

No.	Item Specifications	Fill your Specification
1	Description of Function	
1.1	ICU ventilator provides artificial respiratory support to the critical patients in the intensive care units.	
2	Operational Requirements	
2.1	Microprocessor Controlled ventilator with integrated facility for ventilation monitoring suitable for new-born to adult ventilation.	
3	System Configurations	
3.1	ICU Ventilator for Infant to Adult, complete unit with all standard accessories.	
4	Technical Specifications	
4.1	Imported hinged arm holder for holding the circuit.	
4.2	Colour TFT screen, 12 Inch or more.	
4.3	Facility to measure and display:	
	<input type="checkbox"/> End tidal CO2 with capnography.	
	<input type="checkbox"/> 3 Waves: Pressure & Time, Volume & Time and Flow & Time.	
	<input type="checkbox"/> 3 Loops: P-V, F-V, P-F with facility of saving of 3 loops for reference.	
	<input type="checkbox"/> Graphic display to have automatic scaling facility for waves.	
	<input type="checkbox"/> Status indicator for ventilator mode, battery life, patient data, alarm settings, clock etc.	
4.4	Trending facility for 72 hours with minimum 5 minutes resolution for recent 24 hours.	
4.5	Automatic compliance & leakage compensation for circuit and ET tube.	
4.6	Must have following settings :	
	<input type="checkbox"/> Tidal Volume up to 2000ml.	
	<input type="checkbox"/> Pressure (insp.).	
	<input type="checkbox"/> Pressure Ramp.	
	<input type="checkbox"/> Flow Pattern.	
	<input type="checkbox"/> Respiratory rate up to 100 breaths per minute.	
	<input type="checkbox"/> SIMV Respiratory Rate up to 40 breaths per minute.	
	<input type="checkbox"/> CPAP/PEEP: PEEP 50cmH2O.	
	<input type="checkbox"/> Pressure Support.	
	<input type="checkbox"/> FIO2.	
	<input type="checkbox"/> Pause Time.	
	<input type="checkbox"/> Pressure & Flow Trigger: Pressure Trigger 0-20 cmH2O below PEEP, Trigger Flow 0-100%.	
	<input type="checkbox"/> Inspiratory rise time:-0-20% of breath cycle time.	
	<input type="checkbox"/> I:E Ratio: 1:10 to 4:1	
4.7	Monitoring of the following parameters:	
	<input type="checkbox"/> Airway Pressure (Peak & Mean).	
	<input type="checkbox"/> Tidal volume (Inspired & Expired).	
	<input type="checkbox"/> Minute volume (Inspired and Expired).	
	<input type="checkbox"/> Spontaneous Minute Volume.	
	<input type="checkbox"/> Total frequency.	
	<input type="checkbox"/> FIO2 dynamic.	
	<input type="checkbox"/> Intrinsic PEEP and PEEPi volume.	
	<input type="checkbox"/> Plateau pressure.	
	<input type="checkbox"/> Resistance & Compliance.	
	<input type="checkbox"/> Use selector alarms for all measured & monitored parameters.	
4.8	Modes of ventilation:	
	<input type="checkbox"/> Volume controlled.	
	<input type="checkbox"/> Pressure controlled.	
	<input type="checkbox"/> Pressure support.	
	<input type="checkbox"/> SIMV (pressure control and volume control) with pressure support.	

No.	Item Specifications	Fill your Specification
	<input type="checkbox"/> CPAP/PEEP.	
	<input type="checkbox"/> Inverse ratio ventilation.	
	<input type="checkbox"/> Advanced mode like pressure controlled volume guaranteed.	
	<input type="checkbox"/> Non Invasive ventilation.	
	<input type="checkbox"/> APRV or equivalent.	
	<input type="checkbox"/> PRVC or equivalent.	
4.9	Shall have apnoea /backup ventilation	
4.10	Expiratory block must be autoclaveable and no routine calibration is required.	
4.11	Shall have the ability to calculate / procedure:	
	<input type="checkbox"/> Intrinsic PEEP & Intrinsic PEEP Volume.	
	<input type="checkbox"/> Occlusion Pressure.	
	<input type="checkbox"/> Spontaneous breathing trial.	
	<input type="checkbox"/> Facility to calculate lower and upper inflection point.	
4.12	Nebulizer with capability to deliver particle size of < 3 micron & to be used in both Off and On line	
4.13	Shall have automatic patient detection facility.	
4.14	Medical Air Compressor:	
	<input type="checkbox"/> Imported standalone medical air compressor.	
	<input type="checkbox"/> Snap fit with the ventilator module to provide an oil free medical air.	
	<input type="checkbox"/> Peak output flow shall be minimum 160 LPM.	
	<input type="checkbox"/> Air quality must comply with ISO compressed air purity class.	
	<input type="checkbox"/> Medical Air Compressor must automatically activate in the event of wall air supply loss.	
	<input type="checkbox"/> Replacement of internal filters must be performed without removing the compressor.	
	<input type="checkbox"/> Must have washable air filter.	
4.15	Reusable Face Mask & Nasal Mask:	
	<input type="checkbox"/> Reusable face & nasal mask with textured dual flap silicone cushion flap for easy fit.	
	<input type="checkbox"/> Removable forehead support and pad to match the angle of patient's forehead.	
	<input type="checkbox"/> Stability selector for easy fit and angle.	
	<input type="checkbox"/> Ball & Socket headgear attachments.	
	<input type="checkbox"/> Must be autoclaveable.	
4.16	Shall have battery backup for minimum 1 hour.	
4.17	RS 232C interface for communications with networked devices.	
	5 Accessories, spares and consumables	
5.1	Adult, Paediatric and Neonatal reusable, autoclaveable silicon breathing circuits: 02 set each	
5.2	Reusable Masks (Small, Medium, and Large): 02 set each.	
5.3	Connecting hose with regulator/ flow meter or probe for connection to Pin index oxygen cylinder and BOC type oxygen wall outlet, 3 meter length: 01 set.	
5.4	Humidifier: Servo controlled with digital monitoring of inspired gas temperature complete with heating wire: 01 no.	
5.5	Filter paper for humidifier for 100 uses.	
5.6	O2 cell with O-ring.	
5.7	Silicone test lung adult and child size: 01 set each	
5.8	Nipple connector 15-10 mm.	
5.9	Flow sensors: 05 nos.	
5.10	Inspiration bacterial filter, able to filter 99.97% of all 0.3 microns particles: 05 nos.	
5.11	Expiration bacterial filter, able to filter 99.97% of all 0.3 microns particles: 05 nos.	
5.12	Non corrosive imported trolley with wheels & brakes and hinged arm: 01 no.	
5.13	All standard accessories, consumables and parts required to operate the equipment, including all standard tools and cleaning and lubrication materials, to be included in the offer.	

No.	Item Specifications	Fill your Specification
6 Operating Environment		
6.1	The product offered shall be designed to be stored and to operate normally under Power Supply, Climate, Temperature, Humidity, etc. for Sudan.	
6.2	Power supply: 220 – 240 VAC, 50Hz fitted with appropriate plug. The power cable must be at least 3 metre in length.	
7 Standards and Safety Requirements		
7.1	Must submit ISO13485:2003/AC:2007 for Medical Devices AND	
7.2	CE (93/42 EEC Directives) or USFDA or TUV approved product certificate.	
7.3	Certified to be compliant with ANS/IEC60601.2.12-01 Medical Electrical Equipment—Part 2-12; Particular Requirements for the Safety of Lung Ventilators—Critical Care Ventilators.	
7.4	Must meet IEC 529 Level 3 (IP3X) (spraying water) for enclosure protection, water ingress.	
7.5	Certified to be compliant with ISO-7767 for Oxygen monitoring.	
8 User Training		
8.1	Must provide user training (including how to use and maintain the equipment).	
9 Warranty		
9.1	Comprehensive warranty for 2 years after acceptance.	
10 Maintenance Service During Warranty Period		
10.1	During the warranty period supplier must ensure preventive maintenance and corrective/breakdown maintenance whenever required.	
11 Documentation		
11.1	User (Operating) manual in English.	
11.2	Service (Technical / Maintenance) manual in English.	
11.3	List of important spare parts and accessories with their part numbers and costing.	
11.4	Certificate of calibration and inspection from factory.	

2

Patient Monitor

No.	Item Specifications	Fill your Specification
1 Description of Function		
1.1	NIBP/Vital Sign Monitor is used to continuously monitor the vital parameters including NIBP of critically ill patients.	
2 Operational Requirements		
2.1	Capability of storage of patient data and printing of patient reports.	
2.2	Capability to integrate with the HIS and transfer the data through LAN / Wireless LAN to any other monitoring room / doctor's desk. Must be HL-7 compatible for transmitting and receiving data to/from LAN/HIS	
3 System Configuration		
3.1	NIBP/Vital Signs Monitor with complete accessories.	
4 Technical Specifications		
4.1	Monitoring parameters;- ECG, respiration, NIBP, SPO2 and temperature	
4.2	Digital and 6 waves / traces display on minimum 9 inches TFT/LCD Display Screen.	
4.3	Monitor must have audible and visual alarms capability. Alarms must have three distinct audible alarm tones to distinguish alarm levels as under. Also monitor must permit automatic viewing of alarming parameter waveform and numeric from any bedside in alarm as and when connected in a network.	
4.4	Must include hemodynamic calculations and vital sign and graphic trends. Trends must be automatically stored for at least 24 hours in at least one minute intervals.	
4.5	Numeric monitored data shall be viewable and recordable in a patient chart type format in at least 1, 5, 15, 60 minutes intervals.	
4.6	Convenient handle for carrying the same	
4.7	Able to fix with bed/trolley.	
4.8	Inbuilt rechargeable battery for minimum 3 hours of operation.	

No.	Item Specifications	Fill your Specification
5	Accessories, spares and consumables	
5.1	Accessories:	
	<input type="checkbox"/> Patient cable -01 no.	
	<input type="checkbox"/> Adult Cuff – 01 no.	
	<input type="checkbox"/> Paediatric Cuff -01 no.	
	<input type="checkbox"/> Adult Probe SPO2 -02 nos.	
	<input type="checkbox"/> Paediatric Probe SPO2 -02 nos.	
	<input type="checkbox"/> Skin Temp Probe -02 nos.	
5.2	All standard accessories, consumables and parts required to operate the equipment, including all standard tools and cleaning and lubrication materials, to be included in the offer.	
6	Operating Environment	
6.1	The product offered shall be designed to be stored and to operate normally under Power Supply, Climate, Temperature, Humidity, etc. for Sudan.	
6.2	Power supply: 220 – 240 VAC, 50Hz fitted with appropriate plug. The power cable must be at least 3 metre in length.	
7	Standards and Safety Requirements	
7.1	Must submit ISO13485:2003/AC:2007 for Medical Devices AND	
7.2	CE (93/42 EEC Directives) or USFDA or TUV approved product certificate.	
7.3	Shall meet IEC-60601-1-2:2001 General Requirements of Safety for Electromagnetic Compatibility or must comply with 89/366/EEC; EMC directive.	
7.4	Shall meet the safety requirements as per IEC 60601-2-27:1994—Medical electrical equipment—Part 2: Particular requirements for the safety of electrocardiographic monitoring equipment.	
8	User Training	
8.1	Must provide user training (including how to use and maintain the equipment).	
9	Warranty	
9.1	Comprehensive warranty for 2 years from acceptance.	
10	Maintenance Service During Warranty Period	
10.1	During the warranty period supplier must ensure planned preventive maintenance (PPM) and corrective/breakdown maintenance whenever required.	
11	Documentation	
11.1	User (Operating) manual in English	
11.2	Service (Technical / Maintenance) manual in English	
11.3	List of important spare parts and accessories with their part number and costing.	
11.4	Certificate of calibration and inspection from factory.	

3

Electric ICU Bed with mattress five movement

No.	Item Specifications	Fill your Specification
I	Manufacturer Name:	
II	Model No.:	
III	Country of Origin:	
1	Description of Function	
1.1	ICU Beds are required in the Intensive Care for comfort of the patient and to facilitate comfortable transfer to and fro emergency/OT/Wards etc. It is also required to carry out point of care procedures including radiological procedures at the bedside.	
2	Operational Requirements	
2.1	The system should be electrically operatable and adjustable for heights, trendelenburg etc. It should also be having radiotranslucent top	
3	System Configuration	
3.1	Electrically operated ICU bed with mattress.	
4	Technical Specifications	
4.1	Should have four section mattress base	
4.2	Should have X-Ray translucent back section made up of high pressure laminate.	
4.3	Should have X-Ray cassette holder underneath the back section & should allow insertion of X-Ray cassette from either side of the bed.	
4.4	Base frame & support frame should be made up of steel for long life & prevention from rusting.	

No.	Item Specifications	Fill your Specification
4.5	Should have step less electrical adjustment for the following :-	
	Height : 450-840 mm	
	Back section : 0- 50 degrees	
	Leg Section : 0-30 degrees	
4.6	Should have step less pneumatic adjustment for Trendelenburg (25° approx.), antitrendelenburg (15° approx.)	
4.7	Should have a manual quick release mechanism for back section adjustment during emergency situation	
4.8	Should be equipped with four articulated half-length tuck away side rails	
4.9	Should be equipped with large castors (diameter 120 mm approx.) with central braking and steering facility.	
4.10	Mattress of the Bed should be made up of high density foam with Anti-Microbial agent incorporated into all components that assists in Prohibiting growth of bacteria & fungi and easy to clean.	
4.11	Mattress should be fully Radiolucent for ease in performing portable X-Rays.	
4.12	Should have bumpers at all four corners and place for fixing accessories	
4.13	Dimensions of bed (approx.) :	
	Length : 2200 -2290 mm	
	Width : 850 -1020mm	
	Mattress Size : appropriate as per bed size	
	5 Accessories, spares and consumables	
5.1	Accessories:	
	· I.C.U Bed Mainframe -01	
	· Bed Ends, detachable : 01 pair	
	· Articulated half-length tuck away side rails : 04 Nos.	
	· IV Rods: 01 No.	
	· Mattress 12 cm Thick : 01 No.	
	6 Operating Environment	
6.1	The product offered shall be designed to be stored and to operate normally under Power Supply, Climate, Temperature, Humidity, etc. for Sudan.	
6.2	Power supply: 220 – 240 VAC, 50Hz fitted with appropriate plug. The power cable must be at least 3 metre in length.	
6.3	Resettable overcurrent breaker shall be fitted for protection	
	7 Standards and Safety Requirements	
7.1	The unit offered shall be certified to meeting the relevant quality and safety requirements of TUV, CE mark (MDD), USFDA, IEC, Radiation safety, safety of pressurised equipment and any other relevant quality and safety standards .	
7.2	Manufacturer must have ISO certification for quality standards.	
7.3	Certified to be compliant with IEC 60601-2-38 Medical Electrical Equipment part 2-38 Particular requirements for safety of Electrically Operated Hospital Beds.	
	8 User Training	
8.1	On site operational training till the familiarity of the system and satisfaction of end user shall be provided.	
	9 Warranty	
9.1	Comprehensive warranty for 2 years.	
	10 Maintenance Service During Warranty Period	
10.1	During the warranty period supplier must ensure corrective/breakdown maintenance whenever required.	
	11 Documentation	
11.1	User (Operating) manual in English	
11.2	Service (Technical / Maintenance) manual in English	
11.3	List of important spare parts and accessories with their part numbers and costing.	
11.4	Certificate of calibration and inspection from factory.	
11.5	Log book with instruction for daily, weekly, monthly and quarterly maintenance checklist.	

4

Electric ICU Bed with mattress three movement

No.	Item Specifications	Fill your Specification
I	Manufacturer Name:	
II	Model No.:	
III	Country of Origin:	
	1 Description of Function	
1.1	ICU Beds are required in the Intensive Care for comfort of the patient and to facilitate comfortable transfer to and fro emergency/OT/Wards etc. It is also required to carry out point of care procedures including radiological procedures at the bedside.	
	2 Operational Requirements	
2.1	The system should be electrically operatable and adjustable for heights, trendelenburg etc.	

No.	Item Specifications	Fill your Specification
	It should also be having radiotranslucent top	
3	System Configuration	
3.1	Electrically operated ICU bed with mattress.	
4	Technical Specifications	
4.1	Should have three section mattress base	
4.4	Base frame & support frame should be made up of steel for long life & prevention from rusting.	
4.5	Should have step less electrical adjustment for the following :-	
	Height : 450-840 mm	
	Back section : 0- 50 degrees	
	Leg Section : 0-30 degrees	
4.6	Should have a manual quick release mechanism for back section adjustment during emergency situation	
4.7	Should be equipped with four articulated half-length tuck away side rails	
4.1	Should be equipped with large castors (diameter 120 mm approx.) with central braking and steering facility.	
4.11	Mattress of the Bed should be made up of high density foam with Anti-Microbial agent incorporated into all components that assists in Prohibiting growth of bacteria & fungi and easy to clean.	
4.12	Mattress should be fully Radiolucent for ease in performing portable X-Rays.	
4.13	Should have bumpers at all four corners and place for fixing accessories	
4.14	Dimensions of bed (approx.) :	
	Length : 2200 -2290 mm	
	Width : 850 -1020mm	
	Mattress Size : appropriate as per bed size	
5	Accessories, spares and consumables	
5.1	Accessories:	
	· I.C.U Bed Mainframe -01	
	· Bed Ends, detachable : 01 pair	
	· Articulated half-length tuck away side rails : 04 Nos.	
	· IV Rods: 01 No.	
	· Mattress 12 cm Thick : 01 No.	
6	Operating Environment	
6.1	The product offered shall be designed to be stored and to operate normally under Power Supply, Climate, Temperature, Humidity, etc. for Sudan.	
6.2	Power supply: 220 – 240 VAC, 50Hz fitted with appropriate plug. The power cable must be at least 3 metre in length.	
6.3	Resettable overcurrent breaker shall be fitted for protection	
7	Standards and Safety Requirements	
7.1	The unit offered shall be certified to meeting the relevant quality and safety requirements of TUV, CE mark (MDD), USFDA, IEC, Radiation safety, safety of pressurised equipment and any other relevant quality and safety standards .	
7.2	Manufacturer must have ISO certification for quality standards.	
7.3	Certified to be compliant with IEC 60601-2-38 Medical Electrical Equipment part 2-38 Particular requirements for safety of Electrically Operated Hospital Beds.	
8	User Training	
8.1	On site operational training.	
9	Warranty	
9.1	Warranty for 2 years.	
10	Maintenance Service During Warranty Period	
10.1	During the warranty period supplier must ensure corrective/breakdown maintenance whenever required.	
11	Documentation	
11.1	User (Operating) manual in English	
11.2	Service (Technical / Maintenance) manual in English	
11.3	List of important spare parts and accessories with their part numbers and costing.	
11.4	Certificate of calibration and inspection from factory.	
11.5	Log book with instruction for daily, weekly, monthly and quarterly maintenance checklist.	

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Infusion Pump

No.	Item Specifications	Fill your Specification
1	Description of Function	
1.1	A microprocessor controlled infusion pump unit is needed to include but not limited to the following features:	
1.2	Flat hygienic touch screen.	
1.3	Syringe loading sensor – with KVO (keep vein open)	

No.	Item Specifications	Fill your Specification
1.4	Self calibrated, self diagnosis capability	
1.5	Volume range from 1 –999 ml/hr or better in 1 ml increment	
1.6	High accuracy rate< /- 2%	
1.7	Audio visual indicators	
1.8	Multi types A/V alarms to include occlusion, door open, low battery, empty, etc...	
1.9	Open system using standard IV lines	
1.10	Air in line/ fluid detector	
1.11	Built in rechargeable battery, at least two hours operation	
1.12	Clamp pole	
2	Operating Environment	
2.1	The product offered shall be designed to be stored and to operate normally under Power Supply, Climate, Temperature, Humidity, etc. for Sudan.	
2.2	Power supply: 220 – 240 VAC, 50Hz fitted with appropriate plug. The power cable must be at least 3 metre in length.	
7	Standards and Safety Requirements	
7.1	Must submit ISO13485:2003/AC:2007 for Medical Devices AND	
7.2	CE (93/42 EEC Directives) or USFDA or TUV approved product certificate.	
8	User Training	
8.1	Must provide user training (including how to use and maintain the equipment).	
9	Warranty	
9.1	Comprehensive warranty for 2 years after acceptance.	
10	Maintenance Service During Warranty Period	
10.1	During the warranty period supplier must ensure preventive maintenance and corrective/breakdown maintenance whenever required.	
11	Documentation	
11.1	User (Operating) manual in English.	
11.2	Service (Technical / Maintenance) manual in English.	
11.3	List of important spare parts and accessories with their part numbers and costing.	
11.4	Certificate of calibration and inspection from factory.	

6

Syringe Pump

No.	Item Specifications	Fill your Specification
1	Description of Function	
1.1	The Syringe Infusion Pump provides uniform flow of fluid by precisely driving the plunger of a syringe down its barrel. It provides accurate and continuous flow rate for precise delivery of I.V. medication in critical medical care.	
2	Operational Requirements	
2.1	The syringe pump must be programmable, user friendly, safe to use and must have battery backup and comprehensive alarm system. This must be able to integrate in the HIS.	
3	System Configuration	
3.1	Syringe infusion pump with battery backup alarm and with complete accessories.	
4	Technical Specifications	
4.1	Flow rate programmable from 0.1 to 200 ml/hr. or more in steps of 0.1 ml/hr. with user selectable flow set rate option. SAVE last infusion rate even when the AC power is switched OFF.	
4.2	Bolus rate must be programmable to 400 – 500 ml/hr. or more with infused volume display. Reminder audio after every 0.5 ml delivered bolus. SAVE last Bolus rate even when the AC power is switched OFF.	
4.3	Display of Drug Name with a provision of memorizing 10~15 names by the operator	
4.4	Keep Vein Open (KVO) must be available 1.0 ml/hr. or set rate if lower than 1.0 ml. User must have choice to disable KVO whenever desired.	
4.5	Selectable Occlusion pressure trigger levels selectable from 300/500/900 mmHg	

No.	Item Specifications	Fill your Specification
4.6	Must Work on commonly available 20, 50/60 ml Syringes with accuracy of minimum of +/- 2% or better.	
4.7	Automatic detection of syringe size & proper fixing. Must provide alarm for wrong loading of syringe such as flanges out of slot; disengaged plunger, unsecured barrel etc.	
4.8	Anti-bolus system to reduce pressure on sudden release of occlusion	
4.9	Must have comprehensive alarm package including: Occlusion limit exceed alarm ,Near end of infusion pre-alarm & alarm, Volume limit pre-alarm & alarm, KVO rate flow, Low battery pre-alarm and alarm, AC power failure, Drive disengaged and preventive maintenance.	
4.10	Rechargeable Battery having at least 5~6 hour backup for about 5ml/hr. flow rate with 50ml syringes. Larger battery life and indication of residual life will be preferred.	
5 Accessories, spares and consumables		
5.1	Accessories:	
	<input type="checkbox"/> Mounting device/ Docking Station for two or four pumps as per requirement so as to enable to power up to 2-4 pumps with one power cord when mounted on IV pole. -01 pc.	
5.2	All standard accessories, consumables and parts required to operate the equipment, including all standard tools and cleaning and lubrication materials, to be included in the offer. Bidders must specify the quantity of every item included in their offer (including items not specified above).	
6 Operating Environment		
6.1	The product offered shall be designed to be stored and to operate normally under Power Supply, Climate, Temperature, Humidity, etc. for Sudan.	
6.2	Power supply: 220 – 240 VAC, 50Hz fitted with appropriate plug. The power cable must be at least 3 metre in length.	
7 Standards and Safety Requirements		
7.1	Must submit ISO13485:2003/AC:2007 for Medical Devices AND	
7.2	CE (93/42 EEC Directives) or USFDA or TUV approved product certificate.	
7.3	Certified for meeting IEC60601-2-24:Particular requirements for the safety of infusion pumps and controllers	
7.4	Must meet IEC 529 Level 3 (IP3X) (spraying water) for enclosure protection, water ingress.	
8 User Training		
8.1	Must provide user training (including how to use and maintain the equipment).	
9 Warranty		
9.1	Comprehensive warranty for 2 years.	
10 Maintenance Service During Warranty Period		
10.1	During the warranty period supplier must ensure corrective/breakdown maintenance whenever required.	
11 Documentation		
11.1	User (Operating) manual in English.	
11.2	Service (Technical / Maintenance) manual in English	
11.3	List of important spare parts and accessories with their part number and costing.	
11.4	Certificate of calibration and inspection from factory.	

7

C-Arm X-Ray Machine

No.	Item Specifications	Fill your Specification
1 Description of Function		
1.1	This equipment is used in orthopaedic fractures for imaging of bone pathology or fractures on display monitor during operation/ reduction of fractures.	

No.	Item Specifications	Fill your Specification
2	Operational Requirements For continuous fluoroscopy, image storage and retrieval The system offered shall be a general fluoroscopy/radiology system, it should be a non-digital; non-DICOM compatible type.	
3	System Configuration	
3.1	X-ray C-Arm Mobile with complete accessories	
4	Technical Specifications	
4.1	X-Ray Generator	
	Microprocessor based, high frequency inverter generator	
	Generator Output: not less than 2kW at 100kV	
	Fluoroscopic/ Radiographic KV range	
	Lower limit shall not exceed 40 KV	
	Higher limit shall not be less than 120 KV	
	Fluoroscopic mA range	
	Lower limit shall be ~0.1 mA	
	Upper limit shall be ~9 mA	
4.2	X-Ray Tube	
	Rotating anode type	
	Single focal spot, shall not be more than 0.6 mm	
	Nominal voltage: 110 kV	
	Anode heat storage capacity not less than 300 KHU	
	Inherent filtration should be at least 3 mm Al eq	
4.3	Collimator	
	Operator controlled automatic collimation	
4.4	C-Arm	
	· Focus - I.I. Distance shall be at least 100 cm	
	· Depth shall be ~ 75cm	
	· Horizontal travel at least 200mm	
	· Vertical travel at least 450 mm	
	· Orbital movement shall be ~125°	
	· Swivel range shall be ~12°	
	· Rotation about horizontal axis shall be more than +/-180°	
4.5	Image Intensifier	
	· At least 23 cm input screen with direct coupling with camera	
	· Shall be at least 52 lp/ cm	
	· Noise reduction, scattered light trap for high contrast dynamics	
	· CCD camera technology with ABC and AGC control	
4.6	TV Monitor	
	· 2 units LCD monitor side by side for live and reference image	
	· Shall be at least 43 cm with automatic brightness control	
4.7	Image rotation	
	· Shall be at least 625 scanning lines at 50 Hz	
	· Trolley for 2 display screens and with the alphanumeric keyboard included	
	· High resolution and anti glare	
4.8	Imaging Modes	
	· Fluoroscopy mode shall have the following facilities:	
	· Continuous fluoroscopy with last image hold	
	· Last image hold with at least two frames image memory	
	· Continuous fluoroscopy with image acquisition rate: about 20 frame/second.	
	· Hard disk with image storage capacity of at least 30000 images	
	· RAM Memory of 256 images	
	· Mosaic display of 16 images	
	· Zoom (x 2)	
	· Measures: at least distances,angles	
	· Come with CD/DVD/RW drive	

No.	Item Specifications	Fill your Specification
4.9	Video printer for B/W thermal printing on paper, size 20 x 25 cm, resolutions about 300 dpi; The video printer can be placed on the monitor trolley	
4.1	Indicate here other features and software functions included in this offer	
5 System Configuration Accessories, spares and consumables		
5.1	Video printer for B/W thermal printing 01 no.	
5.2	Sterilizable textile cover and clips, for the X-ray tube and the Cassette holder for 24 x 30 cm	
5.3	All standard accessories/consumables/parts required for the proper operation of the above item shall be included in the offer.	
6 Operating Environment		
6.1	The product offered shall be designed to be stored and to operate normally under Power Supply, Climate, Temperature, Humidity, etc. for Sudan.	
6.2	Should work on 220-240V/ 50 Hz AC Single phase fitted with appropriate plugs and sockets.	
7 Standards and Safety Requirements		
	The unit offered shall be certified to meeting the relevant requirements of TUV, CE mark (MDD), FDA and/ or any equivalent quality and safety standards.	
	Certificates showing the compliance of this unit offered with any relevant quality and safety standards MUST be submitted with this TSF.	
8 User Training		
8.1	On site operational training till the familiarity of the system and satisfaction of end user shall be provided.	
9 Warranty		
9.1	Comprehensive warranty for 2 years.	
10 Maintenance Service During Warranty Period		
10.1	Preventive & Corrective Maintenance:	
	During the warranty period supplier must ensure planned preventive maintenance (PPM) at least 3 nos. in a year along with corrective/breakdown maintenance whenever required.	
11 Installation, Inspections and Commissioning		
11.1	Supplier must accomplish proper installation and commissioning of the equipment on site.	
11.2	Inspections to verify the compliance of the offered equipment as per the specifications	
12 Documentation		
12.1	User (Operating) manual in English	
12.2	Service (Technical / Maintenance) manual in English	
12.3	List of important spare parts and accessories with their part numbers and costing.	
12.4	Certificate of calibration and inspection from factory.	
12.5	Log book with instruction for daily, weekly, monthly and quarterly maintenance checklist.	

8

Mobile X-Ray Machine

No.	Item Specifications	Fill your Specification
1 Technical Specifications		
	A microprocessor controlled mobile x-ray imaging unit is to include but not limited to the following:	
	Microprocessor controlled x-ray generator, > 20 KW	
	It should have a digital display of mAs and kV and an electronic timer.	
	KV range: 40kV to 125kV	
	mA range: 300 mA or more. Please specify mA and seconds separately and not mAs alone.	
	Shortest exposure time: 1 ms.	
	X-Ray Tube: .	

No.	Item Specifications	Fill your Specification
	Output should match the output of the generator,	
	Must have a rotating anode with at least: 2500 rpm and focal spot size should be less than Imm.	
	Rotating anode tube system, with focal spots , 0.6/1.2 mm of large heat storage capacity, > 120,000 HU	
	Collimator- Manually adjustable multileaf collimator, rotatable $\pm 90^\circ$	
	The exposure release switch should be detachable with a cord of at least 5 meters	
	Remote control operating distance > 10 metres	
	Remote control operating radius- 180 deg	
	Lightweight manual driven unit, with braking system.	
	Small source image distance, please specify.	
	Direct 220-240v/50Hz single phase power line connection with built in line voltage compensation.	
	Grid(Ratio 6:1) of following sizes should be provided (1) each 12"x15" & 10"x12"	
	2 User Training:	
2.1	The Supplier shall conduct user training for this equipment to enable operators to use the equipment properly. The training shall include the use of all operational functions of the equipment, as well as routine checks and maintenance expected by users.	
	3 Warranty	
3.1	Comprehensive warranty for 2 years from acceptance.	
	4 Maintenance Service During Warranty Period	
4.1	During warranty period supplier must ensure preventive maintenance & corrective/breakdown maintenance whenever required.	
	5 Installation and Commissioning	
5.1	The equipment to be installed by certified or qualified personnel; any prerequisites for installation to be communicated to the purchaser in advance, in detail.	
	6 Documentation	
6.1	User (Operating) manual in English.	
6.2	Service (Technical / Maintenance) manual in English.	
6.3	List of important spare parts and accessories with their part numbers and costing.	
6.4	Certificate of calibration and inspection from factory.	

9

Portable Ultrasound Machine with UPS

No.	Item Specifications	Fill your Specification
	1 Description of Function	
1.1	A general purpose fully digital B & W Ultrasound imaging system.	
	2 Operational Requirements	
2.1	It shall operate on mains AC supply.	
	3 System Configuration	
3.1	System shall come with main unit, 1 probe, 1 unit of black and white video thermal printer and Ultrasound gel warmer 1 unit.	
	4 Technical Specifications	
4.1	Latest technology and all digital beam former general purpose standalone ultrasound machine with integrated light weight mobile cart.	
4.2	Main applications: OB/GYN, abdominal, peripheral vessels and small parts.	
4.3	The system shall have at least 12" or higher flat LCD monitor with tilt & swivel facilities.	
4.4	Shall have B-mode, M-mode, B/M mode, 2B mode & 2D mode.	
4.5	The system must have at least Two active probe ports for easy use and convenient operation.	
4.6	256 Grey shades for sharp contrast resolutions.	
4.7	Controls for depth, gain compensation, body markers with transducer position.	

No.	Item Specifications	Fill your Specification
4.8	Shall have real time continuous dynamic focus.	
4.9	Shall have facility for image zoom, freeze, text annotation.	
4.10	The system shall have extensive calculation software package for Ob/Gyn and general imaging.	
4.11	The system must have provision for measurement and calculation of distance, area, volume, heart rate and circumference on the image.	
4.12	The system shall have Tissue Harmonic Imaging.	
4.13	Near and far gain adjustable.	
4.14	Contrast, adjustable.	
4.15	Focus: auto adjustable.	
4.16	Shall have an alpha-numeric keyboard with easy access scans controls and track ball and status display.	
4.17	Cine memory of 250 frames for cine loop playback.	
4.18	Frame rate: not less than 50fps.	
4.19	Display depth: minimum 28-30cm.	
4.20	Dynamic range, selectable up to approximately 165dB.	
4.21	Image storage: Minimum 200 patient's images on main unit.	
4.22	Shall have facility for inbuilt CD writer.	
4.23	System shall be DICOM ready and capable of being interfaced with HIS/RIS/PACS.	
4.24	Facility for future upgradeability.	
4.25	Probe: 2 to 5 MHz convex probe for Obs. /Gyn. and abdominal application is to be supplied.	
4.26	Specify in details other compatible probs and their costing for each probe type	
5 Accessories, spares and consumables		
5.1	Accessories:	
	<input type="checkbox"/> Black and white video thermal printer with 50 rolls of high density recording paper: 01 no.	
	<input type="checkbox"/> DVD/CD Recorder with DICOM media transfer.	
	<input type="checkbox"/> Ultrasound gel warmer: 01 unit.	
5.2	All standard accessories, consumables and parts required to operate the equipment, including all standard tools and cleaning and lubrication materials, to be included in the offer.	
6 Operating Environment		
6.1	The product offered shall be designed to be stored and to operate normally under Power Supply, Climate, Temperature, Humidity, etc. for Sudan.	
6.2	Power supply: 220 – 240 VAC, 50Hz fitted with appropriate plug. The power cable must be at least 3 metre in length.	
6.3	Shall provide UPS of suitable rating with voltage regulation and spike protection for 30 minutes back-up.	
7 Standards and Safety Requirements		
7.1	Must submit ISO 13485:2003/AC: 2007 AND	
7.2	CE (93/42 EEC Directives) or USFDA or TUV approved product certificate.	
7.3	Electrical safety conforms to standards for Electrical Safety IEC 60601-2-37 Medical electrical equipment – Part 2-37: Particular requirements for the basic safety and essential performance of ultrasonic medical diagnostic and monitoring equipment.	
8 User Training		
8.1	Must provide user training (including how to use and maintain the equipment).	
9 Warranty		
9.1	Comprehensive warranty for 2 years after acceptance.	
10 Maintenance Service During Warranty Period		
10.1	During the warranty period supplier must ensure preventive maintenance and corrective/breakdown maintenance whenever required.	
11 Documentation		

No.	Item Specifications	Fill your Specification
11.1	User (Operating) manual in English.	
11.2	Service (Technical / Maintenance) manual in English.	
11.3	List of important spare parts and accessories with their part number and costing.	
11.4	Certificate of calibration and inspection from factory.	

10

Computed Radiography system (CR) with UPS

No.	Item Specifications	Fill your Specification
1	Technical Specifications	
	Specifications for State of the art Latest Generation Computed Radiography (CR) system for high resolution Digital radiography	
2	Features	
	Technical Requirements – CR system configuration shall include:	
	Imaging plates (IP)	
	Image reader system	
	CR workstations	
	RIS interface	
	Remote ID and Preview stations	
	Accessories and consumables	
	Laser Imager	
	CR Compatible imaging plates	
	Following sizes are required –	
	35cm x 43 cm - 4	
	35cm x 35 cm - 2	
	24cm x 30 cm - 2	
	18cm x 24 cm - 1	
	15cm x 30 cm - 1	
	Image reader shall meet the Functional requirements :	
	Various image – processing protocols available for the respective regions of body	
	IP processing rate should be 60 plates / hour.	
	Mechanism for Re-routing the newly acquired images to the preconfigured CR work station	
	Capability of retrieving (Service Intervention) at least last 10 scanned images, as part of contingency plan.	
	Capability for quick check of the image and exam data of at least the last 4 Imaging Plates scanned at the X-ray room.	
	Protocol for verifying the connectivity status of configured image destinations.	
	Spatial resolution of the digital image shall preferably be 2k x 2k x 12 bits for optional resolution.	
	Identification and Preview	
3	System Functional Requirements:	
	a) Capability of interfacing to HL7, Proprietary, DICOM Work list or user defined Windows/Linux based interface protocols to HIS/RIS.	
	b) Please specify whether you have tested interfacing with HL7 – DICOM Bridge.	
	c) Mechanism for retrieving Demographics of at least last 10 patients identified on a particular Identification Terminal.	
	d) Customizable Graphic User Interface (GUI) in Identification station with facility of selecting DICOM print & storage destination.	
	e) Indication of Over Exposure on the preview module.	
	f) Mechanism for User release from Preview terminal in case of Auto - routing Images to Pre-defined DICOM Destinations.	
	g) Customizable Graphic User Interface (GUI) for Preview terminal.	

No.	Item Specifications	Fill your Specification
	h) Solution for storing patient demographic data for multiple exams in RIS/non RIS environment.	
	i) It should be possible to put a custom configurable data field in the demographic information of the patient linked with the image.	
4	System should include the following Software applications:	
	Please list all the optional software(s) which are available with you for enhancing the	
	workflow and service in the Digital Radiology environment for the following:	
	Advanced Processing Software	
	Application Software	
	Connecting Software	
	Visual Output Software	
	Quality Monitoring Software.	
	The system should include the following SW applications as standard:	
	Full Leg/Full spine image processing.	
	Quality control software	
	Software, which enables to see in the preview terminal the deviation from normal exposure and with the details of the deviation on the CR workstation.	
	Software masking of the collimation areas.	
	Special attention should be placed on pediatric applications.	
	Software for storing images on any DICOM 3 (or newer versions) compliant stations.	
	Software for printing on any DICOM printer	
5	CR Workstation	
	System configuration requirements:	
	Accept images from CR Reader without any loss of data	
	Capable of Archiving & Printing selected images to a standard DICOM destination.	
	Storing images in the local disk for pre-defined period.	
	Mechanism for accepting New images when the local disk is full	
	Should include 21" antiglare flicker free TFT/LCD color monitor	
	Should include 21" Monochrome antiglare flicker free Medical Grade TFT/LCD .	
	Monitor with at least 2k x 2k resolution	
	CD/DVD Burner	
	80 GB or more on board storage	
6	System Functional requirements:	
	Support DICOM work list or user defined Windows based interface to HIS/RIS.	
	Mechanism for retrieving Demographics of atleast last 10 patient identified on that Terminal.	
	Customizable Graphic User Interface with facility of selecting DICOM print & storage destination.	
	Indication of Over Exposure on the preview module.	
	Mechanism for User release in case of Auto-routing Images to Pre-defined DICOM Destinations.	
	Functional requirement for CR workstations:	
	Built in routine for using predefined image processing parameters for image quality enhancement.	
	Mechanism for storing the Patient image based on name, date, exam, etc.	
	Capability of storing user defined image processing parameters.	
	Capability of overwriting predefined image parameter with user-defined parameters & storing these two images separately.	
	Correcting typographically in Patient Demographic module, in case the RIS connection was down and annually data entry was done.	
	Capability of changing W/1, Flipping, Rotating, Zooming, Collimating Annotating incoming image.	

No.	Item Specifications	Fill your Specification
	Auto-routing incoming image to predefined DICOM Store (SCP storage) or Print Destination (SCP Print Destination)	
	Mechanism for printing Multiple Images in one film, with the possibility of slide and True Size printing.	
	Capability of storing to CD	
	Systems should be able to converse with other DICOM systems – such as MR work station / CT workstation / DSA lab / DR work station.	
	Laser Imager System Configuration requirements: Print Images CR Workstation	
	Capable of Printing Images in DICOM 3.9 format	
	Mechanism to print images 14x17, 11x14, 8x10 film sizes simultaneously.	
	Resolution should be 500 dpi or more.	
	Capable of handling mammography plates.	
	7 Functional requirement for Laser Imager:	
	a) Capable of Printing images in High quality	
	b) Mechanism for printing images in 14x17, 14x11, 10x8 film sizes.	
	c) Mechanism for Printing Multiple Images in one film, with the possibility of slide printing.	
	Laser Paper Printer (Optional)	
	Provision for Distributed CR System should be present. Please quote separately for additional workstation image reader preview stations and image planes (Optional)	
	8 User Training:	
8.1	The Supplier shall conduct user training for this equipment to enable operators to use the equipment properly. The training shall include the use of all operational functions of the equipment, as well as routine checks and maintenance expected by users.	
	9 Warranty	
9.1	Comprehensive warranty for 2 years from acceptance.	
	10 Maintenance Service During Warranty Period	
10.1	During warranty period supplier must ensure preventive maintenance & corrective/breakdown maintenance whenever required.	
	11 Installation and Commissioning	
11.1	The equipment to be installed by certified or qualified personnel; any prerequisites for installation to be communicated to the purchaser in advance, in detail.	
	12 Documentation	
12.1	User (Operating) manual in English.	
12.2	Service (Technical / Maintenance) manual in English.	
12.3	List of important spare parts and accessories with their part numbers and costing.	
12.4	Certificate of calibration and inspection from factory.	

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Hydraulic Operating Table

No.	Item Specifications	Fill your Specification
	1 Description of Functions	
1.1	Hydraulic operating tables are simple tables for performing surgical procedures and it works without electrical power.	
	2 Operational Requirements	
2.1	OT Table is required for general surgery and shall have X-Ray translucent tops.	
	3 System Configuration	
3.1	Operating Table Hydraulic with complete accessories.	
	4 Technical Specifications	
4.1	Four section table top with divided foot section.	
4.2	The table shall be mobile on castors with efficient braking system for stability during surgery.	

No.	Item Specifications	Fill your Specification
4.3	Table top must be constructed from a high-pressure laminate to permit x-ray penetration and fluoroscopy.	
4.4	All table positioning, i.e., height, back section, lateral tilt, trendelenburg, and anti-trendelenburg, except foot and head section must be operated hydraulically.	
4.5	Shall have a manual position selector, whose location must be interchangeable between foot and head end.	
4.6	The casings on the frame and centre supporting column must be made of hygienic stainless steel.	
4.7	Mattress must be radio lucent and suitable for fluoroscopy.	
4.8	Dimensions (approx. +/- 10 % variations):	
	<input type="checkbox"/> Height: 730-1040 mm.	
	<input type="checkbox"/> Side tilt: + 15 degrees.	
	<input type="checkbox"/> Back section adjustment: - 15 degrees to 70 degrees.	
	<input type="checkbox"/> Foot section adjustment: - 90 to 0 degree, detachable.	
	<input type="checkbox"/> Trendelenburg: 25 degree.	
	<input type="checkbox"/> Anti trendelenburg: 25 degree.	
	<input type="checkbox"/> Head section adjustment: -40 to -30 degrees, detachable.	
	<input type="checkbox"/> Maximum width: 555 mm.	
	<input type="checkbox"/> Length: 1950 mm.	
5	Accessories, spares and consumables	
5.1	Accessories:	
	<input type="checkbox"/> Padded arm rest with straps: pair with damp.	
	<input type="checkbox"/> Anesthesia screen with clamps.	
	<input type="checkbox"/> Side supports: pair with clamps.	
	<input type="checkbox"/> Knee crutches: pair with damp.	
	<input type="checkbox"/> X-ray cassette tray.	
	<input type="checkbox"/> Kidney bridge.	
	<input type="checkbox"/> SS bowl with clamps.	
	<input type="checkbox"/> Infusion rod with clamp.	
	<input type="checkbox"/> Legs Support.	
5.2	All standard accessories, consumables and parts required to operate the equipment, including all standard tools and cleaning and lubrication materials, to be included in the offer.	
6	Operating Environment	
6.1	The product offered shall be designed to be stored and to operate normally under Climate, Temperature, Humidity, etc. for Sudan.	
7	Standards and Safety Requirements	
7.1	Must submit ISO13485:2003/AC:2007 for Medical Devices AND	
7.2	CE (93/42 EEC Directives) or USFDA approved product certificate.	
8	User Training	
8.1	Must provide user training (including how to use and maintain the equipment).	
9	Warranty	
9.1	Comprehensive warranty for 2 years after acceptance.	
10	Maintenance Service During Warranty Period	
10.1	During the warranty period supplier must ensure corrective/breakdown maintenance whenever required.	
11	Documentation	
11.1	User (Operating) manual in English.	
11.2	Service (Technical / Maintenance) manual in English.	
11.3	List of important spare parts and accessories with their part numbers and costing.	
11.4	Certificate of calibration and inspection from factory.	

No.	Item Specifications	Fill your Specification
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No.	Item Specifications	Fill your Specification
1	Description of Function	
1.1	To extract fluid from the body during surgery or emergency treatment.	
2	Operational Requirements	
2.1	Shall operate on mains AC supply .	
3	System Configuration	
3.1	The system consists of:	
	<input type="checkbox"/> Suction machine with 2 Jar.	
	<input type="checkbox"/> Suction tubing.	
	<input type="checkbox"/> Two bottles.	
4	Technical Specifications	
4.1	The machine shall be portable on four wheels and with a handle for transportation.	
4.2	The vacuum pump must be totally oil-free diaphragm type. Must have maintenance free pumps of international design for continuous use.	
4.3	Motor shall be of Class "F" insulation to operate in ambient temperature to withstand up to 50 oC, with thermal cut-outs.	
4.4	To facilitate maintenance, the cover of the machine must be easy to open from the top & sides.	
4.5	The suction machine must be capable of producing minimum vacuum of approx. 700 mm Hg and which must be adjustable and monitored by vacuum gauge of suitable range. The suction capacity must be 25 litres per minute and can be regulated.	
4.6	It must have two bottles of 2L each . Each made of unbreakable polycarbonate with ABS Lid with float (over flow control device).The jars must be graduated (in cc levels). The suction bottles shall be autoclaveable.	
4.7	On/Off Switch and power indicator must be available.	
4.8	Shall provide foot switch.	
4.9	Body material:	
	Base, top & panel made of rust proof and corrosion resistant moulded ABS.	
5	Accessories, spares and consumables	
5.1	Accessories:	
	<input type="checkbox"/> Spare bottle: 02 nos.	
	<input type="checkbox"/> Lids: 02 nos.	
	<input type="checkbox"/> Rubber Seals: 02 nos.	
	<input type="checkbox"/> Blades: 02 nos.	
	<input type="checkbox"/> Suction tubing set at least 5 metres: 02 nos.	
	<input type="checkbox"/> Spare fuse: 01 set.	
	<input type="checkbox"/> Bacterial filter : 05 nos.	
5.2	All standard accessories, consumables and parts required to operate the equipment, including all standard tools and cleaning and lubrication materials, to be included in the offer.	
6	Operating Environment	
6.1	The product offered shall be designed to be stored and to operate normally under Power Supply, Climate, Temperature, Humidity, etc. for Sudan.	
6.2	Power supply: 220 – 240 VAC, 50Hz fitted with appropriate plug. The power cable must be at least 3 metre in length.	
7	Standards and Safety Requirements	
7.1	Must submit ISO13485:2003/AC:2007 for Medical Devices AND	
7.2	CE (93/42 EEC Directives) or USFDA or TUV approved product certificate.	
7.3	Electrical safety conforms to standards for electrical safety IEC 60601-1 General requirement for Electrical safety of Medical Equipment.	
8	User Training	
8.1	Must provide user training (including how to use and maintain the equipment).	
9	Warranty	
9.1	Comprehensive warranty for 2 years after acceptance.	
10	Maintenance Service During Warranty Period	

No.	Item Specifications	Fill your Specification
10.1	During warranty period supplier must ensure corrective/breakdown maintenance whenever required.	
11	Documentation	
11.1	User (Operating) manual in English.	
11.2	Service (Technical / Maintenance) manual in English.	
11.3	List of important spare parts and accessories with their part numbers and costing.	
11.4	Certificate of calibration and inspection from factory.	

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Oxygen Regulator

No.	Item Specifications	Fill your Specification
1	Operational Requirements	
	Regulator for Oxygen cylinder	
	Fixed Pressure Type.	
	Suitable for Anesthesia machine	
	British Standard	
2	Operating Environment	
2.1	The product offered shall be designed to be stored and to operate normally under the conditions of Sudan. The conditions include Climate, Temperature, Humidity, etc.	
3	Standards and Safety Requirements	
3.1	Must submit ISO13485:2003/AC:2007 for Medical Devices AND	
3.2	CE (93/42 EEC Directives) or USFDA approved product certificate.	
4	User Training	
4.1	Must provide user training (including how to use and maintain the equipment).	
5	Warranty	
5.1	Comprehensive warranty for 2 years after acceptance.	
6	Documentation	
6.1	User (Operating) manual in English.	
6.2	Service (Technical / Maintenance) manual in English.	
6.3	Certificate of calibration and inspection from factory.	

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Nitrous Regulator

No.	Item Specifications	Fill your Specification
1	Operational Requirements	
	Regulator for Nitrous cylinder	
	Fixed Pressure Type.	
	Suitable for Anesthesia machine	
	British Standard	
2	Operating Environment	
2.1	The product offered shall be designed to be stored and to operate normally under the conditions of Sudan. The conditions include Climate, Temperature, Humidity, etc.	
3	Standards and Safety Requirements	
3.1	Must submit ISO13485:2003/AC:2007 for Medical Devices AND	
3.2	CE (93/42 EEC Directives) or USFDA approved product certificate.	
4	User Training	
4.1	Must provide user training (including how to use and maintain the equipment).	
5	Warranty	
5.1	Comprehensive warranty for 2 years after acceptance.	
6	Documentation	
6.1	User (Operating) manual in English.	
6.2	Service (Technical / Maintenance) manual in English.	
6.3	Certificate of calibration and inspection from factory.	

No.	Item Specifications	Fill your Specification
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Major Surgical Set

No.	Item Specifications	Fill your Specification
1	Technical Specifications	
	Strilization Box	
	FOERSTER SPONGE FORCEPS 25CM STR. SERR.	
	BACKHAUS TOWEL FORCEPS 130MM	
	SCALPEL HANDLE NO. 3	
	SCALPEL HANDLE NO. 4	
	SCALPEL HANDLE NO. 7	
	TC-EDGE MAYO DISSECT. SCISSORS 17CM STR.	
	TC-EDGE MAYO DISSECT. SCISSORS 17CM CVD.	
	TC-EDGE METZENBAUM SCISSORS 18CM CVD.	
	SCURGICAL SCISSORS 145MM STR.SH-BL.	
	TC UNIVERSAL WIRE CUTTING SCS.12CM ANG.	
	DISSECTING FORCEPS 14,5CM	
	DISSECTING FORCEPS 20CM	
	TISSUE FORSEPS 14,5CM 1X2 TEETH	
	TISSUE FORSEPS 20CM 1X2 TEETH	
	ALLIS TISSUE FORCEPS 15CM 5X6 TEETH	
	BABCOCK TISSUE FORCEPS 16CM	
	HALSTED MOSQUITO FORCEPS 12,5CM STR.	
	HALSTED MOSQUITO FORCEPS 12,5CM CVD.	
	RANKIN-CRILE HEMOSTATIC FCPS. 16CM STR.	
	RANKIN-CRILE HEMOSTATIC FCPS. 16CM CVD.	
	ROCHESTER-PEAN HEMOSTATIC FCPS. 16CM CVD.	
	ROCHESTER-OCHSNER FORCEPS 16CM STR. 1X2 T	
	RICHARDSON RETRACTOR 24CM 28X20MM	
	RICHARDSON RETRACTOR 24CM 36X28MM	
	RICHARDSON RETRACTOR 24CM 44X38CM	
	DEAVER RETRACTOR 300X50MM	
	VOLKMANN RETRACTOR 21,5CM 4 BLUNT PRONGS	
	VOLKMANN RETRACTOR 21,5CM 6 BLUNT PRONGS	
	CUSHING VEIN RETRACTOR 20CM 9X12MM	
	US ARMY D/E RETRACTOR 21CM SET OF 2	
	RIBBON RETRAKTOR 330X25MM	
	RIBBON RETRAKTOR 330X40MM	
	BALFOUR ABDOM.RETRACTOR 250MM SPREAD	
	GROOVED DIRECTOR 14,5CM	
	PROBE WITH EYE 13CM	
	DESCHAMPS LIGATURE NEEDLE 21CM RIGHT BL.	
	DESCHAMPS LIGATURE NEEDLE 21CM LEFT BL.	
	YANKAUER SUCTION TUBE 28CM SS WITH EXTRA OLIVE	
	TC MAYO HEGAR NEEDLE HOLDER 16CM G2500	
	TC MAYO HEGAR NEEDLE HOLDER 18CM; 0,5MM	
2	Operating Environment	
2.1	The system offered shall be designed to store and to operate normally under the conditions include Climate, Temperature, Humidity, etc. for Sudan	
3	Standards and Safety Requirements	
3.1	Must submit ISO 9001 or ISO 13485:2003/AC:2007 AND	
3.2	CE (93/42 EEC Directives) or USFDA approved product certificate.	
4	User Training	
4.1	Not applicable	
5	Warranty	

No.	Item Specifications	Fill your Specification
5.1	Warranty for 2 years.	
6 Maintenance Service During Warranty Period		
6.1	Standard warranty conditions are applicable.	

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Minor Surgical Set

No.	Item Specifications	Fill your Specification
1 Technical Specifications		
	Strilization Box	
	surgical knife handle	
	needle holder straight (mayo) 17.5	
	straight artery forceps ,pean 16	
	curved artery forceps, pean 16	
	dissecting forceps	
	curved oper. Scissors , blunt point (mayo) 17 cm	
	surgical scissors , straight , blunt 14.5 cm	
	sharp uterine curette 26 cm x 9 mm sims	
	blunt uterine curette 26 cm x 8 mm (sims)	
	kideny basin 475 ml (16oz) stainless steal 12" x5 x 2-3/8	
	bowl,solution,stainless steel, 8 liters.	
	gauze scissors	
	dressing tray	
	surgical towels	
	handing forceps	
2 Operating Environment		
2.1	The system offered shall be designed to store and to operate normally under the conditions include Climate, Temperature, Humidity, etc. for Sudan	
3 Standards and Safety Requirements		
3.1	Must submit ISO 9001 or ISO 13485:2003/AC:2007 AND	
3.2	CE (93/42 EEC Directives) or USFDA approved product certificate.	
4 User Training		
4.1	Not applicable	
5 Warranty		
5.1	Warranty for 2 years.	
6 Maintenance Service During Warranty Period		
6.1	Standard warranty conditions are applicable.	

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Autoclave (50 L)

No.	Item Specifications	Fill your Specification
1 Description of Function		
1.1	Autoclaves are required for sterilizing an object in high temperature and high pressure steam.	
2 Operational Requirements		
2.1	Microprocessor based electrically heated vertical steam sterilizer	
3 System Configuration		
3.1	Microprocessor based Autoclave (Vertical Model) with complete accessories.	
4 Technical Specifications		
	capacity: approx. 50 L.	
	Vertical type.	
	Stainless steel.	
	Digital controlled temperature and pressure system.	
	Steam sterilization, up to 135° C	
	Digital temperature and pressure gauges.	

No.	Item Specifications	Fill your Specification
	Safety devices : over heat (low water cut-off switch , safety valve and release valve)	
	Automatic controlled sterilization cycle.	
	2 modes sterilization (121°C - 134°C)	
	Exhaust system.	
	Stainless steel basket.	
	Double wall case.	
5	Accessories, spares and consumables	
	Spare heating element- 2 set	
	All standard accessories, consumables and parts required to operate the equipment, including all standard tools and cleaning and lubrication materials, to be included in the offer.	
6	Operating Environment	
6.1	The product offered shall be designed to be stored and to operate normally under Climate ,Temperature , Power supply , Humidity, etc. for Sudan.	
	Power supply: 220-240V/ 50 Hz AC Single phase with appropriate plug .The power cable must be minimum 3 Meter	
7	Standards and Safety Requirements	
7.1	Must submit ISO 9001 or ISO13485:2003/AC:2007 for Medical Devices AND	
7.2	CE or USFDA approved product certificate.	
	Shall meet IEC 61010-2-040 Safety requirements for electrical equipment for measurement, control and laboratory use - Part 2-040: Particular requirements for sterilizers and washer-disinfectors used to treat medical materials.	
8	Warranty	
8.1	Comprehensive warranty for 2 years.	
9	Maintenance Service During Warranty Period	
9.1	During warranty period supplier must ensure corrective/breakdown maintenance whenever required.	
10	Installation and Commissioning	
10.1	The supplier must accomplish proper commissioning of the item onsite.	
11	Documentation	
11.1	User and/or service manual shall be supplied in English.	
11.2	User (Operating) manual in English	
11.3	Service (Technical / Maintenance) manual in English	
11.4	List of important spare parts and accessories with their part numbers and costing.	
11.5	Certificate of calibration and inspection from factory.	

No.	Item Specifications	Fill your Specification
1	Description of Function	
	Certified Stainless steel	
	Small size, suitable to fit into the autoclave 18L and above	
	Lateral air vents, manually closed after sterilization	
	cylindrical sterilizing drum	
	seamless stainless steel construction,	
2	Operating Environment	
2.1	The system offered shall be designed to store and to operate normally under the conditions include Climate, Temperature, Humidity, etc. for Sudan	
3	Standards and Safety Requirements	
3.1	Must submit ISO 9001 or ISO 13485:2003/AC:2007 AND	
3.2	CE (93/42 EEC Directives) or USFDA approved product certificate.	
4	User Training	
4.1	Not applicable	
5	Warranty	

No.	Item Specifications	Fill your Specification
5.1	Warranty for 2 years.	
6 Maintenance Service During Warranty Period		
6.1	Standard warranty conditions are applicable.	

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Sterilization Drum Medium

No.	Item Specifications	Fill your Specification
1 Description of Function		
	Certified Stainless steel	
	Medium size, suitable to fit into the autoclave 50L	
	Lateral air vents, manually closed after sterilization	
	cylindrical sterilizing drum	
	seamless stainless steel construction,	
2 Operating Environment		
2.1	The system offered shall be designed to store and to operate normally under the conditions include Climate, Temperature, Humidity, etc. for Sudan	
3 Standards and Safety Requirements		
3.1	Must submit ISO 9001 or ISO 13485:2003/AC:2007 AND	
3.2	CE (93/42 EEC Directives) or USFDA approved product certificate.	
4 User Training		
4.1	Not applicable	
5 Warranty		
5.1	Warranty for 2 years.	
6 Maintenance Service During Warranty Period		
6.1	Standard warranty conditions are applicable.	

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Sterilization Drum Large

No.	Item Specifications	Fill your Specification
1 Description of Function		
	Certified Stainless steel	
	Large size, suitable to fit into the autoclave 50L	
	Lateral air vents, manually closed after sterilization	
	cylindrical sterilizing drum	
	seamless stainless steel construction,	
2 Operating Environment		
2.1	The system offered shall be designed to store and to operate normally under the conditions include Climate, Temperature, Humidity, etc. for Sudan	
3 Standards and Safety Requirements		
3.1	Must submit ISO 9001 or ISO 13485:2003/AC:2007 AND	
3.2	CE (93/42 EEC Directives) or USFDA approved product certificate.	
4 User Training		
4.1	Not applicable	
5 Warranty		
5.1	Warranty for 2 years.	
6 Maintenance Service During Warranty Period		
6.1	Standard warranty conditions are applicable.	

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Delivery Bed

No.	Item Specifications	Fill your Specification
1 Description of Function		

No.	Item Specifications	Fill your Specification
1.1	Delivery bed is used for Baby Delivery and must incorporate ideal blend of the patient's individual requirements on comfort and the professional needs of the delivery team, focusing on the aesthetic and functional design of the entire product.	
2 Operational Requirements		
2.1	Manually operated delivery bed.	
3 System Configuration		
3.1	Delivery Bed with complete attachments and accessories.	
4 Technical Specifications		
4.1	It must have manual adjustments for height and back positions.	
4.2	It must have collapsible side rails.	
4.3	It must have three sectional mattresses and seat section must have large perennial cut.	
4.4	It must have head board which can be detached.	
4.5	Must have wheels provided with locking system.	
4.6	Must have retractable foot section so as to convert bed into table.	
4.7	Must have infusion rods which have adjustable heights, quick release and attaches to all corners of bed.	
4.8	Must have adjustable leg rests.	
4.9	Must have push grip handles.	
4.10	Must have sliding stainless steel bowl at perennial part of table.	
4.11	It must have catheter bag holder which can be attached on either side of bed.	
4.12	It must be able to give trendelenburg, reverse trendelenburg and 70 degree sitting position.	
4.13	It must have adjustable foot supports.	
4.14	It must be easy to maintain clean and sterilize (especially blood stains).	
4.15	Frame must be (washable) stainless steel.	
4.16	Dimensions (approx.):	
	<input type="checkbox"/> Length: 7 feet	
	<input type="checkbox"/> Width: 3 feet	
5 Accessories, spares and consumables		
5.1	All standard attachments and accessories: 01 set	
5.2	All standard accessories, consumables and parts required to operate the equipment, including all standard tools and cleaning and lubrication materials, to be included in the offer.	
6 Operating Environment		
6.1	The product offered shall be designed to be stored and to operate normally under Climate, Temperature , Humidity , etc. for Sudan.	
7 Warranty		
7.1	Comprehensive warranty for 2 years after acceptance.	
8 Maintenance Service During Warranty Period		
8.1	During the warranty period supplier must ensure corrective/breakdown maintenance whenever required.	

No.	Item Specifications	Fill your Specification
1 Technical Specifications		
1 VMW kit container:		
	Aluminum container with a handle on cover	
	Capacity: enough to contain the items listed below (Item No 2-28)	
	Length: 30 to 32 cm	
	Width: 23 to 25 cm	
	Depth: 16 to 18cm	
2 Stainless container with cover		
	Size: enough space to place scissors and forceps below	

No.	Item Specifications	Fill your Specification
	Approximate Size:	
	Length 22-25cm	
	Width 10-12cm	
	Depth 5-7cm	
	Material: stainless steel	
3	Surgical Scissors x 2	
	Length: 16 to 17cm	
	Material: stainless steel	
	Straight, Blunt Blunt	
	For medical use	
4	Artery Forceps x 2	
	Length: 16 to 17cm	
	Indented part should be more than 4 cm to hold umbilical cord.	
	Material: stainless steel	
	Straight	
	For medical use	
5	Handling forceps (Cheatele Forceps)	
	Length: 27 to 29cm	
	Curved	
	Material: stainless steel	
	For medical use	
6	Kidney dish	
	Length: 24 to 26cm	
	Material: stainless steel	
7	Stainless bowl	
	Diameter: 14 to 16cm	
	Material: stainless steel	
	For medical use	
8	Sprit lamp	
	Diameter: 5 to 7cm	
	Material: stainless steel	
9	Thermometer x 2	
	Auxiliary	
	1 x Clinical mercury thermometer & 1 x Digital (Celsius)	
10	Fetal Scope	
	(Aluminum Pinard Stethoscope)	
11	Weight scale for baby	
	Colored type	
	Capacity: up to 5kg	
	Measure every 50g	
	Spring	
	For newborn baby and infant	
12	Trousers for weight scale	
	Size to fit for newborn baby	
	Length: 28 to 30cm	
	Width:33 to 35cm	
13	Mucus Sucking tube	
	For newborn baby	
	Size: 12Fr-14Fr	
	Capacity: 25ml	
	Transparent graduated chamber	
	Smooth outer surface finish of the catheter	
14	Urine catheter	
	Size: 16-18Fr	
	Re-usable	

No.	Item Specifications	Fill your Specification
	Material: Rubber	
15	Sphygmomanometer	
	Aneroid	
16	Stethoscope (single)	
	Binaural	
	Diaphragm	
17	Tape measure	
	Length: 100 to 150cm	
	Vinyl-coated	
18	Urine test tube	
	Material: Glass	
	Length: 10cm	
	Diameter: 1 to 1.5cm	
19	Handle for urine test tube	
	Size to hold urine test tube for urine test	
20	Dropper	
	Capacity: 1ml	
	Material: Plastic	
21	Plastic Sheet	
22	Plastic Apron	
23	brush	
24	Nail clipper	
25	Umbilical cord clamp box of 50 Pcs	
26	baby blanket	
27	LED Torch	
2	Operating Environment	
2.1	The system offered shall be designed to store and to operate normally under the conditions include Climate, Temperature, Humidity, etc. for Sudan	
3	Standards and Safety Requirements	
3.1	Must submit ISO 9001 or ISO 13485:2003/AC:2007 AND	
3.2	CE (93/42 EEC Directives) or USFDA approved product certificate.	
4	User Training	
4.1	Not applicable	
5	Warranty	
5.1	Warranty for 2 years.	
6	Maintenance Service During Warranty Period	
6.1	Standard warranty conditions are applicable.	

No.	Item Specifications	Fill your Specification
1	Description of Function	
1.1	Oxygen concentrator produces oxygen from ambient air.	
2	Operational Requirements	
2.1	Integrated Oxygen sensing device (OSD) measures concentration at flow meter entrance.	
3	System Configuration	
3.1	Oxygen Concentrator set complete with Flow Splitter.	
4	Technical Specifications	
I	Oxygen Concentrator	
4.1	Output flow: max 5 LPM (Litre per minute).	
4.2	Flow meter range: 1 to 5 LPM.	
4.3	Output pressure: 60 kPa.	
4.4	Oxygen concentration: 95% +/- 3% at 1-3 LPM, 92% +/- 3% at 4 LPM, 90% +/- 3% at 5LPM.	

No.	Item Specifications	Fill your Specification
4.5	Time to reach 95% the specified performance: 5 minutes.	
4.6	Four-step filtering (coarse, pre, inlet and bacterial) of air-intake.	
4.7	All filters replaceable, coarse filter washable/reusable.	
4.8	Continuous monitoring, with visual and audible alert on:	
	<input type="checkbox"/> Low and high output pressure	
	<input type="checkbox"/> Low oxygen concentration	
	<input type="checkbox"/> Oxygen monitor: amber light on the front illuminates when oxygen concentrator is below 85%. If concentration remains below 85% for more than 15 minutes, an audible alarm sounds.	
	<input type="checkbox"/> Power failure	
	<input type="checkbox"/> Battery test.	
4.9	Temperature operating range: 20 to 60 OC.	
4.10	Sound level produced: 40 to 50 dB(A).	
4.11	Shall have 4 antistatic swivel casters, 2 with brakes and with integrated handle allows for easy moving and positioning.	
II Flow Splitter for Oxygen Concentrator		
4.12	Five way split of oxygen flow provided by an oxygen concentrator.	
4.13	Each flow can be adjusted individually via its flow meter, range: 0.125 to 2 LPM (Litre per minute).	
4.14	The output nozzle can either be fit with tubing or left blank.	
4.15	Input pressure: approx. 50 to 350 kPa.	
4.16	Flow splitter allows precise distribution of the oxygen output of a concentrator towards 2, 3, 4 or 5 patients, i.e. neonates and infants.	
5 Accessories, spares and consumables		
5.1	Accessories:	
	<input type="checkbox"/> 2 x Adult cannula, with 2m tubing.	
	<input type="checkbox"/> 4 x Infant/Paediatric cannula, with 2m tubing.	
	<input type="checkbox"/> 4 x New-born cannula, with 2m tubing.	
	<input type="checkbox"/> 3 x Connector for above.	
	<input type="checkbox"/> 4 x Humidifiers.	
	<input type="checkbox"/> 4 x 50' tubing.	
	<input type="checkbox"/> 4 x tubing adapter kit.	
	<input type="checkbox"/> 6 x Spare coarse filters.	
	<input type="checkbox"/> 3 x Spare pre-filters.	
	<input type="checkbox"/> 3 x Spare inlet-filters.	
	<input type="checkbox"/> 3 x Spare bacterial-filters.	
5.2	All standard accessories/consumables/parts required for the proper operation of the above item shall be included in the offer.	
6 Operating Environment		
6.1	The product offered shall be designed to be stored and to operate normally under Power Supply, Climate, Temperature, Humidity, etc. for Sudan.	
6.2	Power supply: 220-240VAC, 50Hz fitted with appropriate plug. The power cable must be minimum 3 metres long.	
	Power consumption, approx.: 500 W.	
7 Standards and Safety Requirements		
7.1	Must submit ISO13485:2003/AC:2007 for Medical Devices AND	
7.2	CE (93/42 EEC Directives) or USFDA or TUV approved product certificate.	
8 User Training		
8.1	Must provide user training.	
9 Warranty		
9.1	Comprehensive warranty for 2 years after acceptance.	
10 Maintenance Service During Warranty Period		
10.1	During warranty period supplier must ensure corrective/breakdown maintenance whenever required.	
11 Documentation		

No.	Item Specifications	Fill your Specification
11.1	User (Operating) manual in English.	
11.2	Service (Technical / Maintenance) manual in English.	
11.3	List of important spare parts and accessories with their part number and costing.	
11.4	Certificate of calibration and inspection from factory.	

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Torch (Diagnostic Penlight)

No.	Item Specifications	Fill your Specification
1	Technical Specifications	
1.1	LED , Xenon lamp or Better for light.	
1.2	Including 2 batteries type AA.	
1.3	Extremely heavy duty resistant casing.	
1.4	Practical metal clip on handle for attaching the light to the physician's coat.	
2	Accessories, spares and consumables	
2.1	Not applicable,.	
3	Operating Environment	
3.1	The product offered shall be designed to be stored and to operate normally under Climate, Temperature, Humidity, etc. for Sudan.	
4	Standards and Safety Requirements	
4.1	Must submit ISO 9001 or ISO13485:2003/AC:2007 for Medical Devices AND	
4.2	CE or U SFDA approved product certificate.	
5	Warranty	
5.1	Warranty for 2 years after acceptance.	
6	Maintenance Service during Warranty Period	
6.1	Standard warranty conditions are applicable.	
7	Installation and Commissioning	
7.1	Must supply preassembled unit, ready to use.	

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Digital Thermometer

No.	Item Specifications	Fill your Specification
1	Description of Function	
1.1	Clinical digital thermometer to check the temperature of body.	
2	Operational Requirements	
2.1	Human oral use.	
3	System Configuration	
3.1	Digital Thermometer, Clinical.	
4	Technical Specifications	
4.1	Flat type, wide thermometer, safe to use, no glass, no mercury.	
4.2	Scale: Celsius scale.	
4.3	Measurement range: 32°C to 45°C	
4.4	Accuracy: +/- 0.1°C between 35°C to 42°C.	
4.5	Display: Liquid crystal display, easy to read.	
4.6	Shall work on battery. There shall be low battery indicator.	
4.7	Shall have facility of beep sound and switch off.	
4.8	Water proof for ease of cleaning.	
4.9	Shall provide battery. Bidder to indicate the type of and number of battery to be supplied.	
5	Accessories, Spares and Consumables	
5.1	Packing: <input type="checkbox"/> Single piece packing in plastic barrel with cover.	
6	Operating Environment	
6.1	The product offered shall be designed to be stored and to operate normally under Climate, Temperature, Humidity, etc. for Sudan.	
7	Standards and Safety Requirements	

No.	Item Specifications	Fill your Specification
7.1	CE (93/42 EEC Directives) or USFDA approved product certificate.	
	8 User Training	
8.1	Not applicable.	
	9 Warranty	
9.1	Warranty for 2 years after acceptance.	
	10 Documentation	
10.1	User's manual to be supplied in English.	

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Instrument Trolley

No.	Item Specifications	Fill your Specification
	1 Description of Function	
1.1	It is an instrument trolley for laying out surgical instruments in the operation theatre.	
	2 Operational Requirements	
2.1	Stainless steel instrument trolley with swivel castors.	
	3 System Configuration	
3.1	Instrument trolley with two shelves, railings, SS bowl, four swivels castors.	
	4 Technical Specifications	
4.1	It shall be constructed fully with 304 grade stainless steel sheet and tube or better.	
4.2	Overall size: approximately 860 H x 460 W x 760 L mm	
4.3	It shall be have 2 tiers of grade 304 stainless steel shelves, top approx. at 880mm and lower shelf at 400mm.	
4.4	On three sides of shelves 20 mm upright lips/rail. Fourth side to have turned down edge	
4.5	Shall be mobile on 4 x 50mm diameter (approx.) robust 360 deg. swivel castors with non-marking grey tyres and with at least 2 diagonal castors shall have brakes	
	5 Accessories, spares and consumables	
5.1	Accessories:	
	<input type="checkbox"/> SS bowl 1no.	
	6 Operating Environment	
6.1	The product offered shall be designed to be stored and to operate normally under the conditions. The conditions include Climate, Temperature, Humidity, etc.	
	7 Warranty	
7.1	Warranty for 2 year after acceptance.	

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I.V Stand

No.	Item Specifications	Fill your Specification
	1 Description of Function	
1.1	This IV/saline stand is used for hanging various intravenous items such as blood bag, glucose bottle etc.	
	2 Operational Requirements	
2.1	Epoxy powder coated IV/Saline stand with castors.	
	3 System Configuration	
3.1	Adjustable IV/saline stand with five legs, with 4 hooks and five swivels castors.	
	4 Technical Specifications	
4.1	The IV stand shall be made of tubular anti-corrosive and antirust treated epoxy powder coated mild steel, with a 5 pronged base fitted on mobile on swivelling castors of approx. diameter Ø50mm. The castors must be non-rusting and non-marking.	
4.2	The stand should come with stainless steel double IV hook, height adjustable from approximately 1620mm to 2340mm, with a screw knob for height adjustment.	
	5 Operating Environment	

No.	Item Specifications	Fill your Specification
5.1	The product offered shall be designed to be stored and to operate normally under the conditions. The conditions include Climate, Temperature, Humidity, etc.	
6 Warranty		
6.1	Comprehensive warranty for 2 years after acceptance.	

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Aneroid sphygmomanometer

No.	Specifications	Fill your Specification
1 Description of Function		
1.1	Sphygmomanometer is a device used to measure blood pressure, composed of an inflatable cuff to restrict blood flow, and a mechanical manometer to measure the pressure.	
2 Operational Requirements		
2.1	Aneroid sphygmomanometer having a dial to show clear numbers and pointer / needle for measurement of pressure.	
3 System Configuration		
3.1	Aneroid sphygmomanometer	
	Cuffs for child size and for adult size (regular)	
	Inflation bulb	
	Carrying pouch	
4 Technical Specifications		
4.1	Packed in easy carrying high quality pouch made of waterproof cloth to accommodate cuff, and inflation bulb.	
4.2	Gauge to be calibrated in 2 mm Hg units.	
4.3	Must provide blood pressure cuffs for child size and for adult size (regular).	
5 Accessories, spares and consumables		
5.1	All standard accessories/consumables/parts required for the proper operation of the above item shall be included in the offer. Bidders shall specify, in a separate Excel worksheet, the quantity and details of any items included in this offer which have not been specified in this Technical Specifications Form.	
6 Operating Environment		
6.1	The product offered shall be designed to be stored and to operate normally under the conditions of the purchaser's country. The conditions include Climate, Temperature, Humidity, etc.	
7 Standards and Safety Requirements		
7.1	Must submit ISO 9001 or ISO 13485:2003/AC: 2007.	
8 User Training		
8.1	Not applicable.	
9 Warranty		
9.1	Warranty for 2 years.	
10 Maintenance Service During Warranty Period		
10.1	Standard warranty conditions are applicable.	
11 Installation and Commissioning		
11.1	Must supply preassembled unit, ready to use.	
12 Documentation		
12.1	User's manual in English	

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Stethoscope double head

No.	Item Specifications	Fill your Specification
1 Description of Function		
1.1	The stethoscope is used for listening to the beating heart of a human, or the lungs. It is also used for listening to the flow of the blood in the surrounding area of the heart.	
2 Operational Requirements		

No.	Item Specifications	Fill your Specification
2.1	Dual type stethoscope - Physician's stethoscope.	
3 System Configuration		
3.1	<input type="checkbox"/> Stethoscope, dual cup/bell	
	<input type="checkbox"/> Tubes	
4 Technical Specifications		
4.1	Dual, cup/bell and diaphragm head	
4.2	Head and ear tube assembly to be made of non-ferrous metal,	
4.3	Tubes to be synthetic material and ear tubes to have shaped plastic cushion ends.	
5 Accessories, spares and consumables		
5.1	All standard accessories/consumables/parts required for the proper operation of the above item shall be included in the offer.	
6 Operating Environment		
6.1	The product offered shall be designed to be stored and to operate normally under Climate, Temperature, Humidity, etc. for Sudan.	
7 Standards and Safety Requirements		
7.1	Must submit ISO 9001 or ISO 13485:2003/AC: 2007.	
8 User Training		
8.1	Not applicable.	
9 Warranty		
9.1	Warranty for 2 years.	
10 Maintenance Service During Warranty Period		
10.1	Standard warranty conditions are applicable.	
11 Installation and Commissioning		
11.1	Must supply preassembled unit, ready to use.	
12 Documentation		
12.1	User's manual in English	

No.	Item Specifications	Fill your Specification
1 Description of Function		
1.1	Examination couch for use of health checkup and treatment of patients.	
2 Operational Requirements		
2.1	An examination couch with upholstered top in two pieces. Adjustable headrest on gas spring.	
3 System Configuration		
3.1	Examination couch with mattress.	
4 Technical Specifications		
4.1	The examination couch shall be made of a solid steel sheet and plate construction with anti-corrosive and antirust treated epoxy powder coating with upholstered top.	
4.2	All 4 legs of the bed shall be capped with heavy duty rubber footings.	
4.3	Overall size of the table must not be less than 1890mm L x 600mm W x 825mm H	
4.4	Strong Mild steel tubular construction epoxy powder coated treated. The top base of machine pressed double bent Mild steel sheet epoxy powder coated treated finish	
4.5	Gas spring assisted adjustable backrest of approx. size 450mm L x 310mm H with upholstered top.	
4.7	Swinging tray must be attached near headrest for BP apparatus and/or other health checkup minor equipment.	
4.8	The mattress shall be foldable and shall be designed to bend with the positioning of the bed when the backrest of the bed is adjusted.	
4.9	Bidder shall indicate the weight capacity and the total weight of the mattress in kilogram (kg)	

No.	Item Specifications	Fill your Specification
4.10	The mattress shall have mid-firmness, with foam density of approximately 0.55kg/ cubic foot, to avoid that the patient would sink down into foam with antibacterial, antistatic, acid resistance, waterproof and washable vinyl or vinylized nylon cover.	
4.11	The joints must be smooth and neat finish.	
5 Accessories, spares and consumables		
5.1	All standard accessories/consumables/parts required for the proper operation of the above item shall be included in the offer, the quantity and details of any items included in this offer which have not been specified in this Technical Specifications Form.	
6 Operating Environment		
6.1	The product offered shall be designed to be stored and to operate normally under Climate, Temperature, Humidity, etc. for Sudan.	
7 Warranty		
7.1	Comprehensive warranty for 2 years after acceptance.	
8 Maintenance Service During Warranty Period		
8.1	During the warranty period supplier must ensure corrective/breakdown maintenance whenever required.	

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Examination Screen (Wing)

No.	Specifications	Fill your Specification
1 Description of Function		
1.1	A patient screen is widely used in hospitals when the doctor examines a patient in his private chamber or in the patient's room in the hospitals. The screen can also be used in the operation room or the changing room of the doctors and nurses.	
2 Operational Requirements		
2.1	Epoxy powder coated or Better , three or four fold patient screen.	
3 System Configuration		
3.1	Patient Screen with light blue curtain and fully swivels twin wheel castors.	
4 Technical Specifications		
4.1	Three or four fold ward screen approx. total size 2450 w x 1650 h mm in three or four sections.	
4.2	Mild steel tubular construction with epoxy powder coated or better treated in three or four section 600mm span width at each side and 1210 mm span width in the middle) and mounted on wide spaced legs for each section, and each foot to have two swivel castors size 50mm.	
4.3	To be supplied with hooks, springs and heavy duty curtain, firmly attached at sides, top and bottom. Curtain must have no gaps between sections	
5 Accessories, spares and consumables		
5.1	All standard accessories, consumables and parts required to operate the equipment, including all standard tools and cleaning and lubrication materials, to be included in the offer. Bidders must specify the quantity of every item included in their offer (including items not specified above).	
6 Operating Environment		
6.1	The product offered shall be designed to be stored and to operate normally under the conditions. The conditions include Climate, Temperature, Humidity, etc.	
7 Warranty		
7.1	Comprehensive warranty for 2 years after acceptance.	

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Wheel Chair

No.	Item Specifications	Fill your Specification
1 Description of Function		
1.1	Wheel chair is used in hospitals for means of mobility by disabled persons/or persons who have impairments that limit their ability to walk.	

No.	Item Specifications	Fill your Specification
2 Operational Requirements		
2.1	It shall be a foldable BUT shall NOT a collapsible type. The mechanism of folding & unfolding must be easy. Large standard adult size hospital wheelchair fixed/ foldable type. Easy maneuverable.	
3 System Configuration		
3.1	Wheel chair invalid type.	
4 Technical Specifications		
4.1	Must be made of the highest quality materials such as Chrome polished finish or stainless steel.	
4.2	Dimensions: approx. W 68 cm × D 110 cm × H 94 cm. Seat width: approx.450mm (18").	
4.3	Wheels to have braking/locking mechanism and self-propelling SS hoops; two swivel castors (200mm dia. approx.) in front.	
4.4	Tyre fitted with self-propelling hoops and brake arrangements.	
4.5	Tyre sizes: Rear approx. 60cm (24") solid Mag tyres or Bicycle type spoked wheels, and Front approx. 200mm (8") Mag swivel casters.	
4.6	Armrests: Padded, Fixed height and detachable.	
4.7	Waterproof upholstery and easy to clean.	
4.8	Padded back rest, seat and push handle.	
4.9	Footrests: Fixed height and swing away foot plates and detachable, preferably made of Aluminium.	
4.1	Maximum Patient weight capacity: approx. 110kg (250 lbs.).	
4.11	I.V. pod shall be provided at the right side of the back rest.	
5 Accessories, spares and consumables		
5.1	All standard accessories, consumables and parts required to operate the equipment, including all standard tools and cleaning and lubrication materials, to be included in the offer.	
6 Operating Environment		
6.1	The product offered shall be designed to be stored and to operate normally under Climate, Temperature, Humidity, etc. for Sudan.	
7 Standards and Safety Requirements		
7.1	Must submit ISO 9001 or ISO 13485:2003/AC:2007 AND	
7.2	CE or USFDA approved product certificate.	
8 User Training		
8.1	Not applicable.	
9 Warranty		
9.1	Comprehensive warranty for 2 years.	
10 Maintenance Service During Warranty Period		
10.1	Standard warranty conditions are applicable.	
11 Installation and Commissioning		
11.1	Must supply preassembled unit, ready to use.	
12 Documentation		
12.1	User's manual shall be supplied in English.	

Commode Wheel Chair

No.	Specifications	Fill your Specification
1	Heavy duty wheelchair stainless steel , aluminum , chrome plate.	
2	wheel break , solid wheel ,rear wheel φ600-650 mm , front wheel φ 200- 250 mm.	
3	patient weight : => 150 Kg , seat width : 450 - 600 mm , Depth : 400 - 450 mm foam rubber , armrest , footrest	
4	foldable backrest	
5	Brake(for person who is push , for the person on the seat)	
6 Operating Environment		

No.	Item Specifications	Fill your Specification
6.1	The product offered shall be designed to be stored and to operate normally under Climate, Temperature, Humidity, etc. for Sudan.	
7 Standards and Safety Requirements		
7.1	Must submit ISO13485:2003/AC:2007 for Medical Devices AND	
7.2	CE (93/42 EEC Directives) or USFDA approved product certificate.	
8 User Training		
8.1	Must provide user training (including how to use and maintain the equipment).	
9 Warranty		
9.1	Comprehensive warranty for 2 years after acceptance.	
Walking Aid (Frame)		

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No.	Specifications	Fill your Specification
1 Description of Function		
1.1	Helps maintain balance and stability when standing and walking	
2 Technical Specifications		
2.1	Folds up for convenient, compact storage and transport	
2.2	Easy push-button mechanisms may be operated by fingers, palms or side of hand	
2.3	Each side operates independently to allow easy movement through narrow spaces and greater stability while standing	
2.4	U-shape frame design	
2.5	Comfortable molded hand grips for a secure hold	
2.6	Slip-resistant rear tips for secure support	
2.7	Lightweight alloy construction to ensure maximum strength while remaining lightweight	
3 Accessories, spares and consumables		
3.1	All standard accessories/consumables/parts required for the proper operation of the above item shall be included in the offer.	
4 STANDARDS AND SAFETY		
4.1	Must be USFDA or CE or TUV approved product	

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Patient Trolley (Stretcher With Trolley)

No.	Item Specifications	Fill your Specification
1 Description of Function		
1.1	A trolley for transportation of a patient in the hospital.	
2 Operational Requirements		
2.1	It shall be constructed fully with anti-corrosive and antirust treated epoxy powder coated steel sheet and tube or better.	
3 System Configuration		
3.1	Patient trolley with handles and four swivels castors.	
4 Technical Specifications		
4.1	Overall size: approximately 2030 L x 560 W x 820 H mm	
4.2	Welded tubular frame with box type pattern construction.	
4.3	Dished shaped top, push handles to be fitted at both ends. The dished shaped top surface shall be smooth and corrosive and rust resistance.	
4.4	Shall be mobile on 4 x 200mm robust swivelling castors with non-marking grey tyres and with at least 2 diagonal castors shall have locking/brake mechanism. All four wheels MUST be fully 360 deg. swivels. Fixed direction wheels are NOT acceptable.	
4.5	To be supplied complete with patient transfer board. Smooth board in either heavy duty mild steel or Aluminium Approx. size 1500 l x 500 w mm. All edges shall be rounded /curved finished. Surface to be smooth to permit easy sliding of patient onto trolley.	
5 Accessories, spares and consumables		
5.1	All standard accessories, consumables and parts required to operate the equipment, including all standard tools and cleaning and lubrication materials, to be included in the offer.	
6 Operating Environment		

No.	Item Specifications	Fill your Specification
6.1	The product offered shall be designed to be stored and to operate normally under Climate, Temperature, Humidity, etc. for Sudan.	
7	Warranty	
7.1	Comprehensive warranty for 2 years after acceptance.	

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Electric Binocular Microscope

No.	Item Specifications	Fill your Specification
1	Description of Function	
1.1	Compound microscope consists of two or more than two magnifying lenses. One can view individual cells, even living ones. It has high magnification	
2	Operational Requirements	
2.1	System complete with illumination system is required.	
3	System Configuration	
3.1	Binocular Microscope Compound with complete accessories	
4	Technical Specifications	
4.1	Body : Binocular, sturdy, stable base body with focus adjustment controls	
4.2	Eye piece : Paired, high quality, (the image of the object as seen through the binocular eyepiece must be well defined centrally in at least 2/3 field of view), achromatic, wide field, 10x and 15x without inbuilt pointer. The eyepiece must be aplanatic and have a minimum field number of 18. Dioptre adjustment must be present on one/ both eye pieces or on the eye piece tube	
4.3	Objective : Four 4x, 10x, 40x, 100x.	
4.4	10x and 40x objectives must have numerical apertures of 0.25 and 0.65 respectively and must be of spring loaded type or otherwise.	
4.5	100x must have numerical aperture of 1.25 and must be of oil immersion and spring loaded type.	
	Suitable prominent marking must be provided on 100x for easy identification.	
4.6	Unbreakable containers to be provided for storing the objectives. All objectives must be wide field, achromatic and par focal.	
4.7	Marking of the Objectives : Each objective must be engraved with the following information:-	
	<input type="checkbox"/> Name of the manufacturer	
	<input type="checkbox"/> Magnification and numerical aperture, for example, 10x/0.25	
	<input type="checkbox"/> 100x objective must be engraved with the word 'Oil'	
4.8	Nose piece: Revolving nose piece to accommodate four objectives with click stops. It must be provided with ribbed grip for easy rotation mounted on a precision ball bearing mechanism for smooth and accurate alignment. Extra ports if any must be fitted with dust proof metallic/ebonite caps.	
4.9	Stage Uniformly horizontal, mechanical stage having dimensions of length 140 mm (+/- 20mm) with fine vernier graduations (minimum reading accuracy of 0.1 mm). The stage must be provided with spring loaded slide holder for exact positioning of specimen/ slide. It must be designed with convenient sub-stage vertical coaxial adjustment for slide manipulation. The stage must have ball-bearing arrangement to allow smooth travel in transverse directions i.e. 80 mm (+/-5mm) and front to back direction, 50mm (+/-5mm)	
4.10	Sub-stage condenser: Abbe-type condenser, numerical aperture (N.A.) 1.25 focusable with rack and pinion arrangement incorporating a spherical lens and an iris-diaphragm. The condenser must have a filter holder and removable/ swing in/ out blue filter (suitable for bright field Microscopy).	

No.	Item Specifications	Fill your Specification
4.11	Sub-stage illuminator: 1.The system must have a build-in variable light source (Illuminator). This source must have a 20 W, 6/12 V Halogen lamp. The circuitry for the light source must include a constant voltage supply. The system must be provided with a step down transformer and an on-off switch and intensity control. The lamp must be provided with a lamp socket which has the facility for easy replacement of the bulb. light	
4.12	The Illuminator must have a build-in field diaphragm for Kohler illumination.	
4.13	Eye piece tubes: Binocular eye piece tubes, inclined at 30 and 45 degrees, rotatable through an angle of 360 degrees, having inter-pupillary distance range of 54-74 mm or wider, covering the above mentioned range	
4.14	Focusing knob: Co-axial coarse and fine focusing knobs capable of smooth fine focusing movement over the full range of coarse travel. The fine focusing movement must have sensitivity of two microns or less (finer) over the entire coarse focusing stop safety arrangement must be provided.	
4.15	General 1 .All optical parts including objectives, eye pieces and prisms must have anti-reflective coating which also gives anti-fungal property.	
	<input type="checkbox"/> All metallic parts must be corrosion-proof, acid-proof and stain-proof	
	<input type="checkbox"/> A bottle of at least 25 ml immersion oil, a roll of lens tissue paper and lens cleaning solution (100 ml) must be provided with each microscope.	
	<input type="checkbox"/> One no. of anti-static cleaning brush must be provided with each Microscope for cleaning purpose.	
	<input type="checkbox"/> Each Microscope must be supplied with Blue filters. The Blue filter must be packed in the box and not fixed on the Microscopes.	
	5 Accessories, spares and consumables	
5.1	Accessories:	
	<input type="checkbox"/> 100x oil immersion objective – one.	
	<input type="checkbox"/> Halogen bulb, (6/12volts, 20w) – 6 Nos.	
	<input type="checkbox"/> Fuses – 6 Nos.	
5.2	All standard accessories, consumables and parts required to operate the equipment, including all standard tools and cleaning and lubrication materials, to be included in the offer. Bidders must specify the quantity of every item included in their offer (including items not specified above).	
	6 Operating Environment	
6.1	The product offered shall be designed to be stored and to operate normally under Power Supply, Climate, Temperature, Humidity, etc. for Sudan.	
6.2	Power supply: 220-240V/ 50 Hz AC Single phase fitted with appropriate plug to meet purchaser’s country requirements. The power cable must be minimum 3 metres long.	
6.3	Voltage corrector/stabilizer of appropriate ratings meeting international standards.(Input 160-260 V and output 220-240 V and 50 Hz)	
	7 Standards and Safety Requirements	
7.1	Must sub mit ISO13485:2003/AC:2007 for Medical Devices AND	
7.2	CE or US FDA approved product certificate.	
	8 User Training	
8.1	Must provide user training (including how to use and maintain the equipment).	
	9 Warranty	
9.1	Comprehensive warranty for 2 years after acceptance.	
	10 Maintenance Service during Warranty Period	
10.1	During warranty period supplier must ensure corrective/breakdown maintenance whenever required.	
	11 Installation and Commissioning	
11.1	The bidder must arrange for the equipment to be installed and commissioned by certified or qualified personnel; any prerequisites for installation to be communicated to the purchaser in advance, in detail.	
	12 Documentation	

No.	Item Specifications	Fill your Specification
12.1	User (Operating) manual in English	
12.2	Service (Technical / Maintenance) manual in English	
12.3	List of important spare parts and accessories with their part numbers and costing.	
12.4	Certificate of calibration and inspection from factory.	

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Electrolyte analyzer Machine with UPS

No.	Item Specifications	Fill your Specification
	For analysis of electrolytes in laboratories or hospital point of care	
	Units to measures electrolytes from whole blood, serum, plasma, Urine dialysate or aqueous standards.	
	The machine can be configured to measure Na,K,and ionized Calcium Interchangeable electrodes	
	Programmable correlation factors microprocessor controlled.	
	Electrodes for : Sodium. Potassium, Chloride., Ionized Calcium, Lithium Reference System.	
	Sample Size not more than 100 µL	
	Measurement range for blood approx:	
	Na+: 20 - 200	
	K+: 0.2 - 40	
	Cl-: 25 - 200	
	Li+: 0.2 - 5	
	Ca++: 0.1 - 6	
	PH: 6- 8 units	
	Measurement range for urine approx:	
	Na+: 25 - 1000	
	K+: 1 - 500	
	Cl-: 25 - 500	
	Sample Application syringe,sample cup,collection tube,capillary	
	Analysis Time (blood) not more than 1 min	
	Analysis Time (urine) not more than 2 min	
	Sample Rate minimum 60 sample/hour	
	Built in printer	
	Operating Environment	
	The unit shall be capable of operating continuously in ambient temperature of 10 -40deg C and relative humidity of 15-90%	
	The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90%	
	Power supply: 220 – 240 VAC, 50Hz fitted with appropriate plug. The power cable must be at least 3 metre in length.	
	Suitable UPS with maintenance free batteries for minimum 30 min. back-up shall be supplied with the system.	
	Standards and Safety Requirements	
	Must submit ISO13485:2003/AC:2007 for Medical Devices AND Should be FDA/CE/BIS approved product.	
	Shall meet internationally recognised for Electromagnetic Compatibility(EMC) for electromedical equipment: 61326-1.	
	Certified to be compliant with IEC 61010-1, IEC 61010-2-281, 61010-2- 101 for safety.	
	User Training	
	Must provide user training (including how to use and maintain the equipment).	
	Warranty	
	Comprehensive warranty for 2 years from acceptance.	
	Maintenance Service During Warranty Period	
	During the warranty period supplier must ensure planned preventive maintenance (PPM) and corrective/breakdown maintenance whenever required.	
	Installation and Commissioning	
	The bidder must arrange for the equipment to be installed and commissioned by certified or qualified personnel; any prerequisites for installation to be communicated to the user in advance, in detail.	
	Documentation	
	User (Operating) manual in English Should provide 2 sets(hardcopy and soft-copy)	
	Service (Technical / Maintenance) manual in English Should provide 2 sets(hardcopy and soft-copy)	

No.	Item Specifications	Fill your Specification
	List of important spare parts and accessories with their part number and costing.	
	Certificate of calibration and inspection from factory.	

Vein viewer (finder)

No.	Specifications	Fill your Specification
	Description of function	
	The product should be able to define the subcutaneous veins for the purpose of cannulation.	
	Technical specifications	
	Light type: Near infrared light	
	It should make it easy to identify the valves in the veins.	
	It should be small and easy to be hand held.	
	It should have an inverse display, with veins appearing lighter compared to background.	
	Image Resolution: 720 x 480 minimum	
	The battery should be displayed on the screen.	
	Infrared wavelength: 850nm minimum	
	LED lifetime: 20,000 hours minimum	
	Accuracy: 0.25mm minimum	
	Best projection distance: 200A+/-20mm	
	Image frame rate: 20FPS	
	The battery should last at least 3 hours.	
	It should be supplied with the battery charger.	
	Accessories, spares and consumables	
	All standard accessories, consumables and parts required to operate the equipment	
	Environmental factors	
	The unit shall be capable of being stored continuously in ambient temperature of 0 -55deg C and relative humidity of 15-95%	
	The unit shall be capable of operating in ambient temperature of 20-50 deg C and relative humidity of 80%	
	Standards and safety	
	Should be FDA or CE approved product certificate.	
	User Training	
	Must provide operating and service trainings	
	Warranty	
	Comprehensive warranty for 2 years.	
	Documentation	
	User (Operating) manual in English Should provide 2 sets(hardcopy and soft-copy)	
	Service (Technical / Maintenance) manual in English Should provide 2 sets(hardcopy and soft-copy)	
	List of important spare parts, accessories and consumables with their part numbers and costing.	
	Certificate of calibration and inspection from factory.	
4.4	Shall be mobile on 4 x 200mm robust swivelling castors with non-marking grey tyres and with at least 2 diagonal castors shall have locking/brake mechanism. All four wheels MUST be fully 360 deg. swivels. Fixed direction wheels are NOT acceptable.	
4.5	To be supplied complete with patient transfer board. Smooth board in either heavy duty mild steel or Aluminium Approx. size 1500 l x 500 w mm. All edges shall be rounded /curved finished. Surface to be smooth to permit easy sliding of patient onto trolley.	
5	Accessories, spares and consumables	
5.1	All standard accessories, consumables and parts required to operate the equipment, including all standard tools and cleaning and lubrication materials, to be included in the offer.	
6	Operating Environment	
6.1	The product offered shall be designed to be stored and to operate normally under Climate, Temperature, Humidity, etc. for Sudan.	

No.	Item Specifications	Fill your Specification
7	Warranty	
7.1	Comprehensive warranty for 2 years after acceptance.	

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Dental Unit with full accessories

No.	Item Specifications	Fill your Specification
1	Description of Function	
1.1	A Dental chair for Dental treatment	
2	Operational Requirements	
2.1	It shall operate on AC power supply.	
3	System Configuration	
3.1	Delivery Bed with complete attachments and accessories.	
3.1	Patient chair, 1 unit	
3.2	Working stool, 2 units	
3.3	High speed hand piece, 2 units	
3.4	Low speed motor with 1 straight hand piece & 1 contra-angle hand piece, 1 set	
3.5	A built-in light cure unit	
3.6	A built-in ultrasonic scaler with one each of pointed and flat scaler tips	
3.7	One air compressor at least 1 horse power	
3.8	One suction unit at least 1 horse power	
3.9	One unit of automatic amalgamator	
3.10	One set of amalgam carrier with tips and one amalgam well	
3.11	One set of 4 pieces of amalgam condensers	
3.12	One set of 5 pieces of amalgam carvers	
3.13	One set of 5 pieces of burnishers	
3.14	Bidder shall indicate brand and model information here and provide technical data document for major components specified above.	
4	Technical Specifications	
4.1	Patient type: adult & paediatric & deformity.	
4.2	Main unit standard configuration as follow:	
4.3	Patient chair:	
4.4	With electrical chair movement and deluxe double articulated headrest.	
4.5	With one left armrest as standard.	
4.6	3 pre-set chair positions: start, treatment and rinsing position.	
4.7	Electrical patient chair loading capacity: not less than 1323N (135kg).	
4.8	Backrest movement range 105°-175°.	
4.9	The lowest position of the patient chair from the ground shall not be less than 380mm.	
4.10	The highest position of the patient chair from the ground shall not be less than 780mm.	
4.11	Chair movement is controllable by the 4 way foot control at the chair base without touch panel.	
4.12	No cables on the floor, hygienic and clean.	
4.13	One main switch to control air, water and power.	
4.14	The chair position is locked while an instrument is working.	
4.15	With chair-backrest safety system, backrest and seat movement can be stopped once it meets obstacle.	
4.16	Dentist element:	
4.17	Dentist element with whip arm system.	
4.18	Height of dentist element is adjustable.	
4.19	1 X-ray film viewer (12V, 2000cd/m2).	
4.20	1 silicon mat for the dentist element which can be sterilized.	
4.21	1 three way syringe.	
4.22	3 ISO 4-hole/Midwest hand piece hoses.	
4.23	1 air pressure meter.	

No.	Item Specifications	Fill your Specification
4.24	Assistant element:	
4.25	1 three way syringe.	
4.26	1 strong suction hose.	
4.27	1 saliva ejector.	
4.28	With suction filter system.	
4.29	Water unit:	
4.30	The cuspidor can be swivelled and removable for easy cleaning.	
4.31	Cup filler and bowl rinsing systems shall prevent over filling of cup and prolong rinsing of bowl. Preferably programmable.	
4.32	With automatic water heating system (24V)	
4.33	With water venturi and air water separator system	
4.34	Fresh water bottle, at least 1.5L	
4.35	Operating light:	
4.36	Colour temperature: 3800-4500K.	
4.37	12V, 50 Watt Halogen bulb or Better.	
4.38	Dental light intensity: min 25000lux with intensity dimming function.	
4.39	Working stool, 2 units.	
4.40	Mobile on 5 castors.	
4.41	Height of seat and backrest is adjustable.	
4.42	Backrest angle is adjustable and lockable.	
4.43	Come with NSK or equivalent high speed hand piece, 2 units.	
4.44	Come with NSK or equivalent low speed motor with 1 straight hand piece & 1 contra-angle hand piece, 1 set.	
4.45	Come with a built-in light cure unit.	
4.46	Come with a built-in ultrasonic scaler with one each of pointed and flat scaler tips.	
4.47	Come with one unit of automatic amalgamator.	
4.48	Come with one set of amalgam carrier with tips and one amalgam well.	
	Bidder shall indicate brand and model/ part number information here and provide catalogue of each piece of item offered here.	
4.49	Come with one set of 4 pieces of amalgam condensers, one each of serrated small size, serrated big size, smooth small size & smooth big size.	
	Bidder shall indicate brand and model/ part number information here and provide catalogue of each piece of item offered here.	
4.50	Come with one set of 5 pieces of amalgam carvers, double-ended, made of stainless steel, one size each from small, medium up to large size.	
	Bidder shall indicate brand and model/ part number information here and provide catalogue of each piece of item offered here.	
4.51	Come with one set of 5 pieces of burnishers, double-ended, made of stainless steel, one size each of different type.	
	Bidder shall indicate brand and model/ part number information here and provide catalogue of each piece of item offered here.	
4.52	Come with one air compressor at least 1 horse power or capacity sufficient to supply to the Dental chair specified above, whichever higher. Bidder shall indicate capacity of the unit offered here.	
	Air compressor must be oil less & noise less.	
4.53	Come with one suction unit at least 1 horse power or capacity sufficient to supply to the Dental chair specified above, whichever higher. Bidder shall indicate capacity of the unit offered here.	
5	Accessories, Spare Parts and Consumables	
5.1	All standard accessories, consumables and parts required to operate the equipment, including all standard tools and cleaning and lubrication materials, to be included in the offer. Bidders must specify the quantity of every item included in their offer (including items not specified above).	
6	Operating Environment	

No.	Item Specifications	Fill your Specification
6.1	Power supply: 220 – 240 VAC, 50Hz fitted with appropriate plug. The power cable must be at least 3 metres in length.	
6.2	Environment: <input type="checkbox"/> Temperature: 10-45 degree C <input type="checkbox"/> Relative Humidity: not more than 98%	
6.3	Air supply pressure 0.55~0.80Mpa	
6.4	Water supply pressure 0.20~0.40Mpa	
7 Standards & Safety Requirements		
7.1	Must submit ISO13485:2003/AC:2007 for Medical Devices AND	
7.2	CE (93/42 EEC Directives) or USFDA approved product certificate.	
7.3	Electrical safety conforms to standards for electrical safety IEC-60601.	
8 User Training		
8.1	The Supplier shall conduct user training for this equipment to enable operators to use the equipment properly. The training shall include the use of all operational functions of the equipment, as well as routine checks and maintenance expected by users.	
9 Warranty		
9.1	The warranty period for this item shall be 24 months after acceptance of the Goods	
10 Maintenance Service During Warranty Period		
10.1	Preventive and corrective maintenance services during warranty period shall be included.	
11 Installation and Commissioning		
11.1	The bidder must arrange for the equipment to be installed and commissioned by certified or qualified personnel; any prerequisites for installation to be communicated to the purchaser in advance, in detail.	
12 Documentation		
12.1	User (Operating) manual in English	
12.2	Service (Technical / Maintenance) manual in English	
12.3	List of important spare parts and accessories with their part number and costing.	
12.4	Certificate of calibration and inspection from factory.	

No.	Item Specifications	Fill your Specification
TECHNICAL SPECIFICATIONS		
1	Should be stand model with fiber wheels and locking system.	
2	Should have X-ray tube current of minimum 7/8/10 mA and 60/65/70 KV adjustable preferably.	
3	Should have a constant potential minimum 20 KHz high frequency X-ray generator.	
4	Should have an exposure timer of minimum 0.02 to 2 seconds.	
5	Focal spot size should not exceed 0.8x0.8 mm.	
6	Should be compatible for digital radiograph.	
7	X-ray tube head should have swing angulations of at least 290° in the vertical plane and 360° continuous rotations in the horizontal plane.	
8	X-ray tube head should have angle indication.	
9	Should have a counter balanced arm mechanism.	
10	Should be supplied with cones.	
11	Should be supplied with one light weight lead apron of 0.5mm lead equivalent.	
12	Should work on 200-240Vac/50Hz.	
13	The certificate should be attached with the bid.	
14	Should have safety certificate from a competent authority CE / FDA (US) CB certificate or valid detailed electrical and functional safety.	
15 User Training		

No.	Item Specifications	Fill your Specification
15.1	The Supplier shall conduct user training for this equipment to enable operators to use the equipment properly. The training shall include the use of all operational functions of the equipment, as well as routine checks and maintenance expected by users.	
16	Warranty	
16.1	The warranty period for this item shall be 24 months after acceptance of the Goods	
17	Maintenance Service During Warranty Period	
17.1	Preventive and corrective maintenance services during warranty period shall be included.	
18	Installation and Commissioning	
18.1	The bidder must arrange for the equipment to be installed and commissioned by certified or qualified personnel; any prerequisites for installation to be communicated to the purchaser in advance, in detail.	
19	Documentation	
19.1	User (Operating) manual in English	
19.2	Service (Technical / Maintenance) manual in English	
19.3	List of important spare parts and accessories with their part number and costing.	
19.4	Certificate of calibration and inspection from factory.	