels, foldable down, with grid for X-ray. Manual bed inclination \pm 10° ▪ Combined O₂ humidifier with venturi suction complete including flow meter and suction bottle dedicated to neonates. Corrugated tube for O₂ humidifier and O₂ connection hose. 1 x O₂ Cylinder with fittings. ▪ Resuscitation device for babies, breathe delivery system to deliver CPAP and PEEP. ▪ Audio and visual alarms for Power failure, Skin Temperature deviations, High Temperature, Skin probe defective/ unplugged. 	
Accessories :	
<ul style="list-style-type: none"> ▪ Complete with O₂ hood ▪ IV pole 	

<ul style="list-style-type: none"> ▪ Skin probe (reusable)
Optional (If Any) :

Clinical Specialty	Pediatric Equipment
Generic Name	OVER HEAD WARMER
Clinical Purpose	<ul style="list-style-type: none"> ▪ Over head warmers are used to maintain the body temperature of newborn infants. This is best done so that the energy expended for metabolic heat production is minimized. The heat output of these devices is usually regulated by servo control to keep the skin temperature constant at a site on the abdomen where a Thermistor probe is attached.

TECHNICAL SPECIFICATION	
<p>Baby warming system. Microprocessor controlled heating system. Fail safe system. Mobile with antistatic castor, lockable, bumper guard.</p> <ul style="list-style-type: none"> • Manual heat output control : 0% to 100% • Skin and Manual temp control settings • Display range of temperature: LED / LCD • Heating power/ source : 500 W Quartz • Selection for operating modes: Skin or Manual • Pivot arm technology for heating. Head can be moved 60° in both directions allowing X-Ray procedure without moving the baby. • Integrated observation lamp • Integrated baby bed 760 x 600 mm with secured plexi glass side panels, foldable down, with grid for X-ray. Manual bed inclination ± 10° • Audio and visual alarms for Power failure, Skin Temperature deviations, High Temperature, Skin probe defective/ unplugged. • Complete with IV pole, Skin probe (reusable) • Lockable antistatic castors 	
Accessories :	
Optional (If Any) :	

Clinical Specialty	Pediatric Equipment
Generic Name	INTENSIVE CARE INCUBATOR
Clinical Purpose	<ul style="list-style-type: none"> ▪ An incubator is an apparatus used to maintain environmental conditions suitable for a neonate (newborn baby). It is used in preterm births or for some ill full-term babies.

TECHNICAL SPECIFICATION	
<p>Intensive care incubator comprises microprocessor controlled unit with digital display of set/measured temperature, humidity and weight. Trend data for all parameters.</p> <ul style="list-style-type: none"> • Incubator hood double/triple wall, doors at front and back. Bed surface (600 x 350 mm) (approx) with mattress tiltable head and foot end. Integrated X-ray tray to accommodate X-ray cassettes from outside without moving the baby. 5 x elbow hand ports, one iris diaphragm and access holes. Noise level inside the hood 45 - 50 dBA. • X-ray compatible hood/mattress with tray 	
TEMPERATURE REGULATION:	
• Air Temperature setting range:	25-37/ 37°-39°C
• Skin temperature setting range:	34-37/ 37°-38°C
• Display resolution:	0.1°C
HUMIDITY REGULATION:	
• Water Reservoir Capacity:	1000 ml
• Setting/display Range:	(15 – 90%)
WEIGHING SCALE:	

<ul style="list-style-type: none"> Inbuilt digital weighing scale <p>TREND DATA: 7-days trend data recording</p> <p>ALARM SAFETY SIGNALS:</p> <ul style="list-style-type: none"> Visual and audible battery buffered/ powered alarms for, skin and air control temperature deviations, over temperature skin / over temperature air control, Humidity Control, Fan failure, Cabinet base with drawers unit, lockable antistatic Casters. <p>STANDARD ACCESSORIES:</p> <ul style="list-style-type: none"> Air sensor, skin sensors, humidity sensor, IV Pole, replaceable bacterial filter, Rails at head and foot end. Mattress with cover. RS232/ USB Port.
Accessories :
Optional (If Any) :

Clinical Specialty	Pediatric Equipments
Generic Name	Baby Cot
Clinical Purpose	Baby Cot is used for the comfort and the safety of the newborn and for offering the most practical and functional solution to the health operators
TECHNICAL SPECIFICATION	
<p>The trolley carrying the baby cot should a solid and safe structure and is made of epoxy painted steel.</p> <ul style="list-style-type: none"> Lying area made of rectangular hollow pipe frame with wire mesh, Mobile on 75mm diameter, rubber castors (two diagonal lockable). Safety sides can be slided up & down provided with standard cushioned Rexene foam mattress. Laying area: 78cm x 135cm. approx. or better 	

Clinical Specialty	Pediatric Equipment
Generic Name	Crash Cart Trolley Fully Equipped
Clinical Purpose	<ul style="list-style-type: none"> A crash cart trolley is a set of trays/drawers/shelves on wheels used in hospitals for transportation and dispensing of emergency medication/equipment at site of medical/surgical emergency for life support protocols (ACLS/ALS) to potentially save someone's life
TECHNICAL SPECIFICATION	
<p>Baby resuscitation trolley for emergency</p> <p>Stainless steel / ABS top.</p> <p>Three or more drawers</p> <p>1 Shallow drawer fitted with drawer Tidy Unit.</p> <p>Lower cupboard with central locking/securing all drawers and cupboard.</p> <p>Operated by cupboard door and use of security seals.</p> <p>Double hook stainless steel I.V. Pole.</p> <p>Double push handle</p> <p>Quality cushion castors (2 x braking)</p> <p>2 x stainless steel cylinder holders for D or E size cylinders.</p> <p>Cardiac board 600 x 400 x 55mm with stainless steel housing brackets at rear of trolley.</p> <p>Universal rail system fitted to width of trolley.</p> <p>6" aneroid sphygmomanometer with Paeds & infant Velcro cuff and rail clamp.</p>	

Electronic timer and rail clamp.
 Venturi suction unit with O₂ outlet and 2.0 liter jar.
 Suction tube and connecting tubing.
 O₂ flow meter fitted to O₂venturi outlet 0-15 lpm.
 Pin index regulator with outlet for connection to remote venturi hose and O₂ outlet.
 Oxygen cylinder Qty 01 fitted with trolley

Intubation set comprising:

- Macintosh laryngoscope with 4/5 blade set.
- Magill introducing forceps
- Adult resuscitator
- Set disposable E.T. tubes (5)
- Set Guedel airways (3)
- Pen torch
- Artery forceps (2)
- Dressing scissors (2)
- Set of plastic tubes
- Examination light to rail clamp.3

Accessories :

Optional (If Any) :

Clinical Specialty	Pediatric Equipment
Generic Name	Paeds ICU Beds
Clinical Purpose	<ul style="list-style-type: none"> ▪ Pediatric ICU Bed is used for the comfort and the safety of the newborn and for offering the most practical and functional solution to the health operators
TECHNICAL SPECIFICATION	
<p>Motorized Hospital bed suitable for use in Intensive Care Unit. Paeds /Adult Intensive Care bed with head and foot panels. Height adjustment with foot pedals/hand held control and nurse control panel Trendelenburg / anti Trendelenburg position. Radiolucent backrest and gas spring / Motorized assisted with controls on both sides to facilitate use of the C arm /x-ray cassette holder for imaging. Castors of anti-static material, foot operated bow brake, locks three castors and provides easy steering. Mattress with internal hinge and standard nylon proof cover. Safe working load 20-150 KG Collapsible Side Rails Pair. I.V Rod Removable Head and Foot End with auto locking system</p> <ul style="list-style-type: none"> • CPR Board 	
Accessories :	
Optional (If Any) :	

Clinical Specialty	Pediatric Equipment
Generic Name	Mobile Suction Pump
Clinical Purpose	<ul style="list-style-type: none"> ▪ Suction Machine is used to clear airways of materials that would impede breathing or cause infections, to aid in surgery, and for other purposes.
TECHNICAL SPECIFICATION	
<p>Mobile Suction Unit with jar of capacity 2-3 litre, autoclave able (Polysulfone / Polycarbonate). 40-50liters/minutes at 300-600mm Hg. Pressure gauge to monitor the suction. Noise level should not exceed 45dB. Vacuum continuously adjustable</p>	

10X bacterial filter Complete aspiration set with tubing Overflow safety 220V/50Hz. I Phase
Accessories :
Optional (If Any) :

Clinical Specialty	Pediatric Equipment
Generic Name	ELECTRIC BREAST PUMP
Clinical Purpose	<ul style="list-style-type: none"> A breast pump is a mechanical device that extracts milk from the breasts of a lactating woman. Breast pumps may be manual devices powered by hand or foot movements or electrical devices powered by electricity or batteries.
TECHNICAL SPECIFICATION	
Sterilizable with silicon teat physiological suction rhythm The breast pump must provide milking Sucking pressure: 330mBar Adjustable milking cycle upto 50/min Digital/ LCD display for settings and data communication Accessories Breast shield three sizes Breast shield for caved-in-nipples (3cm) Milk collection bottles Milk collection bottles cap Bottle stand Connecting tubing Cleaning brush Rechargeable battery AC 220 V 50 Hz.	
Accessories :	
Optional (If Any) :	

Clinical Specialty	Pediatric Equipment
Generic Name	BILIRUBINO METER NON-INVASIVE TYPE
Clinical Purpose	<ul style="list-style-type: none"> Bilirubin is the yellow breakdown product of normal heme catabolism, caused by the body's clearance of aged red blood cells which contain hemoglobin. Bilirubinometer is used to analyze serum bilirubin value.
TECHNICAL SPECIFICATION	
Type	Non invasive for measurement through forehead
Intended use	Pre, during and post phototherapy
Gestational age	27-42 weeks
Post-natal age	0-20 days
Total serum bilirubin range	0-20 mg/dL
Accuracy (RMSE)	+/- 1.5 mg/dL at 66% of the time or 1 sigma
Power	100-240 V AC, 50 Hz
Rechargeable battery	30 measurements on full charge
Complete with	desk top charger
Accessories :	
Optional (If Any) :	

Clinical Specialty	Pediatric Equipment
Generic Name	WHOLE BODY COOLING MACHINE
Clinical Purpose	<ul style="list-style-type: none"> ▪ Hyperthermia is elevated body temperature due to failed thermoregulation that occurs when a body produces or absorbs more heat than it dissipates. Extreme temperature elevation then becomes a medical emergency requiring immediate treatment to prevent disability or death. ▪ Hypothermia is defined as a body core temperature below 35.0 °C (95.0 °F). ▪ Whole body cooling machine provides the facilities of thermoregulation
TECHNICAL SPECIFICATION	
<ul style="list-style-type: none"> • System Capable used for Hospital ICU, Coronary care units, Operating Room, Recovery and Emergency Rooms. • System has convenient way to warm or cool patients. • Hypo hyper Thermia unit should have hose connections for water Blankets • Hypo hyper Thermia mats of different sized & shaped should be connected any time with one system, facilitate three patients at a time through one unit. • Having 3 operating modes: Automatic, Manual and Monitor • Fluid Temperature Range Manual:5°C to 40°C • Accessories: • Temperature probe (Adult Esophageal/Rectal Temperature Probe) Qty: one • Reusable Blankets (Adult) Qty:01 • Reusable Blanket (Pediatric) Qty:01 	

Clinical Specialty	Pediatric Equipment
Generic Name	ULTRASONIC NEBULIZER
Clinical Purpose	<ul style="list-style-type: none"> ▪ Nebulizer is a drug delivery device used to administer medication in the form of a mist inhaled into the lungs. Nebulizers use oxygen, compressed air or ultrasonic power to break up medical solutions and suspensions into small aerosol droplets that can be directly inhaled from the mouthpiece of the device
TECHNICAL SPECIFICATION	
<ul style="list-style-type: none"> ▪ Ultrasonic energy for uniform and highly dense 1-5 microns. ▪ More than 96% of 0.3 micron or larger air borne dust particles are effectively shut out with the air filter to provide purified air for aerosol nebulization. ▪ Medication cup with replaceable diaphragm. ▪ Easily detachable fan cover and Air filter. ▪ Made of highly resistant Sterilizable resin. ▪ Stand with solution bottle for safety. ▪ Nebulizing rate: 4 ml/min or greater. ▪ Mist particle size: Approx. 1-5 microns. ▪ Nebulizing time setting: 1-115 min or more. ▪ Medication cup capacity: 150 ml. ▪ Rechargeable battery operated 	
Accessories :	
<ul style="list-style-type: none"> ▪ Solution bottle 500 ml for approximate 4 hours continuous operation ▪ Solution bottle support ▪ Water Level controller ▪ Flexible arm. ▪ Tray set for nebulizer with tray track and pole mount fitting 	
Optional (If Any) :	

Clinical Specialty	Pediatric Equipment
Generic Name	TRANSPORT INCUBATOR
Clinical Purpose	<ul style="list-style-type: none"> An incubator is an apparatus used to maintain environmental conditions suitable for a neonate (newborn baby). It is used in preterm births or for some ill full-term babies. The Transport Incubator is used for transportation of infant from one place to an other
TECHNICAL SPECIFICATION	
<ul style="list-style-type: none"> Cabin 600 x 240 x 290 mm (approx.) with transparent panel with two hand ports O2 supply cylinder Space heater Simple frame which can be latched on to any stretcher Thermometer with digital display of temperature Visual & audible alarms for temperature excess (39 C) Low battery alarm. 	
<p>Accessories</p> <p>Unit complete with</p> <ul style="list-style-type: none"> Oxygen cylinder with reducing valve O2 connecting hose Built in flowmeter Guard Rail Restraint straps Battery Operated Ventilator Oxygen monitor separate / built in 5KVA UPS with Socket to drive the equipment in ambulance, aircraft & hospital. In case of pneumatic driven Ventilators, two E-type cylinders each for min three hours operation 	
<p>Optional (If Any)</p> <ul style="list-style-type: none"> Water nebulizer Bronchial aspirators Vacuum mattress Digital weighing scale for weighing baby inside the incubator Collapsible stand 	

Clinical Specialty	Pediatric Equipment
Generic Name	NEONATAL TRANSPORT SYSTEM
Clinical Purpose	<ul style="list-style-type: none"> Neonatal transport System is used to move premature and other sick infants from hospitals without specialist. Neonatal transport services such as NETS utilize mobile intensive care incubators fitted with mechanical ventilators, infusion pumps and physiological monitors capable of being used in a mobile environment.
TECHNICAL SPECIFICATION	
<ul style="list-style-type: none"> Entire system should be operatable from independent power source for three hours or more. Totally self-contained/separate compact infant transport incubator with following: Double wall infant hood for reduced heat loss while providing total visibility. Built in / separate design for physiological monitor for ECG, Respiration, Blood pressure, Two temperatures with digital readout of all parameters. (Battery operated / pneumatically driven) Infant ventilator having following modes CPAP PEEP IPPV/CMV IMV 	

<ul style="list-style-type: none"> ▪ “E” size cylinders of sufficient quantity to derive the system for three hours at maximum breath rate i.e. upto 120 bpm (for pneumatically ventilators only). ▪ Digital Displays of skin temperature. ▪ Alarm: ▪ Alarms for High Temperature ▪ System Failure ▪ Air flow sensor failure ▪ No power ▪ Low power unit ▪ complete with trolley and power bank
<p>Accessories: Unit complete with</p> <ul style="list-style-type: none"> ▪ All sensors/probes requires to measure all physiological values ▪ I.V. syringe pump ▪ Oxygen Analyzer ▪ Pulse oximeter ▪ A.C. power source and external / Internal Batteries. ▪ Examination Light ▪ Pediatric Suction Unit ▪ Ambo bag of three sizes i.e. Neonates, Infants & Pediatrics

Clinical Specialty	Pediatric Equipment
Generic Name	MANUAL RESUSCITATOR NEONATAL
Clinical Purpose	<ul style="list-style-type: none"> ▪ Neonatal resuscitation or also called as newborn resuscitation is the resuscitation of newborn children with birth asphyxia
TECHNICAL SPECIFICATION	
<ul style="list-style-type: none"> ▪ Autoclaveable silicone resuscitator for infants ▪ Consisting of 240 ml approx. bag, ▪ Patient valve with regulator, ▪ Mask size 00, 0, 1 & 2, approx. ▪ Airways sizes 0, 1, ▪ Reservoir bag 240 ml approx. capacity, ▪ Reservoir bag Complete in carrying case with pop up valve. ▪ (Optional: Volume controlled manual resuscitator, I.O. to specify). 	

Clinical Specialty	Pediatric Equipment
Generic Name	COOL MIST & OXYGEN TENT
Clinical Purpose	<ul style="list-style-type: none"> ▪ An oxygen Tent consists of a canopy placed over the head and shoulders, or over the entire body of a patient to provide oxygen at a higher level than normal. This form of treatment is often prescribed in conditions where people have difficulty in breathing. An oxygen tent can be used in either a hospital setting or outside a health-care facility, and can be recommended for short- or long-term therapy
TECHNICAL SPECIFICATION	
<ul style="list-style-type: none"> ▪ For upper respiratory therapy for the Pediatric patient. ▪ Recirculation system to provide a cooled saturated mist in just a few minutes. ▪ Canopy reusable or disposable. ▪ Four zippers to allow the nurse accessibility to the patient with minimum disturbance to the canopy environment. ▪ The canopy may also be completely rolled back for unobstructed access when needed ▪ OPERATION: By compressed air or Oxygen. ▪ Oxygen Concentration: Fine control allowing 21 to 60% concentration control. ▪ Flush: 30% in 1 min to 50% in 5 min. ▪ Oxygen alarm system to be activated if oxygen flow rate falls below desired level. 	

<ul style="list-style-type: none"> ▪ Automatic cooling and heating system with 15 to 35 Deg. C ▪ Automatic regulation of temperature inside the tent. ▪ Ultrasonic humidity control system for upto 95% humidity levels. ▪ Unit complete with all standard accessories like air compressor, aspirator, oxygen analyzer and disposables.

Clinical Specialty	Pediatric Equipment
Generic Name	AMBIENT TEMPERATURE MONITOR
Clinical Purpose	<ul style="list-style-type: none"> ▪ Ambient Temperature Monitor represents the small range of temperatures at which the air feels neither hot nor cold, which is approximately between 15 °C (59 °F) and 22 °C (72 °F)
TECHNICAL SPECIFICATION	
<ul style="list-style-type: none"> ▪ Digital Readout Fahrenheit or Centigrade by one tenth increments. ▪ Thermistor probes & adopters to monitor temperatures in the ventilator circuits, incubators and infant hoods. ▪ Audible high temperature alarms adjustable display range (72 - 110 Deg. F)/21 - 43.5 Deg. C. Rechargeable battery with charger & AC operated. 	
ACCESSORIES:	
<ul style="list-style-type: none"> ▪ Pediatric Inspire Air sensor with adopter ▪ Pediatric Tubing adopter. 	

Clinical Specialty	Pediatric Equipment
Generic Name	CLINITRON THERAPY BED
Clinical Purpose	<ul style="list-style-type: none"> ▪ Clinitron Therapy can help you achieve better outcomes across the care continuum. It maximizes patient envelopment and microclimate management capabilities, while significantly reducing shear, friction, and interface pressure. The unique Air Fluidized Therapy environment promotes significantly faster healing of complex wounds
TECHNICAL SPECIFICATION	
<ul style="list-style-type: none"> ▪ A bacteriologically clean microclimate environment with compressed air passes through the diffuser into the tank filled with microspheres. ▪ The rising air surrounds and suspends 50 to 150 microns, microspheres. ▪ The result has all the characteristics of a dry fluid. ▪ The viscosity of this fluid varies according to about 1 cm per sec. ▪ Standard Length: 84" ▪ Overall Length: 92.5" (231 cm) ▪ Standard Width: 36" (Siderails off); 42" (Siderails on) ▪ Standard Height: 21.5" ▪ Therapeutic Patient Weight Limit: 350 lbs 	

Clinical Specialty	Pediatric Equipment
Generic Name	BABY RESUSCITATION MANKIN
Clinical Purpose	<ul style="list-style-type: none"> ▪ A manikin is a life-sized anatomical human model used in education and engineering. The best known of these, the Transparent Anatomical Manikin (TAM) is a three-dimensional, transparent model of a human being, created for medical instructional purposes
TECHNICAL SPECIFICATION	
<u>Infant / Neonatal Simulators</u>	
<ul style="list-style-type: none"> • Tearing and secretions of fluids from eyes, ears, and mouth 	

- Voice sounds include crying, cooing, giggling
- Realistic airway; trachea with realistic anatomical landmarks
- Blinking eyes, variable pupil dilation
- Fully operational in the supine, lateral and sitting positions
- Palpable physical landmarks: clavicle, sternum, ribs, intercostals spaces
- Bulging fontanel capability
- Interchangeable male and female genitalia with urine output
- Two pre-configured patients,
- Four Simulated Clinical Experiences (SCEs), four SCE development licenses
- Compatible laptop or computer
- Patient monitoring Software
- Portable in-room air compressor

Pediatric Baby Simulator

- Ability to support anesthesia and Respiratory Care
- CPR Correct hand placement, depth, and rate of compressions are reflected in physiological feedback
- It should also have complete facility of Cardiac, Breathing, circulation, Pharmacological System, Articulation , Trauma , Vascular access and urinary catheterization, Neurological disorder, and Sound
- Realistic airway
- Drug Recognition
- Two pre-configured patients
- 13 Simulated Clinical Experiences (SCEs)
- Wireless patient Monitor
- Compatible Laptop or computer

Clinical Specialty	Pediatric Equipment
Generic Name	DIGITAL BABY SCALE
Clinical Purpose	▪ For weighing infants and young children upto the 20 Kg.
TECHNICAL SPECIFICATION	
<ul style="list-style-type: none"> ▪ For use in NICU and Pediatric Department etc. ▪ Accuracy +/- 5 gm for digital system. ▪ Large digital readout ▪ Zero setting ▪ Integral and completely separable baby tray. 	

Clinical Specialty	Pediatric Equipment
Generic Name	OXYGEN HOOD
Clinical Purpose	▪ An oxygen hood consists of a canopy placed over the head and shoulders, or over the entire body of a patient to provide oxygen at a higher level than normal. This form of treatment is often prescribed in conditions where people have difficulty in breathing. An oxygen tent can be used in either a hospital setting or outside a health-care facility, and can be recommended for short- or long-term therapy.
TECHNICAL SPECIFICATION	
Design to minimize the risk of patient during therapy	
<ul style="list-style-type: none"> ▪ Transparent plastic resin canopy, ▪ High roofing, ▪ Ice box incorporated, ▪ Interior oxygen concentration within the canopy/hood can be controlled through the oxygen concentration regulator, ▪ The regulatory capability of the oxygen regulator with the range of 40 - 95%. 	
Accessories :	
<ul style="list-style-type: none"> ▪ Ice Box 	

<ul style="list-style-type: none"> ▪ Oxygen supply hose ▪ Drainage hose ▪ Oxygen analyzer meter. ▪ Sensor gives the reading by positioning it at the measuring area
Optional (If Any) :

Clinical Specialty	Pediatric Equipment
Generic Name	MANUAL BREAST PUMP
Clinical Purpose	<ul style="list-style-type: none"> ▪ A breast pump is a mechanical device that extracts milk from the breasts of a lactating woman. Breast pumps may be manual devices powered by hand or foot movements or electrical devices powered by electricity or batteries.
TECHNICAL SPECIFICATION	
<p>Sterilizable with silicon teat physiological suction rhythm. Adjustable vacuum handle Milk flow with each pump stroke. Vacuum is released automatically after each pump stroke.</p> <p>Accessories Handle Expression funnel. Nipple Shields Breast shells for protection of sore or cracked nipples and allow air to circulate. Breast shield (three sizes) Milk collection bottle Cleaning brush</p>	
Accessories :	
Optional (If Any) :	

Clinical Specialty	Pediatric Equipment
Generic Name	RADIANT HEATER
Clinical Purpose	<ul style="list-style-type: none"> ▪ Radiant heater is used to maintain the body temperature of newborn infants. This is best done so that the energy expended for metabolic heat production is minimized. The heat output of these devices is usually regulated by servo control to keep the skin temperature constant at a site on the abdomen where a thermistor probe is attached.
TECHNICAL SPECIFICATION	
<ul style="list-style-type: none"> ▪ Unit should supply infra-red radiation in ▪ wave length spectrum of 1.5 - 6.8 μ m ▪ Intensity selection in mW/cm² ▪ Swiveling Facility ▪ Microprocessor controlled temperature 37c ▪ For examination Two LED Stripes ▪ System should have self-Test function. ▪ Should provide Homogeneous illumination. ▪ Visual and audible alarms as well as automatic intensity. ▪ Integrated timers for heat control. ▪ Auto detect function reduce the radiation intensity ▪ when the distance to the patient is reduced ▪ Should have high-performance reflector ▪ that directs the radiation intensity of the heating element directly ▪ and evenly to the patient pad. ▪ Height adjustable double arm joints. ▪ Wave length spectrum 1.5 to 6.8 μ m ▪ Illumination on both sides in 5 steps or better 	

<ul style="list-style-type: none"> ▪ Adjustable Mobile stand with Ground plate ▪ 4 antistatic castors two with locks
Accessories:
Optional (If Any) :

Clinical Specialty	Pediatric Equipment
Generic Name	PRIMARY CARE INCUBATOR
Clinical Purpose	<ul style="list-style-type: none"> ▪ An incubator is an apparatus used to maintain environmental conditions suitable for a neonate (newborn baby). It is used in preterm births or for some ill full-term babies
TECHNICAL SPECIFICATION	
<ul style="list-style-type: none"> ▪ Primary Care Incubator Comprises Microprocessor controlled unit with digital display of set / measure temperature , ▪ Air temperature control, ▪ Temperature regulation range 28.C - 38 C +/- 1 C with uniform heat distribution over the bed surface. ▪ Replaceable bacteria filter for filtration of fresh air and oxygen. ▪ Bed surface 650 mm x 360 mm (approx.) with mattress. ▪ Bed surface can be optionally raised at either end. ▪ Highly thermo stable acrylic glass or similar material single wall with four iris/elbow (sleeve) window and one side port. ▪ Humidification of the incubator air regulate able between 40-60 %. ▪ Oxygen flowmeter 0-15 liter/min. for incubator mounted on a trolley with cabinet/case. ▪ Alarm signals safety: ▪ The visual and audible battery powered alarm for power failure and ▪ Visual & Audible alarm for temperature excess (39 C). ▪ A visual and audible alarm warns in case of fan failure. ▪ Test buttons to check the individual alarms or automatic test system. 	
Accessories	
<ul style="list-style-type: none"> ▪ Complete with air temp. sensor, IV pole, ▪ oxygen monitor built in /separate ▪ spot/continuous , ▪ Guard rail, ▪ restraint straps 	
Optional (If Any)	
<ul style="list-style-type: none"> ▪ Water nebulizer, ▪ Oxygen distributor/manifold, ▪ Bronchial aspirators, ▪ Mattress, ▪ Digital weighing scale to weigh baby inside the incubator, ▪ Ultrasonic nebulizer & Humidity Indicator 	

Clinical Specialty	Pediatric Equipment
Generic Name	AIR+OXYGEN PROPORTIONER FLOWMETER
Clinical Purpose	<ul style="list-style-type: none"> ▪ Air + Oxygen proportional flowmeter is used as blender
TECHNICAL SPECIFICATION	
<ul style="list-style-type: none"> • The mixing unit to be connected directly to the oxygen and compressed air wall outlets • Single control knob flowmeter (0-15 l/min.) • Range: 21% - 100%. • Thus the percentage of oxygen in the gas mixture produced may be altered without any need for modifying the flow and vice versa. • With the flow selector at the position high, the proportioner should operate a Number of pneumatically driven ventilators of 10-100 lpm controlled by a unidirectional valve and will automatically be closed when not in use. 	

- With the flow selector at the position low flow the air/oxygen mixture passes to the flowmeter.
- It can be administered for use with anesthesia machine,
- infant incubators,
- ventilators,
- manual ventilating sets,
- Oxygen hoods between the 30% - 100% range the concentration can be varied in steps of 5% with an accuracy of +/- 2%. –
- Warning signal will sound at pressure 3.5 bar/2.5 bar.

Accessories :

Optional (If Any) :

Clinical Specialty	Pediatric Equipment
Generic Name	AMBIENT OXYGEN ANALYZER
Clinical Purpose	<ul style="list-style-type: none"> ▪ Ambient Oxygen Monitor is used to analyze the deficiency of oxygen under normal and abnormal conditions
TECHNICAL SPECIFICATION	
<ul style="list-style-type: none"> ▪ Portable type. ▪ Monitors oxygen concentration in breathing circuits. ▪ Sensor direct read out on digital display, ▪ Battery operated. ▪ Measuring range 0-100% at room temperature easily sterilized explosion proof 	
Sampling Method	Diffusion
Gases Detected	Oxygen (O2)
Range	0 – 25 % O2
Accuracy	± 1 % of Full Scale
Operating Temperature	-40 to +55 °C
Display	3/4" LCD Digital Display, Back Lit
Sensor Type	Long life zirconium oxide sensor cell
Sensor Life	> 10 years under Normal Conditions
Signal Outputs	4-20 mA Analog Output Dual Level Alarm Relay Contacts

Clinical Specialty	Pediatric Equipment
Generic Name	BLOOD/FLUID WARMER
Clinical Purpose	<ul style="list-style-type: none"> ▪ A fluid warmer is a medical device used in healthcare facilities for warming fluids, crystalloid, colloid, or blood product, prior to being administered (intravenously or by other parenteral routes) to body temperature levels in order to prevent hypothermia in physically traumatized or surgical patients
TECHNICAL SPECIFICATION	

<ul style="list-style-type: none"> ▪ Unit should be electronically controlled for reliable transfusion and infusion procedure. ▪ Capacity of tank 1.3 liter (approximately) ▪ With blood warming adjustable coil ▪ With safety device thermo control 39-40 deg C.

Clinical Specialty	Pediatric Equipment
Generic Name	DISINFECTANT ROOM
Clinical Purpose	<ul style="list-style-type: none"> ▪ Disinfection room is used to disinfect the Anesthesia equipment, operation theatre table, incubators, ventilators, patient circuits &etc.
TECHNICAL SPECIFICATION	
<ul style="list-style-type: none"> ▪ Formaldehyde disinfection room microprocessor controlled fully automatic for patient's ventilators, incubators, Anesthesia equipment, theatre table etc. ▪ 2 or more complete preselected automatic programs: 3 to 4 hours and 10 hours' time. ▪ Ventilators, incubators and Anesthesia machine connected to an electric socket or to a compressed air outlet inside the cabinet to run the equipment. ▪ AC: 220V/50 Hz single phase. ▪ Compressed air: ▪ Copper pipe 12/13 mm. 5 bar pressure ▪ Air discharging Tube Polythene / Stainless steel ▪ Corrugated hoses. ▪ Breathing bags. ▪ Volumeter. ▪ Patient circuit system ▪ Room size sufficient to sterilize above mentioned equipment & accessories: ▪ Trolley complete on caster with trays spigots and rails ▪ 10 bottles of Formaldehyde solution (10 liters) ▪ 10 number air intake filters. ▪ Chemicals to be arranged locally by the suppliers at the time of installation. 	
Accessories	
Optional (If Any)	

Clinical Specialty	Pediatric Equipment
Generic Name	INFUSION TRAINER PEDIATRIC ARM
Clinical Purpose	<ul style="list-style-type: none"> ▪ Infusion trainer Pediatric Arm SIMULATOR is the imitation of the operation of a real-world process or system over time. Simulation is also used with scientific modeling of natural systems or human systems to gain insight into their functioning. Simulation can be used to show the eventual real effects of alternative conditions and courses of action. The major application of Infusion trainer pediatric arm simulator is used to educate or for teaching purpose
TECHNICAL SPECIFICATION	
<ul style="list-style-type: none"> ▪ For effectively teaching the stated IV's and injection techniques. ▪ The trainer consisting of a realistic arm with veins connected to a blood reservoir. ▪ The IV equipment includes infusion bottle, infusion set, and IV cannula, an extra set of veins and all the necessary accessories, including directions. 	

Clinical Specialty	Pediatric Equipment
Generic Name	NEONATAL MONITOR
Clinical Purpose	<ul style="list-style-type: none"> ▪ Neonatal monitor or physiological monitor is a medical

	device used for monitoring of ECG, PR, NIPB, IBP, SPo2, Temp etc
TECHNICAL SPECIFICATION	
Configured Bedside monitor for display of vital signs monitoring	
Measuring all physiological parameters of Paeds, Neonates	
Mounted on original wall mounted stands	
Monitors should be connected with central station wirelessly / wired	
OPERATING FEATURES & CHARACTERISTICS	
Electro-surgical interference suppression/ protection	
Defibrillator protection	
Freeze and cascade facility	
waveforms traces speeds 25/50mm/sec	
Screen size min 12" or more with touch screen colored	
minimum 12 waveforms or more	
STANDARD PARAMETERS	
ECG, NIBP, SpO2, 2-Temp, Respiration, Trends, Arrhythmia Analysis, 2-IBP, EtCO2, CO.	
Monitoring, Recorder	
ECG: (Cable Alligator Type)	
Numeric heart rate	
Waveform: Six wave form minimum, real time freeze ECG trace	
3, 6 and 12 lead real time monitoring	
Measuring range: 15 to 300bpm	
5 and 10 lead each ECG cable with electrodes	
Ability to detect Adult & Pediatric Heart rate range, QRS widths and amplitudes	
NONINVASIVE BLOOD PRESSURE (NIBP): (Paeds, Neonates Cuff)	
Method: Oscillometric principle	
Numeric: Systolic, Diastolic and Mean Pressures	
Ability to measure Adult & Pediatric B.P	
Rising Cuff / continuous pressure display	
Selectable auto inflate interval settings	
TEMPERATURE (Rectal, Nasal, Skin Probes)	
Numeric. Temperature selectable in 'C / 'F	
Channels: 2 channels or more	
Ability to measure Adult & Pediatric temperature range	
PULSE QXIMETRY: (Paeds, Neonates Probes)	
Numeric: 0-100% Oxygen saturation measuring range	
Massimo Technology/ Other patent technology with motion tolerance	
Waveform: Plethysmograph pulse with pulse strength indication Sensor for Pediatrics & Adult Patients	
RESPIRATION:	
Sweep speed: 6.25, 12.5mm/sec.	
Breathe rate display and Settable Apnea Alarm.	
RECORDER:	
3 Channel Recorder for printing of ECG Waveforms	
ECG Paper Roll (05)	
INVASIVE BLOOD PRESSURE MODULE	
2 or more Channel IBP Monitoring	
Numeric: Systolic, Diastolic and Mean Pressure	
Variable scale: Selectable	
5 IBP Complete kits	
ARRTHIEMIA ANALYSIS:	
Arrhythmia analysis and ST analysis with minimum 10 Arrhythmia detection	
CARDIAC OUTPUT MODULE	
Numeric Display	

Display of Cardiac Output
Thermodilution Method
One starter kit
CAPNOGRAPHY (ETCO2)
For measuring of End Tidal CO2
Capability of Main / side stream measurements for intubated and non intubated
Airway & nasal adapter 50 each adult and paed
TRENDS:
Trends for at least 48-96 hours with graphical and tabular representation for all parameters
ALARMS:
Selectable automatic Adult and Pediatric Mode alarm limits High and low (settable) on all parameters
Visual and Audible indication of alarms
BACKUP SUPPORT
Built-in Rechargeable Battery with back up of at least 1-2 hours in case of AC power failure for full parameters.
Wall mount or trolley original from manufacturer.
The system must be complete with all sensors, probe, cable or any other accessories required for measuring all the above selectable parameters for adult & Pediatric applications. All the accessories must be supplied by the same manufacturer
Optional Items: <ul style="list-style-type: none"> • Telemetry • Central Station with 19" LED (same Manufacturer) • HL7 interface capable of connectivity with HIMS

Clinical Specialty	Pediatric Equipment
Generic Name	PATIENT TEMPERATURE MONITOR
Clinical Purpose	<ul style="list-style-type: none"> ▪ Patient Temperature Monitor used to administered the temperature of patient
TECHNICAL SPECIFICATION	
<ul style="list-style-type: none"> ▪ Digital readout Fahrenheit or centigrade by one tenth increments. ▪ Thermistor probes and adapters to monitor patient skin, ▪ Rectal temperatures. ▪ Audible high temperature alarm adjustable display range (70-110 F)/.21-43.5 C ▪ Rechargeable battery with charger & AC Operated. 	
Accessories: <ul style="list-style-type: none"> ▪ Rectal Probe. ▪ Skin Probe. 	

Clinical Specialty	Pediatric Equipment
Generic Name	PEDIATRIC HEAD
Clinical Purpose	<ul style="list-style-type: none"> ▪ SIMULATOR is the imitation of the operation of a real-world process or system over time. Simulation is also used with scientific modeling of natural systems or human systems to gain insight into their functioning. Simulation can be used to show the eventual real effects of alternative conditions and courses of action. The major application of head simulator is used to educate or for teaching purpose
TECHNICAL SPECIFICATION	
<ul style="list-style-type: none"> ▪ Functional head is realistically modeled to represent a six month old infant. ▪ The temporal vein of the pediatric head is easily accessible for IV infusions through the life like vinyl skin, ▪ To provide the accurate representation of size and feeling of puncture. ▪ Practice in the jugular vein is equally realistic. 	

- The neck is made of soft, flexible foam to provide a realistic feel of palpation and puncture.
- Pediatric head includes a head with skin and veins, and administration set, IV supply bottle, 2 different gauge winged infusion needles, 1 pint blood teaching guide, and carrying case.

Clinical Specialty	Pediatric Equipment
Generic Name	SERVO CONTROLLED INCUBATOR
Clinical Purpose	<ul style="list-style-type: none"> ▪ An incubator is an apparatus used to maintain environmental conditions suitable for a neonate (newborn baby). It is used in preterm births or for some ill full-term babies
TECHNICAL SPECIFICATION	
<ul style="list-style-type: none"> ▪ Single / double wall canopy system (I.O to specify) ▪ Servo Control System. ▪ Intensive Care Incubator comprises Microprocessor controlled unit with digital display set/measure temperature & baby skin temperature. ▪ Temperature regulation upto 38 C with uniform heat distribution over the bed surface ▪ Sensor attached to child's skin continuously measures child skin temperature ▪ The air temp in the incubator is controlled correspondingly. ▪ Bed surface 650 mm x 360 mm (approx.) ▪ UP / Down position are possible ▪ Flap opening on both sideway of incubator ▪ Rail/drawer is provided beneath ▪ The radiolucent plastic panel of the incubator to accommodate X.Ray cassettes from outside. ▪ Highly thermostable acrylic glass or similar material hood fitted with a large hinged flap in front. ▪ Four spring operated elbow / hand ports ▪ Inside the hood ventilation hoses can be suspended ▪ Single or double wall canopy to be specified at the time of indent. ▪ Replaceable bacteria filters ▪ Built in control for Humidification to regulate incubator air up to 60% ▪ 2 or more drawers system ▪ Alarm signals safety ▪ The visual and audible battery powered alarm for power failure ▪ Visual & audible alarm for temperature excess (39 C) ▪ Audible & Visual alarm warns in case of fan failure and sensor/probe failure. ▪ Test buttons to check the individual alarms signals at any time or automatic system. 	
Accessories Unit complete with <ul style="list-style-type: none"> ▪ Air temperature sensor ▪ Skin temperature Sensor ▪ I.V. Pole ▪ Guard Rail ▪ Restraint straps ▪ Oxygen monitor separate / built in 	
Optional (If Any) <ul style="list-style-type: none"> ▪ Water nebulizer ▪ Bronchial aspirators ▪ Vacuum mattress ▪ Digital weighing scale for weighing baby inside the incubator ▪ High humidification pads ▪ Connection of Oxygen to drive flow meter both form oxygen cylinder & manifold of central gas pipeline system ▪ Oxygen flowmeter 0-15 liter/min. for incubator ▪ Humidity Meter 	

Clinical Specialty	Pediatric Equipment
Generic Name	BILIRUBINO METER CAPILARY TYPE
Clinical Purpose	<ul style="list-style-type: none"> ▪ Bilirubin is the yellow breakdown product of normal heme catabolism, caused by the body's clearance of aged red blood cells which contain hemoglobin. It is used to analyze the 'total bilirubin' through a micro capillary tube in order to follow the new born icterus course
TECHNICAL SPECIFICATION	
Use	Measurement of total bilirubin by photometric method
Sample	Centrifuged whole blood
Serum	Minimum volume: 10 µl
Reading cuvette	Haeparinized haematocrit capillary
Measure unit	mg/ dl or µmol/ l
Reading time	3s approx.
Reading inaccuracy	±5%
Optical filter	455 and 575 nm / 461and 551 nm
Display	Alpha numeric/ LCD
Printer	Thermal printer, Integrated
Memory	Memory for 90 results
Power requirements	220V, 50Hz
Complete with micro centrifuge for capillaries. Capillaries tube – Pack of 100.	
Accessories :	
Optional (If Any) :	

As Per Notification No. SO(Stand) 423/2016, Government of The Punjab, Specialized Healthcare and Medical Education Department, Dated: 28.03.2016, following PVMS committee is hereby constituted to prepare PVMS(Product Vocabulary of Medical Store) of Health Department related to Biomedical Equipments/Machinery