S.No.	Purchaser's Requirements (f/y-082/83)	Bidder's Compliance Sheet		
		Yes/No	page no. in	Remarks
	Anaesthesia machine			
	Manufacturer:			
	Brand:			
	Model:			
	Country of Origin:			
1	**General Requirement**			
1.1	Compact and modular, Anaesthesia machine with an integrated ventilator for adult to infants and integrated airway monitor for airway pressures and volume.			
1.2	Anaesthesia workstation with circle absorber, one vaporizers, Ventilator and Monitoring with complete accessories.			
1.3	The machine should be suitable for low and minimal flow anesthesia application with compliance compensation of breathing circuit. Should have fresh gas decoupling system.			
1.4	The machine should have minimum 2 drawers			
1.5	The anesthesia machine, inbuilt ventilator, vaporizer, should be manufactured by the same company.			
1.6	The system should have upto 1 Hrs. battery backup			
1.7	System should confirm to USFDA or European CE and EN 60601-2-13 (Requirement for safety and essential performance of anaesthesia system)			
2	**Gas delivery system**			
2.1	Should have pin index yokes for Oxygen & air besides separate connection for Central gas supply for Oxygen and Air.			
2.2	Machine should provide fresh gas settings and delivery with flow meters for O2 & Air			
2.3	Should have back-up O2 control which provides an independent fresh gas source and flow meter Control in case of electronic failure.			
2.4	The system should be suitable to use at minimal flow upto 700ml fresh gas setting.			
2.5	Emergency Oxygen flush at 30 – 70 L/min bypassing the vaporizer.			
2.6	In case of electricity and battery failure, manual ventilation, gas and agent delivery should be possible.			
2.7	Machine shouldn't depend upon driving gas for ventilating.			
3	**Vaporizer**			

3.1	Machine should have possibility to mount two quick mount type vaporizer for easy interchangeability, and safety with interlock facility.			
3.2	Should be provided with a Temperature / pressure compensated and flow independent			
3.3	Should be capable of connecting Vaporiser.for Isofluorene / Sevoflourane / Halothene / Desflorane Vaporizer			
3.4	should have extended delivery range from 0 to 6 Vol. %			
3.5	The vaporizer should require no calibration in its life time.			
4	**Breathing System**			
4.1	Should have fresh gas de-coupled semi closed circle absorber system.			
4.2	Should have adjustable pressure relief valve from 5 to 75 mbar.			
4.3	Should have change over from Spontaneous to Bag ventilation with single step.			
4.4	The system should have leak and compliance test (including patient hoses upto the Y piece).			
4.5	Should have compact breathing system with approx. 1.7 Ltr. Volume capacity.			
4.6	Should have an external fresh gas outlet for connecting Magill or Bain's circuit			
4.7	Auxiliary oxygen port system.			
5	**Anaesthesia Ventilator**			
5.1	The system should have inbuilt ventilator with electronically controlled and electrically driven technology, for zero consumption of driving gas.			
5.2	Should not require changing of bellows for adult & infants.			
5.3	Modes: Manual/Spont, Volume controlled.			
5.4	Tidal Volume: 20ml -1400 ml			
5.5	PEEP : 0 ~ 20 mbar			
5.6	Breathing Frequency : 4 to 60 BPM			
5.7	Should be able to ventilate with atmospheric (room) air, in case of total gas supply failure.			
6	**Airway monitoring**			
6.1	Screen should be of atleast 6" inch.			
6.2	Integrated monitor for electronic monitoring and display of following parameters.			
6.3	Expiratory Tidal Volume			
6.4	Expiratory Minute volume			
6.5	PEEP, Peak & Mean and Plateau airway pressure			
6.6	Frequency			
6.7	Waveform display for Airway pressure.			
7	**Alarm limits & alarms**			

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REC No. 385 'A'

7.1	Adjustable high / low limits with audio and visual alarms for the following :			
7.2	Minute volume,			
7.3	Airway pressure (incl stenosis and disconnect),			
7.4	Insp oxygen concentration,			
7.5	Audio power supply fail alarm,			
7.6	Fail to cycle warning.			
8	**Operating Environment**			
8.1	The system offered shall be designed to store and to operate normally under the conditions of the purchaser's country. The conditions include Power Supply, Climate, Temperature, Humidity, etc			
8.2	Power supply: 220 - 240 VAC, SOHz fitted with appropriate plug. The power cable must be at least 3m in length			
9	**Accessories and Spare Parts:**			
9.1	2 gas (Air & O2) Anaesthesia workstation			
9.2	Trolley with drawer			
9.3	Pipeline connections for 2 gases			
9.4	Adult & Peadiatric autoclavable patient tubings (1 each)			
9.5	Anaesthetic Face mask size – Adult & child			
9.6	Vaporiser for Isofluorene			
9.7	Medical Grade Adult Test Lung			
9.8	Central gas supply hoses (Color coded)			
9.9	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).			
10	**Standard and Safety Requirements**			
10.1	Must submit 15013485:2003/ AC:2007 for Medical Devices AND			
10.2	CE (93/42 EEC Directives) or USFDA approved product certificate			
11	**User & Technical Training**			
11.1	Must be provided to user as per user requirement by trained professional			
12	**Warranty**			
12.1	Comprehensive warranty for 2 year			
13	**Maintenance service during warranty period**			
13.1	During the warranty period the supplier must ensure corrective/breakdown maintenance whenever required.			
14	**Documentation**			
14.1	User (operating) manual in English			
14.3	List of important spare parts and accessories with their part numbers and costing			

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Technical Specification

Technical Specifications for Automatic Autoclave (450 L)

S.N.	Purchaser's Specifications (FY-2082/083)	Bidder's Compliance sheet		
		Compliance Yes/No	Deviation (if any)	Corresponding page no. of data sheet/ catalogue in support of specification
Autoclave ,Automatic (450l or more)				
Manufacturer				
Brand				
Type / Model				
Country of Origin				
1	**Description of Function**			
1.1	Autoclave shall be able to work under high pressure and high temperature in order to sterilize wrapped instruments, unwrapped instruments, linen, glassware, plastic articles etc.			
2	**Operational Requirements**			
2.1	Microprocessor controlled, automated horizontal electrically heated autoclave with complete accessories.			
3	**System Configuration**			
3.1	Horizontal Autoclave with complete accessories.			
4	**Technical Specifications**			
4.1	Single door high pressure steam sterilizer with triple walled, steam jacket and separate boiler.			
4.2	Should be made up of stainless-steel SS 316 chamber, door, loading carriage, with glass wool (or equivalent) insulation.			
4.3	Operating temperature 121 ^{0}C – 134 ^{0}C			
4.4	Operating pressure: 1.2 to 1.5 Kg/cm2 (15-20 PSI)			
4.5	Capacity-~ 450 liters Size: (600x1200) mm			
	Load capacity-~ 18kw			
4.6	Heating device (steam generator) horizontally mounted, preferably separated from the chamber.			
4.7	Double locking mechanism preventing door from opening while chamber is pressurized.			
4.8	Chamber is provided with two rails for easy/smooth movement of carriage.			
4.9	Should provide with universal carriage and loading trolley.			
4.10	Indicating lights display all functions including heating, low water, timer operation, temperature set point and actual temperature.			

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NEC No. 365 'A'

	Keypad shall be provided which is used for adjusting the parameters.			
4.12	Spring loaded safety valves and automatic vacuum breaker for jacket.			
4.13	Automatic pressure control switch			
4.14	Steam generator should consist of automatic water level controller for the protection of immersion heater. Should have low water level cut-off.			
4.15	It shall have temperature sensing device for precise control and monitoring.			
4.16	Should Pre-vacuum post vacuum –~ Equipped with PRE-vacuum and post- vacuum technology, and ensures complete air removal before sterilization and effective steam evacuation after the cycle. This results in deeper steam penetration, uniform sterilization, and faster, moisture-free drying-ideal for wrapped instrument, surgical tools, and textile loads			
2	Audio/ visual Alarm for pressure failure, low water etc.			
	Accessories, spares and consumables			
2.1	Accessories: • Spare Heat resistant silicon lid gasket: - 2 nos. • Spare Immersion rod: - 2 nos. • Loading trolley for transfer of goods			
2.2	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).			
3	**Operating Environment**			
3.1	The system offered shall be designed to operate normally under the conditions of the purchaser's country. The conditions include Power Supply, Climate, Temperature, Humidity, etc.			
3.2	Power supply: 440V 3ph, 50Hz AC Supply fitted with appropriate plug. The power cable must be at least 3 meter in length.			
4	**Standards and Safety Requirements**			
4.1	Must submit ISO 9001:2015/ISO 13485,CE or USFDA certificates			
4.3	Electrical safety shall confirm to standards for electrical safety IEC-60601.			
5	**User Training**			

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NEC No. 360 YA

	Must provide user training (including how to use and maintain the equipment).			
6	**Warranty**			
6.1	Comprehensive warranty for 2 years			
7	**Maintenance Service During Warranty Period**			
7.1	During the warranty period supplier must ensure corrective/breakdown maintenance whenever required.			
7.2	Installation and Commissioning			
7.3	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.			
8	**Documentation**			
8.1	The bidder should submit a valid authorization from the manufacturer.			
8.2	The bidder should submit the original brochure or e copy.			
8.3	User (Operating) Service (Technical / Maintenance) manual in English manual in English			
8.4	List of important spare parts and accessories with their part numbers and costing.			
8.5	Bidders must completely fill the Technical Specification Form (TSF). Only YES/NO/COMPLY should not be written. Page number in the catalogue must be clearly mentioned and highlighted.			

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SPECIFICATIONS OF C-ARM Machine

S.N.	Purchaser's Specifications	Bidder's Compliance Sheeet		
	Mobile C-Arm with Image Intensifier/FPD	**Yes/N0**	**Page no. in catalogue**	**Remarks**
	Manufacturer			
	Brand			
	Type / Model			
	Country of Origin			
1	**Description of Function**			
1.1	Microprocessor controlled C-arm machine with Image Intensifier and 1K X 1K imaging chain should provide the excellent image quality at low radiation, ideally suited for general surgeries in many application fields and special application such as orthopedics, urology, Gastroenterology, pain management, Spine fixation. .			
2	**Operational Requirements**			
2.1	It shall be suitable to be used for adult and pediatric patients in general radiography examination and it shall operate on single phase AC power supply.			
3	**System Configuration**			
3.1	A portable mobile trolley C-Arm machine with image intensifier.			
4	**Technical Specifications**			
4.1	**IMAGE INTENSIFIER & CAMERA/FPD system**			
	Input field size (approx.) 9 inch (Triple field)			
	Grid on the entrance field: circular grid			
	Digital high resolution 1k*1k CMOS camera, with at approx. 1.6 MP, 10 bits, 15 fps / 25 fps and high resolution 1024* 1024 pixel.			
4.2	**Monitor**			
	32 inch single 0r 17 inch dual monitor or more High Resolution (1920 x 1080) Full HD LED Monitor with Auto Clean, Active Back-light control and contrast booster with superb fluoroscopic viewing monitor mounted on mobile			

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NEC No. 365 "A"

4.3	**X-Ray Tube**			
	Monoblock tube head having dual focus stationary anode X-Ray tube of focal spot 0.6mm (small focus) &large focus (1.5mm) should be provided			
	Anode Heat Storage capacity should be 42KHU or more.			
	System should have laser based aiming tools to reduce exposure for doctor and patients.			
	Collimator: fixed			
4.4	**Control Unit:**			
	A very compact, soft touch control panel with graphical color TFT display of min 5.7-inch size on which KV, mAs, Fluoro mA,and other indicators can be displayed			
	Should have 2 step remote exposure switch.			
	Console Panel should have following functions and indications.			
	• Machine ON/OFF switch. • Fluoro timer reset Switch (For reinitiate the exposure after 300 sec fluoro timer) • KV and mAs increase and decrease switches. • X-Ray ON Switch with indicators. • Switches for up/down movement of "C" on both side of panel. • Realtime temperature display on screen. • Exposure lock switch.			
4.5	**X ray Generator**			
	High Frequency not less than 40 KHz.			
	Output power should be 5KW.			
	Fluoro & Rad. Kv 40 to 110 KV.			
	Max. mA: 80mA or more.			
	Radiographic mAs:0.4 to 200mAs			
	Pulse Fluoroscopic mA(peak):- • 0.1 to 3mA (Fluoro Mode) • up to 8mA (HD Mode)			
4.6	**Memory system**			
	Memory system should include the following:			

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NEC No. 365 "A"

4.7	**Image Acquisition**			
	Image processing software with real time image capturing, storage, and display in 1K X 1K format.			
	Unlimited data storage with high resolution, 1K X 1K format.			
	1000 runs of 100 frames image memory with Unlimited patient creation Storage at full resolution 1024 x 1024			
	Single/dual monitor support for enhanced Last Image Hold.			
	System should have feature of post image enhancements			
	Optimal dose indicator algorithm in manual X-ray mode to avoid x-ray adjustment.			
	Should have feature of video rotation angles.			
	Image Rotation, Image Mirror support			
	Should have feature of Negative Image, Contrast adjustment, Sharpness, Brightness, Advance and Ultra Enhancements			
	Must have Customizable key map configurations			
	Dedicated Patient Mode (Without Registration), add/ modify information.			
	Image Format Support BMP, JPEG, PNG,etc.			
	Real time Horizontal and Vertical Video Flip functions.			
	Should have inbuilt APR system.			
	System should auto Save Image after exposure			
	System should store Patient Image Counter and patient name.			
	Real time digital zoom facilities.			
	Real time noise with reduction with Averaging			
	Real time Image Flip function Horizontal &Vertical.			
	Import Patient Data			
4.8	**Storage**			

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NEC No. 365 "A"

	System should able to store image more then 10000 images.			
	Fluoro saving as per user need			
	Last image hold saving as per user need			
4.9	**C-arm Movements (approx.)**			
	Fully counter balanced movement			
	Rotation: ±180			
	Arc orbital movement: 120 or more			
	Horizontal movement: 200mm or more			
	Vertical movement: 400 or more			
	Clearance:750 mm or more			
	Swivel range: ±12.5° or more			
	SID: 930 mm or more			
	System should have features of locks for all the manual movements of C-arm			
	Should have emergency switch to shutdown entire machine operations.			
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.			
5.2	Accessories:			
	Lead apron-03 no Thyroid shield-03 no Lead eyewear-03 no			
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 Power Supply, Climate, Temperature, Humidity, etc.			
6.2	**Power supply requirements**			
	The machine should be operable on single phase 220 – 240 VAC, 50Hz with appropriate plug for X-ray generator fitted with appropriate plug for other units. The power cable must be at least 3 meters in length.			
	electronic voltage stabilizer should be provided			
	UPS for power backup of the software should be provided.			
7	**Standards and Safety Requirements**			

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7.1	Must submit ISO13485 for Medical Devices AND			
7.2	Must submit CE or USFDA approved product certificate.			
7.3	The product should be approved by AERB / BIS.			
8	**User Training**			
8.1	Must provide user training (including how to use and maintain the equipment).			
9	**Warranty**			
9.1	Comprehensive warranty for 3 years should be provided.			
10	**Maintenance Service During Warranty Period**			
10	During the warranty period supplier must ensure corrective/breakdown maintenance whenever required.			
11	**Installation and Commissioning**			
11	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	User (Operating) manual in English.			
12	Service (Technical / Maintenance) manual in English.			
12	Manufacturer authorization letter			

Bidder must completely fill the Technical Specification Form (TSF). Only Yes/no/all complies should not be written. Page number in the catalogue of all the required parameters must be clearly mentioned and highlighted. Failure in doing so may lead to rejection of bid from technical committee.

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NEC No. 365 "A"

Technical Specifications for Defibrillator			
S.N.	Purchaser's Specifications (f/y-082/83)	Bidder's Offer	
		Yes/No	Remarks
	Defibrillator		
	Manufacturer		
	Brand		
	Type/Model		
	Country of Origin		
1	**Description of Functions**		
1.1	To be used in emergency & critical care departments to meet various resuscitation and monitoring needs.		
2	**Operational Requirements**		
2.1	It shall operate on AC power supply and internal battery.		
3	**System Configurations**		
3.1	Defibrillator must be Biphasic Light Weight and latest model with complete accessories.		
4	**Technical Specifications**		
4.1	**Defibrillation function:**		
4.2	Must be compact design, Monitoring, Manual Defib and AED (Automated External Paddles sets) capabilities.		
4.3	Able to perform synchronized defibrillation and non- invasive pacing therapy.		
4.4	Shall have multifunctional cable that can be attached to paddles, AED pads and shall be provided with multifuntional pads for AED, cardioversion, etc.		
4.5	Shall have variety of options for all patient resuscitation needs, and have facility to upgrade to 12 lead, EtCO2, NIBP, SpO2, Temperature (2 channels) in future		
4.6	System shall be user friendly, lightweight and easily transportable. es comply, - Weight must be less than 7Kg with accessories - easy to carry handle - must have a charge indicator that illuminates when the unit is charged and ready to deliver a shock;		
4.7	The defibrillator paddles shall be easily interchangeable among adult, child, and internal paddles. It shall come with at least adult and paediatric paddles.		
4.8	Can be used for paediatric and adult defibrillation & must have automatic shock level settings		
4.9	Energy settings should be up to 200 joules or more energy options should be available		
4.1	Fast charging time up to 200J should be less than 7 sec. both in AC power and battery.		
4.11	Deliver all necessary energy to patient with 20ms even in high impedance patients.		

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12	The unit shall be able to perform defibrillation and monitoring by using disposable electrodes.		
4.13	Recharge time shall not be held longer than 7-8 seconds before discharge.		
4.14	Energy charge & discharge and other selection/control buttons shall be available at the paddle handles as well as front of defibrillator		
4.15	Can operate within a high range of temperature (: 0 to 50° C)		
4.16	Should have built in AED and protocol should be informed by message and voice prompt.		
4.17	Waveform should get back to basic line approximately within 3 sec. after defibrillation		
4.18	Shall have LCD display displaying at least dual ECG channel, HR, battery status, shock indicator and various data. Bidder to specify size of LCD screen (6-8inch) and atleast 3 waveforms which can be displayed.		
4.19	Shall have audio and visual alarms. (Please indicate in the next column type of alarms available)		
4.2	Must have an electrode contact-quality indicator to minimize the risk of ineffective defibrillation.		
4.21	The unit shall be portable and the weight of the machine must be within 8kg with accessories		
4.22	Provision for built in Battery test function		
4.23	Built in 2 channel thermal recorder		
4.24	Should be maintenance free		
4.25	**ECG monitoring function:**		
4.26	Shall have a 3-leads ECG, Lead I, II & III, monitoring capability protected from defibrillation by means of ECG electrodes and through-the-paddles monitoring		
4.27	With heart rate display and alarms		
4.28	With Lead-fault indicator		
4.29	Shall have an integrated thermal printer/ recorder with paper speed of 25 mm/sec, 50 mm/sec,		
5	**Accessories, Spare Parts and Consumables**		
5.1	**Accessories:** Rechargeable battery, 1 piece on the unit Thermal paper x 1 roll/sets Power cord x 1 set 3 wire ECG cable x 1 set for ECG monitoring Disposable ECG electrodes, 5 pieces		
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).		

Deputy

	Operating Environment		
6.1	The system offered shall be designed to operate normally under the conditions of the purchaser's country. The conditions include Power Supply, Climate, Temperature, Humidity, etc.		
6.2	Power supply: 220 – 240 VAC, 50Hz fitted with appropriate plug (3 pin). The power cable must be at least 3 metres in length.		
7	**Standards & Safety Requirements**		
7.1	Must submit ISO13485:2003/AC:2007 for Medical Devices **AND**		
7.2	CE (93/42 EEC Directives) and USFDA approved product certificate.		
7.3	Electrical safety conforms to standards for electrical safety IEC-60601-1 General Requirements and IEC-60601-2-25 Safety of Electrocardiograms.		
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 year after acceptance.		
10	**Maintenance Service During Warranty Period**		
10.1	During the warranty period supplier must ensure planned preventive maintenance (PPM) along with 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**		
12.1	User (Operating) manual in English		
12.2	Service (Technical / Maintenance) manual in English		

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Technical Specification of Electro-hydraulic OT Table

S.N.	Purchaser's Technical Specifications (f/y-082/83)	Bidder's Compliance Sheet		
	Electro-hydraulic OT Table	**Yes/N**	**Page No**	**Remarks**
	Manufacturer			
	Brand			
	Type/Model			
	Country of Origin			
1.	**Description of Function**			
1.1.	Electro-hydraulic operating tables are tables for performing surgical procedures and it works with electrical power and hydraulic system.			
2.	**Operational Requirements**			
2.1.	Electric and hydraulic Operating Table with complete standard accessories.			
3.	**Technical Specifications**			
3.1	Five section table top including divided foot section.			
3.2	It should made of SS medical Class materials with Durable and Corrosion resistant properties.			
3.3	Should have latex free, radiolucent, memory foam mattress with seamless PU leather.			
3.4	The form should have antibacterial, antistatic, and waterproof properties.			
3.5	The lifting column should be protected by elastic plastic cover that helps for easy cleaning and aesthetically looking.			
3.6	The hydraulic system should be high pressure with integrated valve.			
3.7	Table wheel should be inside the SS Base frame			
3.8	Table should have Floor Locking system for Stability and movements through lock/unlock floor feet button.			
3.9	Table should have manual over ride system.			
3.10	The keyboard must have lock and unlock button to prevent the accidental press to the button.			
3.11	Table should have remote control system with backlit.			
3.12	All Sections should be X-Ray Translucent for fluoroscopy and should be C-Arm compatible and main section should have facility for putting X-Ray cassette from either end.			
3.13	All table positioning, i.e., height, back section, lateral tilt, Trendelenburg, and reverse- Trendelenburg, height adjustment except foot and head section must be operated electrically.			
3.14	It should have maximum lifting capacity of 180 kg or more			
3.15	Inbuilt rechargeable battery capable of backup. Battery should have charging circuit with auto cut off.			

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NEC No. 365 "A"

3.16	Should have kidney bridge for ease of patient positioning.			
3.17	Should have provision of ortho attachment, floor mounted type .			
3.22.	**Dimensions (approx.)**			
a.	Should be approx. 500mm wide (excluding side rails) and 1950mm long (including head section) or better.			
b.	Adjustable height (without mattress) 760mm – 1010mm or better			
c.	Trendelenburg adjustment at least 22° or more			
d.	Reverse Trendelenburg adjustment at least 22° or more			
e.	Lateral Tilts 20° or more			
f.	Back section at least 70° up and 15° down or better			
g.	Head adjustment 25° up and 25° down, adjustable by gas spring or better			
h.	Leg adjustment 90° down, adjustable by gas spring or better			
i.	Facility for self-leveling back to zero position by press of one button by remote.			
j.	Longitudinal slide: 250mm or more. It should be motorized.			
k.	Head Plate: detachable and interchangeable with Leg Plate			
l.	Leg Plate: detachable and interchangeable with Head Plate			
4	**Accessories, Spare Parts and Consumables included**			
	All standard accessories, consumables and parts required to operate the equipment should be supplied.			
a.	Hand remote -1			
b.	Padded Shoulder support – 1 pair			
c.	Padded Lateral support -1 pair			
d.	Pu foam Mattress – 1			
5	**Operational Environment**			
5.1.	The product offered shall be designed to be stored and to operate normally under the conditions of the purchaser's country. The conditions include Power Supply, Climate, Temperature, Humidity, etc.			
5.2.	Power Supply: 220 ±22 VAC, 50 Hz with appropriate power cable and plug.			
6.	**Standards, Medical Device Regulation and Safety Requirements**			
6.1.	Must submit ISO 9001 & ISO13485:2003/AC:2007 for Medical Devices **AND**			
6.2.	CE (93/42 EEC Directives) & USFDA Registered/approved product certificate.			

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NEC No. 365 "A"

7.	**User and Technical Training**			
7.1.	Must provide user training (including how to use and safe handling, keep hygiene the equipment).			
8.	**Up time Service Backup, Warranty/Guarantee**			
8.1.	Comprehensive warranty for 2 year after acceptance.			
8.2.	During the warranty period supplier must ensure preventive maintenance and corrective/breakdown maintenance			
9.	**Installation and commissioning**			
9.1.	The bidder must arrange for the quoted equipment with all the listed accessories and consumables to be installed on site and commissioned by certified or qualified personnel; any			
10.	**Documentation on site**			
10.1.	User (Operating) manual in English			
10.2.	Service (Technical/ Maintenance) manual in English			
10.3	Manufacturer authorization should be submitted durning tender submission.			

Technical Specification on Electro-Surgical Unit with Vessel Sealing

	Electro-Surgical Unit with Vessel Sealing	YES/NO	Page No. in	Remarks
	Manufacturer:			
	Country of Origin:			
	Brand Type:			
	Model No.:			
1	**Description**			
1.1	Electrosurgical units or Cautery are required to provide cutting and coagulation electrically during surgery and for controlling bleeding by causing coagulation (hemostasis) at the surgical site.			
2	**Integral component**			
2.1	Elecro-Surgical Unit : 1 Unit			
2.2	Two Pedal Foot Switch : 1 Unit			
2.4	Electrical Pencil Single Use with Rocker switch : 20 pieces			
2.5	Single Use patient plate : 20 pieces			
2.6	Patient Plate Cable : 1 piece			
2.7	Monopolar Cable : 1 piece			
2.8	Bipolar Cable : 2 piece			
2.90	Reusable Laparoscopic Vessel Sealer with cable: 2 piece			
2.10	5mm diameter, shaft length 350 mm Vessel Sealer with 4m cable: 2 pieces			
2.11	5mm diameter, shaft length 200 mm Vessel Sealer with 4m cable: 2 pieces			
2.1	Reusable Laparoscopic Bipolar forceps : 2 piece			
2.13	Manufacturer Trolley for ESU : 1 piece			
3	**System Configuration**			
3.1	Monopolar & bipolar cutting & coagulation			
3.2	Vessel Sealing System			
3.3	Endo Cut System			
4	**Technical Description:**			
	The unit should have following features for vessel sealing:-			
4.1	Should have coagulation mode for bipolar vessel sealing.			
4.2	Should have a socket for vessel sealing integrated on the main unit.			
4.3	Should seal vessels up to 7 mm diameter or to coagulate vascularized tissue without changing the settings.			
4.4	Should have automatic control of HF peak voltage.			
4.5	Should have maximum output up to 360 watts.			
4.6	Should have feature to automatically stop the current flow when optimal sealing is achieved.			
A	**User Interface**			
A.1	Should have minimum 26 cm diagonal screen size color touch display.			
A.2	Should have Intuitively-guided operation.			

Deependra Oli
Bio-Medical Engineer
NEC No. 365 "A"

A.3	Should represent utilized current forms as pictograms and scale wheels and interactive graphics should show the expected and actual tissue effect.			
A.4	Number of individualized program presets should be minimum 300.			
A.5	Should be able to store user-specific settings as programs in the system menu and the representation of the programs should be possible in plain text.			
A.6	Should have illuminated multifunction sockets with status display.			
A.7	The offered system should support the user in a step-by-step menu from inserting an instrument through the selection of the current modality to the application of the selected current form.			
A.8	Should be able to export and import of the saved programs via anintegrated Wi-Fi interface via app			
A.9	The sockets should be available for both monopolar and bipolar instruments and should offer automatic instrument recognition.			
A.10	The unit should recognize the instrument which is attached, the unit settings should be automatically adjusted to the recommended current forms and non-approved modes should be blocked			
A.11	Instrument activation should be illustrated by hand or footswitch pictograms.			
A.12	The sockets should color lit up and show the different states in terms of usage, safety, and activation.			
A.13	Should be able to store up to 6 sub-programmed with remote switching capabilities from the operating field by the surgeon (footswitch / monopolar electrosurgical pencil)			
A.14	Should have discipline-specific, indication-specific and OR- specific customized programs			
A.15	Should have at least 1 monopolar socket, 1 Bipolar socket, 1 integrated vessel sealing socket, 1 patient plate cable socket and 1 universal socket (Both monopolar and bipolar should be compatible in universal socket) in the main unit.			
B	**Safety**			
B.1	The system should automatically and independently carry out a function checks of the unit and of connected accessories after switching on.			
B.2	The system should automatically detect, documents and reports malfunctioning.			
B.3	The unit should have function to automatically alert the user of any malfunctioning			
B.4	Should have function of automatic monitoring of the connection for the patient plate, alerting the user in the event of a malfunction.			

Deependra Gir
Bio-Medical Engineer
NEC No. 355 "A"

B.5	Should have function of automatic monitoring of the use of split-pad patient plates on the patient.			
B.6	Should have function of automatic monitoring of the symmetry of partial current flows through the split-pad patient plate with Constant Voltage.			
B.7	Should have function of automatic monitoring of the relative current density of the electrosurgical current when using multi-pad patient plates.			
B.8	Depiction on the display of the current status of the neutral electrode with a scale wheel should be available.			
B.9	Should have function for automatic monitoring of theduration of activation.			
B.10	Prevention of incorrect power settings in the cutting and coagulation modes should be available.			
B.11	Neonatal function with alarm to prevent too high current outputs when using small patient plates for infants should beavailable.			
C	**MODES**			
C.1	The tendered unit should offer monopolar and bipolar cutting and coagulation modes as well as vessel-sealing modes.			
C.2	The settings for all cutting and coagulation modes should ensure that the cutting and coagulation quality is reproducible.			
C.3	The tendered unit must offer at least six different cutting modes, with a selection of different hemostatic effects per cutting mode.			
	The unit must offer all cutting modes listed below.			
C.4	Cutting mode for smooth inscisions with minimum to moderate hemostasis up to approx. 400W			
C.5	Cutting mode for tissue with poor conductive properties and monopolar resection with arcing regulation up to approx. 400W			
C.6	Cutting mode for controlled incision with significant hemostasis to approx. 240W			
C.7	Endo Cut Mode up to approx. 330W			
C.8	Bipolar cutting mode			
C.9	Bipolar high cutting mode for TUR / TCR			
C.10	The tendered unit must have at least ten different coagulation modes; users have a choice of different, finely adjustable hemostatic effects for every coagulation mode.			
	The coagulation modes listed below must be available.			
C.11	Coagulation mode for gentle coagulation			
C.12	Coagulation mode for intensive coagulation			
C.13	Classic Coagulation mode			
C.14	Coagulation mode for two simultaneously activated instruments (optional)			

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Deepanshu Sah
Bio-Medical Engineer
MEC No. 365 'A'

C.15	Coagulation mode for tissue separation with dynamic adjustment of the modulation frequency			
C.16	Spray coagulation mode			
C.17	Coagulation mode for gentle bipolar coagulation			
C.18	Coagulation mode for intensive bipolar coagulation			
C.19	Coagulation mode for bipolar vessel sealing / thermofusion			
C.20	Bipolar coagulation mode for TUR / TCR			
D	**Operating**			
D.1	Must have coagulation mode with a slow and fast automated pulsed activation			
D.2	All coagulation modes must be adjustable to provide reproducible coagulation			
D.3	Modes must allow a range of applications to be performed from non-contact hemostasis of bleeding to non-contact devitalization of tissue anomalies			
E	**Service & Upgrade**			
E.1	The system should be equipped with up to modular type four multifunctional sockets which can be upgradable to Argon plasma coagulation & Waterjet System.			
E.2	The modular design should permit the system to be combined with other units, accessories (argon plasma flexible probes and argon plasma rigid handheld instruments) and a system cart (plasma surgery; hydro surgery; cryosurgery; smoke evacuation) & should be upgradable to waterjet System.			
E.3	Software upgrading should be able to be managed via an integrated Wi-Fi interface			
E.4	Should have function to export a detailed report on full usage, activation duration, energy delivered, mode used, error messages via an integrated Wi-Fi interface			
E.5	The system should automatically detect, document and report malfunctioning.			
E.6	The electrosurgical unit should automatically store the data of any malfunctions which occur.			
E.7	Stored problem reports should able to be accessed via an integrated Wi-Fi interface or retrieved directly from the unit.			
E.8	The unit should be designed in such a way so that maintenance work and the exchange of individual components can be undertaken on site at any time.			
E.9	Software upgrading should able to be managed via an integrated Wi-Fi interface (connected with electrosurgical unit).			
E.10	Energy supply of modules should be through docking system.			
5	**Accessories, Spare and Consumables**			

Deependra Oli
Biomedical Engineer
NEC No. 365 'A'

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. All accessories must be from the same manufacturing company.			
6	**Operating Environment**			
6.1	The system offered shall be designed to be stored and to operate normally under the conditions of the purchaser's country. The conditions include Power Supply, Climate, Temperature, Humidity, etc.			
7	**User and Technical Training**			
7.1	Must provide user training to concerned personnel (including how to use and maintain the equipment)			
8	**Warranty**			
8.1	Comprehensive warranty for 2-year warranty after acceptance			
9	**Maintenance Service During Warranty Period**			
9.1	During the warranty period supplier must ensure preventive maintenance and corrective / breakdown maintenance whenever required.			
10	**Instruction to bidders**			
10.1	Must submit original catalogue and product data Sheet confirming the specification along with the tender.			
10.3	Should provide ISO certificate of Manufacturer, CE & USFDA approved Certificate, Classification in accordance with EU Directive 93/42 EEC (IIB), Protection class in accordance with IEC 60 601-1 (I), IEC 60 601-1 type			
11	**Documentation**			
11.1	User (Operating) manual in English			
11.2	Service (Technical / Maintenance) manual in English			

Technical Specification of Fiber Optic Laryngoscope

S.N.	Purchaser's Specifications (f/y-082/83)	YES/NO	Page No. in Catalogue	Remarks
	Fiber Optic Laryngoscope			
	Manufacturer			
	Brand			
	Type / Model			
	Country of Origin			
1	**Description of Function**			
1.1	Fiber Optic Laryngoscope is suitable for intubation of adult and paediatric patients, sterilizable and durable for repeated use in hospital operating theatre and critical-care environments.			
2	**Operational Requirements**			
2.1	All surfaces shall be smooth (no edges or recessed features) to facilitate cleaning, disinfection and sterilization, and to reduce risk of nosocomial contamination.			
3	**System Configuration**			
3.1	Fiber Optic Laryngoscope with complete standard accessories.			
4	**Technical Specifications**			
A	**Laryngoscope Blades**			
4.1	The offered laryngoscope blades must be of the reusable Macintosh type with integrated fiber optic illumination.			
4.2	The blades must be constructed from a single piece of chrome-plated, high-grade stainless steel to resist oxidation and corrosion during reprocessing.			
4.3	The fiber optic bundle must be internally housed, with no external fiber bundles, screwed joints, or openings that could trap contaminants.			
4.4	The blades must be compatible with all laryngoscope handles conforming to the ISO 7376 standard (green standard connector).			
4.5	The fiber optic system must provide high-intensity illumination, maintaining an illuminance of at least 1,000 lux after 4,000 autoclave cycles at 134°C for 4 minutes.			
B	**Laryngoscope Handle**			
4.6	The offered laryngoscope handle must be designed for simplified hygienic reprocessing without the need to disassemble the battery compartment or LED light unit for cleaning and disinfection.			
4.7	The handle must be 100% waterproof, allowing for wipe disinfection, manual immersion disinfection, and low-temperature gas plasma sterilization (e.g., STERRAD/VHP) without removing the batteries or LED unit.			

Deependra Oli
Bio-Medical Engineer
NEC No. 365 "A"

4.8	The handle must be suitable for steam sterilization/autoclaving up to 134°C			
4.9	The handle must incorporate a non-slip "Wave Design" surface to improve grip and the reliability of wipe disinfection.			
4.1	The operating time in continuous operation must be a minimum of 10 hours.			
4.11	The handle must be compatible with all laryngoscope blades conforming to ISO 7376 (green standard).			
4.12	The handle must be available in a standard size, operating on 2x C-cell batteries.			
4.13	The LED light source must be of high quality (LEDHo), providing a maximum brightness at least three times greater than conventional halogen lights and featuring a high colour rendering index.			
5	**Accessories, spares and consumables**			
5.1	All standard accessories, consumables and parts required to o perate 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 system offered shall be designed to be stored and to operate normally under the conditions of the purchaser's country. The conditions include Power Supply, Climate, Temperature, Humidity, etc.			
7	**Standards and Safety Requirements**			
7.1	Must submit ISO 13485 for Medical Devices			
7.2	Must submit CE (93/42 EEC Directives) or USFDA approved product			
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	**Installation and Commissioning**			
11.1	Supplier must accomplish proper installation and commissioning of the equipment.			
12	**Documentation**			
12.1	User (Operating) manual in English			
12.2	Service (Technical / Maintenance) manual in English			

Deependra Oli
Bio-Medical Engineer
EC No. 365 "A"

Technical Specificaitons of High Vacuum Suction apparatus

S.N.	Technical Specification F/y-082/83)	Bidder's Offer
	Manufacturer	
	Brand	
	Type / Model	
	Country of Origin	
1.0	**Description of Function**	
1.1	Suction apparatus are used to extract fluid from the body during surgery or emergency treatment.	
2.0	**Operational Requirements**	
2.1	It Shall operate on mains AC supply.	
3.0	**System Configuration**	
3.1	High Vacuum Suction apparatus with complete sets of accessories	
4.0	**Technical Specification**	
4.1	The machine shall be portable on four wheels and with a handle for transportation.	
4.2	The vacuum pump must be oil immersed rotary vane type.	
4.3	Motor shall be of 1/2HP, FHP	
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. 720 mm Hg and which must be adjustable and monitored by vacuum gauge of suitable range. The suction capacity must be atleast 35 litres per minute and can be regulated.	
4.6	It must have two bottles of 2l. 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	It shall be offered with On/Off Switch and power indicator.	
4.8	The bidder shall provide foot switch for easy operation with foot.	
4.9	It shall be equipped with approx. 350 watt,1440 RPM,0.5 HP electric motor.	
4.1	The unit shall be supplied with the bacterial filter fitted on the top.	
5.0	**Accessories, spares and consumables**	
5.1	**Accessories:** • Spare bottle: 01 no. • Lids: 02 nos. • Rubber Seals: 02 nos. • Blades: 02 nos. • Suction tubing set at least 5 metres: 02 nos. • Spare fuse: 01 set.	
6.0	**Operating Environment**	

Deependra Oli
Bio-Medical Engineer
NEC No. ...

6.1	The product offered shall be designed to be installed and to operate normally under the conditions of the purchaser's site. The conditions include Power Supply, Climate, Temperature, Humidity, etc.	
6.2	It Should be operated by 220V -230V AC,50 with appropriate plug and the wire must be atleast 3m long.	
7.0	**Certifications And Standards.**	
7.1	Must submit ISO13485:2003/AC:2007 or CE for Medical Devices **AND**	
8.0	**User Training**	
8.1	The bidder must 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 year after acceptance.	
10.0	**Maintenance Service during and After Warranty Period**	
10.1	During warranty period supplier must ensure preventive maintenance and corrective/breakdown maintenance whenever required.	
11.0	**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.	
11.2	Must supply preassembled unit, ready to use.	
12.0	**Documentation**	
12.1	Bidder should provide user (Operating) manual in English	
12.2	Bidder should provide Service (Technical / Maintenance) manual in English	

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Technical Specification for ICU Ventilator

S.N.	Hospital's Purpose Specification (f/y-082/83)	Bidder's Compliance sheet		
		Yes/No	Page no.	Remarks
	ICU Ventilator			
	Name of Bidder:			
	Manufacturer:			
	Brand:			
	Type / Model:			
	Country of Origin:			
1	**Description of Function**			
	ICU ventilator provides artificial respiratory support to the critical patients in the intensive care units.			
2	**Operational Requirements**			
	Microprocessor Controlled ventilator with integrated facility for ventilation monitoring suitable for Pediatric & Adult ventilation.			
3	**System Configurations**			
a	Ventilator main unit			
b	Trolley			
c	All required standard accessories and consumables			
4	**Technical Specifications**			
a	The ventilator should be turbine-based gas driven.			
c	It should operate from mains supply with central supply oxygen and oxygen cylinder.			
d	It should operate with external AC and internal battery backup for at least 45 minutes and optionally extandable upto at aileast 2 hours.			
e	The ventilator should have both invasive and non- invasive ventilation mode.			
f	Should have at least 12" LCD/TFT inbuilt color touch screen integrated graphics and easy to use rotary knob.			
g	Should have external interface with RS232 serial port of VGA for live LCD projection (shall be used for teaching purposes)			
h	Should have automatic compliance & leakage compensation for circuit and ET tube.			
i	Should have the facility of screenshot of waveforms for later analysis.			
j	Should have the facility of integrated nebulizer in the same ventilator.			
k	Should have future upgradable provision for mainstream CO2 measurement and Oxygen therapy.			
5	**Modes of Ventilation**			
	The Bidder should highlight and mention their equivalent mode in the compliance sheet			
a	Non-Invasive Ventilation (NIV)			

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b	Pressure-Controlled Modes: PC-AC , PC-BIPAP/PC-SIMV+			
c	Volume-Controlled Modes: VC-CMV/VC-AC, VC-SIMV			
d	Spontaneous Modes: SPN-CPAP			
	Should have at least the following range of settings			
a	Tidal Volume:approx. 25 - 2000ml			
b	Respiratory rate:approx. 2-80 bpm			
c	PEEP: approx. 0 to 35 mbar			
d	Pressure Support: approx. 0 to 50 mbar			
e	FiO2 rate: 21-100 %			
f	Flow acceleration: approx. 5-200 mbar/sec			
g	Inspiratory time: approx. 0.2s to 10s			
h	Flow tigger: approx. 1- 15 L/min			
i	Inspiratory pressure: approx. 3-60 mbar			
j	I:E ratio:approx. 1:9 to 4:1			
6	**Monitoring Parameter**			
a	Monitor must display the following set and delivered parameters of ventilator settings ➢ Tidal volume: Inspiratory, Expiratory, Spontaneous ➢ Minute volume: Total, Spontaneous ➢ Max. airway pressure, plateau pressure, mean airway pressure, PEEP ➢ Ventilation ratio (I:E) ➢ Resistance, Compliance and total respiratory rate ➢ Leakage Minute volume MVleak ➢ Inspiratory O2 concentration ➢ Curve displays: Tidal Volume, Paw, Flow, etc. ➢ Rapid shallow breathing (RSB)			
b	Must display at least 4 user selected scalar graphic (flow, pressure and volume over time), should displayed simultaneously on the screen with set and delivered parameter mentioned. Should display at least 2 loops (user selectable pressure volume, flow volume, pressure flow). Should have facility of superimposing and saving of more than 4 reference loops. Should display all waveforms and loop simultaneously.			
c	Must provide at least 24 hours trending and browsing of monitored parameters.			
8	**Alarms Parameter**			
a	All alarms should be self-guiding with possible cause and remedy.			
b	Should have facility to pause audio of alarms for a period of 2 min.			

Deependra Oli

Deependra Oli
Bio-Medical Engineer
NEC No. 165 "A"

c	Must have audible alarms of different tones graded for high priority, immediate priority and priority tones with display of the nature of warning being highlighted on the display			
d	Must provide for user adjustable alarms and volume for the following with built in default settings Airway pressures: high / low Expiratory minute volume: high / low Tidal volume: high / low Apnea-alarm time: 20 to 60 sec Spontaneous breathing frequency: high Inspiratory O2-concentration: high / low Inspiratory breathing gas temperature: high			
10	**Additional Accessories, spares and consumables must provide**			
a	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).			
b	Disposable breathing circuit for adult,pediatric -1 sets each			
c	Silicone test lung adult,pediatric -1 set each			
d	Disposable NIV Mask -1 pc each			
11	**Operating Environment**			
a	The system offered shall be designed to be stored and to operate normally under the conditions of the purchaser's country specific place. The conditions include Power Supply, Climate, Temperature, Humidity, Altitude etc.			
b	Power supply: 220 – 240V AC, 50Hz fitted with appropriate plug. The power cable must be at least 3 meter in length.			
12	**Standards and Safety Requirements**			
a	Must submit ISO13485:2003/AC:2007 for Medical Devices AND			
b	CE (93/42 EEC Directives) and USFDA approved product certificate.			
13	**User Training**			
	Must provide user training (including how to use and maintain the equipment)			
14	**Warranty**			
	Comprehensive warranty for 2 year after acceptance			
15	**Maintenance Service During Warranty Period**			
	During the warranty period supplier must ensure preventive maintenance and corrective/breakdown maintenance whenever required.			

16	**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 purchaser in advance, in detail.			
17	**Documentation**			
a	The bidder should submit a valid authorization from the manufacturer.			
b	The bidder should submit the original brochure or e-copy			
c	User (Operating)/ Service (Technical / Maintenance) manual in English.			

Technical Specification of Infusion Pump		
S.N	**Description (F/y-082/83)**	**Bidder's Offer**
	Infusion Pumps - Country of Origin:	
	Company :	
	Model No:	
	Technical Specification of Infusion Pump	
1	Flow rate:	
	a. 0.1 -1200 ml/hr (0.1 ml/hr in steps)	
2	Flow rate range: 0.1 - 1200 mL/h 0.01 ml/hr minimum increments for low infusion volume or for low rates.	
3	Flow rate accuracy - ± 5%	
4	Bolus range should be 1200 mL/h, adjustable from 50 mL/h to 1200 mL/h by 50 mL/h increments.	
5	Compatible with (Microinfusion set, Blood transfusion set , Adult high-pressure intravenous set)	
	a. Adult high pressure I/V sets- 15 drops/ml	
	b. Transfusion sets-30 drops/ml	
	c. Microinfusion set-60 drops/ml	
6	Setting modes should be	
	a. g/h,ng/kg/min, ng/kg/h, microg/ min, microg/h, microg/kg/min, microg/kg/h, mg/min, mg/h, mg/24h, mg/kg/min, mg/kg/h, mg/kg/24h, mgm²/h, mg/m²/24h, g/h, g/kg/min, g, kg/h, g/kg/24h, mmol/h, mmol/kg/h, mmol/kg/24h, mU/min, m/u/kg/min,mU/kg/h,U/min, U/h, U/kg/min, U/kg/h, kcal/h, kcal/24h, kcal/h, kcal/24h, kcal/kg/h, mEq/min, mEq/h, mEq/kg/min, mEq/kg/min, mEq/kg/kg/h.	
7	Functions: Able to work with or without drip sensor.	
8	Special Functions:	
	a. Keep vein open (KVO) at the rate of 1-3 ml/hr; adjustable	
	b. Volume memory function.	
	c. Volume to be infused (VTBI) mode should be present.	
9	Pressure limit should be: Variable or 3 pre set levels - Range from 50 to 750 mm HG. (25 mmHg increment from 50 to 250 mmHg/50 mmHg increment fro 250 to 750 mmHG).	
10	Operating Condition: 10-40 degree Centigradetemperature and 30-85% relative humidity.	
11	Storage : - degree to 45 degree centrigrade. Relative humidity 10-95%	
12	Power Supply:	
	a. AC 100-240 Volt.	
13	Internal battery should be able to work ≥ 6 hours at flow rate of 25 ml/hour.	
14	Screen - LCD Display.	
15	Weight : Less than 2.5 kg	
16	Alarm Functions:	
	a. Start Reminder	
	b. Occlusion / High pressure	
	c. Clamp closure alarm	
	d. Bubble detection alarm	

Deependra Oli
Bio-Medical Engineer
NEC No. 365 "A"

	e. Near Completion or completion alarm	
	f. Empty alarm	
	g. AC/DC power disconnection alarm	
	i. Door alarm	
17	Occlusion detection should be upstream and downstream.	
18	Protection against change of setting with keyboard lock functionality.	
19	Dynamic pressure system (DPS) should be there to neutralize pressure variations in line,.	
20	Should provide protection against splashing fluids. (Waer proof level IP 22 or more).	
21	Should be able to change rate of delivery without interruption.	
22	The device should contain at least 19 drugs profiles each software configurable	
23	The device should have the possibility of editing Drug library for setting normal infusion rate, bolus and loading dose parameters, default infusion mode, soft and hard limits for infusion rates with use of external software.	
24	Should provide pole holding system by clamp and should be able to rotate by 90 degree to keep in vertical pole as well as horizontal pole (patient bed side railing).	
25	Displays minimum 1500 last dated events in real time	
26	The pump must have same physical attributes (same key functions) like same company's syringe pump for user friendliness.	
27	The pump should run in either dedicated or in available IV sets. At least 5 units of IV sets should be supplied along with each pump. IV set price should be fixed for at least 2 years.	
28	Should provide pole holding system by clamp and should be able to rotate by 90 degree to keep in vertical pole as well as horizontal pole (patient bed side railing).	
29	Modes of operations: mL/h modes: Volume + Flow rate, Volume + Time, Flow rate + Time, Volume + Time + Rate, Ramp-up / Ramp down, Sequential / Intermittent, Secondary / Piggyback, Drop/min, Dose mode	
	Conditions:	
1	**Standards and Safety Requirements**	
	Must submit valid ISO 13485, European CE (93/42 EEC Directives) approved product certificate and/or US-FDA (501K) approved product certificate must be valid.	
	Must meet IEC-60601-1-2:2001 General Requirements of Safety for Electromagnetic Compatibility.	
2	**User Training**	
	Must provide user training (including how to use and maintain the equipment)	
3	**Warranty**	
	Comprehensive warranty of 2 year	
	During warranty period supplier must ensure preventive maintenance & corrective/breakdown maintenance whenever required	
4	**Installation and Comissioning**	

Deepencha Gil
Bio-Medical Engineer
NEC No. 365 "A"

	The bidder must arrange for the equipment to be installed and commisioned by certified or qualified personnel; any prerequisites for installation to be communicated to the purchaser in advance, in detail.	
5	**Documentation**	
	User (Operating) manual in English	
	Service (Maintenance) manual in English	

Deependra Oli
Bio-Medical Engineer
NEC No. 365 "A"

Technical Specification of Intravenous Anaesthesia Tiva Syringe Pump				
S.N	Purchaser's Specification	Bidder's Compliance Sheet		
	Syringe pump (Intravenous Anaesthesia, TIVA)	YES/NO	Page NO	Remarks
	Manufacturer			
	Brand			
	Type / Model			
	Country of Origin			
	Description of Function			
1.	A Intravenous Anaesthesia (TIVA) syringe pump is used to administer total intravenous anaesthesia. It is used when the inhalation anaesthesia is not suitable.			
	Technical Specification			
1.	The machine should be high intelligent microprocessor controlled, accurate for fluid transfusion with continuous operating mode.			
2.	Flow rate range: 0.1-1200 ml/ hour or better.			
3.	Infusion Progress should be indicaed by light with color coding.			
4.	Purge rate/ Bolus mode: Should be from 0.1 to 1200 ml / hr in increments of 0.1ml/ hr or better.			
5.	Syringe compatible with major syringe brands available in market.			
6.	Alarms: Alarms should be deonted by sound, words and lights Occlusion High pressure Low Battery Near Empty Infusion Completion Cable disconnection(Ac/DC) Syringe disengaged alarams VTBI near end and infusion completion			
7.	Should have battery backup for 6 hours or more			
8.	Should be waterproof standard .			
9.	Should have facility to change flow rate without interruption			
10.	The device should have graphic LCD display for Rate, Drug name, battery status, occlusion level, syringe size, syringe brand etc. display at a glance			
11.	The device should have various modes of infusion (Rate Mode, Volume Target Mode, Volume Time Mode, Dose rate, TCI Mode)			

Deependra Gr.

Deependra Oli
Bio-Medical Engineer
NEC No. 305 "A"

12.	Dose rate modes should have: ng/h, ng/kg/min, ng/kg/h, µg/min, µg/h, µg/kg/min, µg/kg/h, mg/min, mg/h, mg/24h, mg/kg/min,mg/kg/h,mg/kg/24h,mg/m²/h, mg/m²/24h, g/h, g/kg/min, g/kg/h, g/kg/24h, mmol/h, mmol/kg/h, mmol/kg/24h, mU/min, mU/kg/min, mU/kg/h, U/min, U/h,U/kg/mi n,U/kg/h,kcal/h,kcal/24h ,kcal/kg/h,mEq/min,mEq/h, mEq/kg/min, mEq/kg/h options to operate.			
13.	Should have "Volume to be infused (VTBI)" function, range 0.1 to 999.9 ml or better.			
14.	Should provide pole holding system by clamp and should be able to rotate by 90 degree to keep in vertical pole as well as horizontal pole (patient bed side railing).			
15.	Should have facility of stacking in one above the other with locking system between the subsequent pumps.			
16.	Should be able to change the infusion rate without interruption of delivery.			
17.	Delivery should be continued with previous setting once restarted.			
18.	Dynamic pressure system (DPS) with upper and lower limit to demonstrate the drug library.			
19.	Selectable occlusion pressure trigger level from approx.50 to 900mm of Hg.			
20.	Should have Anti bolus system ie should prevent sudden release of drugs in the aached tubing once the occlusion is released distal to the syringe.			
21.	Nightmode with reduced brightness of display, manual adjustment.			
22.	Delivery accuracy should be± 2% in syringe.			
23.	The device should contain at least 19 drugs profiles each software configurable			
24.	The device should have the possibility of editing Drug library for setting normal infusion rate, bolus and loading dose parameters, default infusion mode, soft and hard limits for infusion rates with use of external software.			
	Standard and Accessories			
1.	All standard Maintenance tools and cleaning /lubrication materials where applicable shall be included.			
	Operating Environment			
1.	The system offered shall be designed to be stored and to operate normally under the conditions of the purchaser's country. The conditions include Power Supply, Climate, Temperature, Humidity, etc.			
2.	Power supply: 220 – 240 VAC, 50Hz fitted with appropriate plug. The power cable must be at least 3 metres in length .			
	Standards and Safety Requirements			
1.	Must submit ISO13485 for Medical Devices AND			
2.	European CE or USFDA approved product certificate			
	User Training			

Deependra Oli
Bio-Medical Engineer
NEC No. 365 "A"

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.			
	Warranty			
1.	Comprehensive warranty for 2 year after installation.			
	Maintenance Service during Warranty Period			
1.	During warranty period supplier must ensure corrective/breakdown maintenance whenever required.			
	Installation and Commissioning			
1.	Supplier must accomplish proper installation & commissioning of equipment onsite.			
	Documentation			
1.	User (Operating) manual in English			
2.	Service (Technical / Maintenance) manual in English			
4.	Authorization letter from the manufacturer should be provided.			

Deepak Gh
Bio-Medical Engineer
NEC No.

Technical Specification of Light, Operation Theatre, Ceiling (2 Dome, LED)

S N	Purchaser's Specifications (f/y-082/83)	Bidder Compliance Sheet		
	Light, Operation Theatre, Ceiling (2 Dome, LED)	**(Yes/No)**	**Deviation (if any)**	**Page no in catalogue**
	Manufacturer			
	Brand			
	Type / Model			
	Country of Origin			
1	**Description of Function**			
1.1	Surgical lights illuminate the surgical site for optimal visualization of small, low-contrast objects at varying depths in incisions and body cavities.			
2	**Operational Requirements**			
2.1	A major operating light, ceiling type with one main & one satellite light units.			
3	**System Configuration**			
3.1	Operating light ceiling type having dual dome with all standard accessories.			
4	**Technical Specifications**			
4.1	Shall be a ceiling mounted light with flexible arm.			
4.2	Shall be LED with microprocessor based technology.			
4.3	Shall have single colour high performance LEDs with life time more than 45,000 hours of operation.			
4.4	It shall have dual dome with main light and satellite light.			
4.5	Number of LEDs: Not less than 60 + 40 for main light and satellite light respectively			
4.6	Lux intensity: 150,000 Lux or above for major dome and 140000 Lux for satellite dome.			
4.7	Light field diameter shall be above 15 cm or better			
4.8	Colour temperature shall be approx. 3800-5000 K or better.			
4.9	Colour rendering index shall not be less than 90.			
4.10	Depth of illumination shall not be less than 100 cm.			
4.11	Illumination adjustment 30% to 100%.			
4.12	Height adjustment more than 1 metre.			

Deependra Gill
Bio-Medical Engineer
NEC No. 385 'A'

4.13	Light field adjustment by autoclaveable handle.			
4.14	The light dome shall be compatible for laminar air flow.			
4.15	Shall have stable illumination throughout the life period of the light.			
4.16	The LED's must be of a dual colour suitable for long term maintenance and ease of replacement.			
4.17	Shall have digital control panel on the dome for lux adjustment.			
4.18	The intensity of light shall be uniform during the surgery.			
4.19	**Installation Kit**			
	The followings items shall also be included:			
a	Ceiling mounting plate/ bracket or equivalent			
b	Wires, conduits and other accessories for connecting the wall control box, the light and others.			
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 of the purchaser's country. The conditions include Power Supply, Climate, Temperature, Humidity, etc.			
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 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 and Technical Training**			
8.1.	Must provide user training (including how to use and safe handling, keep hygiene the equipment).			
9.	**Warranty**			
9.1	Comprehensive warranty for 2 year after acceptance.			
9.2	During the warranty period supplier must ensure preventive maintenance and corrective/breakdown maintenance whenever required.			
10.	**Installation and commissioning**			
10.1	The bidder must arrange for the quoted equipment with all the listed accessories and consumables to be installed on site and commissioned by certified or qualified personnel; any prerequisites for installation to be communicated to the purchaser in advance, in detail.			
11.	**Documentation on site**			
11.1	User (Operating) manual in English			
11.2	Service (Technical/ Maintenance) manual in English			
11.3	Manufacturer authorization letter.			

S N	Purchaser's Specifications	Bidders Compliance Sheet		
	MOBILE Xray MACHINE (f/y-082/83)	Yes/No	Page No in Catalogue	Remarks
	Manufacturer			
	Brand			
	Type / Model			
	Country of Origin			
1	Description of Function			
	Microprocessor controlled 3.5 KW High Frequency Mobile x ray machine using cutting-edge technology to optimize patient dose emission with less exposure time and reduced motion artifacts while providing excellent reproducibility and superior contrast.			
2.	TECHNOLOGY & FEATURES			
2.1	Should have Micro Controller based feather touch control Panel with LCD display, spill proof design.			
2.2	Should have SBM design– Spring balanced mobile stand system			
2.3	Should have Large Digital LCD display : KV, mAs, APR Program, error display			
2.4	Should have 2Point Technique (KV & mAs selection) for exposure			
2.5	Should have Technique selector switch for Table Radiography and Bucky, Machine ON/OFF switch, KV and mAs increase/decrease switches, stand-by & exposure switch, Collimator Lamp 'ON' switch, Ready (Stand by) and X-Ray ON indicators, Inbuilt Automatic Voltage Compensator with indicator to prevent Voltage variation & filter (e.g. Spike protection) to keep instruments and tube safe.			
2.6	Status and error display, Self-diagnostic program with LCD display of earth fault error, KV error, filament error and tube head thermal overload.			
2.7	Should have Anatomical Preprogrammed (at least 128 pre-set programs with A.P.R. utility) parameters of human Anatomy, which helps the user to select exposure parameters based on body part, examination view and size of the patient.			

Deependra Gil
Bio-Medical Engineer
NEC No. 285 '[illegible]'

2.8	Should have Dual action hand switch with retractable cord.			
2.9	Should have Complete shielded wiring and EMI Protection for noise free use.			
2.10	Should have Built in circuit breaker, automatic voltage stabilization and leak & spark proof heavy duty connectors			
3.	**X-RAY GENERATOR**			
3.1	**Type** : Microprocessor controlled High Frequency X-Ray Generator			
3.2	**Output power** : 3.5 KW or more			
3.3	**Frequency** : 40 KHz or more			
3.4	**KV Range** : 40 to 110 KVp or more			
3.5	**Radiographic Ma** : up to 100mA			
3.6	**mAs range Timer** : 1 mAS – 200mAs or more			
3.7	**Exposure Timer** : 1ms to 4 sec or better			
4	**X-RAY TUBE**			
4.1	**Tube Type** : Stationary Anode X-Ray Tube, Thermally protected			
4.2	**Focal spots (approx)** : 1.5 mm x 1.5 mm or Better			
4.3	**Anode Heat Storage Capacity:** 42KHU or more			
5.	**Collimator:**			
5.1	One No. manual collimator (LBD) with +90deg rotation for adjustment of exposure area with Auto cut-off provision.			
6.	**Spring Balanced Mobile Stand:**			
6.1	Spring Balanced Mobile (SBM) stand with 3 or more wheel design ensures easy mobility & efficient foot brake. Light weight with tube arm, easy to maneuver, smooth movement of tube head, integrated cassette storage box, Light vehicle wheels for easy mobility. Orbital Rotation lock, Angular Rotation lock & Parking lock.			
7	**ELECTRICAL CHARACTERISTICS**			
7.1	**Mains Power Supply:** Single phase 220 VAC, ± 10%, Frequency 50 Hz			

8.	**Important Conditions**			
8.1	a. Must have valid AERB type approval certificate and BIS certificate.			
8.2	b. Must be CE Certified or USFDA approved.			
8.3	c. Should be ISO 13485:2016 , ICMED 13485 & IEC(electric safety) certified.			
8.4	d. Should be operable on 220-240VAC, 50Hz			
8.5	e. Operational Training must be provided to the staff at the time of installation.			
8.6	f. Two year of standard warranty.			
9	**Installation and Commissioning**			
9.1	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.			
10	**Documentation**			
10.1	User (Operating) manual in English			
10.2	Service (Technical / Maintenance) manual in English			
10.3	Manufacturer authorization letter			

Technical Specification of Neuro Drill Set

S.N.	Purchaser's Technical Specifications (f/y-082/83)	Bidder's Compliance Sheet		
	Neuro Drill Set	Yes/ No	Page No. in Catalogue	Remarks
	Manufacturer			
	Brand			
	Type / Model			
	Country of Origin			
1.	Description of Function			
1.1	High-speed electric neuro drill designed for precise neurosurgical and spinal procedures requiring controlled micro-speed operation.			
2.	Operational Requirements			
2.1	Must provide precise speed control, safety, reliability, and suitability for neurosurgical and spine surgical procedures.			
3.	System Configuration			
3.9.	Includes micro-speed control unit, drill handpiece, sterilizable accessories, foot pedal control, and required operational attachments.			
4	Technical Specifications			
4.289.	Micro speed Control Unit			
4.290.	It should have liquid crystal display touch screen minimum 6", self-explanation symbols and intuitive user dialog for easy operation.			
4.291.	It should have two motor connection sockets for effortless switching between motors.			
4.292.	It should have integrated irrigation pump that allows precise adjustments of the flow between 0-75ml/min with 10% interval			
4.293.	It should be capable of recognizing automatically the motor type connected and adjust the settings respectively.			
4.294.	It should have customizable settings: Acceleration and stopping characteristics for individual motors, oscillation angle and much more.			
4.295	It should save the last configurations			
4.296	There should be separate motor control field and a pump control field in the screen display.			
4.297	The control unit should saves the last configurations, allowing the operator to proceed right away.			
4.298	The control should be capable of controlling Speed, Irrigation, Reverse rotation and Priming on the screen			

Deependra

Deependra Om
Bio-Medical Engineer
NEC No. 365 'A'

4.299	The control unit should be able to make Accelerator adjustment (min. 10% - max. 100%), Brake adjustment (min. 10% - max. 100%), Torque adjustment (min. 30%- 100%) and Oscillation adjustment.			
4.3	The system should have excellent cutting, and weight balance during drilling			
4.301	Handpieces and attachments are thermo disinfector compatible			
4.302	**Foot Control**			
4.303	It should have foot control ON/OFF switch and irrigation ON/OFF			
4.304	It should be able to switch between the two motors			
4.305	Foot control must be multifunctional programmable type. Assignment to function of the button should not be fixed			
4.306	The footswitch should be variable speed control			
4.307	It should have high quality finish and resistance against fluids that ensure a long lifetime for the foot control switches.			
4.308	**High Speed Motor-1pcs**			
4.309	It should be slim design, compact and light			
4.31	It should be High speed rotation of maximum 80,000/min			
4.311	It should be made of high-quality materials with titanium coatings which is long-lasting and scratch-free			
4.312	The cable should be min 3 meters			
4.313	It should be high speed motor with torque of more than 4.5Ncm or better			
4.314	There should be no rotating outer parts in the motor.			
4.315	The minimum motor power should be 200w			
4.316	**Perforator Hand piece-1pcs**			
4.317	It should deliver stable torque and achieve smooth and powerful			
4.318	Maximum Speed 1250/min			
4.319	Disposable perforator (14mm) chuck with crammed-lug release mechanism which is safe and reliable that eliminates the risk of			
4.32	**Craniotome Hand piece-1pcs**			
4.321	Maximum Speed 80000/min			
4.322	Craniotome hand piece with two sizes adult and pediatric of duraguards should be available for variable cranial bone thickness			
4.323	The smooth and powerful cutting avoiding additional stress to the			
4.324	Must supply saw for both adult and pediatric -2pc each			
4.325	**Angled and Straight Hand piece**			
4.326	It should have maximum Speed 80000/min			
4.327	It should have non slip surface			
4.328	It should have slim design straight with working length of 35-40 mm and diameter of 5.5mm-1pc			
4.329	It should have slim design angled with working length of 35-40 mm and diameter of 5.5mm-1pc			
4.33	It should have slim design angled with working length of 55-60 mm and diameter of 5.5mm-1pc			

Deependra Gil

Deependra Gil
Bio-Medical Engineer
NEC No. 365 "A"

4.331	It should have facility of adjusting bur exposure into 6 steps from 13mm to 25mm			
4.332	All standard attachment should accommodate universal bur. The one bur should fit in all length attachment			
4.333	It should have tapered tip to ensure better visibility and access to surgical anatomy			
4.334	It should have irrigation nozzle			
4.335	**Drill Hand piece-1pcs**			
4.336	Maximum Speed 80000/min			
4.337	Should accommodate twist drill 1.5mm			
4.338	Tubing Set (10 pcs)			
4.339	Should be disposable type.			
4.34	Spray Adaptor			
4.341	Lubrication and cleaning Oil Spray alcohol based (6 pcs)			
4.342	Oil spray should have alcohol for cleaning the handpieces along with lubrication.			
4.343	Should supply sterilization box with silicon mat and trolley			
4.344	All motors and hand piece should be articulable			
4.345	**Burs**			
4.346	Craniotome Burs long, medium and pediatric -2pcs each			
4.347	Acon bur of 7.5 mm diameter -2pcs			
4.348	Round Fluted bur 4mm diameter -2pcs each			
4.349	Diamond bur 2mm diameter -2pcs each			
4.350.	Match stick bur 1.8mm diameter 2pcs			
5	**Operating Environment**			
5.1	The equipment offered shall be designed to be stored and to operate normally under the conditions of the Nepal's climate. The conditions include power supply, climate, temperature, humidity, etc.			
5.2	Power Supply: 220V±10% AC, 50/60 Hz with appropriate power cable and plug.			
6	**Standards, Medical Device Regulation and Safety Requirements**			
6.1	Bidders must submit a valid ISO 13485:2016.			
6.2	Bidders must submit a valid automatically renewable European CE-marked certificate in compliance with Directive 93/42/EEC on Medical Devices, issued by a Notified Body, if the existing CE certificate has expired and US-FDA approved (510K statement). Failure to submit will result in bid rejection.			
6.3	Must submit the IEC 60601-1 test report.			
7	**User and Technical Training**			
7.1	Must provide user training (including how to use and safe handling, keep hygiene the equipment).			
8	**Up time Service Backup, Warranty/Guarantee**			
8.1	Bidders must provide a comprehensive warranty for 2 year after acceptance.			

Deependra Oli
Bio-Medical Engineer
NEC No. 365 "A"

8.2	During the warranty period supplier must ensure preventive maintenance and corrective/ breakdown maintenance whenever required.			
9	**Installation & Commissioning**			
9.1	The bidder must arrange for the quoted equipment with all the listed accessories and consumables to be installed on site and commissioned by certified or qualified personnel; any prerequisites for installation to be communicated to the purchaser in advance, in detail.			
10	**Documentation**			
10.1	User (Operating) manual in English.			
10.2	Service (Technical / Maintenance) manual in English.			
10.3	The letter of authorization for particular this tender from manufacturer or sub-distributor authorization linking to the manufacturer for particular bid must be submitted. Non submission leads to reject the bid.			
10.4	List of important spare parts and accessories with their part numbers and costing must be submitted. Non submission leads to reject the bid.			

Bio-Medical Engineer

Technical Specification of Ortho with Saw & Instruments

S.N.	Purchase's Specifications	Bidder 's offer		
		Yes/No	Page No in Catalogue	Remarks
	Ortho with saw, instruments and accessories			
	Manufacturer			
	Brand			
	Type / Model			
	Country of Origin			
1.	**Description of Function**			
1.1	Drilling machines are used in a number of orthopedics surgical procedures, for example, in making holes in bones for bone screws and in drilling out the medulla or marrow areas of bones.			
2.	**Operational Requirements**			
2.1	Autoclavable Battery operated drill machine with single hand piece that can be operated by attaching multiple attachments and Electrical spinal drill set with all the attachments and instruments.			
3.	**System Configuration**			
3.1	Drill machine should be battery operated, autoclavable with single hand piece that can be operated by attaching multiple attachments			
4.	**Technical Specifications for Ortho Drill**			
4.1	Drill machine should be battery operated, autoclavable with single hand piece that can be operated by attaching multiple attachments.			
4.2	Shall be supplied with battery charger LCD Touch screen display in the 4 bay charger.			
4.3	Should be Ergonomic, quiet and light weight handpiece with less vibration.			
4.4	Single handed two trigger options for instant forward, reverse and safe mode operation should be available			
4.5	Two trigger option should allow low speed screwing , tapping & oscillating drill functions.			
4.6	Sculptured handpiece should provide for optimum comfort and intuitive functionality.			
4.7	Device temperature and current draw should be monitored to prevent excess heat generation			
4.8	Handpiece should be of metal hard anodised aluminium construction			
4.9	Handpiece should be of the DC brushless motor type			

Deependra Oli
Bio-Medical Engineer
NEC No. 365 "A"

4.10	Handpiece should be of the high performance, hermetically sealed hybrid motor controller type			
4.11	Handpiece cannulation - approx. 4.4 mm diameter.			
4.12	Handpiece & adaptor/attachment system should be fully machine washable			
4.13	Modular hand piece with minimum 17 dedicated attachments and 13 final drive adaptors giving the facility of drilling, wire & pin driving, reaming, reciprocating and sagittal sawing in one handpiece			
4.14	Simple blade mounting mechanism to eliminate unwanted vibration and noise			
4.15	Dual trigger hand piece with drilling speed of approx. 0-1350 rpm or more.			
4.16	Hand piece should have maximum reaming torque of approx. 16Nm.			
4.17	Hand piece should have cannulation of approx. 4.4mm diameter			
4.18	Hand piece should be pulse lavage compatable.			
4.19	Electrical protection - Type BF			
4.20	Atleast Seven power source options should be available			
4.21	Should have Drilling attachment of speed approx. 0-1350 rpm with cannulation of 4.4 mm diameter.			
4.22	Should have quick release drilling and reaming attachment for Hudson/Zimmer combition with the speed of 0-330 RPM and cannulation of 4.4mm diameter			
4.23	Should have Sawing attachment for large sagittal saw with the speed of approx. 0-13500 cpm.			
4.24	Should have wire and pin driver attachment of 0.7 to 4.0mm wire capacity and speed of approx. 0-1350 RPM with 4 mm cannulation			
4.25	Should have radiolucent attachment with the speed of approx. 0-1350 rpm			
4.26	Low noise level at 84 dB			
4.27	Handpiece weight approx – 780 grams			
4.28	Output power – 150 watts - 240 watts			
4.29	Battery charger should have battery health check facility stating the condtion of batteries.			
4.30	The Batteries should not have any memory effect.			
4.31	the batteries shoud have battey level indicators by led light for the instant assess of battery capcity during use and before use.			
4.32	Should have the facility of attaching the pulse lavage jet in the drill hand piece.			
4.33	Battery charger should allow 4 batteries charging bay with touch screen display that displays the condtion of each battery.			

Deependra Oli
Bio-Medical Engineer
NEC No. 365 "A"

4.34	The drill machine should be supplied with following configuration:			
	1. Dual trigger hand piece: 1 unit			
	2. Drilling attachment: 1 unit			
	3. Drilling and reaming attachment: 1 unit			
	4. Sagittal Sawing attachment : 1 unit			
	5. Wire and pin Driver attachment: 1 unit			
	6. 4 bay charger with touch screen: 1 unit			
	7. Battery with 2200 mAh or more capacity : 2 unit			
	8. Aseptic Housing for the battery: 1 unit			
	9. Aseptic Shield: 1 unit			
	10. Chuck Key: 1 unit			
5.00	**HAND HELD Pediatric CAST CUTTER (FROM THE SAME MANUFACTURER)**			
	System Saw must be light weight not weighing more than 0.35-0.4KG			
	system must be battery powered			
	battery capacity must be 30wH atleast			
	Battery must be lightweight and should not weigh more than 450gms			
	Charging time should not be more than 3hours			
	Saw must be able to work for 2hrs atleast continuously			
	System must have display to change cutting speed			
	Must have battery indicator on the display			
	It must be micro processor controlled for better cutting performance			
	System must be possible to work with both battery pack and mains			
	Speed of the saw must be approx. 14500-17500 cpm			
	II. Blades			
	3 blade designs-Approx. 64mm diameter fully round, Approx. 32mm radius segmented and Approx. 40mm radius segmented			
	4 blade coatings-Ion Nitride, Zirconium Nitride (ZrN), Titanium Nitride (TIN) and PTFE.			
	2 blades supplied as standard, Approx. 64mm dia PTFE blade and Approx 32mm radius segmented Ion Nitride blade			
	Blades compatible with POP, polyester and fibreglass materials must be available			
	Power: Adjustable from 800watt minimum & 240volt, frequency 50/60hz			
	Noise Level not more than 75-78dBA			
	Suction: <1900 mm water Column			
	Capacity of compartment: approx. 10-12litres			
	Filtration Hepa >0.3 micron or less			

Deependra Oli
Bio-Medical Engineer
NEC No. 365 "A"

	Weight:<15-18 kg			
	Speed of motor rotation: Approx. 16000 rpm high speed & low speed cpm Approx. 12000			
	Air flow rate of extractor must be 30ltrs/s or more			
	Handpice weight must be less than 800gms.			
	Power cord length 3-5m			
	Hose length must be 2-4m			
7	**Accessories, spares and consumables**			
7.1	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).			
8	**Operating Environment**			
8.1	The product offered shall be designed to be stored and to operate normally under the conditions of the purchaser's country. The conditions include Power Supply, Climate, Temperature, Humidity, etc.			
9	**Standards and Safety Requirements**			
9.1	Must submit ISO13485:2003/AC:2007 for Medical Devices AND			
9.2	CE (93/42 EEC Directives) and USFDA certificate for drill systems and attachment.			
9.3	Shall meet IEC 60601-1-2:2001 General requirements of safety for electromagnetic compatibility			
10	**User Training**			
10.1	Must provide user training (including how to use and maintain the equipment).			
11	**Warranty**			
11.1	Comprehensive warranty for 2 year after acceptance.			
12	**Maintenance Service During Warranty Period**			
12.1	During warranty period supplier must ensure corrective/breakdown maintenance whenever required.			
13	**Installation and Commissioning**			
13.1	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.			
14	**Documentation**			
14.1	User (Operating) manual in English.			
14.2	Service (Technical / Maintenance) manual in English.			
14.5	Must submit valid manufacture's authorization letter.			

Deependra Oli

Deependra Oli
Bio-Medical Engineer
NEC No. 365 "A"

Technical Specification of Patient Monitor 7 parameter

S.N.	Purchaser's Specifications (f/y-082/83)	Bidder's Compliance		
	Patient Monitor 7 parameter	**Yes /No**	**Ref Dos Page No.**	**Remarks**
	Manufacturer			
	Brand			
	Type / Model			
	Country of Origin			
1	**Description of Function**			
1.1	It should be suitable for usage in Emergency, operation room and ICU capable of monitoring ECG, SPO2, Non invasive Blood Pressure(NIBP), Respiratory Rate, Temperature, Etco2, IBP.			
2	**Operational Requirements**			
2.1	The patient monitor must be user friendly, safe to use and must have battery backup and comprehensive alarm system.			
3	**System Configuration**			
3.1	The monitor should be at least of 7 parameter, Portable with complete accessories to operate fully.			
4	**Technical Specifications**			
4.1	Monitor must be able to monitor ECG, Respiration, Spo2, NIBP, dual temperature, mainstream or sidestream Etco2, two IBP and be able to show upto 11 waveforms.			
4.2	At least 15" high resolution touch Screen with rotary Knob.			
4.3	Monitor must have lithium ion battery, run time more than 2 hour battery backup.			
4.4	Adult, paediatric and neonatal measurement mode.			
4.5	It must have pace detection, defibrillator protection and should have IPX1 liquid ingress protection or better.			
4.6	The monitor should be able to configure automatically for new parameters as they are connected.			
4.7	Should have alarm indicators with different alarm tones and visible alarm lights indicators on top for different issues.			
4.8	The alarm volume and beat volume should be adjustable according to clinical practices and/or preferences.			
4.9	Should be able to enter the patient details along with the user required alarm setting parameter.			
4.10	Arrhythmia analysis must be capable to monitor and analyse both paced and non-paced patients.			
5.0	**NIBP**			
5.1	Technique: Oscillometric Measurement Mode: Manual, automatic, continuous and sequence.			
5.3	Measuring range: Systolic pressure: approx. 40mmHg-270mmHg, Diastolic pressure: approx. 10mmHg- 215mmHg, Mean arterial pressure: approx. 20mmHg- 235mmHg			
6.0	**SPO2**			

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Deependra Sh
Bio-Medical Engineer
NEC No. 365 "A"

6.1	In neonatal, paediatric and adult application, should have feature to ensures accuracy in low saturation and low perfusion conditions			
6.2	Transducer : Dual-wave length LED SPO2 measuring range: 0%-100% SPO2 measuring accuracy: ±2% for range from 70% to 100%(adult) ±3% for range from 70% to 100% (Neo)			
6.3	Should supply (Nellcor or Masimo) Module and probe or similar types.			
7.0	**ECG**			
7.1	3 and 5 lead ECG HR measuring range: 20bpm – 300 bpm HR measuring accuracy: ± 2 bpm			
7.2	ECG Sweep should be 12.5, 25, 50 mm/s.			
8.0	**TEMP**			
8.1	Dual temperature with measuring range: 0- 50 degree centigrade. Measuring accuracy: ± 0.1 degree centigrade.			
9.0	**RESP**			
9.1	RR measuring range: 0rpm – 150 rpm RR measuring resolution: 1rpm			
10.0	**Etco2**			
10.1	Mainstream or sidestream with accessories for Adult/paediatric/Neonatal			
10.2	Measurement range from 0-150 mmHg and a resolution of 1 mmHg.			
11.0	**IBP for 7 parameter system.**			
11.1	2 channel IBP with accuracy of ±2% and a resolution of 1 mmHg or Better			
13	**Accessories, spares and consumables**			
13.1	All standard accessories, consumables and parts required to operate the equipment, to be included in the offer. Bidders must specify the quantity of every item included in their offer (including items not specified above).			
13.2	. NIBP hose (1pcs) with reusable cuff of 3 various sizes(neonate, children and adult) – 1 no. each equipment - SPO2 probe of 3 various size(neonates, children and adult)- (SPO2 probe each set should come from patient monitor pin to hand of the patient)(i.e Extension + Spo2, For one Monitor Extension 2 Pcs + Different size of Spo2 Probe 2Pcs each) - ECG Cable 5 Lead -2 set each - 2 complete set of IBP (1 set cables with 2 disposable kits) - Complete set of Etco2. 1 set and accessories for invasive and non-			
14.0	**Operating Environment**			
14.1	The system offered shall be designed to be stored and to operate normally under the conditions of the purchaser's country. The conditions include Power Supply, Climate, Temperature, Humidity, etc.			
14.2	Power supply: 220 – 240 VAC, 50Hz fitted with appropriate plug. The power cable must be at least 3 metre in length.			

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15.0	**Standards and Safety Requirements**			
15.1	Must submit ISO13485:20023 or better for Medical Devices			
15.2	CE (93/42 EEC Directives) or USFDA approved product certificate for patient monitor.			
16.0	**User Training**			
16.1	Must provide user training (including how to use and maintain the			
16.2	Must provide Maintenance training to Biomedical staff.			
17	**Warranty**			
17.1	Comprehensive warranty for 2 year after date of installation.			
18	**Maintenance Service During Warranty Period**			
18.1	During the warranty period supplier must ensure corrective/breakdown maintenance whenever required.			
19	**Installation and Commissioning**			
19.1	The bidder must arrange for the equipment to be installed and commissioned by certified or qualified personnel .Any pre-requisites for installation to be communicated to the purchaser in advance in detail.			
19.2	The Delivered Equipment manufacturing date should not be older than 2025.			
20	**Documentation**			
20.1	User (Operating) manual in English.			
20.2	Service (Technical / Maintenance) manual in English			
20.4	Valid authorization document should be provided.			
	Bidder must completely fill the Technical Specification Form (TSF). Only Yes/no/all complies should not be written. Page number in the catalogue of all the required parameters must be clearly mentioned and highlighted. Failure in doing so may lead to rejection of bid from technical committee			

Deependra Oli
Bio-Medical Engineer
NEC No. 282 "A"

Technical Specification on Syringe Pump

	Syringe Pump(f/y-082/83)	YES/NO	Page No. in Catalogue	Remarks
	Manufacturer:			
	Country of Origin:			
	Brand Type:			
	Model No.:			
1	**Description**			
1	Flow rate range should be 0.1ml/hr to 1200 ml/h with accuracy of ± 1% on mechanism.			
2	Should work on the folowing syringe capacities 5, 10, 20, 30/35, 50/60 CC and should be compatible with min 100types of syringe			
3	Should have drug library of minimum 3800 drugs categorized in user defined 19 categories with facility to set all infusion parameters like soft limit, hard limit, bolus dose etc.			
4	The night mode programmed manually or automatically in a variable time range is must to decrease the brightness of the screen.			
5	Fast start option is mandatory with pause option programmable from 1min to 24hrs			
6	Should have direct bolus option with flow rate 50ml/hr to 1200ml/hr with increment of 50ml/hr along with programable bolus with settable dose or volume/time			
7	Variable and 3 pre-set levels pressure mode is must. Range from 50 to 900 mmHg. (25 mmHg increment from 50 to 250 mmHg / 50 mmHg increment from 250 to 900 mmHg). Can be enables / disabled and adjusted with facility to display realtime inline pressure in both digital and analog form.			
8	The Dynamic Pressure System with maximum and minumum threshold setting is mandatory.			
9	Graphical display of the following history "Volume / dose infused, pressure, flow rate" must be present.			
10	The device should have push guard for syringe protection.			
11	Should have Swinglock clamp for versatile clamp and horizontal clamp that allows the fixation on a rail or on a pole			
12	Should have Li-ion Smart battery, remaining battery life and battery charge level available on the display. Battery Life (when fully charged): > 10 h at 5 mL/h			
13	**Standards and Safety Requirements**			
	Must submit valid ISO 13485, European CE (93/42 EEC Directives) approved product certificate and/or US-FDA (501K) approved product certificate must be valid.			
	Must meet IEC-60601-1-2:2001 General Requirements of Safety for Electromagnetic Compatibility.			
14	**User Training**			

	Must provide user training (including how to use and maintain the equipment)			
15	**Warranty**			
	Comprehensive warranty of 2 years			
	During warranty period supplier must ensure preventive maintenance & corrective/breakdown maintenance whenever required			
16	**Installation and Comissioning**			
	The bidder must arrange for the equipment to be installed and commisioned by certified or qualified personnel; any prerequisites for installation to be communicated to the purchaser in advance, in detail.			
17	**Documentation**			
	User (Operating) manual in English			
	Service (Maintenance) manual in English			

Technical Specification of High-end Color Doppler Ultrasound Machine				
S. N.	Purchaser's Specifications F/Y- 2082/083	Bidder's Compliance Sheet		
	Color Doppler Ultrasound Machine	Yes/No	Page no. in catalog	Remarks
	Manufacturer			
	Brand			
	Type/Model			
	Country of Origin			
1	Description of Function			
1.1	A fully digital high-end Colour Doppler Ultrasound DICOM compatible system with digital broadband/wide band beam forming capable of performing imaging application in Fetal/Obstetrics, Abdominal, Gynecology, Pediatric, Small Organ, Trans-rectal, Trans-vaginal, Urology, Cardiac Adult, Cardiac Pediatric and Peripheral vessel etc.			
2	Operational Requirements			
2.1	It shall operate on mains AC power supply.			
3	System Configuration			
3.1	System shall be supplied with main unit, 3 probes, 1 unit of black and white thermal printer and inbuilt Ultrasound gel warmer 1 unit.			
3.2	1 unit of broad bandwidth of approx. 2– 5 MHz, convex array probe for OB/GYN and abdominal application.			
3.3	1 unit of broad bandwidth of approx. 5- 17 MHz, linear array probe for small part and superficial scanning application.			
3.4	Phased array transducer with a frequency range of approx.1-6 MHz or better, suitable for Cardiology applications.			
4	Technical Specifications			
4.1	Should be compatible to best quality and light weight probe with broad band/wide band technology for ease of use.			
4.2	System should have automatic and user programmable software for 2D Imaging, and advanced and easy 3D imaging and 4D imaging applications.			
4.3	System should support broadband probes spanning a frequency of approx. 1 MHz to 17 MHz, depending on the probes.			
4.4	Should have, High resolution 21 inch or more LCD/LED Colour flat panel monitor with resolution 1920x1080 or better mounted on articulating arm with tilt and swivel function.			
4.5	Should have additional 10 inch or more with touchscreen monitor and resolution of 1,280 x 700 or better for better user control .			
4.6	System should have minimum 4 active probe ports with electronic switching facility from keyboard with the capability of connecting any of the probes in any port.			
4.7	The system shall accept most of the common probe types of: convex array, liner array, phased array, TVS and 3D/4D volume probes.			

Deependra Oli
Bio-Medical Engineer
NEC No: 365 "A"

4.8	System must be offered with a 2D frame rate of at least 1500 frames/second or more and 230 frames/sec or more in Color Mode. Acquisition frame rate should be clearly mentioned in the technical quote If not mentioned Please attach a letter from manufacturer along with the technical bid clearly stating the frame rate of the offered system.			
4.9	System must be offered with a minimum of 8 00000 digital processed channels. Original technical data sheet should be enclosed in technical bid to support the number of channels on the systems. If not mentioned Please attach a letter from manufacturer along with the technical bid clearly stating the digital processed channels of the offered system.			
4.10	. System Should have higher Dynamic range 255db and above. dynamic range and clearly mentioned in the datasheet or submit letter from manufacturer.			
4.11	System should be supplied with complete Obstetric analysis: BPD, CRL, AC, HC, FL, GS, AFI, etc. for Estimation of Gestational Age and Fetal Weight, Heart Rate, growth chart, Obstetric Doppler Calculation (MCA, umbilical artery etc.) and OB/GYN report system.			
4.12	Modes of Operation: B-Mode, B-Flow, Color Doppler mode, Power Doppler (PD) mode, M mode, Pulsed Wave (PW) Doppler mode, Continuous Wave (CW) Doppler mode, Tissue Doppler Imaging (TDI) mode, Spectral Doppler mode , Elasto-Scan Mode, Real time 3D (4-D imaging).			
4.13	System should have Cross beam imaging.			
4.14	System should have Trapezoid Imaging on linear Probe, Convex and Phase array Probes with enlarged FOV.			
4.15	System Should have Dynamic Tissue Optimization done by adjusting automatically Signal to Noise ratio while scanning from one organ to another organ.			
4.16	System Should have Automated B/D measurement.			
4.17	System should be offered with one touch image optimization and Real time continuous image optimization for excellent tissue uniformity.			
4.18	The system should have Tissue Doppler Imaging (TDI).			
4.19	Should have strain Elastography.			
4.20	System should have advance Needle visualization technique.			
4.21	System should have cine memory of at 500 MB			
4.22	System should have Linear and curved Anatomical M- Mode (AMM) features			
4.23	Should have ability to zoom 8x or better.			
4.24	PRF should be approx. 17 KHz.			
4.25	System should have capability of real time automatic Doppler calculations.			
4.26	Auto trace and automatic Doppler calculations should be available in live and frozen images.			
4.27	Must have fully Digital /slider control TGC.			
4.28	Steering up to 20 degree independent of B Mode/PW on linear probe.			
4.29	It should have Tissue Harmonic Imaging			

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NEC No. 365 'A'

4.30	It should have Compound imaging system.			
4.31	System should have Automated IMT measurement.			
4.32	System should be Capable to support: - Auto IMT measurement - Auto NT measurement - Auto vessel diameter.,etc			
4.33	System should have standard Cardiac measurement package for adult and pediatric.			
4.34	Should have Base line shift, Spectrum inversion, Angle correction, Dynamic range adjustment should be possible.			
4.35	System should have special image processing technologies that aim to enhance image quality by reducing noise and artifacts, improving contrast and resolution. Bidders shall mention the name of technology.			
4.36	System should be capable of scanning of 38 cm or more. Scanning Depth should be clearly mentioned in the technical quote If not mentioned Please attach a letter from manufacturer along with the technical bid clearly stating the scanning depth of 38 cm in the offered system.			
4.37	Image storage facility on in build HDD/SSD should be minimum with capacity of 1TB and 8 GB of RAM.			
4.38	System can able to adjust the height up/down features			
4.39	System should have customizable user interfaces, programmable keys, and customizable exam protocols to optimize workflow.			
4.40	DICOM© 3.0 Connectivity			
4.41	Should have complete cardiac package with appropriate software			
5	**Accessories, Spare Parts 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.			
5.2	UPS(3 kvA) to be provided with the system.			
6	**Operating Environment**			
6.1	Power supply: 220 – 240 VAC, 50Hz fitted with appropriate plug. The power cable must be at least 3 meters in length.			
7	**Standards & Safety Requirements**			
7.1	Must submit ISO13485:2003/AC:2007 for Medical Devices			
7.2	Must Submit CE (93/42 EEC Directives) and USFDA (510K) approved product certificate.			
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 3 year after installation and acceptance at site with additional 2 years of service warranty should be provided.			
10	**Maintenance Service During Warranty Period**			

10.1	During the warranty period supplier must ensure preventive maintenance and corrective/breakdown maintenance whenever required.			
10.2	The bidder must ensure the service and complete spare parts support for 10 years of the system, including accessories.			
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) /Service manual in English.			
12.2	Manufacturer Authorization letter from manufacturer			
12.3	List of important spare parts and accessories with their part number and costing.			

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Ventilator, Transport

S.N.	Purchaser's Specifications (f/y-082/83)	Bidder's Compliance Sheet
	Ventilator, Portable	
	Manufacturer	
	Brand	
	Type / Model	
	Country of Origin	
1	**Description of Function**	
1.1	The portable ventilator is used during transport of a patient with artificial respiration support or home care of a patient after discharge from a hospital.	
2	**Operational Requirements**	
2.1	The portable ventilator shall be light weight (< 5 kg)	
2.2	Shall be microprocessor controlled.	
2.3	Shall operate with mains electric supply as well as with batterbackup .of 10 hours.	
2.4	Shall be able to work both with cylinders (0-7 bar) and pipeline, connectors and high-pressure tubing of appropriate length to be supplied.	
3	**System Configuration**	
3.1	Portable ventilator for paediatric to adult and with battery backup min 5 hours	
4	**Technical Specifications**	
4.1	Must have TFT Color Touch Screen of 8 inch or more, for monitoring of the ventilation parameters, curves and loops.	
4.2	It shall be an electronically controlled pneumatic ventilator.	
4.3	Should be Single Knob Operation, Individual presetting.	
4.5	Must have a built in Electronic Blender for Air and Oxygen.	
4.6	Must be able to accept low pressure Oxygen source in addition to High Pressure Oxygen.	
4.7	Must have at least 5 hours of built in battery back-up or more	
4.8	The ventilator shall be compatible with DC power cables for powering the ventilator from Ambulance Cigarette lighter power supply.	
4.1	Shall have following settings (approx.)	
	a. TV 50 to 1500 ml ATPD +/- 10% of setting	
	b. PEEP/CPAP: 0 to 25 cm H2O (0 to 2451 Pa) cm H2O	
	c. Pressure Support: 0-60cmH2	
	d. RR up to 80bpm	
	e. I: E ratio : 1:1 to 1:99.9	
	f. FiO2: 21 – 100%	
	g. Respiratory rate: 1-60 breaths per minute	

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	h. Inspiratory time: approximately 0.3-3s	
	i. Inspiratory Pressure:): 10 to 80 cm H2O (980 to 7845 Pa)cmH2O	
	j. Max inspiratory flow: : 0 to 100 LPM @ 40 cm H2O (3922 Pa)	
4.11	Ventilator mode:	
	AC, SIMV with or without pressure support, and CPAP (NPPV/PPV) with or without pressure support	
4.12	Shall have selectable Flow trigger or Pressure trigger or both.	
4.13	Should have provision of SPO2and Heart rate display	
4.14	Shall have provision for automatic leak compensation for circuit and ET tube.	
4.15	Shall have monitoring/control of Plateau Pressure, Manual Breath, Apnea Backup, Oxygen in Use, Inverse Ratio ,PIP, Type of breath initiation, Exhaled VT, Total breath rate, I:E ratio, PEEP on display so that these can be read in outdoor conditions often associated with the field ambulances and during patient transfers.	
4.16	Shall have measurement of compliance & resistance respectively. Shall have apnoea back up ventilation and Manual breath.	
5.17	Audio-visual alarms for	
	a. Low supply pressure	
	b. High/low airway pressure	
	c. Leakage/disconnection	
	d. Power failure	
	e. Apnea	
	f. Low battery	
5	The design of ventilator must be compact in order Fully reflective LCD and Silent and Dark mode capabilities for operation in all light conditions and tactical situations	
5.1	Shall fix, on rails of transport trolley and on stand with wheels.	
5.2	**Accessories, spares and consumables**	
	. Adult Reusable /Autoclaveable Silicon Patient Circuit	
	. Paediatric Reusable/Autoclaveable Silicone Patient Circuit	
	. Oxygen Hose	
	. Rechargeable Batteries (in the unit)	
	. HME Filters 2pcs	
	. Bacteria Filters 2pcs	
5.3	All standard accessories/consumables/parts required for the proper operation of the above equipment shall be included in the offer.	

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6	**Operating Environment**	
6.1	The system offered shall be designed to be stored and to operate normally under the conditions of the purchaser's country. The conditions include Power Supply, Climate, Temperature, Humidity, etc.	
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	The unit offered shall be certified to meeting the relevant quality and safety requirements of CE mark and USFDA additional with any other relevant quality and safety standards if it has. Certificates showing the compliance of this unit offered with any relevant quality.	
7.2	Manufacturer must have ISO certification for quality standards.	
7.3	Must meets the transport standards EN 794-3 and ISO 10651-3 for emergency and transport ventilators, EN 1789 for ambulances, and both EN 13718-1 and RTCA/DO-160G for aircrafts.	
8	**User Training**	
8.1	On site operational training and technical training till the familiarity of the system and satisfaction of end user (clinical staff and technical staff) 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.	
12	**Documentation**	
12.1	User (Operating) manual in English.	
12.2	Service (Technical / Maintenance) manual in English.	

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Technical specification of Video Laryngoscope Machine

S.N.	Purchaser's Specifications (f/y-082/83)	Bidder's Compliance Sheet	
	Video laryngoscope	**Yes/No**	**Remarks**
	Manufacturer		
	Brand		
	Type / Model		
	Country of Origin		
1	**Description of Function**		
1.1	Video laryngoscope machine designed to provide clear, real-time visualization of the airway for safe and efficient intubation		
2	**Operational Requirements**		
2.1	Video laryngoscope with complete standard accessories		
3	**System Configuration**		
3.1	The offered system must be a complete video laryngoscope set for fast and reliable intubation, providing superior glottis view via an integrated video display.		
4	**Technical Specifications**		
4.1	The device must feature a unique transflective display technology that automatically adapts for optimal visibility even in very bright ambient light conditions.		
4.2	The display must be a minimum of 3 inches and be in a practical portrait format for intubation.		
4.3	The display unit must have an adjustable angle to minimize reflections and improve ergonomics during the intubation procedure.		
4.4	The system must utilize smart image processing to ensure realistic colour representation and a sharp image.		
4.5	The grip head and display frame must be constructed from anodised aluminium.		
4.6	The handle and the camera arm must be constructed from stainless steel.		
4.7	The system must use single-use, Macintosh-style video laryngoscope blades.		
4.8	The system must be powered by a rechargeable battery.		
4.9	The system shall be compatible with a dedicated charging station.		
4.10	The laryngoscope shall provide a situational field of view of the glottis and the relevant surrounding anatomy for comprehensive orientation.		
5	**Accessories, spares and consumables**		

Deependra Oli

Deependra Oli
Bio-Medical Engineer
NEC No. 365 "A"

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 of the purchaser's country. The conditions include Power Supply, Climate, Temperature, Humidity, etc.		
7	**Standards and Safety Requirements**		
7.1	Must submit IS013485:20023 or better for Medical Devices		
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 year 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 such as water, electricity, civil works etc. 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.		

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Deependra Gi
Bio-Medical Engineer
NEC No. 365 "A"

Technical Specification Fully Digital X-Ray Machine 600 mA or more

S. N.	Purchaser's Specifications (F/Y-082/83)	Bidder's compliance sheet		
	Fully digital X-Ray Machine 600 mA or better	**Yes /No**	**Page no in catalogue/datasheet**	**Remarks**
	Manufacturer:			
	Brand:			
	Type/Model:			
	Country of Origin:			
1	**Description of Functions**			
1.1	A general-purpose Fully Digital X-ray machine with 50 KW or more high frequency generator with floating table, Vertical Chest Bucky stand, console and flat panel detectors.			
2	**Operational Requirements**			
2.1	X-ray system with floor mounted with X-ray tube, table, and fixed multipurpose Bucky wall Stand and digital detector to share between the table and Bucky wall stand. It shall be suitable to be used for adult and pediatric patients in general Radiography examination.			
3	**System Configurations**			
3.1	X-ray Generator, 1 unit.			
3.2	X-Ray tube & tube support system, 1 unit.			
3.3	Detector- 2 units			
3.4	Floating patient table, 1 unit.			
3.5	Vertical Bucky stand, 1 unit.			
3.6	Control panel -1 unit			
3.7	Dry film printer-1			
4	**Technical Specifications**			
4.1	**X-ray Generator**			
4.1.1	600mA or more microprocessor based, high frequency generator.			
4.1.2	Generator Power Output not less than 50 KW or more providing 600mA current or more.			
4.1.3	KVP Range 40 kV to 150kV with 1 KV adjustment.			
4.1.4	mAs range: 0.1 - 1000mAs or more			
4.1.5	Exposure time range approx. 1msec and maximum not more than 10 sec.			
4.2	**X-ray Tube**			
4.2.1	The X-Ray Tube shall have rotating anode.			
4.2.2	Maximum exposure voltage should be 150KV or more.			
4.2.3	Maximum exposure current should not be less than 600mA or more.			
4.2.4	Should be available with Dual Focus Technology with • Large focus: approx. 1.2 mm • Small focus: approx. 0.6 mm			
4.2.5	Filtration should be minimum 1.0 mm Al equivalent.			
4.2.6	Anode heat storage capacity shall not be less than 300 KHU or more.			

4.3	**Flat Panel Detector**			
	The Flat Panel should be a Retrofit Solution and capable to work with any of the X-Ray available in Department.			
4.3.1	Detector should be of latest technology with Cesium Iodide (CSI) Scintillator technology.			
4.3.2	Weight should not be more than 5 kg.			
4.3.3	Detector size: 35 cm × 43cm or more.			
4.3.4	Automatic Exposure Detection to any X-ray Generator without wire connection.			
4.3.5	Image Matrix Size Approx. 2.2K x2.2K Pixel or more			
4.3.6	Spatial resolution of 3.3 LP/mm or better.			
4.3.7	The Pixel size : 150µm or lesser			
4.3.8	Should have a minimum image depth of 16 bit.			
4.3.10	**Preview time after exposure 5 sec or less.**			
4.3.11	Battery Backup: Minimum 5 Hours or more.			
4.3.12	Surface Load Capacity: 150 Kg or more			
4.3.13	The Detector should have replaceable Lithium Ion battery.			
4.3.14	Water Resistance: IPX or equivalent			
4.4	**Floor Mounted Tube Column**			
4.4.1	Movement range of column along track should be approx. 2100mm			
4.4.2	Vertical travel movement range of tube assembly along column should be approx. 1300mm.			
4.4.3	Rotation range of tube along Horizontal axis should be approx. ±135°.			
4.4.4	Must have electromagnetic braking/locking system.			
4.5	**Floating Patient Table (4-way movement floating table)**			
4.5.1	It shall be a radio-translucent floating table top with load capacity of 250 kg or more.			
4.5.2	Lateral Movement Range : approx .220mm± 10mm or better			
4.5.3	Longitudinal movement range: approx. 900mm± 10mm or better			
4.5.4	The tabletop should be made of low radiation absorption as well as water proof material.			
4.5.5	It should be able to accept all the cassette size up to 14"x17" or better.			
4.5.6	Various table accessories such as SS cassette tray, etc must be provided with the system.			
4.5.7	The Table should consist of motorized reciprocating bucky with Grid. Grid Ratio: approx. 8:1 or 10:1 Grid LPI: at least 85 lines/inch			
4.6	**Vertical Stand Bucky**			
4.6.1	It should be floor mounted vertical bucky stand with oscillating Grid and SS cassette with following parameters: Grid Ratio: approx. 8:1 or 10:1 Grid LPI: at least 85 lines/inch			
4.6.2	The Bucky must have smooth up & down movement.			

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.3	It should be able to accept all the cassette size up to 14"x17" or better.			
4.6.4	**Collimator**			
4.6.5	SID: 100cm or more			
4.6.6	Should have LED Indicator light source.			
4.8	**Control Panel**			
4.8.1	It should have digital display of mA, kV and mAs			
4.8.2	It should have minimum 2-point exposure technique (KV / MAS)			
4.8.3	Shall display various x ray status, error, etc.			
4.8.4	Shall come with radiography hand switch in control room			
4.8.5	Anatomical preprogrammed (with at least 1000 programs) parameters of various anatomical positions should be available to select exposure parameters			
4.8.6	**A two-step hand switch with dual action for exposure release with retractable cord should be provided for taking images from a safer distance.**			
4.9	**Imaging Workstation**			
4.9.1	Workstation shall have core i5/i7 with high speed processor, latest operating system, Latest model processor, RAM – 4GB, HDD – 500GB, latest windows 10 32/64bit. Display Monitor: at least 20" size			
4.9.2	Operating console must have STANDARD Image Manipulation/Post Processing Software facility for patient identity entry, viewing and processing images, documentation.			
4.9.3	DICOM work list, DICOM Print, DICOM Storage should be available.			
5	**Imaging Printer ,laser/thermal, (film based):**			
4.9.5	The system must have at least two online film sizes, and should be capable to print on any of the 8" x 10", 10" x 12", 14" x17" sizes. All two film input trays should be freely configurable at user level for all the mentioned film sizes.			
4.9.6	Printer should have dry image Technology, compatible with DICOM and PACS without loss of information, allowing multiple modalities to be connected at a time.			
4.9.7	Throughput: 70 films or more.			
4.9.10	DICOM Compatible.			
4.9.11	Resolution > 500 DPI.			
4.9.12	Multiple Image and slide printing capability.			
	Contrast: 14-bit contrast resolution or more.			
5	**Accessories, Spare parts & Consumables**			
5.1	All standard accessories, consumables and spare parts required for the proper operation of the above item shall be included in the offer.			
5.2	Bidder shall specify in a separate document the quantity and details of any items included in this offer which have not been specified in this Technical Specification.			

5.4	Online UPS (3kvA) for at least 30 minutes system backup			

.	**Operating Environment**			
.1	The system offered shall be designed to be stored and to operate normally under the conditions of the purchaser's country. The conditions include Power Supply, Climate, Temperature, Humidity, etc.			
6.2	Power supply: 380-415VAC 3 phase 50Hz fitted with appropriate plug for X-ray generator and 220 – 240 VAC, Single phase 50 Hz, fitted with appropriate plug for other units.			
7	**Standard & Safety**			
7.1	Must Submit ISO 13485:2003/AC:2007 Certificate			
7.2	Must submit **CE (93/42 EEC Directives) AND USFDA (510K)** approved product certificate for Flat panel detector and X-ray system .CE or USFDA approved certificate for dry Imaging printer			
8	**Warranty**			
8.1	2 years complete comprehensive warranty on the whole System with additional one year of service warranty.			
9	**User Training**			
9.1	The Supplier shall conduct on site user training for the equipment to enable operators to use the equipment properly. The training shall include the use of all 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.			
10	**Installation & Commissioning**			
10.1	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.			
11	**Documentation**			
11.1	User (Operating) manual in English.			
11.2	Bidder must submit a valid authorization letter along with bid for Xray system,Flat panel detector and Dry imager .			

Bidder must compulsorily fill out the Compliance Sheet and provide with Reference Documents or Brochures (And page no) to validate the points. Failure to do so will subjected as Non-Compliant by the Technical Evaluation Team.

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NEC No.

Specification for Cervical Coller

S.N.	Purchaser's Specifications F/y-082/83	Bidder's offer
	Manufacturer	
	Brand	
	Type / Model	
	Country of Origin	
1	**Description and Specification**	
1.1	Should have Soft foamis slightly contoured for a comfortable fit. Covered with100% cotton stockinet and a velcro closure.	
1.2	Loop contact closures for easier use.	
1.3	Adjustable size designed for using on a wide range of petients.	
2	**Accessories, spares and consumables**	
2.1	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).	
3	**Standards and Safety Requirements**	
3.1	Must submit ISO 13485 for Medical Devices	
3.2	Must submit CE (93/42 EEC Directives) approved product certificate.	
4	**Warranty**	
4.1	1 year comprehensive warranty should be provided for the bed.	
5	**Maintenance Service During Warranty Period**	
5.1	During the warranty period supplier must ensure corrective/breakdown maintenance whenever required.	
6	**Installation and Commissioning**	

Deependra Oli
Biomedical Engineer
NEC No. 365 'A'

6.1	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.	
8	**Documentation**	
8.1	User (Operating) manual in English.	

Specification for Emergency and Recovery Trolley

S.N.	Purchaser's Specifications(f/y-082/83)	Bidder's offer
	Manufacturer	
	Brand	
	Type / Model	
	Country of Origin	
1	**Description and Specification**	
1.1	Casters: Heavy-duty, non-staining precision ball-bearing swivel casters of 5" for smooth maneuverability.	
1.2	Caster Control: Foot-operated, centrally actuated lever at both head and foot ends with multistage switching for total lock, direction lock, or free mobility.	
1.3	Gas spring assisted seamless adjustment for Trendelenburg and Reverse Trendelenburg positions.	
1.4	Manually operated on a ratchet mechanism for reliable positioning.	
1.5	Hydraulic pump operated by foot levers on both sides for convenient height variation.	
1.6	Two-section X-ray permeable pre-laminated board supported on a strong M.S. tubular frame with removable stretcher.	
1.7	Accessories: Provided with Oxygen cylinder cage, sliding X-ray cassette holder, collapsible safety side railings, SS telescopic IV rod (4 hooks), utility tray, and 50 mm (2") mattress.	
1.8	Finish: Pre-treated and epoxy powder coated for corrosion resistance and durability.	
1.9	Angle of Back Section:approx. 70°	
1.10	Angle of Trendelenburg / Reverse Trendelenburg: approx.17°/ 15°	
1.11	Stretcher Top Size: Handle to hadle - 1930L x 660W mm	
1.12	Overall Size:approx. 2030L x 1020W x 600-880H mm.	
2	**Accessories, spares and consumables**	
2.1	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).	
3	**Standards and Safety Requirements**	
3.1	Must submit ISO 13485 for Medical Devices	
3.2	Must submit CE (93/42 EEC Directives) product certificate.	
4	**Warranty**	

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Reg. No. 365 "A"

4.1	2 years comprehensive warranty should be provided for the bed.	
5	**Maintenance Service During Warranty Period**	
5.1	During the warranty period supplier must ensure corrective/breakdown maintenance whenever required.	
6	**Installation and Commissioning**	
6.1	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.	
8	**Documentation**	
8.1	User (Operating) manual in English.	

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965 "A"

Specification for Head Immobilizer

S.N.	Purchaser's Specifications (f/y-082/83)	Bidder's offer
	Manufacturer	
	Brand	
	Type / Model	
	Country of Origin	
1	Description and Specification	
1.1	A reusable, radiolucent head immobilization device used with a spine board or scoop stretcher to stabilize the head and neck of trauma patients during emergency transport.	
1.2	Made from closed-cell foam or coated high-density foam. Waterproof, non-absorbent, and wipe-clean surface. Resistant to blood, body fluids, and disinfectants. Latex-free materials preferred.	
1.3	<u>Components</u> One base plate compatible with standard spine boards. Two lateral head blocks with large ear openings for patient monitoring. Adjustable forehead strap and chin strap (Velcro or quick-release). Fastening straps to secure immobilizer to the spine board	
1.4	Weight: ≤ 1.0 kg Should accommodate adult and pediatric head sizes (adjustable straps).	

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NEC No. 365 "A"

1.5	**Fluid-resistant** **Easy to wipe and disinfect** **Suitable for chlorine or alcohol-based disinfectants**	
2	**Accessories, spares and consumables**	
2.1	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).	
2.2	1 base plate 2 head blocks 2 adjustable securing straps (forehead & chin) Board attachment straps	
3	**Standards and Safety Requirements**	
3.1	Must submit ISO 13485 for Medical Devices	
3.2	Must submit CE (93/42 EEC Directives) approved product certificate.	
4	**Warranty**	
4.1	2 year comprehensive warranty should be provided for the bed.	
5	**Maintenance Service During Warranty Period**	
5.1	During the warranty period supplier must ensure corrective/breakdown maintenance whenever required.	
6	**Installation and Commissioning**	
6.1	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.	
8	**Documentation**	
8.1	User (Operating) manual in English.	

Mayo Trolley

S.N.	Purchaser's Specifications (f/y-082/83)	Bidder's Offer
	Mayo Trolley	
	Manufacturer	
	Brand	
	Type / Model	
	Country of Origin	
1	**Description of Function**	
1.1	Mayo trolley use in operating theatre and in treatment rooms.	
2	**Operational Requirements**	
2.1	It is used for layout for surgical instruments.	
3	**System Configuration**	
3.1	Mayo trolley with four swivels	
4	**Technical Specifications**	
4.1	The mayo trolley shall be constructed fully with 304 grade stainless steel or better.	

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NEC No. 365 "A"

4.2	Come with a removable 304 grade stainless steel tray size approximately 560mm x 400mm x 20mm	
4.3	It shall be height adjustable to provide tray height in range minimally from approx. 800mm to 1250mm.	
4.4	Shall come with a screw locking knob for height adjustment.	
4.5	Mounted on 4x 50 mm (2") Diagonal locking castors	
5	**Accessories, spares and**	

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Bio-Medical Engineer
MEC No. 325 A

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 of the purchaser's country. The conditions include Climate, Temperature, Humidity, etc.	
7	**Standards and Safety**	
7.1	Must submit ISO 9001 or ISO13485:2003/AC:2007 **AND**	

Deputy Director (Medical Engineer) DG No. 305 "A"

7.2	CE or USFDA approved product certificate.	
8	**User Training**	
8.1	Not applicable.	
9	**Warranty**	
9.1	Comprehensive warranty for 2 year from acceptance.	
10	**Maintenance Service During Warranty Period**	
A	Standard warranty conditions are	
	applicable.	
11	**Installation and Commissioning**	
A	Must supply preassembled unit, ready to use.	
12	**Documentation**	
A	Not applicable.	

Specification of Over Bed Table

S.N.	Purchaser's Specifications	Bidder's offer
	Manufacturer	
	Brand	
	Type / Model	
	Country of Origin	
1	**Description and Specification**	
1.1	Overall size:approx. 900 mm L x 530 mm W x 700 mm to 1050 mm H.	
1.2	Height adjustment by Pneumatic Gas Spring mechanism.	
1.3	Made of Rectangular frame tube material.	
1.4	The edge of the top can be raised up to avoid falling of items from edge of table top.	
1.5	50 mm dia. high quality castor wheels with wheel locks.	
1.6	Laminate or ABS top,powder-coated frame.	
1.7	All corners should be rounded off so that there shall be no sharp edges.	
1.8	Stainless steel sheets/tubes are of Grade 304.	
1.9	Free upward movement to prevent body entrapment.	
2	**Accessories, spares and consumables**	
2.1	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).	
3	**Standards and Safety Requirements**	
3.1	Must submit ISO 13485 for Medical Devices	
3.2	Must submit CE (93/42 EEC Directives) approved product certificate .	
4	**Warranty**	
4.1	2 year comprehensive warranty should be provided.	
5	**Maintenance Service During Warranty Period**	
5.1	During the warranty period supplier must ensure corrective/breakdown maintenance whenever required.	
6	**Installation and Commissioning**	

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VEC No. 365 'A'

6.1	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.	

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NEC No. 365 "A"

Bed, Hospital(semi- fowler design)

S.N.	Purchaser's Specifications	Bidder's Offer
	Bed, Hospital	
	Manufacturer	
	Brand	
	Type/Model	
	Country of Origin	
1	**Description of Function**	
1.1	A hospital bed is a bed specially designed for hospitalized patients in need of patient ease. These beds have special features both for the comfort and well-being of the patient and for the convenience of hospital staff.	
2	**Operational Requirements**	
2.1	The patient bed shall be made of solid steel construction with anti- corrosive and antirust treated baked hard epoxy powder coating,ABS made side pannels	
3	**System Configuration**	

3.1	Hospital Bed epoxy powder coated	
4	**Technical Specifications**	
4.1	Bed base shall be anti-corrosive and antirust treated epoxy powder coated welded steel bar or epoxy powder coated 18G perforated sheet top to improve ventilation.	
4.2	The patient bed shall be fixed height where the Back Rest Section could be elevated by mechanical hand crank located at the foot end of the bed.	
4.3	Shall have 4 IV rod receptacles and mosquito net pole receptacles at the 4 corners	
4.4	It shall come with one dual hook anti-corrosive and antirust treated epoxy powder coated or 304 grade stainless steel IV rod.	
4.5	Shall have provisions to fix urinary bag on both sides.	
4.6	All 4 legs of the hospital bed shall be capped with heavy duty rubber footings.(	
4.7	It shall have S.S/pre-treated epoxy powder coated M.S Head and foo t panels with side rails also.	
4.8	Both bedhead and foot-end panel shall be detachable.	
4.11	Overall approximate dimension: 1980mm length, 910mm width, 600mm height	
5	**System Configuration Accessories, spares and**	

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Bio-Medical Engineer
NEC No. 365

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 system offered shall be designed to store 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 **AND CE approved product certicates**	
8	**User Training**	
8.1	Not applicable.	
S.N.	**Purchaser's Specifications**	
9	**Warranty**	
9.1	Warranty for 2 year.	
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	Users/Instructions manual shall be provided in English. ,Manufacturer authorization letter	

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NEC No. 365 "A"

Specification for Spine Board

S.N.	Purchaser's Specifications	Bidder's offer
	Manufacturer	
	Brand	
	Type / Model	
	Country of Origin	
1	**Description and Specification**	
1.1	Spine board with safety belts is made of PE material with no discharge contaminator, and firmness to wear.	
1.3	The structure should be allowed X-rays because of its completely translucent property .	
1.4	Must be compatible with most head immobilization devices and strap mechanisms.	
1.5	Product Size (approx.): 1840L x 450W x 55H mm.	
1.6	Load Bearing: approx. 180kg.	
2	**Accessories, spares and consumables**	
2.1	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).	
3	**Standards and Safety Requirements**	
3.1	Must submit ISO 13485 for Medical Devices	
3.2	Must submit CE (93/42 EEC Directives) approved product certificate.	
4	**Warranty**	
4.1	2 year comprehensive warranty should be provided for the bed.	
5	**Maintenance Service During Warranty Period**	
5.1	During the warranty period supplier must ensure corrective/breakdown maintenance whenever required.	
6	**Installation and Commissioning**	

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Bio-Medical Engineer
NEC No. 365 "A"

6.1	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.	
8	**Documentation**	
8.1	User (Operating) manual in English.	

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NEC No. 365 "A"

TECHINICAL SPECIFICATION FOR STRETCHER TROLLEY

S.N	Purchaser's Specifications(F/Y:082/83)	Bidder's Compliance Sheeet		
	Stretcher trolley	**Yes/No**	**Page No. in Catalogue**	**Remarks**
	Manufacturer:			
	Brand:			
	Type/Model:			
	Country of Origin:			
1	**Description of Function**			
1.1	A stretcher is a medical device used to transport patients who are unable to move or walk on their own due to injury, illness, or medical conditions. It is typically a flat platform made of a sturdy frame, often with a mattress or padding, designed to provide support and comfort during patient transport.			
2	**Operational Requirements**			
2.1	Removable stretcher, Supported On the trolley			
3	**System Configuration**			
3.1	Patient stretcher Trolley, complete unit.			
4	**Technical Specifications**			
4.1	High-strength stainless steel or aluminum alloy frame material for durability and lightweight handling.			
4.2	Powder-coated or corrosion-resistant finish for hygiene and longevity.			
4.3	Overall size(approx.): 1950mm(L) x600(W) mm.			
4.4	Fixed height(approx.) :810mm			
4.5	Trolley should be provided with 150-200 mm diameter. Swivels castors wheels,2 with brakes for stability .			
4.6	Removable stretcher, Supported On the trolley			
4.7	Should be Pre-treated and epoxy powder coated			
4.8	Carrying capacity: 120kg or more.			
4.9	Pushing handles at both ends should be covered with PVC sleeves.			
4.1	Should have smooth edges and burr free			
5	**Accessories, spares and consumables**			
5.1	To be supplied with all standard accessories, spares and consumables for complete functionality of the product.			
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	Shall be certified to meet ISO 9001 or ISO 13485:2003/AC:2007 and			
7.2	CE approved product certificate.			
8	**User Training**			
8.1	Not applicable.			
9	**Warranty**			
9.1	Warranty for 2 year after acceptance.			
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.			

Bidder must completely fill the Technical Specification Form (TSF). Only Yes/No/All complies should not be written. Page number in the catalogue of all the required parameters must be clearly mentioned and highlighted. Failure in doing

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NEC No. 365 "A"

S.N	Purchaser's Specifications(F/Y:082/83)	Bidder's Compliance Sheeet		
		Yes/No	Page No. in Catalogue	Remarks
	Stretcher trolley			

so may lead to rejection of bid from technical committee.

Deependra Oli
Bio-Medical Engineer
NEC No. 365 "A"

TECHINICAL SPECIFICATION FOR TROLLEY, MEDICINE

S.N	Purchaser's Specifications,F/Y-082/83	Bidder's Compliance Sheeet		
	Medicine Trolley	yes/no	Page no. in catalogue	Remarks
	Manufacturer:			
	Brand:			
	Type/Model:			
	Country of Origin:			
1	**Description of Function**			
1.1	A medicine/drug trolley for storage and delivery of medicines and drugs to patients in wards of healthcare facilities.			
2	**Operational Requirements**			
2.1	Stainless steel medicine trolley with swivel castors.			
3	**System Configuration**			
3.1	Medicine Trolley, complete unit.			
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 900 H x 460 W x 760 L mm			
4.3	Frame work made up of SS tubes.			
4.4	Multiple drawers (minimum 5) made of high quality materials with telescopic channels, below the platform.			
4.5	Should be equipped with lock key system .			
4.6	Shall be mobile on 4 x 100mm diameter (approx.) robust 360 deg. anti-rust, anti-static, noiseless, swivel castors & shall have brakes.			
4.7	Shall have provision for hanging one IV fluid bottle			
5	To be supplied with all standard accessories, spares and consumables for complete functionality of the product.			
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	Shall be certified to meet ISO 9001 or ISO 13485:2003/AC:2007 and			

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Bio-Medical Engineer
NEC No. 385 'A'

7.2	CE certificate.			
8	**User Training**			
8.1	Not applicable.			
9	**Warranty**			
9.1	Warranty for 2 year after acceptance.			
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.			

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Bio-Medical Engineer
NEC No. 365 "A"

Specification for Wheel Chair

S.N.	Purchaser's Specifications	Bidder's offer
	Manufacturer	
	Brand	
	Type / Model	
	Country of Origin	
1	**Description and Specification**	
1.1	Must be made of the highest quality materials such as Chrome polished finish or stainless steel or high-strength aluminum alloy materials.	
1.2	Can be used for emergency staff to transfer patient from stairs	
1.3	Must have detachable armrest and foorrest.	
1.4	The stretcher approves the patient's safety during transport process beacuse of its 3pieces of restraint straps with quick-release buckle.	
1.5	Front wheels: approx. 8-inch solid rubber swivel casters for smooth movement.	
1.6	Rear wheels: large self-propelling type, approx. 22-inch solid rubber or pneumatic tires with hand rims.	
1.7	Overall size approx.: 25"*42"*36"	
1.8	Should support at least 100–120 kg user weight.	
1.9	5cm thick, PU foam cushioned waterproof upholstery and easy to clean.	
2	**Accessories, spares and consumables**	
2.1	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).	
3	**Standards and Safety Requirements**	
3.1	Must submit ISO 13485 for Medical Devices	
3.2	Must submit CE (93/42 EEC Directives) approved product certificate.	
4	**Warranty**	
4.1	2 year comprehensive warranty should be provided .	
5	**Maintenance Service During Warranty Period**	
5.1	During the warranty period supplier must ensure corrective/breakdown maintenance whenever required.	
6	**Installation and Commissioning**	

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Bio-Medical Engineer
NEC No. 365 "A"

6.1	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.	

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NEC No. 365 "A"

Specification for Anesthesia Trolley

S.N.	Purchaser's Specifications(f/y-082/83)	Bidder's offer
	Manufacturer	
	Brand	
	Type / Model	
	Country of Origin	
1	**Description and Specification**	
1.1	Framework made of ABS plastic body with aluminum columns.	
1.2	Provided with Dust bin (2pcs), Utility Container, File Holder & S.S. rail on top.	
1.3	Trolley having multi-bin containers on top for medicines.	
1.4	Trolley having Sliding Side Shelf for writing purpose.	
1.5	locking system for 2 small & 3 big drawer.	
1.6	Provided with adjustable inner partitions.	
1.7	125 mm (5") Diagonal locking castors.	
1.8	Overall Size (approx.): 850L x 520Wx 950H mm.	
2	**Accessories, spares and consumables**	
2.1	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).	
3	**Standards and Safety Requirements**	
3.1	Must submit ISO 13485 for Medical Devices	
3.2	Must submit CE (93/42 EEC Directives) approved product certificate.	
4	**Warranty**	
4.1	2 years comprehensive warranty should be provided for the bed.	
5	**Maintenance Service During Warranty Period**	
5.1	During the warranty period supplier must ensure corrective/breakdown maintenance whenever required.	
6	**Installation and Commissioning**	
6.1	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.	
8	**Documentation**	
8.1	User (Operating) manual in English.	

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Bio-Medical Engineer
MED. No. 365 "A"

Technical Specification for Bed side screen

S.N	Purchaser's Specifications F/Y-082/083	Bidder's Compliance Sheeet		
	Bed side screen	**yes/no**	**page no. in catalogue**	**Remarks**
	Manufacturer:			
	Brand:			
	Type/Model:			
	Country of Origin:			
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 three fold patient screen.			
3	**System Configuration**			
3.1	Patient Screen with light blue curtain and fully swivel twin wheel castors.			
4	**Technical Specifications**			
4.1	Three fold ward screen approx. total size 2450 w x 1650 h mm in three sections.			
4.2	Mild steel tubular construction with epoxy powder coated treated in three 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	To be supplied with all standard accessories, spares and consumables for complete functionality of the product.			
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	Shall be certified to meet ISO 9001 or ISO 13485:2003/AC:2007 and			
7.2	CE approved product certificate.			
8	**User Training**			
8.1	Not applicable.			
9	**Warranty**			
9.1	Warranty for 2 year after acceptance.			
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.			

Deepend Oli
Bio-Medical Engineer
NEC No. 369 'A'

Specification for Biomedical Waste Bin

S.N.	Purchaser's Specifications	Bidder's offer
	Manufacturer	
	Brand	
	Type / Model	
	Country of Origin	
1	**Description and Specification**	
1.1	Bins made up of plastic.	
1.2	Bins should be foot operated	
1.3	Should be available in red / blue / black/ yellow/ white / green colours.	
1.5	Available sizes: 80 ltrs with 2 pcs rear wheels,	
2	**Accessories, spares and consumables**	
2.1	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).	
3	**Standards and Safety Requirements**	
3.1	Must submit ISO 13485 for Medical Devices	
3.2	Must submit CE (93/42 EEC Directives) approved product certificate.	
4	**Warranty**	
4.1	1 year comprehensive warranty should be provided.	
5	**Maintenance Service During Warranty Period**	
5.1	During the warranty period supplier must ensure corrective/breakdown maintenance whenever required.	
6	**Installation and Commissioning**	
6.1	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	
8	**Documentation**	
8.1	User (Operating) manual in English.	

Specification for Biomedical Waste Bin set of 4

S.N.	Purchaser's Specifications	Bidder's offer
	Manufacturer	
	Brand	
	Type / Model	
	Country of Origin	
1	**Description and Specification**	
1.1	Bins made up of plastic.	
1.2	Bins should be foot operated	
1.3	Should be available in red / blue / black/ yellow/ white / green colours.	
1.4	Should be provided with set of 4 bin and can be altered as required	
1.5	Framework made up of SS tubes.	
1.6	sizes: 20-30 ltrs.	
2	**Accessories, spares and consumables**	
2.1	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).	
3	**Standards and Safety Requirements**	
3.1	Must submit ISO 13485 for Medical Devices	
3.2	Must submit CE (93/42 EEC Directives) approved product certificate.	
4	**Warranty**	
4.1	2 year comprehensive warranty should be provided .	
5	**Maintenance Service During Warranty Period**	
5.1	During the warranty period supplier must ensure corrective/breakdown maintenance whenever required.	
6	**Installation and Commissioning**	
6.1	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.	
8	**Documentation**	
8.1	User (Operating) manual in English.	

Deependra Oli
Bio-Medical Engineer
NE. No. 365 "A"

TECHINICAL SPECIFICATION FOR CRASH CART

S.N	Purchaser's Specifications(F/Y:082/83)	Bidder's Compliance Sheeet		
	Crash cart			
	Manufacturer:			
	Brand:			
	Type/Model:			
	Country of Origin:			
1.1	Crash Cart is a set of trays/drawers/shelves on wheels used in hospitals for transportation and dispensing of emergency medication/equipment at site of medical/surgical emergency for life support protocols potentially to save a patient's life.			
2	**Operational Requirements**			
2.1	Stainless steel trolley on stainless steel tubular frame.			
3	**System Configuration**			
3.1	Crash Cart with removable coloured bins, storage units, fitted with oxygen cylinder holder and electric lamp holder and four swivels castors.			
4	**Technical Specifications**			
4.1	Dimensions: approx. 900mm L x 500mm W x 1500mm H.			
4.2	Stainless steel top and shelf & equipped with atleast 6 removable coloured bins made of moulded plastic.			
4.3	Lockable storage units – 3 drawers (stainless steel or moulded plastic). **Wood or wood laminate construction drawers are NOT acceptable.**			
4.4	To be fitted with stainless steel, height adjustable, twin hook/loop, IV pole assembly.			
4.5	Fully, 360 deg. swivel castors/wheels, size 125mm dia with at least one castor/wheel to have locking/brake mechanism.			
4.6	Top shelf to have stainless steel guard rail above surface.			
4.7	Fitted with epoxy powder coated oxygen cylinder holder and electric lamp holder with clamp and cardiac massage board.			
4.8	Must be capable of carrying ECG Monitor/defibrillator and other apparatus.			
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 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 **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.			

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Specification of Dressing Trolley

S.N.	Purchaser's Specifications,f/y-082/83	Bidder's offer
	Manufacturer	
	Brand	
	Type / Model	
	Country of Origin	
1	**Description and Specification**	
1.1	The frame work made of S.S tubes and two S.S 2 shelves with S.S raling on all four sides.	
1.2	The trolley fitted S.S bucket and S.S bowl	
1.3	The trolley mounted on 100 mm (4") diagonal locking castors	
1.4	Should have trolley mounted 125 mm (5") diagonal locking castors	
1.5	Over all size 30L X 18W X 32"H	
1.6	It should be finish SS frame SS Shelves with SS basin & bucket	
2	**Accessories, spares and consumables**	
2.1	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).	
3	**Standards and Safety Requirements**	
3.1	Must submit ISO 13485 for Medical Devices	
3.2	Must submit CE (93/42 EEC Directives) approved product certificate .	
4	**Warranty**	
4.1	2 year comprehensive warranty should be provided.	
5	**Maintenance Service During Warranty Period**	
5.1	During the warranty period supplier must ensure corrective/breakdown maintenance whenever required.	
6	**Installation and Commissioning**	
6.1	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.	

TECHINICAL SPECIFICATION FORBED SIDE LOCKER

S.N	Purchaser's Specifications(F/Y:082/83)	Bidder's Offer
	BED SIDE LOCKER	
	Manufacturer:	
	Brand:	
	Type/Model:	
	Country of Origin:	
1.1	A bedside locker simplifies the work of the caregiver and it enhances the comfort and autonomy of the patient in terms of accessibility, convenience and storage capacity.	
2	**Operational Requirements**	
2.1	All metal construction (machine pressed CRCA steel sheets) with heavy duty anti-corrosive and antirust treated epoxy powder coated .Legs Mild steel tubular construction epoxy powder coated treated	
3	**System Configuration**	
3.1	Bedside cabinet/locker, complete unit.	
4	**Technical Specifications(approx.)**	
4.1	Feet to be capped with heavy duty plastic buffers.	
4.2	Overall approximate size 820mm H x 400mm W x 400mm L	
4.3	Fitted with superimposed stainless steel top. Top to have lip or edge or retaining rail to prevent items slipping off, Finish must be smooth.	
4.4	With stainless steel towel rail.	
4.5	Bedside lockers provided with one storage cabinet and single draw under the top and space for keeping utilities.	
5	**Accessories, spares and consumables**	
5.1	Not applicable.	
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 **AND**	
7.2	CE or USFDA approved product certificate.	
8	**User Training**	
8.1	Not applicable.	
9	**Warranty**	
9.1	Comprehensive warranty for 2 year.	
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	Not applicable.	

Deependra
Bio-Medical Engineer
NEC No. 365 "A"

TECHINICAL SPECIFICATION FOR ICU BED (ELECTRIC)

S.N.	Purchaser's Specifications(F/Y:082/83) I.C.U bed (electric)	Bidder's Compliance Sheeet		
		Yes/No	Page No. in Catalogue	Remarks
	Manufacturer			
	Brand			
	Type/Model			
	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 from 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 must be electrically operated and adjustable height and tilt.			
3	**System Configuration**			
3.1	Electrically operated ICU bed with mattress.			
4	**Technical Specifications**			
4.1	Must have four section mattress base			
4.2	Must have X-Ray compatable with X-Ray cassette holder.			
4.3	Base frame & support frame must be made up of steel.			
4.4	Should have step less electrical adjustment for the following(approx.)			
	• Height : 390-7700 mm			
	• Back section : 0- 50^0			
	• Leg Section : 0-30^0			
4.5	Must have step less pneumatic adjustment for Trendelenburg (12° approx.), anti-trendelenburg (15° approx.)			
4.5	Must have a manual quick release mechanism for back section adjustment during emergency situation			
4.7	Must be equipped with four articulated half-length tuck away side rails			
4.8	Must be equipped with large castors (diameter approx. 125 mm) with central braking and steering facility.			
4.9	ICU Bed should have 4 actuaters with wired hand set for patient.It should have function of back rest ,kneerest,hi-low ,trend/rev trend and electronic CPR in handset			
4.1	Mattress of the bed must be made up of high density foam with Anti-Microbial agent incorporated into all components.			
4.10	Mattress must be fully radiolucent.			
4.11	Must have bumpers at all four corners and place for fixing accessories			
4.12	Must have CPR quick release handle ergonomically located at the head end of the bed.			
4.12	**Dimensions of bed (approx. ± 10%):**			
	• Length : 2000 mm			
	• Width : 1020mm			
	• Mattress Size : appropriate as per bed size, thickness at least 10cm			
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 10 cm Thick : 01 No.			
5.2	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 system 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.			
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.and			
7.2	CE or USFDA approved product certificate.			
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	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	**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	Certificate of calibration and inspection from factory.			

Bidder must completely fill the Technical Specification Form (TSF). Only Yes/No/All complies should not be written. Page number in the catalogue of all the required parameters must be clearly mentioned and highlighted. Failure in doing so may lead to reiection of bid from technical committee.

TECHINICAL SPECIFICATION FOR INSTRUMENTS TROLLEY

S.N	Purchaser's Specifications(F/Y:082/83)	Bidder's Compliance Sheet
	Trolley, INSTRUMENTS	
	Manufacturer:	
	Brand:	
	Type/Model:	
	Country of Origin:	
1	**Description of Function**	
1.1	An instrument trolley for laying out surgical instruments in the operation theatre	
2	**Operational Requirements**	
2.1	Stainless steel instruments trolley with swivel castors.	
3	**System Configuration**	
3.1	instrument Trolley, complete unit.	
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 900 H x 450 W x 680 L mm	
4.3	It shall be have 2 tiers of grade 304 stainless steel shelves each provided with protective railings on three sides	
4.4	On three sides of shelves 20 mm upright lips/rail. Fourth side to have turned down edge	
4.5	Shall have push/pull handle	
4.6	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 brake	
5	**Accessories, spares and consumables**	
5.1	To be supplied with all standard accessories, spares and consumables for complete functionality of the product.	
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	Shall be certified to meet ISO 9001 or ISO 13485:2003/AC:2007 and	
7.2	CE approved product certificate.	
8	**User Training**	
8.1	Not applicable.	
9	**Warranty**	
9.1	Warranty for 2 year after acceptance.	
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.	

Deepak

Specification of IV Stand

S.N.	Purchaser's Specifications (f/y-082/83)	Bidder's offer
	Manufacturer	
	Brand	
	Type / Model	
	Country of Origin	
1	**Description and Specification**	
1.1	Five pronged base fitted with 50mm (2") castors	
1.2	12mm inner SS rod woth double hook	
1.3	Hight adjustable	
1.4	Should have in knock down construction	
1.5	Must be SS Pipe with Plastic Base	
2	**Accessories, spares and consumables**	
2.1	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).	
3	**Standards and Safety Requirements**	
3.1	Must submit ISO 13485 for Medical Devices	
3.2	Must submit CE (93/42 EEC Directives) approved product certificate.	
4	**Warranty**	
4.1	Warranty must be 2 year	
5	**Maintenance Service During Warranty Period**	
5.1	During the warranty period supplier must ensure corrective/breakdown maintenance whenever required.	
6	**Installation and Commissioning**	
6.1	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.	
8	**Documentation**	
8.1	User (Operating) manual in English.	

Specification for Patient Transfer board

S.N.	Purchaser's Specifications	Bidder's offer
	Manufacturer	
	Brand	
	Type / Model	
	Country of Origin	
1	**Description and Specification**	
1.1	Should be a patient transfer board/system suitable for transferring patients safely between beds, trolleys, operation tables, and X-ray/fluoroscopy tables.	
1.2	Should have an overall size of approximately 1700 mm (L) × 500 mm (W).	
1.3	Should be made of high-quality Nylon and Plywood materials with water-resistant properties for long-term hospital use.	
1.4	Should have a maximum load-bearing capacity of at least 200 kg .	
1.5	Ergonomically designed to reduce strain and effort for nursing staff while ensuring patient safety and comfort during transfer.	
1.6	Should have a smooth, non-staining surface that is easy to clean and maintain in hospital conditions.	
2	**Accessories, spares and consumables**	
2.1	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).	
3	**Standards and Safety Requirements**	
3.1	Must submit ISO 13485 for Medical Devices	
3.2	Must submit CE (93/42 EEC Directives) approved product certificate.	
4	**Warranty**	
4.1	2 year comprehensive warranty should be provided .	
5	**Maintenance Service During Warranty Period**	
5.1	During the warranty period supplier must ensure corrective/breakdown maintenance whenever required.	
6	**Installation and Commissioning**	
6.1	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.	

Deependra Oli
Bio-Medical Engineer
NEC No. 365 "A"

X-Ray View Box (LED) - DOUBLE

S.N.	Purchaser's Specifications (f/y-082/83)	Bidder's offer
	Manufacturer	
	Brand	
	Type / Model	
	Country of Origin	
1	**Description and Specification**	
1.1	Frame work should be madeup of Aluminium Sheet.	
1.2	Should be provided features with : On/Off, Lux intensity adjustable by dimmer.	
1.3	Thickness should be approx 45mm	
1.4	Dimensions(approx.) : 850*512*47 mm	
2	**Accessories, spares and consumables**	
2.1	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).	
3	**Standards and Safety Requirements**	
3.1	Must submit ISO 13485 for Medical Devices	
3.2	Must submit CE (93/42 EEC Directives) approved product certificate.	
4	**Warranty**	
4.1	1 year comprehensive warranty should be provided.	
5	**Maintenance Service During Warranty Period**	
5.1	During the warranty period supplier must ensure corrective/breakdown maintenance whenever required.	
6	**Installation and Commissioning**	
6.1	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.	

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Deependra Om
Bio-Medical Engineer
NEC No. 265 "A"