S#	Technical Specifications	Qty	CIF Price		FOR Price	
			Unit Price	Total Price	Unit Price	Total Price
01	**SINGLE PLANE DIGITAL ANGIOGRAPHY / INTERVENTIONAL SYSTEM** The single-plane C-arm system for digital acquisition designed to meet the requirements of modern general angiography, cardiac angiography and interventional cardiac procedures with Flat Panel Detector. Consisting of: **POSITIONING ARM:** • C-arm with motorized movements. Real time display of rotation angulations. The C-arm should have the possibility of head to toe coverage of the patient without repositioning the patient. • Right anterior oblique (RAO) /Left Anterior Oblique (LAO): +/- 120° or more. • Cranial / Caudal: Minimum + 50 / -45° or more (Capable of achieving Spider position). • Rotation speed 25° / sec. or more in LAO /RAO • Motorized parking (+/ - 120 deg. Motorized rotation of the C-arm) • Integrated, computer-aided collision monitoring / Protection • Programmable auto positioning of selected angulations. (50 or more programmable positions). • Variable source-to-detector distance between 90 cm and 120 cm **FLAT DETECTOR** The high resolution dynamic flat panel detector (cardiac size) with integrated detachable grid especially designed to fulfill the requirements for diagnostic and interventional cardiology & radiology. Size: Dedicated cardiac Flat Detector (20 cm x 20 cm) ; Pixel size: 190 µm or less Spatial resolution: 2.5 - 2.7 LP/mm or more. Fluoroscopy as well as image acquisition to be done in 16 bit digitization depth. Removable grid for dose saving in paediatric procedures. The gird to be preferably removed with push of a button: **PATIENT SUPPORT / TABLE (HYBRID)** • Floor mounted examination table for angiography and interventions. • Motorized height adjustment with variable speed. Floating tabletop with longitudinal and transverse movements. • Left / right pivotal table rotation +/- 90 deg. or more • Patient weight bearing capacity 200 kg or more. Capability to handle additional load (100 kg) for CPR procedure. **Accessories** - Arm cradles (pair), Unilateral armrest, Infusion bottle holder,	**01**				

	X-RAY GENERATOR • Microprocessor based high frequency X-ray generator • Output Power 100 KW. Radiographic rating minimum 1000 mA at 100 KV. • The system should have capability of digital radiography and fluoroscopy. Should have capability of doing digital pulsed fluoroscopy at 10, 15 & 30 pulses / sec. • Maximum continuous fluoro output power to be 3 KW or more to ensure good image quality during fluoro at oblique angles. • Shortest Exposure time of less than 1msec with automatic exposure control. • Should be capable of providing 250 mA or more current during digital pulsed fluoroscopy at small focus **X-RAY TUBE** • Dual focus X-ray tube with anode heat storage capacity of at least 3.2 MHU or better • Liquid bearing technology for longer durability and quiet operation. • Dual Focus 0.4 mm, 0.8mm or better. **DIGITAL IMAGING SYSTEM (ACQUISITION / FLUROSCOPY)** • Acquisition, storage and display in 1024 X 1024X 12 bits. • Real time filtering, online edge enhancement, noise reduction (spatial filtration), pixel shift / remasking, and dynamic real time Pan / zoom. • Hard Disk/Magnetic Disk Capacity for storage of 25,000 frames with 1024X1024X 12 bits matrix • DICOM 3.0 with standard exchange media. • The system must have DICOM send & DICOM Query / Retrieve facility • Digital pulsed fluoroscopy with 7.5 or 10, 12.5 or 15 and 25 or 30 frames per second in 1024X1024X 10 bits or more. • Display of scene directory for easy selection of any image or scene from the examination room or control room • Radiation-free positioning of the primary and semi-transparent diaphragms by means of graphic display in the LIH (Last Image Hold). • Variable Copper filtration during fluoroscopy and acquisition for radiation protection from 0.1 mm to 0.9 mm Cu (alteast 05 filters). The selection of the Cu filters must be automatic by the system based on patient weight / absorption without any user interaction. • Display of the measured dose-area product and the calculated patient air kerma reference on the flat screen display in ceiling suspension • Monitoring of the skin entry dose, taking into account the geometric conditions of the system (device angulation, table position) to ensure that the skin entry dose applied to a specific region of the patient's body will not exceed a specified threshold. • The system to display the dose information in DICOM format after every examination. • Scientific Coronary / Cardiac Vessel analysis with determination of degree of stenosis, distance measurement and calibration.					

	• LVA analysis SW • Dedicated processing software / Application to display image for enhanced stent visibility with display and control in control room as well as in examination room. Any related hardware, if needed is to be included in the offer. The application should be able to utilize online fluoro, stored fluoro runs or fluoro images for stent boosting. Online table-side processing like windowing, Image invert, Zoom / pan, edge enhancement. The application should be able to view images and fade vessels or stents in and out for vessel / stent comparison at the table side and control room. • Automatic positioning of the c-arm corresponding to reference image and vice versa. • Simultaneous display of fluoroscopy and reference images. • The system must have online image density (gray scale) correction i.e., Automatic online image density correction of dynamic scenes and single images for clear view in the bright and dark areas of the image. • X-ray optimization before fluoro with built-in intelligence by using c-arm and table position data to calculate before taking an acquisition. • Fast digital acquisition module for cardiac acquisition / angiography. • Facility to review previous studies in the examination room from the patient's old CD. • The system should have the capability for retrieval of angio/CT/MR images back into the digital imaging system from the CDs and/or the network. **Controls of Digital Imaging System:** All controls of digital imaging system must be available in the examination as well as control room**.** **CD / DVD recorder** CD/DVD drive for automatic digital image storing on CD-ROM for off-line data exchange in DICOM 3 format. The system must archive the images/scenes onto the CD in background, without blocking ongoing cine acquisition **Networking** Network interface (100 BaseT) with the following integrated DICOM 3 services: DICOM Send, DICOM Storage Commitment (StC), DICOM Query and DICOM Retrieve **MONITORS FOR THE SYSTEM** • Active Matrix TFT monitors having high resolution • Monitors should be ceiling-mounted in the operating/examination room. • Two 19 inch active matrix digital TFT monitors (resolution min. 1024 x 1280) for live and reference images in the operating/examination room. Maximum brightness of the imaging monitors: 600 cd/m^2 OR one 30 inch large display for live and reference images (preferred); having 1600 x 2500 resolution and maximum luminace of 600 ad/m^2 • 19 inch monitor active matrix TFT monitor for live live images in the control room. Maximum brightness to be 250 cd/m^3 or more. • Data for display of system and table geometry, system messages as well as dose is to be displayed either on the imaging monitors or on a sparate monitor intergrated into the ceiling suspension system. **PHYSIOLOGICAL HAEMODYNAMIC MONITORING SYSTEM**					

	Multichannel (20 channels or more) to record at least 4 channels IBP. Surface ECG in any configuration and simultaneous 12 lead ECG, NIBP and SaO_2 measurement.
	
	• The system must be complete with software for pediatric & adult, right / left heart, angio / valvular homodynamic examinations including functionality for homodynamic calculations such as gradients, valve areas, shunt. Including annotations and 12 channel ECG.
	• Digital display of all the parameters like IBP, Heart rate etc. It should be possible to print the waveforms simultaneously while acquiring the data in the background.
	• It should be possible to store the waveforms on the hard disk / CD of the physiological recording system. The system should include following:
	  o 2 x invasive blood pressure reusable transducer.
	  o Reusable interface for 12 lead ECG.
	  o NIBP cuffs (2 Nos.)
	  o Holder for mounting the IBP transducer alongside the patient table.
	• The system should have 40 GB or more hard disk for permanent storage.
	• Two color monitors 19 inch Active matrix TFT inside the control room.
	• One 19 inch monitor in the examination room that should be installed on the ceiling suspension with two monitors of imaging system.
	• DVD / CD writer for archiving of study data and wave form stored on the hard disk.
	• Facility of freezing the homodynamic data and simultaneous recovery of recent data / compare stored data with current waveform.
	• Tableside control of the Haemodynamic system in the examination room (separate price to be offered).
	• Bi-directional communication between Haemodynamic system and Digital System of Main angio machine for transfer of patient demographic- and X-ray data such as Acquisition time, RAO/LAO angle, Cran./Caud. Angle, SID, Time of scene, Frame frequency, Total area dose and Fluoroscope time.
	
	The Haemodynamic system must be from original manufacturer of angio system.
	Surgical shadow-less light ceiling suspended.
	Ceiling suspended Lead Glass for Upper Body Radiation Protection
	Lower body radiation protection flaps
	1 x Fully programmable latest model contrast medium injector with 200 disposable syringes
	Other Allied Accessories
	• One Postscript level Network Laser Printer for taking image printouts on paper. This printer is to be connected with the Main Digital Imaging System. Paper for 500 prints should be delivered with the printer.
	• Lead Glass Window size 1 x 1.5 meter or more. Pb equivalence 2.1 mm or better
	• Intercom for communication between control and exam room					

	160 KVA UPS compatible for the whole system with back-up time of 10 minutes for fluoro and cine acquisition (MGE, APC, Chloride, GE). Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent					
02	**DIGITAL MAMMOGRAPHY SYSTEM FOR SCREENIIG, DIAGNOSTICS AND 3D BIOPSY** **1 <u>Digital Mammography System for Screening, Diagnostics, 3-D Stereotactic Biopsy.</u>** a. Digital Mammography system consisting of b. exposure stand with (Touch/Membrane Screen) c. swivel arm system d. separate operator table e. control box for exposure release f. a mammography X-ray tube g. an integrated direct-to-digital Flat Panel Detector h. an Acquisition Workstation (AWS) for image acquisition, i. The Acquisition Workstation must enable immediate preview for fast image quality monitoring. ii. After exposure, the image must be displayed on the monitor for the user to check both the positioning of the patient and patient demographic data. i. Patient work list and demographic data management. j. The system must be designed for high patient volume (at least 10 per hour) screening, providing high patient throughput and reliability. k. Gridless acquisition offering minimum dose. l. It must also provide additional benefits of digital imaging. m. The system should be upgradable to tomosynthesis. **2 <u>BASIC UNIT</u>** a. Swivel arm system consisting of X-ray tube unit, compression device and object table with integrated detector b. Motorized, isocentric rotation of the swivel arm with preset rotation angle (Single Touch) c. The motorized, height-adjustable (60cm to 140cm or better) object table must adjust from examination stand as well as via the Remote Controle d. Motorized and manual compression with pre-selectable compression force e. Digital display of compression force and compression thickness f. Integrated positioning/collimator light g. Function for optimizing compression force h. Pre-programmable exposure parameters for optimized patient dose and AEC (Automatic Exposure Control) i. Source-image distance 60-70 cm j. Swivel range + 180° to – 180°, motorized **3<u>X-RAY GENERATOR & X-RAY TUBE</u>** a. Microprocessor-controlled high-frequency generator b. Power output 5kW or better c. kV range 20 kV to 35 kV or better	**01**				

	d. Mammography X-ray tube unit with rotating-anode e. Focal spot nominal value 0.1 / 0.3 or better f. Heat storage capacity **(tube unit)** equal or greater than 2000.0 KHU g. Heat storage capacity **(anode)** equal or greater than 160 KHU h. Anode speed 8,500 rpm or better i. Optical anode angle equal to or less than 20° **4 FLAT DETECTOR** a. Detector size 24 cm x 30 cm b. Latest detector technology with aSe (Amorphous Selenium) or equally advanced material c. Pixel size 90 MM or less (better) d. Image matrix (24 cm x 30 cm), (18 cm x 24 cm) **PC HARDWARE & DISPLAYS** Latest Image acquisition system Intel Xeon PC, 3.60GHz or better, 8 GB or more RAM, Windows XP system or better Image memory 50,000 images on hard disk (1000 GB or better) in 14-bit matrix or better TFT color display 3MP Screen size 21“ or better 6. **IMAGE ACQUISITION, DISPLAY & PROCESSING** a. Patient directory b. Digital radiography: digital filtration c. Image processing: Application-oriented (lookup tables) for contrast/brightness and Edge enhancement, Dynamic range control, Noise reduction, Detection of breast border, Electronic shuttering d. Text/graphic functions: Image orientation label, Image annotation and comment, Length and angle measurement, Interactive zoom and pan, Gray-scale inversion, Split screen function 7. **DATA TRANSFER & DOCUMENTATION** a. DICOM interface for image data communication based on the DICOM 3 standard b. Send/ receive, query/ retrieve, storage commitment and print c. DVD / CD burner Writing of images in DICOM format to DVD/CD 8. **3-D STEREOTACTIC BIOPSY UNIT** a. Automatic stereotactic biopsy b. Biopsy unit should comprise of a hand box for controlling the needle positioning device, a standard needle holder, a face shield to protect the patient from swivel arm movements, and calibration accessories c. The biopsy unit should simply slide onto the object table and must be automatically detected by the machine for biopsies from any projection (e.g. Cranio-Caudal and Mediolateral) d. Workflow should be automated with remote tube movements of the stereo pair acquisition controlled from the AWS, and automatic needle positioning e. Stereotactic biopsy shall be performed on seated and recumbent patients f. Biopsy volume (vertical needle guidance), Biopsy volume (lateral needle guidance) g. Tube swivel range in stereo mode – 15° and + 15° or better					

	h. Biopsy compression plates with and w/o window for vertical and lateral needle guidance i. Weight of biopsy unit should not be greater than 5 kg 9. **ACCESSORIES** a. Compression plates 18 cm x 24 cm, 24 cm x 30 cm with wall holder b. Cordless Remote Control for radiation release c. Biopsy compression plate d. Disposable Needles and Bushes for Biopsy **REGULATORY APPROVALS** Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent					
03	**CT-SCAN 16 SLICES** - Slices . . . . . 16 (32 with IVR) - Tube . . . . . 3.5 MHU - Power . . . . . 32 kW - High voltage . . . . . 80 – 130 kV - mA . . . . . 20-400 mA@80 kV with optional High Power 80 - Z coverage . . . . . 1.1 cm (16*0.7 mm) - Max table load . . . 160 kg - Sub-millimeter slices over the whole detector width - Digital tilting - Table fixed at specially selected and fully operational height (74 cm) - Accuracy and low-dose for routine clinical fields - Great iodine contrast and precise timing for angiography (optional High power 80) - Sequence acquisition modes: 16x07mm Sn 16x0.7mm (tin filter) 2x5mm 1x10mm 1x5mm Sequence Acquisition: Reconstructed slice width: 1.5, 2, 3, 4, 5, 6, 7, 8, 10mm - Spiral acquisition modes: 16x07mm Sn 16x0.7mm (tin filter) Spiral reconstructed slice width: 0.6, 0.8, 1, 1.5, 2, 3, 4, 5, 6, 7, 8, 10 mm Pitch factor: 0.09 to 1.5	**01**				

	Patient Table: 160 Kg Patient table Max. table load 160 kg / 353 lbs Table feed speed 1–200 mm/s Fixed vertical table position at 74cm (-150 cm from isocenter) Scannable range 125 cm / 49’’ with patient table extension **High Performance Package:** Includes FAST AWP, FAST IRS, High Power 80, High Speed 0.8s, iMAR, Inline Spine Ranges, InlineRib Ranges, Inline Lung CAD, Spine Ranges @ CT View, Lung CAD @ CT View **High-speed 0.8s** The High Speed 0.8s mode adds increased volume coverage with a faster rotation time of 0.8 seconds, providing extended clinical capabilities High currents at 80 kV for enhanced iodine contrast, which is especially useful for very small vessels. Maximum tube current 400 mA at 80 Kv **In**terative Metal Artifacts Reduction **Inline Spine Ranges** **Inline Rib Ranges** **Inline Lung CAD** **Lung CAD** Spine Ranges Automatic detection and labeling of vertebrae **Positioning & Fixation Set:** Including Pediatric Cradle, Arm support, Patient tale slicker, Patient fixation with slider **SyngoOsteo CT** For quantitative assessment of the bone mineral content in the lumbar spine for CT-supported diagnosis and follow-up of osteoporosis **Neuro DSA** Neuro DSA allows for bone-free evaluation of the neuro vasculature. Main indications are the diagnostic evaluating of neurovascular disease (e.g. aneurysms & stenosis) and planning interventional treatment (e.g. coiling and stenting). DSA (Digital Subtraction Angiography) allows for bone-free evaluation of the neuro vasculature. Main indications are the diagnostic evaluating of neurovascular disease (e.g. aneurysms & stenosis) and planning interventional treatment (e.g. coiling and stenting). **FEATURES** The CT Neurovascular workflow allows for comprehensive vessel analysis of head and neck facilitated by Curved Planar Reformations (CPR) and stenosis measurement tools -Multimodality ready: Multi-modality results can be displayed for comparison -Connectivity to RIS/PACS and modalities should be metioned with all details Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent					

04	**DUAL HEAD GAMMA CAMERA** A Gamma Camera system with Two High Definition Digital Detectors that can be positioned at 76 degrees or 90 degrees for cardiac applications with half time cardiac imaging and should also be capable to perform whole body or general applications.Syste must be upgradeable to highest level and SPECT CT **Gantry** • Height: greater than equal to 193 cm • Width: greater than equal to 167 cm • Depth: less than equal to 159 cm • Axis of rotation: from floor shall be 99 cm more • Patient positioning: shal be accompanied with atleast 15” flat panel color LCD display • Tunnel opening: shall be atleast 71 x 86 cm • Two High Definition Digital Detectors to be positioned at 76 degrees or 90 degrees for cardiac applications and 180 degrees for whole body or general applications • Gantry shall support circular and non-circular orbits. Autocontour, with infrared real-time body contouring, average autocontour distance shall be 1.1 cm • Max. CW/CCW Rotation on Detector 1: 440°/30° • Ring rotation range should reach 470° • Rotational accuracy shall be 0.1° • Center of rotation: ≤0.25 pixel • Max. Caudal Tilt: +90° / -20° • A fully integrated source holder for quick and convenient quality control • A quality control phantom kit, including the MHR phantom and point source vials and a sheet source positioning phantom • All motions of the patient bed, gantry and detectors should be motorized and controlled via the hand controller **Patient Bed** • Width: less than equal to 90 cm • Length: should be atleast 250 cm • Weight: not more than 270 kg • Height: atleast 110 cm or less • Low attenuation characteristics (<7%) • Min. pallet height of 48 cm for patient access • Armrest supports upper arms and hands • Body wrap to help patients lie still on the bed • Head holder to support and stabilize the head • Max. scan length in whole-body mode: atleast 202 cm • Horizontal motion accuracy: 0.4 mm • Min. – Max. horizontal Speed: 0.1-240 cm/min	**01**				

	<u>Detectors</u> • Field of view (FOV): atleast 53.3 x 38.7 cm (21 x 15.25 in) • Diagonal FOV: 65.9 cm (25.9 in) • Crystal size: not less than 59.1 x 44.5 cm (23.25 x 17.5 in) • Diagonal: 73.9 cm (29.1 in) • Crystal thickness: 9.5 mm (3/8 in) or 15.9 mm (5/8 in) • Total number of photomultiplier tubes: 58 or more • Diameter of photomultiplier tubes: 53-7.6 cm (3 in) and 6-5.1 cm (2 in) **Intrinsic Spatial Resolution** • FWHM in CFOV ≤3.8 mm • FWHM in UFOV ≤3.9 mm • FWTM in CFOV ≤7.5 mm • FWTM in UFOV ≤7.7 mm **Intrinsic Spatial Linearity** • Differential in CFOV ≤0.2 mm • Differential in UFOV ≤0.2 mm • Absolute in CFOV ≤0.4 mm • Absolute in UFOV ≤0.7 mm **Intrinsic Energy Resolution** • FWHM in CFOV ≤9.9 % **Intrinsic Spatial Resolution @ 75 kcps** • FWHM in UFOV ≤4.1 mm • FWTM in UFOV ≤7.8 mm **<u>Detector with collimator specifications</u>** **System Spatial Resolution Without Scatter (LEHR at 10 cm)** • FWHM in CFOV ≤7.5 mm ≤7.8 mm • FWTM in CFOV ≤13.6 mm ≤14.9 mm **System Spatial Resolution With Scatter (LEHR at 10 cm)** • FWHM in CFOV ≤8.3 mm ≤8.9 mm • FWTM in CFOV ≤18.6 mm ≤19.5 mm **System Planar Sensitivity (LEHR at 10 cm)** • Absolute 202 cpm/µCi **<u>Acquisition Workplace</u>** • High performance acquisition worksplace providing a wide range of clinical acquisition protocols utilizing a graphical user interface, keyboard and mouse					

	○ SPECT Acquisition Modes should include the following: ○ Planar static and dynamic ○ Whole Body ○ SPECT, gated, non-gated or both ○ Dynamic SPECT ○ Whole Body SPECT **Workflow Features:** • The system should combine acquisition and display into user customizable workflows • Workflow shall automatically print, archive & distribute results to other devices on network **Quality Control:** • The system should use automatic and manual motion correction features • It should also normalize gated studies and create quality control images such as sinograms and linograms **3D Orientation:** • Should be capable of reorienting acquired SPECT volumes interactively to achieve the desired patient position • The orientation applied to one volume shall be automatically applied to up to 3 additional volumes **Image Registration:** • Multiple techniques shall be available for accurate registration of acquired images • Interactive, manual translations and rotations in all 3 planes • Triple registration and the choice of output matrix size shall be available **Reconstruction:** • The reconstruction engine shall support up to 5 multi-isotope studies concurrently • Standard SPECT as well as wholebody, dynamic and gated cardiac volumes shall be created **<u>Colliomators:</u>** Low Energy Hi Res Collimator **Separate processing Workstation with Advance Cardiac processing software (Cedar Cenai ; Mishigan or equivalent)** Outputs include DICOM secondary capture files, result files, reports as well as the ability to generate an AVI or TIFF file. **<u>Other supplies</u>** • UPS for the system • Printer for gamma camera Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent					

05		**MRI SYSTEM0.35 TESLA PERMANENT MAGNET**			**01**			
		4 Channel or more high resolution 0.35 Tesla permanent magnet MRI System. The system should have advanced, high-field applications use for a wider range of patients. The magnet is open on 3 sides for easy patient access. Capable of all 2D & 3D routine, neuro, body, spine, orthopedics, pediatrics, cardiology and peripheral vascular imaging. MRI System comprises of the following**:**						
		MAGNET						
		Type	Permanent Magnet with vertical magnet field					
		Field strength	0.35 Tesla					
		Shielding method	Active					
		Shimming method	Passive & Active with high order automated online 3D Shim					
		Fringe Field (X-axis, Z-axis, Y-axis)	2.9m x 3.1m x 2.7m or less					
		Magnet length / size	142 cm or less magnet width with three side patient access.					
		Field Homogeneity	Typical ± 2.5ppm at 36 cm (DSV) or better					
		RF SYSTEM						
		Gradient amplifier type	Solid State					
		Transmitting power	2 KW or more					
		Receive Channels	4 channels or more standard simultaneous independent channels					
		COILS						
		System should offer imaging capability for Brain, Neck, Spine, Breast, Shoulder and Knee imaging etc. and other clinical applications, with following minimum coils of High S/N Ratio. Offered coils must offer parallel imaging capability for at least Head, Neck, Spine, Body. The machine must be capable of performing whole CNS Imaging in a single scan with multiple coil (head, neck and spine) connectivity.						
		CP Transmit Coil	Integrated in magnet / unit					
		Head/Neck Coil 4 Channels or more	(QTY-1) For Brain Imaging, cervical spine, combined head / neck imaging and TMJ.					
		Spine / Body Coil 4 Channels	(QTY-1) For Optimum coverage of Abdomen, thoracic, pelvis spine and MR					

			Angiography.						
		Dedicated Extremity coil, 4-channel	(QTY-1) For MRI imaging of the knee and ankle or lower extremities.						
		Shoulder Coil - 2 channel	(QTY-1) (Phased Array Coil for imaging of both shoulders)						
		Flexible coil	(QTY-2) For peripheral joints and other kinematic studies etc.						
		Neurovascular Imaging	For complete neurovascular imaging, the system should be capable of combing different coils (e.g., head/neck coil and spine coil etc.). Minimum 10 channels or more coil combination of head, neck and spine for neurovascular procedures is needed. up to 4 coils can be placed simultaneously, facilitating up to 100 cm seamless field-of-view.						
		GRADIENT SUBSYSTEM							
		Gradient strength	24 mT/ m or more						
		Slew rate	55 T/m/s or more						
		Duty cycle	100%						
		Gradient coils shielding	Active						
		FOV	5-400 mm or more						
		ACQUISITION PARAMETER							
		Slice thickness – 2D	1.6 mm – 200 mm or better						
		Slice thickness – 3D	0.05 to 20mm or better						
		Acquisition matrix	512						
		Parallel Imaging	Integrated parallel imaging capability should be offered, applicable in all coils, sequences and clinical applications.						
		PATIENT COUCH							
		Type	Tabletop for easy patient handling outside magnet gap						
		Weight bearing capacity	Minimum 200Kg or better						
		Movement	Should have lateral and Longitudinal movements						
		Table Accessories	IV Pole, Positioning pads &						

			Immobilization straps						
		MRI OPERATING CONSOLE							
		Computer System (Host / Recon)	Multitasking having real time inter-active control with simultaneous scan and reconstruction of up to 2 data sets.						
		Simultaneous scanning, image acquisition, image reconstruction, processing and filming etc.							
		Parallel evaluation of up to 30 regions of interest							
		The system should offer Imaging packages for Neurology, Orthopedics ,Cardiology, Angiography , Body , Breast , Oncology , Pediatric etc with following minimal capabilities at console:							
		Reversal of gray-scale values, Image rotation by 90° or by user-defined angle, Flip horizontally / vertically, Image zoom and pan, Shutter Annotation, Window width/level controls, zoom, pan, rotate, mirror, Image annotation, Image arithmetic, Image measurement, Image annotation and labeling.							
		Arithmetic operations on images and series (e.g. for evaluation of contrast media studies)							
		Time-intensity analysis for contrast- enhanced examinations, e.g. for post-contrast studies							
		Simultaneous visualization of up to four independent series for comparison.							
		Cine movie display of 8 slices or more dynamics/phases							
		3D surface rendering, Multiplanar Reconstruction, Maximum Intensity Projection							
		Imaging Sequences & Applications:							
		Spin Echo (Single and multi-echo) up to 30 echoes or more							
		Inversion Recovery –IR							
		2D/3D FLASH							
		2D/3D FISP							
		2D/3D PSIF							
		2D/3D True FISP							
		2D/3D MEDIC							
		2D/3D TSE							
		2D / 3D Time-of-Flight (ToF)							
		2D / 3D TurboIR							
		T1 FLAIR							
		Turbo Dark Fluid 3D							

	Non-contrast MRA and venography 3D isotropic resolution volume imaging Tools for rapid evaluation of left or right ventricular function imaging protocols for assess-ment of the kinetic behavior for lesion visualization and characterization Single & Multi Shot EPI – free selection capability of single or multi shot EPI Motion and flow insensitive Turbo Spin Echo sequence Motion Correction SW for Cardiac and Abdominal Imaging, **DICOM PACKAGE** Query/ Retrieve, Send/Receive, Media, Import/ Export, Storage, Print & IHE Integration **ADDITIONAL ACCESSORIES TO BE OFFERED:** 1. Online Sine Wave double conversion UPS for whole system with 10 minutes back up 2. MRI Compatible IV Pole. 3. RF Cage / Shielding including two points for medical gases with imported interior finishing. Europe/USA 4. Dry Medical Imager DICOM compatible with 14 x 17 film size (Fuji/Agfa/Carestream) 5. Non-magnetic Wheel chair 6. Non Magnet Patient trolley 7. Metal detector **INTERANTIONAL SAFETY AND QUALITY STANDARD** Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent						
06	**HIGH (DUAL) ENERGY LINEAR ACCELERATOR (LINAC)** General terms and conditions:- Supplier must have full backup services locally, they should provide list of their technical persons and Engineers. They must also provide list of installation base in the country with year of installation **Sr #.** — **REQUIRED SPECIFICATION** Provision, installation, and commissioning of The dual mode medical linear accelerator with dual photon and five electron energies, should be fully digital with provision for 3-DCR ,IMRT, complete in all respect along with accessories.			01			

			IGRT and cone beam and Total body Irradiation to be quoted as optional. Technical specifications are as follows: US, EU, Japan system should be FDA/ CE approved						
		A	**Linac System:**						
			a. Linear Accelerator must have the latest technology and should be fully computer controlled with the latest state of art Hardware , software and control system						
			b. Must provide Klystron as the RF power source.						
			c. Standing type of Wave-guide along with the bending magnet, target assembly, vacuum ion pump. Demountable Robust Triode Gun.						
			d. Sealed type of dose monitoring chamber (Ion chamber) must be provided and should operate independent of ambient temperature and pressure. All dosimetry, patient and unit safety related interlocks must be sensed and controlled by hardware and software.						
			TECHNICAL SPECIFICATIONS						
			Photon Beam Energies: Photon energies – 6 and 15 MV (BJR 11)						
			ElectronBeam Energies: Five different Electron energies ranging from 5-22 MeV must be available. Beam quality must be according to IAEA TECDOC 398.						
			Dose Rate & Beam Stability: 6& 15 MV Photon should have dose rate of 100 - 600 or more MU/min at isocentre Electron energies should have dose rate of 100 - 1000 or more MU/min at isocentre (with calibration setting of 1 MU-1cGy) Please indicate min: and max: dose rates and number of intermediate dose rates available Specify the beam stability time in milliseconds.						
			Field Size: Rectangular Field Size: 0.1X0.1 cm^2 to 40 X 40 cm^2 at 100 cm SSD Clipped corners will not be acceptable for field size. a) The collimators must be motorized. b) Asymmetric Jaw movement: Asymmetrical collimation for both the sets of jaws shall be provided. At least one pair of jaws must be able to cross the central line by at least 15 cm to other side. The travel other set of jaws shall be specified. **Tolerance**: The digital, mechanical display should be within 2mm, the optical field size andmeasured optical field size at 0°, 90°, 180° and 270° gantry angles must be less than 1mm for field size less than 10 X 10 cm and ≤ 2mm for fields size > 10 X 10 cm.						
			Beam Flatness: c) Flatness: For photon and electron beam intensity relative to the central axis over the central 80% of						

			the field size at 100 cm SSD and 10cm depth perpendicular to the central axis. This should be less than or equal to±2% along X-Y axis and diagonal axis for all field sizes from 5 X 5cm2 to 40 X 40 cm2. d) Stability of flatness with gantry rotation: The stability of the field flatness with gantry angle 0°, 90°, 180° and 270° at 10cm depth along X,Y and diagonal axis for all field sizes from 5 X 5 cm^2 to 40 cm x 40 cm should not be more than ±2%.						
			Beam Symmetry: The ratio between values measured for each pair of symmetrical points along longitudinal and transverse axis with respect to the beam axis at 10 cm depth for 0°, 90°, 180° and 270° gantry angles for all field sizes from 10 cm x 10 cm to 40 cm X 40 cm should not exceed ±2%.						
			Radiation Field Penumbra: The width between the 20% and the 80% isodose lines measured for 10 X 10 cm^2 at depth of 10 cm at 100 cm SSD should not be more than 10mm. Specify the penumbra width.						
			Congruence Between Optical and Radiation Field: The congruence between optical and radiation fields for 5x5 cm, 10 cm x10 cm at 0, 90,180 and 270 degree gantry angles with SSD = 100 cm should be within 2 mm along X,Y axes.						
			Rotational/Arc therapy: 7. The Linac must have photon arc therapy feature with gantry rotation in clockwise and counter clockwise directions. 8. The dose rate/range of dose rate should be specified MU per degree. The MU/degree shall automatically be computed. 9. A range of continuously variable dose rate should be available. A unit able to deliver high dose per degree will be preferred.						
			• **MECHANICAL SPECIFICATIONS**						
			Gantry and collimator Gantry Rotation ±180° (360° total)						
			a) Read out - Digital and Mechanical						
			b) The digital display must be in room as well as at console. The digital display accuracy should be ±0.5deg., with resolution of 0.1 deg. while mechanical scale accuracy within ±1.0deg. with resolution of 1 deg.						
			c) Readout accuracy 0.5°						
			d) Control - Hand pendent and control-console						
			e) Target - Axis Distance. - 100 ± 0.2 cm						
			f) ODI Range- 75 cm to 150 cm						
			g) ODI Accuracy ± 0.1 cm						
			h) Mechanical front pointer must have the range from 60 cm to 120 cm with an accuracy of ± 0.1 cm at 100 cm SAD and resolution of 0.2 mm.						

			i) Gantry Rotation Isocentre ≤ 2 mm dia. Sphere						
			j) No Beam-stopper						
			k) Collimator:Rotation - ± 95° about mid position						
			l) Control - Hand pendant and control- console						
			m) Readout accuracy - ± 0.5°						
			n) Collimator Rotation Isocentre ≤ 2 mm dia. Sphere						
			o) Dynamic Wedge						
			Target specification: Transmission type target with focal spot ≤3mm in diameter at x-ray target. (Material of the target to be specified)						
			Treatment Couch: 1. Isocentric indexed versatile extended range couch.						
			2. Longitudinal, Lateral, Vertical and Rotational movements and tilted position (Standard couch with yaw and pitch movement). The table must be able to rotate around the isocentre (motorized and free movement; please specify rotation angle range**)**						
			3. Electrical / Mechanical Control						
			4Control-Local and/or Remote						
			5. Opening window - Tennis Racket / Mylar						
			6.Fully Carbon Fiber table top for better Quality Portal Images. a. Minimum height from floor –approx. 60-65 Cm b. A mean shall be provided to lower couch in the event of power failure. c. Table top dimensions: Width≥50cm, Length ≥200cm d. Lift capacity ≥440 lbs.						
			e) All motions must have an accuracy of ± 1mm with 0.1 cm resolution in digital display must be in room and in control console area.						
			CONTROL CONSOLE AND TREATMENT ROOM DISPLAY FEATURES						
			1. Main Control Console: A computerized controlled console must be provided outside the treatment room. All the functions and modes of the accelerator must be software controlled. This console shall provide controls that must be activated in order for the accelerator to become operational in any of its various modes of operation and also provide displays of accelerator parameters. In addition all the modes and functions of the accelerator must also be operated manually in case of any software malfunction. The accessories attached to the machine must be displayed on control console (with record and verification)						
			2.Parameter Monitors: The display of important parameters should be provided at the control console, and in the treatment						

			room.						
			3. Control Console Display: The control console must have digital displays of gantry rotation, collimator rotation, collimator jaw setting (symmetric & asymmetric) treatment couch motions (lateral, vertical, longitudinal and turn table rotation about isocentre) and required display as mentioned earlier.						
			4. Treatment room display: This facility must be available and details should be specified.						
			5. Treatment room pendent: Hand pendants shall be provided. The hand pendent must have the control of gantry rotation, collimator rotation, collimator jaw settings, treatment couch motions (vertical lateral, longitudinal and turntable rotation around isocentre and room light control. To prevent possible malfunctioning, when hand pendant is in operation, the computer system must prevent conflicting signals from being sent to the same mechanical device.						
			ESSENTIAL ACCESSORIES						
			a) Shielding Block Holder: A detachable set of screwed shielding blocks and tray must be provided to accommodate 2 trays simultaneously for wedges and block separately. Specify location and size of blocking trays.						
			b) Shielding Blocks and Trays: A complete set of screwed shielding blocks and tray must be provided.						
			c) Wedge Filters: Should provide a motorized wedge system(Virtual and dynamic wedges) for variable wedge angles. The physical wedges for 15,30,45 and 60 degree must also be provided. Constraint wedge factor for virtual wedges. Automatic calculation for virtual wedge resumption in case of wedge treatment interruption.						
			d) Laser Localizer lights: Laser Alignment System (4 cross laser system) All lasers will be diode green lasers.						
			e) Electron Applicators For electron therapy electron beam applicators of all sizes must be provided. Electron applicators should be supplied both circular and rectangular fields. Electron beam shaping system/trimmer to be supplied for irregular electron fields.						
			ACCELERATOR SYSTEM CHARACTERISTICS						
			a. **SSD Indicator:** A mechanical indicator of SSD from 60cm to 120 cm with accuracy of ±1 mm at isocentre should be provided.						
			b. **Front and Side Pointers:** A mechanical front pointer to locate isocentre of the unit within ±2mm and to apply to any						

orientation of the machine shall be provided.

1. **MLC - Multi Leaf Collimator.**

For maximum flexibility, the Multileaf Collimator must be used in conjunction with the primary collimators. To facilitate rapid setup of standard treatments, the conventional collimator system must not be replaced. Conventional therapy capabilities must be provided through an accessory mount for the attachment of shadow blocks, wedges, and electron applicators. The field sizes must range from at least 0.5 x 0.5 cm^2 to 40 x 40 cm^2. The mechanical and radiation isocenter accuracy must remain < .01 cm radius sphere. Separate MLC workstation provided if required.

i. Number of leaves shall be at least 120 (60 pairs).
ii. Clearance from bottom of collimator to isocenter shall be specified.
iii. Inter-digitation of leaves should be available
iv. MLCs must be able to cross the central line by at least 15 cm to other side and must be capable to cover 20cm over travel to the central line by MLC carriage movement.
v. The movement of each jaw should be independent of the other jaws.
vi. Accessory holder able to accept all applicator and trays for beam limitation and be coded accordingly. Trays to be supplied with the system.

a) Independent drives
b) Leaf width at isocentre<= 10 mm
c) Capable of performing Dynamic Conformal therapy procedures. Interface between MLC & Existing Network System should be provided.
d) Facility to treat patients conventionally, using blocks without MLC.
e) Work Station HW/SW – Specify details
f) Integration (full Networking) with Planning System, Simulator, CT, CT Simulator, MRI
g) RFA should be done.
h) IMRT(Step and Shoot, Dynamic ,IMAT)deliveries should be possible.

Linac May also be useable without MLC and with x-y jaws only

5. **Intensity Modulated Radiotherapy System**

The system shall be capable of delivering IMRT (Step and Shoot , Dynamic ,IMAT) deliveries should be possible.

IMRT techniques available shall be specified.

Treatment (including imaging) should be possible in conventional 10 to 15 minutes time slots.

- **PORTAL IMAGING SYSTEM- TECHNICAL SPECIFICATION**

1. It should be fully integrated with the accelerator
2. It should give real time image.
3. It should be integrated with arms fixed along with the linear accelerator and capable to take, image at any gantry agents. The arms should be of robotic type and remote controlled (EPID).

			4. The system should be based on latest technology with high-resolution imaging. 5. The system should have image detection unit, image acquisition and processing system. Portal vision visualization system workstation and workspace with 21" display color monitor. 6. Portal imaging system should be retractable to get movement space when not in use.						
		B	• **TREATMENT PLANNING SYSTEM - TECHNICAL SPECIFICATION**						
			1. Provide a latest comprehensive Radiotherapy Treatment Planning (RTP) system for conventional, 3D Conformal Radiation therapy,IMRT Inverse Planning and Brachytherapy. 2. One server for data base management integrated with the planning terminal and two work station shall be provided with life time latest and updated versions license of Conventional, 3DCRT, IMRT and Brachytherapy. The Treatment Planning System shall be linked to Accelerator console through record and verification system. Required Server and software shall be supplied. 3. Two contouring work stations with life time licenses should be included. It should include fusion and registration software, virtual simulation software and beam modeling software.These system should also be capable to communicate with LAP Lasers at in CT room for Dicom coordinate transfer. 4. Appropriate port Hub W/BNC connector for network connection should be provided. 5. Power strip with push-to-reset circuit breaker to provide single power connection for computer, monitor and accessory and peripherals. 6. The TPS shall be based on modern workstation technology and permit the linking of several client workstations to a central server workstation. Two calculation engine and two contouring station. 7. Hardware requirements: Latest configuration of hardware (CPU, hard drive, RAM, Min 21" square TFT monitor Medical Grade, color LASER printer) **8.** DICOM-3RT INTERFACE to network with simulator, CT scanner, dosimetry system, 3-D TPS etc. System shall be with Digital film scanner						
			User Interface a) 3D view displays anatomical volumes (translucent surfaces or wire-frames), fields, field accessories and dose distribution b) 3D view indicates patient orientation using an anthropomorphic symbol c) 3D view can be used to define beam parameters (field size, collimator rotation), beam position (lateral and longitudinal rotation, movements), shielding blocks and MLC settings d) Can project field outlines onto the patient surface in the 3D view e) Can display DRR attached to field in the 3D view f) Can compare DRR image with portal image or digitized simulator image inside BEV g) Beam's-Eye-View (BEV) with anatomy and DRR display h) Ability to create digitally enhanced DRR to suppress bone, enhance soft tissue, use partial volumes, etc. i) DRR automatically recalculated in real time when the field is moved						

			j) BEV can be used to define beam parameters (field size, collimator rotation), beam position (lateral and longitudinal rotation, movements), shielding blocks and MLC settings k) Layer window that provides a quick and interactive method to display and select fields and accessories l) Property display function that groups information into logical combinations for easy access and change. m) Toolbar for frequently used operations n) Hot-keys for frequently used operations. **o)** Printing and plotting is done in the background thus system is free for planning the next patient.						
			Patient anatomical data transfer: a) The patient data must be transferred from CT/MRI, Simulator (in the form of fluoroscopic image and CT/MRI slices) via DICOM, CD & DVD's. b) Data from CT/MRI slices must be transferred from CT/MRI Scanners, Simulators & RFA. c) The system must select more than or equal to 200 images per patient and to do real time multi-planer reconstructions from original CT/MRI image data sets. d) The system must have autocontouring of external and internal organs from CT/MRI images either taken from CT/MRI film or via other mode of data transfer as mentioned above.						
			Contouring a) Supports contouring templates that list structures of interest and define structure display properties, etc. b) Automatic contouring of patient outlines and internal structures through all CT-images c) Post-processing tools that smooth, reshape, connect, disconnect structures, etc. d) 3D automargin function (e.g. CTV to PTV) with independent margins in 6 directions e) 3D manual contouring tools that work in the transversal, sagittal and frontal images f) Interpolation of contours g) Manual contour entry and editing h) Display of Axial ,Coronal and sagittal images for reference i) Boolean operations (AND, OR, XOR, AND NOT) with structures to create complex structure definitions j) Edge detection tool k) Contour optimization tool						
			Dose Planning a) Supports Planning library that define field orientation, name, margins, isocenter location, and dose prescription b) The field can be centered automatically to the center of any volume c) Different energies (photons and electrons) as well as external beam, intracavity and interstitial d) plans can be combined in a single plan e) Each field can have separate isocenter f) Import of image, isocenter and plan data from CT scanner						

			g) Entire group of fields can be moved together h) Auto-blocking with a user-defined margin around target volume i) B outlines can be modified graphically j) Ability to copy, move and mirror blocks k) Auto-MLC with a user-defined margin around target volume l) MLC aperture can be modified graphically m) Ability to copy and mirror MLC settings n) Automatic optimization of compensators. o) User-defined density for bolus p) User-defined CT numbers within specified regions (remove contrast medium) in any plane						
			Dose Calculation, Photons a) Photon energy range from telecobalt to 25 MV X-rays and multiple electrons. b) 3D dose calculations with coplanar and non-coplanar photon and electron beams c) Calculation of Monitor Units separates the phantom and head scatter component d) Calculation of Monitor Units for linear accelerators and treatment times for Cobalt units (decay factor included) e) 3D dose calculations can be performed simultaneously with multiple patient planning f) Normalization of dose distributions to minimum, maximum, any arbitrary % value or to any dose point value g) User-definable transmission factors for blocks etc. h) Beam hardening in metallic wedges is included in the calculation i) Support for Enhanced Dynamic Wedge j) Support for motorized wedge K) Both Power law and Equivalent TAR heterogeneity correction						
			Plan Analysis a) Side-by-side plan comparison such that images are linked to display the same image planes (frontal, sagittal and transversal) simultaneously b) DVH for any multiple structure volumes in one plot c) DVH for multiple plans in one plot d) Differential or cumulative dose volume histogram e) Absolute or relative scale for the structure volume axis of DVH plot f) Dose volume histogram supports Boolean combination (AND, OR, XOR, AND NOT) of several volumes g) Export of DVH data into other formats(ASCII file/Excel file, etc.) h) Printout of DVH graphs on paper i) Point dose display j) Display and plotting of any arbitrary dose line profiles k) Multiple plan summation l) Can store summed plans						

			m) Plan subtraction n) Can map, dose distribution to the surface of any structure						
			Supported Treatment Techniques a) Isocentric , non-isocentric and fixed SSD fields b) Photons, electrons c) Irregular d) Coplanar and non-coplanar fields e) Asymmetrical collimators with field central axis over-travel f) Shielding blocks (number should be specified) g) Standard wedges h) Motorized wedges i) Dynamic and Enhanced Dynamic Wedges based on open field dosimetric beam data and STT files (no additional beam data measurements to configure) j) Compensators k) Bolus						
		C	• **THE RECORD & VERIFICATION SYSTEM MUST BE BASED ON CLIENT/SERVER ARCHITECTURE TO PROVIDE** i) A common relational database management system that integrates medical and business records ii) A common user interface for data entry and viewing in a variety of applications iii) A standard communication path for interfacing to other database systems. iv) Considering the critical nature and volume of procedures, the software must provide high reliability, and should offer the highest quality performance. v) The Oncology information management/record and verify system shall assist in the integration of radiotherapy patient data throughout the entire department. It shall also record and verify treatment parameters of patients undergoing treatment on the Linac. vi) At least Two Work stations to be provided						
			• **ONCOLOGY INFORMATION SYSTEM COMPLETE WITH NETWORKING, RECORD & VERIFY SYSTEM** (1) Transfer of all parameters from Simulator & Treatment Planning System to the Linear Accelerator for automatic treatment setup & delivery should be provided. (2) Transfer of Fluoroscopy images from Simulator to Portal Imaging System for comparison should be provided. (3) Transfer & Execution of MLC Position Parameters for normal treatment & IMRT treatment including Step & Shoot & Dynamic techniques from Treatment Planning System should be provided.						

			• **Trainings: (Please specify) for physicists and radiation oncologists** 1. On-Site User training(s) to be provided 2. Abroad / Class room Training(s) to be provided 3. Clinical Training(s) should be in USA/EU countries						
		D	• **Services and Subsystems to be supplied with Linac.** a) Complete installation including beam data collection, commissioning, Acceptance testing is the whole responsibilities of vendor. b) Room Planning and designing. Space requirements to be spelt out in advance. Specific site layouts and Drawings to be provided (as per user provided drawings) prior to installation. c) Electrical Requirements to be specified prior to installation. d) The system must be supplied with a proper sliding Motorized radiation shielding door calculation to ensure safe use of the Linac. There should be a mechanism to open the door manually in case of power failure. e) UPS with minimum 30 Minutes Backup time on full Load of Linac. f) Water Chiller required for Linac system including Piping and Pumps. g) Any other sub system(s) required for the functioning of Linac. h) Connectivity with the CT / CT Simulator system including required Work Station to connect it with R&V System.						
		E	• **Dosimetry System to be supplied, according to offered Linac system.** (Please specify the items included for Complete Dosimetry and Radiation Survey Meter) It must include: – Detectors and Chambers for Photon and Electron (parallel plate or Advanced Markus) chamber , Former chambers and Thimble chambers with buildup cap. – Electrometers – Slab Phantoms – 3DWater Phantom with water Reserve and all accessories for Relative Dosimetry – Anthropomorphic phantom with their films – Full IMRT Plan Verification Tools / System. – Stationary Water Phantom – QA (Daily) Tools – Beam check tool – Lateast Epson Expression 10000 XL scanner and Color Printer – Digital Survey meter with (photon , Neutron) detection. – Digital Thermo meter and Barometer						
		F	• **Electron Block Mold System:**(Please specify the items)						
		G	• **Immobilization devices::** (Please specify the items)						

		– Carbon breast board – Table top – Prone Head Rest for CSI – Tilting Device – Knee rest different sizes – Head rest different sizes – Vaclocks with Pump – EYS/lens shield marker – Immobilization belts – Prone Bally boards – spine Mattress – Arm Supports different sizes – Site marking taps, Tattoo's – Tongue depressors – Pillow. – Water suspan (extra large)					
	H	• **Warranty:** – Linac and Subsystems MUST have 6 Years Complete warranty with including parts. – The warranty will be started after complete installation ,commissioning and Data acquisition of the system means after 1st patient. – 3 Days will be allowed for rectification of fault for further period 500 Dollar per day will be penalty and warranty period will be extended accordingly.					
		Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent					
07		**RADIOTHERAPY SYSTEM FOR INTRA OPERATIVE RADIOTHERAPY(IORT)** The latest low energy X-ray device for the use in a standard OR environment without constructional radiation protection measures The whole installation, commissioning and Acceptance test are the responsibility of vendor. **DESCRIPTION** ▪ Miniature low energy X-ray source, max: .energy50KEV,spherical, uniform dose distribution ▪ Permanent, online monitoring of dose delivery during treatment by an integrated radiation monitor- direct and real time measurement of the dose delivery ▪ Quality control tools for check-up of dose rate and dose distribution prior to treatment ▪ Integrated and imbedded high voltage supply to ensure patient protection and to avoid high voltage cables in the body of the patient for to the protection and safety of the patient. ▪ X-ray source without cooling, designed for long term use based do appropriate manufacturer service					

	▪ Sustainable and reusable X-ray source with a minimum 600 treatment Minutes per source ▪ Reusable and serial in able applicators spherical applicators different sizes to fit the size of the treatment area ▪ Fully automatic and mobile system for use indifferent OR´s ▪ Remote control console for distant operation and control of the X-ray System including: ▪ DICOM connectivity, modern Graphic User Interface for seamless work flow, 3D Treatment Planning software system with hybrid Monte Carlo algorithm and simulation of the applicators Positioning of the X-ray source in the body without angle limitation to fit Exactly tumor bed topography for precise irradiation and for optimum surgical results **Conformity** Radiotherapy device according to ▪ EC directive93/42/EWG, medical devices IEC 60601-1/EN 60601-1,IEC 60601-1-2,IEC60601-2-8 Technical Data Weight of carrier system <250kg Dimensions of carrier system (B x H x T) <800x2000x1500mm Voltage 110-240V/50 Hz/60Hz Max power consumption <2000VA Energy ≤50KEV Beam Current ≤40µA Anode material Gold Radiation field size, anode diameter <3.5mm Radiation Protection Fully shielded, integrated inter locks, external Inter lock switch Conformity CE mark, FDA 510kcleared Medicalproductacc.93/42/EWG Class IIb Protective insulated device Protection category- I Medical device Type B User manual English **Accessories** Applicators Spherical, diameter 1.5 to 5.0cm in 0.5cm steps, sterilize able Quality assurance tools(QA) Calibrated ionization chamber for low energy and dosimeter, fully shielded (QA) Shielding material Sterile, single use Drapes Sterile, single use Warranty 3 years warranty with all parts will be started after first patient Full service contract including part					

	and Installation and commissioning Trainings for Physicist and Radiation Oncologist Must be in USA/EU based **Specification for survey meter** • It should measure the X-ray Gamma rays and Beta rays. • Large LCD display with back light. • The X-rays and Gamma rays energy range (0.05 – 3.0) MeV. • Beta radiation energy range (0.1 - 3.5) MeV. • Dose equivalent rate (DER) indication range (0.01 micro Sv /h to 130 mSv/h) • PC Communication via USB interface. • Audible ALARM must be include • Environmental temperature range (-10 to +50) degree centigrade. • Weight should be less than 300 gram. • Dimensions should be 148 x 85 x 40 mm **Personal Electronic Dosimeters** • Personal Electronic dosimeters (PED) should be easy for use. • The dose equivalent rate (DER) range (0.01 micro Sv/h to 12 Sv/h) • The Dose equivalent (DE) measurement range for continues and pulsed photon radiation should be (0.05 micro Sv to 20 Sievert) • Minimum pulse duration of X-ray and Gamma radiation 1 ms and up to • The accuracy of DER measurement in the range (0.1 micro Sv/h to 10 Sv/h). • The accuracy of DE measurement in the range (0.05 micro Sv to 10 Sv). • Energy range should be (20 Kev to 10 MeV) • The device should have (Audio, Visual, Vibration) alarms to warn the user, when preset dose/dose rate threshold levels are exceeded. • Temperature (-20 to 50) degree centigrade. • Weight should be less than 100 g. • Dimensions (58 x58 x18) mm Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent					
08	**<u>MOBILE C-ARM WITH FLUOROSCOPY</u>** A mobile C-arm system for surgical imaging that offers a number of benefits including a robust design, easy system operation, and sharp imaging at low dose. **C-Arm** • Orbital movement shall be at least 130° (– 40° to + 90°) • Angulation should be at least ± 190° • Horizontal movement of minimum 20 cm	**01**				

	• Immersion depth must should be 73 cm or better • Swivel range must be ± 12° or better • Vertical travel should be 42 cm motorized or better • Source-Image intensifier distance equal to 100 cm or better • Free space should not be less than 75 cm **X-ray generator** • Nominal peak output power 2.5 kW • kV range shall be 40 kV to 110 kV • Single Image range 0.2 mA to 13 mA • Fluoroscopy range 0.2 mA to 13 mA continuous; 3 mA to 24 mA with 0.5 p/s to 10 p/s • Integrated dose measuring chamber **Tube/Collimator** • Dual-focus stationary-anode tube • Focal spot nominal value must be 0.6/1.0 • Anode heat storage capacity should be 100 KHU or better • Iris diaphragm (lead) for concentric, radiation-free collimation **Digital video imaging system, image intensifier & image acquisition** • High contrast and high spatial resolution • Nominal diameter 23 cm (9”) with Zoom format 15 cm (6”) • Fluoroscopy Image acquisition 0.5 to 10 f/s or better • Automatic contrast and brightness regulation **Display** • 2 x 19“ TFT b/w display or better, Screen size 19” (48 cm) • Image matrix 1280 x 1024 **Optional** • Data transfer and documentation via DICOM • Detachable grid Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent					
09	**<u>X-RAY 500MA 125KVP FOR GENERAL RADIOGRAPHY</u>** **System composition:** 1. High voltage generator (Controller) 1 set 2. Floor to Ceiling X-ray tube Support 3. X-ray tube 4. Electronical Collimator 5. Bucky Chest stand	**01**				

	6. 4-Way Bucky Table 7. H.V.Cable **Specifications:** **1. Generator :** 1) Type 2) Max. Output 3) Rating Output 4) Tube Current 5) Exposure Timer 6) mAs 7) Anatomical setting of X-ray condition 8) Self-Control Function(CPU Automatically Diagnosis) 9) Anatomical program 10) Voltage Phase **2, Floor to Ceiling X-ray Tube Support** 1) Left / Right Travel 2) Up / Down Travel 3) Back / Forth Travel 4) Tube Rotation 5) Power **X-ray Tube Rotating Anode (Toshiba)** 1) Inherent Filtration 2) Focal spot 3) Anode Heating capacity **Electronic Collimator** 1) Filtration 2) Localization Lamp Timer 3) Maxinum x-ray Field size at SID 65cm 4) Average Light Field illuminance **Bucky chest stand** 1) Size 2) Vertical travle 3) Vertical range 4) Grid ratio 5) Grid 6) Power Requirement **4-way table** 1) Size 2) Bucky Travel	 Inverter 40kw 500mA / 125 kv 10 to 500mA 0.01~ 6sec 0.5 to 600 mAs 576 sets standard standard Single Phase 1480mm 1350mm 235mm ±180˚ 24VDC 50/60Hz 0.9mm Al eq 1.0 / 2.0mm 140,000HU 1.5mmAl 30sec 35cm×35cm 160Lux 1820(H) x 580(L) x 240(W) 1,300mm 400~1,740mm 8:1 85Line Motor alternating 24VDC 1Amp 50/60Hz 710(H) x 2000(L) x 728(W) ± 220mm(440mm)					

	3) Grid ratio 8:1 4) Bucky Grid Motion Spring Action 5) Longitudinal Moving ± 350mm 6) Horizontal Moving ± 150mm 7) Power 220VAC 3Amp 50/60Hz **H.V Cable** 1) Stand type 6M 2) Ceiling type 12M Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent					
10	**MOBILE XRAY 100 MA WITH BATTERY** LATEST UNIT WITH INTERNAL UPS/BATTERY SYSTEM FOR 1 HOUR CONTINOUS USE MUST 750 APR MEMORIES, REMOTE CONTRAL SOFTWARE, DIGITAL REVERSE DISPLAY FUNCTION (TOSHIBA JAPANESE TUBE HEAD) X-RAY GENERATOR: **1.** High frequency FULL BRIDGE INVERTER **(Micro processor based)** 2. Max power 5 KW 3. Max voltage 110kV 4. Max current 100MA 5. Frequency 60kHz **X-ray tube (Toshiba Japan):** 1. Focal spot 1.8 2. Anode angle 15° 3. Heat Storage 30kJ **Control desk:** 1. Controlled by a micro-processor with LED display 2. programmed anatomical parts, can be re-programmed by operator 3. Collimator lamp ON/OFF switch also from control pane 4. kV Selection 5. mAs selection **COLLIMATOR:** 1. With multiple layer blades and manual control 2. Variable field from 5x5 to 40x40cm 3. High intensity halogen lamp 24DC 150 Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent	**01**				

11	**<u>SURGICAL NAVIGATION SYSTEM FOR CRANIAL AND ENT PROCEDURES LATEST MODEL</u>** The unit should be suitable for all Neurological and ENT Surgeries. Unit should be innovative, computer based passive infrared surgical Navigation System, used for surgical visualization, planning and Navigation to help minimize iathrogenic trauma to the brain tissue And reduse risk for surgery complication in cranicl procedure The system should have powerful image management and advanced Dynamic 3D Tracking System. Should Be Based On CT/MRI or multi modality 2D patient images in dicom format. Infrared Laser Guided Tracking System to track 3D position Surgical Planning Optimization Diffusion Tensor Image (DTI) merged functional neuronavigation Brain needle aspiration biopsy Snapshot for easy documentation Multiple modalities application, Ultra High Prescion 3D Tracing Quantitive surgical approach design Multiple navigation modes Steropsis guided brain shift compensation Great operation convenience Smalrt imormaitn management **System Configuration:** Optical tracking system, NDI tracking system, image management work station, Computer system, touch monitor, software package, support mobile trolley, Navigation Probe, Microscope Probe, Active Marker, Reference Frame, Articulated Arm, Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent	**01**				
12	**<u>LED SURGICAL LIGHT CEILING DOUBLE DOME WITH HD CAMERA AND HD MONITOR:</u>** LED Operating Lamp, Double Dome, Ceiling type designed to meet users for an excellent latest technology, High quality, low cost, easy operation, High Light Intensity and deep cavity illumination, Minimum Shadows, Maximum focusing filed, easily sterilized handle, sealed light head, Multi application for surgery, ophthalmology, obs delivery, Gyne operations, ICU etc. Adjustable Color Temperature **TECHNICAL SPECIFICATIONS:** Luminance (Lux): 160000 LUX x 02 Diameter of light head: 700/600 mm Color Temperature (Kelvin): 5000K or more Average Bulb Life: 50000 hours or more Color Rendering Index: 95+-5	**01**				

	Light field Depth in mm: 800 Light Head Power Consumption: 150x2 LED Power W 01 Radiant Energy 06 Power Supply input voltage: from 100-120 to 200 – 230 Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent					
13	**Surgical pendant for operation theatre:** Arm based ceiling supply pendant dual for OT For operation thathre mounting on concrete ciling uses Heavy duty acchors, arm length 600mm / 800mm or more Dual arm system, swivelling type, lifting adjustable. The arm should have freedom of movement Lift enables vertical, effortless enorgomic Device positioning and should be latest. Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent	**01**				
14	**ELECTRO HYDRUALIC OPERATING TABLE** Acentric structure, interchangeable head and leg plates, convenient for using X-ray and C-arm 4-section design to meet different requirements of surgical positions 350mm longitudinal shift, double back plates, Alternative pedal control, over ride control, Sable valley shaped base, 500mm table top height, Table length 2140mm, width 520mm, height 1100/600mm Operation load capacity 200 kgs or more Stable hydraulic system , high load-bearing and low movement noise Fast and solid assembling and disassembling with high quality pneumatic springs Detachable pad, soft, smooth and moisture-proof Stainless steel shell, antipollution and anticorrosive Wire handset control with touch keypad, safety lock in 30 seconds to prevent is operation Complete orthopedic and neuro attachments with all accessories should be quoted as standard in this unit. **OTHER ACCESSORIES:** Operation Table Main Body Pad for head plate 1pc Pad for back & lumbar plate 1pc	**01**				

	Pad for leg plate 2pcs Body belt 2pcs Hand belt 4pcs Leg belt 2pcs Arm rest plate (Level regulable) 2pcs Anaesthetic Screen Bracket (Portability) 1set Leg support (including locking piece) 2pcs Body support (including locking piece) 2pcs Shoulder support (including locking piece) 2pcs Remote Control 1pc Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent					
15	**<u>Anesthesia work station complete unit</u>** **Anesthesia machine:** 3 gased 02/no2/air With gas supplying box, flow meter for o2/no2/air Oxygen flush valve, alarm whistle for oxygen Supplying failure, no2 cut off valve for oxygen Supplying failure, pressure relief valve for Protection from over pressure, vaporizer Mounting rail, oxygen & nitrous oxide piping Station block with pressure gauge, Co2 absorber system complete with pop-off valve, Canister, manometer, 42” corrugated tube x 2, With hose, y/l connectors, mask, re breathing bag, With 02 latest vaporizers complete in all respect Original trolley with draws **Anesthesia ventilator:** Microprocessor, time controlled ventilator with digital display (ac / dc operated) for adult and infant (both compatible)ventilation rate: 5 to 80 bpm - tidal volume: max. 1500 ml for infant: 0 – 300 ml - i:e ratio 1:1.0-1:3.0 Pressure alarm limit – high and low 0 – 99 cmh2o Auto and manual alarm setting for high and low pressure Mute: 60 seconds alarm silence Pressure monitoring system built in Built in un interrupted power supply (ups) with automatic discharging for the long life of battery Display for: breathing rate, i.e ratio, low pressure Alarm limit, peak pressure & high pressure alarm limit Led indicator for apnea, high and low pressure alarm Low battery, internal battery for normal working	**01**				

	Under electric power failure. Complete with monitor and original trolley and accessories Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent					
16	**<u>ELECTROSURGICAL UNIT 300WATTSAND 400 WATTS</u>** Electro Surgical Unit designed for speed, Accuracy and simplicity incorporating Biopolar and monopolar outputs simultaneously and Work independently of each other and a second Monopolar output is available. Both Biopolar and monopolar generators should provide Cutting and coagulation output modes giving optional speed and Precision which is essential when the minimization of tissue damage Is a priority. Input Mains 230V a.c. 240V a.c. 220V a.c. 50/60Hz 11 0V a.c. Stabilised for ± 10% Monopolar Open Circui Power Crest Output Factor Voltage(peak) Normal cut 345W 1.9 1150 Blend 300W 3.0 2200 Cut (specialist) 345W 2.1 1500 Pinpoint Coag. 170W 5.1 2150 Spray Coag. 79W 8.7 4000 Nominal load 150-200 Ohms Bipolar Coag. high range 50W Variable 150 low range 15W Variable 23 Nominal load 100 Ohms Frequency Monopolar 475kHz Bipolar 785kHz Safety Built to comply with EN60601-1:1990 and IEC 60601-2-2:1998	**02**				

	Class 1 Defibrillator proof Drip-proof Leakage Currents Patient leakage (MSK) current: always less than 100 microamps to earth (ground) from all patient circuits at 230 50Hz for the unit in normal conditions. Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent					
17	**Baby incubator:** Microprossor controled unit with digital diplay Air temp control, skin temp control, builtin phottherpay LED light, Humidity display, complet with original trolley with cup board, Re232 interface, audio and visuable alamrs, auto shut down, Should have ultrasoinc and nebulized humidfication to Prevent bacterial infection and separate humidity setting With measurement display, , max levels of led light display. Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent	**01**				
18	**INFANT WARMER:** Dual channel micro processor controlled unit APGAR score and timer system for babies, Temp control modes, pre warming, skin temperature, Carborundum and far IR electric heater as standard, Adjustable operating light with lift system, X-Ray cassette tray, RS232 interface, networking, Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent	**01**				
19	**PHOT THERAPY LED TYPE:** Big area lighting to ensure sufficient treatment Fan free design to eliminate noise Time countdown to avoid over treatment mobile type with castor Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent	**01**				
20	**WASH CABIN FOR BEDS** Wash basin for beds in position with condense drying system 2 doors pass through unit. Measuring length 2.500mm width	**01**				

	2110 mm inclusing technical unit on right side, height 2850mm With condense drying 4 pieces ramps. Complete with water And electric al connections. The unit should guarantees 100% clean and disinfected items With thermo chemical cleaning and disinfection process for All type of beds, wheel chairs, mattress, all kind of trolley, Boxes, drums, bottles. Complete with trolley and cleaning material Note: unit should be latest and CE/TUV/ISO/EN marked/certified Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent					
21	**CLEANING AND DISINFECTING STEAM GENERATOR** Bioler: capacity: 3.5 to 5 lit (stainless steel) pressure 5 bar Steam temp: 150c, self filling device, steam outflow 150g.mn Tank capacity: 4 to 5 liters, with complete accessories. Latest steam generator for bio cleaning for hospital use Unit should ensure all kind of surfaces: floors, vertical surfaces, Furniture, equipment, medical devices, including bio cleaning trolley and accessories kit complete unit Note: unit should be latest and CE/TUV/ISO/en marked/certified Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent	**01**				
22	**BED PAN CLEANING AND DISINFECTION MACHINE** Cleaning and disinfection machine with thermal disinfection for Bed pan and urinals, unit with jutting machine inclusive of white WC seat with lid, complete drain. Software program with tank disinfection tft lcd display, WC and rim flushing usb interface, liquid spill sensor,urine bottles, nozzels, all poles switch thermal disinfectioncoll and drying system with automatic door Note: unit should be latest and ce/tuv/iso/en marked/certififed Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent					
23	**LAPROSCOPY & HYSTROSCOPY SET WITH ALL COMPLETE ACCESSORFIES:** 01 Hd monitor 24‖ or above Multiindication camera system includiing Led light source (image video/capturing) Zoom coupler f= 15 – 36 m	**01**				

	High glass zoom objective coated optical system Multi indication pump / basic unit for up to 4 indications Transport set laproscopy for activation of pump Irrigation tube set for activation of pump Vaccum tube set with integated filter Light cables for led light source Adopter for fiber optic Original equipment trolley with cable Potential equalization Holding device for lcd monitor Torlley mounted protecting holder Holder for camera head Holding shackle for camera head Cable winder for trolley/bottle support Adaptable infusion stand Integtaredcontorl unit for c02 heater Co2 heating tube, high pressure tube, Instruments set for laproscopy (complete set) Diagnostic hysteroscopy: Cystoscope/husteroscopeautoclavalbe Compelte with all instruements Surigical monopolar hysteroscopy: Cystoscope/hysteroscope 4mm or more Wortable length 300mm or more autoclavable Resectoscoope / unipolar cable / working elementWith all electodes Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent					
24	**<u>KICK BUCKET, STAINLESS STEEL</u>** **Material** Stainless steel **Capacity** approx: 12/15 litters **Castors**: electrically conductive and lockable **<u>IV STAND NORMAL CARE</u>** **Material** Stainless Steel Single handed safety height adjustment **Regulating range** 1.350 – 2.150mm or more **Tube diameter** 25/18mm **Length of outer tube** 1,000mm or more	**01** each				

	Base diameter 635mm or more **MOBILE LED EXAMINATION LAMP** **Light source** LED, central reflector 18 V / 12 W **Light output** appr. 4.300 K ± 200 K **Light field diameter** D10 100 / 160 mm at 500 / 1.000 mm **Luminous flux:** 160 lm or more **Electrical mains:** 100 - 240 V, 50 - 60 Hz **Base diameter** 635 mm or more **MOBILE TRANSFER CHAIRS WITH INFUSION POLE TREATMENT UNIT** **Material:** Stainless steel / Aluminum **Arm- and Leg rest:** Pad in flat version **Castors** 7 twin castors Ø 75 mm 3 out of them with wheel-brake **Seat mechanism:** must be Aluminum, black powder coated **Seat height adjustment** 155 mm or more with gas spring **Arm-/ Leg rest height adjustment** 830 - 1100 mm or more **CHILDREN IV POLE** **Material** must be aluminium / plastic **Bottle holder** plastic 4 safety bottle hooks 2 kg / hook **Regulating range** 1.350 - 2.000 mm or more **Tube diameter** 25 / 18 mm or more **Base diameter:** 635 mm or more **Total / base weight (net)** 3,0 / 1,3 kg or more **HOLDER FOR GLOVE DISPENSER 2-FOLD** **Material:** must be aluminum / coated **Size** 280 x 270 x 100 mm or more **Fixation** must be with quick-hand-fastener **DISINFECTANT DISPENSER WITHOUT PLATE FOR 500 ML BOTTLES** **DRIP BOWL** **Material** stainless steel / aluminium **Size** 300 x 200 x 100 mm **Fixation** with quick-hand-fastener Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent					
25	**HI-END ENT TREATMENT UNIT COMPLETE:** - It's full system for treatment and operating in Otolaryngology. - Efficient 2-suctions	**01**				

	- Convenient total control switches can control each functions easily - Safety auto-off switch for Heater, either manual switch or timer control switch(30sec) - Glass suction bottles are enough size in usage and good in cleaning - Artificial marble surface enables dust proof, easy to clean - Drawer typed built in Endoscope storage & UV sterilizer optimizes usability - Various optional accessories enable enlarge user's choice - Personal computer rack - Key board supporter with swiveling 2-folded arm - Marble top can use desk, chart or multi-function - Front body 105mm stainless cans, which are convenience for used instrument container - Suction bottle supports are drawer type which are enable to clean easily - Two-suction system enable user choose either one - Maximum 3 post pole to add up accessories conveniently - Six 83mm stainless can give enough space to use - Casters can move device easily to other place - Color variety: Gray or white - Main Instrument tray can heat for instrument - Suction bottle window enable user can check bottle liquid level easily - Medicine bottles with folded arm supporter are convenient to use - Suction device is automated micro-switch movement - Sprays are working automatically when pick up and stop working return to the holder - Instrument tray cover can protect instrument from being spoiled by dust and should semi-transparency to check inside also - Instrument cover should be made of acryl, which is not broken easily - Microscope for ENT with all accessories LED type latest standard **SPECIFICATIONS ;** - Power source: AC220V, 50/60Hz - Power consumption: 1200VA(Main body) - Air compressor: 250W, 2-way head. Max. air pressure 6Kgf/cm2 - Suction motor: 650~680mmHg negative pressure					

	- Dimensions: 1800(w) * 709(d) * 800(h), Post pole max. height: 1946mm(diff. 10%) - Weight: Approx. 178kg - Color: White or Black **CONFIGURATIONS** Main body & standard accessories - Spray: 4(Straight 3, Curved 1) - Suction: 2 - Endoscope storage drawer with UV sterilizer - Suction bottle: each 2 of 3000, 1000 & 500cc glass bottles - Ventilation with tube: 1 - Heater: 1 - Medicine tray & bottles: 1 - Illumination light: 1 - Power cable: 1 - **Patient's Chair automatic with remote** **FEATURES ;** - Full movement enough to diagnosis & operate - Comfortable & easy to control - Movement controlled by Food switch, button switches on back-rest, Unit control switch - Movement: up/down, front/rear - Automatic reset position after use - Noiseless smooth movement - Easy to rotate by manually 340deg. and fix it by foot pedal - Easy to clean surface of seat what are upholstered - Capacity of load up to 250kg - Made of solid steel structure - One-touch lock/unlock position set up to adjust height of head-rest - Steel parts should be painted anti-acid, anti-scratch, with strength - Auto-reset switch can make chair position back to default position to prepare easily for the next patient - Available in a variety of seat colors					

<table>
<tr>
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<td>
<u>SPECIFICATIONS;</u>
- Power consumption: 460VA
- 340° rotation by manual
- Up/down stroke: 210mm
- Back-rest: 5~95°
- Auto reset position: move back to standard position
- Rotatable armrest
- Weight: 85kg
Head rest: One touch lock system
Endoscopic Visual system
<u>SPECIFICATIONS;</u>
<table>
<tr><td>Camera</td><td>CCD 1/3” Gun type</td></tr>
<tr><td>Resolution</td><td>768 * 494 pixels</td></tr>
<tr><td>Source</td><td>LED 3.9V / 13.5A one channel</td></tr>
<tr><td>Dimensions</td><td>314(w) * 303(d) * 110(h)mm</td></tr>
<tr><td>Weight</td><td>6.5kg</td></tr>
<tr><td>Image backup</td><td>USB</td></tr>
</table>
<u>CONFIGURATIONS;</u>
- Light source main body): 1
- CCD camera or camera gun(Camera + Adaptor + Light cable): 1
- LCD Monitor(19”): 1
- Cart for independence or Arm sets for unit amount: 1
- Foot switch for capture.

Quoted product should be certified: FDA, CE , ISO, TUV
MAKE / ORIGIN U.S.A. Japan , Europe or equivalent
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<tr>
<td>26</td>
<td>
<u>CTG MACHINE</u>
The fetal monitor offers you the most cost effective CTG solution for obstetrical departments in offices ,clinics, and hospitals
• 12.1” Foldable Color Display / Multi Display mode
•Backup memory for seamless monitoring / USB port
</td>
<td>01</td><td></td><td></td><td></td><td></td>
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</table>

	•Compatible with 150/152 mm thermal recording paper •Large numeric and graphic display for ease of readability •Signals Overlap verification to separate twins FHR •Long life-Li-ion battery guarantees the mobility •Convenient probe rack and compact design • 60 hours backup memory for seamless monitoring • Builtin long life thermal printer Standard Configuration: 02 FHR, TOCO, AFM and Lion Battery with trolley Optional FetalStimultor, DECG IUP with accessories Note: The unit should be ***FDA/CE/ ISO / TUV/MDD certified*** Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent					
27	**HIGH END FETAL & MATERNAL MONITORING SYSTEM WITH TOUCH SCREEN AND WIRELESS TRANSDUCER SYSTEM (LATEST MODEL)** • 12.1" high resolution, color TFT-LCD screen • 12-crystal broad beam waterproof FHR transducer • Touch screen provides great ease of use • Fetal and maternal monitoring parameters both available • 24 hours backup memory for seamless monitoring • Three monitoring interfaces for different clinical needs • FHR signal quality indicator • Signals Overlap Verification to separate twins FHR • One-button operation gives access to start monitoring • Flat surface design and waterproof TOCO transducer • Built-in long life thermal printer • Compatible with 150/152 mm universal recording paper • Support American/International standard recording paper • Fast printing of stored traces • DECG & IUP parameters • Smart BP delay measurement • 200 NIBP records and 1440 maternal parameters lists playback • Continuous post-delivery monitoring with maternal parameters • Insight software for real-time and offline data transmission to PC • Built-in rechargeable battery for 4 hours continuous work • Wired & wireless central monitoring solution • Complete carting and mounting solution	**01**				

	• Wireless FHR and TOCO Probes standard • With original trolley shelves/arm **Standard ConfigurationParameters** **External Measurements** • Dual-FHR • TOCO • MFM • AFM **Internal Measurements** • DECG • IUP **Maternal Measurements** • MECG • NIBP • MSpO2 • TEMP Optional Fetal Stimulator, DECG IUP with accessories Safety : FDA approved , ISO , TUV approved , CE , MDD Mark Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent					
28	**<u>MULTI PARAMETER PATIENT MONITOR</u>** 12.1" color TFT LCD display (resolution: 1024 x 768 dots) with Touch-screen for easy operation Maximum 13 Waveforms or above standard Maximum 12-lead ECG analysis and display ST Segment Analysis Monitor Standard Parameters : SpO2, ECG, Resp, NIBP, Temp, PR Monitor Optional Parameters : Nellcor SpO2, 4-IBP, Respironics EtCO2, C.O., Multi-gas, Thermal Recorder for 3 traces Built–in rechargeable Li-ion battery for up to 4 hours with full capacity Nurse callMaximum interface include in standard: VGA, 2-USB, SD card, Ethernet port and defibrillator synchronization output Bi-directional communication with Central Monitoring System **ECG** Heart Rate Range : 15 ~ 350 bmp (± 1bpm) Lead Selection : 3 Leads (R, L, F or RA, LA, LL)	**01**				

	5 Leads (R, L, F, N, C or RA, LA, LL, RL, V) 12 Leads (optional) Sweep Speed : 12.5, 25, 50 mm/sec Gain Selection : x0.25, x0.5, x1, x2, cm/mV, Auto Input : 5-lead ECG Patient Cable **Respiration** Measurement Method : Impedance between R-F, R-L Resp. Rate Range : 0 ~ 150 rpm (± 1rpm) Accuracy : ± 2 rpm **NIBP** Method : Oscillometric Mode : Manual, Auto, Continues measuring interval in Auto Mode Repeat Cycle : 1 ~ 480 minutes Cuff Pressure Range : 0 ~ 290 mmHg (± 1 mmHg) Overpressure protection : Dual Overpressure protections **SpO2** Measuring Range : 0 ~ 100 % Alarm Range : 0 ~ 100 % Accuracy : Adult (including pediatric) ± 2(70 ~ 100 % SpO2) Neonate (including pediatric) ±3 (70 ~ 100 % SpO2) Accuracy : ± 3 bpm Pulse Rate Measuring & Alarm Range : 20 ~ 300 bpm **Standard :** 12.1“ inch Color TFT Screen, ECG, SpO2, NIBP, RESP, Temp and PR With original trolley Safety : FDA approved , ISO , TUV approved , CE , MDD Mark Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent					
29	**VIDEO COLPOSCOPE SYSTEM (LATEST)** With its bright LED cold lighting system, high resolution camera and electronic green filter,the video colposcope realizes full-screen display of the precise cervical examination which is very important to the gynecologist Electronic green filter enhances vascular image display without compromise of illumination •Advanced and fast auto-focusing system ensures clear image •Acetic acid and iodine reaction test timer to capture the right and precise image •LED cold lighting system realizes real view of tissue •Real –time display of magnification	**01**				

	•Powerful image display and data management software •1x-36x magnification range Complete with original trolley / swing arm / pc system Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent					
30	**VITAL SIGN MONITOR (NIBP+SP02+PR) WITH ORIGINAL TROLLY** Light weight and portable design Suitanble for adult/pards/neonate High resolution TFT color LCD screen 8/10” Auto/manual/continuous/ averafe BP mode 30000 or more nibp measuremement review 72 hours or more trend review 800 or more alaram review Built-in lion battery 7 to 8 hours Real time measurement and trend display Bar code scanner support as standard Powerful data storage Support USB flash drive Bi directional communication with central monitoring system Compatibale with pc data management sofftware Nurse call funtion, support hl7 via xml files Lan/wifi connectivity as optional Original mobile trolley with basket Note: product should be fda, ce & mdd approved/certified Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent	**01**				
31	**ECG MACHINE 3 CHANNELS TOUCH SCREEN** **Display COLOR LCD Screen Size 5 to 6”**, Vivid waveform display, Automatic ECG Measurement and interpretation software standard, Paper Speed: 5mm/s, 6.25mm/s, 10mm/s, 12.5mm/s, 25mm/s, 50mm/s (±3%) Auto/Manual/Rhythem work modes, Automatic baseline adjustment, Complete digital filtering, resisting baseline drift, AC and EMG interface, Lead off detection and alarm, Built in high resolution thermal printer, Built-in rechargeable Li-ion battery, for more than 5/6 hours backup, Large patient data storage 150/200 which can be enlarged by a USB flash disk, Communication interface: Ethernet/RS232/USD connections standard,	**01**				

	External USB printer port for connecting Laser printer/low cost printing, With all standard accessories with local mobile trolley. Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent.					
32	**12 CHANNELS ECG MACHINE:** LEAD: Standard 12 Leads RECORDING CHANNEL: 3, 6, 12 Ch ECG STORAGE: 500 ECGS OR MORE RECORDING PAPER: Z FOLD 8.5 INCH (A4 SIZE) LCD DISPLAY: BIG LCD COLOR DISPLAY SAMPLING RATE: 1000Hz A/D CONVERSION: 16BIT OR MORE COMMUNICATION:PC COMMUNICATION WITH RS232 INTERFACE AND LAN AS STANDARD PRINTER/WRITER: THERMAL ARRAY SENSITIVITY: 5, 10, 20mm/mV PAPER SPEED: 5, 10, 25, 50mm/s FILTERS 04: AC LINE FILTER, LOW PASS FILTER, ASELINE FILTER, MUSCLE FILTER. COMMAN MORE REJECTION: 100DB OR MORE PATIENT LEAGAGE CURRENT:10uA FREQUENCY RESPONSE: 0.05 – 150Hz FIRMWARE UPDATES: LATEST VIA USB MEMORY STICK WEIGHT: LESS THEN 5 KGS WITH BATTERY BATTERY: BUILTIN RECHARGABLE (14.4V. NI-MH) POWER: AC OR BATTERY (AC 110/240V – 50/60Hz) COMPLIANCE: CLASS I, TYPE CF WITH DEFIB. PROTECTION EEC DIRECTIVE FOR MEDICAL DEVICES, ISO9001:2000 FOR MEDICAL DEVICES. Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent	**01**				
33	**<u>CENTRAL MONITORING STATION WITH PC COMPLETE</u>** Central Monitoring System Up to 128 Monitors Arrhythmia Detection Patient waveform colors Programmable alarm processing	**01**				

	Trend processing Multi lead support Complete full disclosure system Strip chart recorder & graphics printer Bi-directional bedside support Ethernet network support 21 inch x 2 Color LCD Screens Minimum i7 pc/Processor Laser Printer Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent					
34	**DIGITAL PORTABLE ULTRASOUND BW DOPPLER SYSTEM** The system shall be designed for multipurpose applications including Abdominal , Obstetrics , Gynecological , Urological , Small Parts , Orthopedics , Peripheral Vessels and Cardiology. Shall support Multi Frequency Convex, Micro-Convex, Linear, Endorectal and Endovaginal Array Transducers. System Requirements: Shall have at least 2 selectable ports for Electronic Array Probes Unit should support Laser Printer and Video Printer, Washable Probes and Gel Holder, Unit should have built-in lithium rechargeable battery, continuous working for at least 2hours (bultin UPS/battery system) Technical Specifications: **1)** Operating and Display Modes : B-Mode , B/B-Mode , 4B-Mode, M-Mode , B/M-Mode, PW mode **2)** Imaging Depth : From 2 to 30cm, adjustable in 1cm step **3)** Zoom function: Both in real-time and frozen conditions, 8-segment at least adjustment **4)** M-Mode Sweep Speed : adjustable, at least 4-segment **5)** Cine-Memory: at least 256-frame, bi-directional, can be replayed auto and manual, replay speed can be adjustable, Cine-loop can be saved both in CIN and AVI format **6)** Image Orientation: Left / right inversion , Up / down inversion **7)** Image pseudo color display: at least 7 kinds, can be saved or printed **8)** Permanent Image Memory: Support different format, such as BMP, JPG, at least 500MB build-in image storage **9)** 256 Shades of Grey at least **10)** TGC Control: at least 8-segment **11)** Programmable Presets : Image parameters can be preset by exam-category, at least 7 types **12)** Image Processing: Tissue Harmonic Imaging; Multi-beam-forming; Phased Inversion harmonic imaging; Image resolution can be optimized by one button **13)** Display Annotations: Hospital name, Characters, Patient name, Patient ID Date and time , Active probe ,	**01**				

	Image orientation , Graybar , TGC-curve (graphic) , Gain and dynamic range , Imaging depth in cm , Acoustic Power, Frame Rate, **14)** Body Mark Annotations: No less than 100 types, must including probe's position and direction **15)** Image annotations: Default Phases no less than 100, Support user-defined comment storage **16)** Transmit Focus: Minimum 4 focuses synchronously,16-segment adjustable Transmit focal zone position **17)** Biopsy guidelines to guide needles during the biopsy **18)** Receive gain adjustable, from 0 dB to 130 dB, 2dB step **19)** Adjustable Dynamic Range from 30 dB to 150 dB, 4 dB step **20)** Monitor: LCD Monitor, 12" Minimum or above **21)** Operating Panel: Ergonomically , Backlit **22)** Calculation and Measurements : i) Professional software package for different application, including OB, GYN, Small Parts, Urology, Cardiology and Orthopedics, Peripheral Vessels ii) General Measurement Items: Distances, Circumferences, Areas, Angles, Volume, Angle and %Stenosis (B-Mode) Distance, Time, Velocity, Heart Rate and Slope (M-Mode) iii) OB measurement:Measurement Items, no less than 15 items, including BPD, HC, AC, FL, GS, CRL, AFI and EFW. Users could switch between different OB tables; OB formula no less than 10 types, including Hadlock1~4, Tokyo, Osaka, Merz1 and 2, Hansmann Fetal Growth Curves: System can display fetal growth in a graph chart according to some measurement items and their OB table **23)** Report: OB, GYN, Urological, Small parts, Cardiovascular, Orthopedics Report Format, can be previewed before printing and Images can be printed on Standard Laser Printer **24)** Power Requirements : Universal power supply 100-240 V, 50-60 Hz **25)** Peripheral ports: i) Support USB ports, both for USB disk and report printer ii) Support S-Video or Video output, compatible with PAL and NTSC iii) Support VGA output iv) DICOM output is optional for network **26)** Transducers: i) All transducers must be multi-frequency, no less than 5-segment ii) Frequency band: from 2.0MHz to 10.0MHz,including harmonic frequency					

<table>
<tr><td></td><td>iii) Convex Array Probe , Applications : Abdomen , Gynecology , Obstetrics , Urology ,
Dominate Frequency: 3.0 MHz , range: 2.5/3.5/4.5/H2.5/H2.7 (biopsy guide optional)
27)
No more than 7.5KG

Standard: Main unit with convex probe, battery, trolley and servo stabilizer.
Optional: Linear and TVS probes, Thermal Printer Model 898 Sony Japan.

Standard: Latest unit should be FDA and CE/MDD approved/certified.
Quoted product should be certified: FDA, CE , ISO, TUV
MAKE / ORIGIN U.S.A. Japan , Europe or equivalent</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>**35**</td><td>**AUDIOMETRIC BOOTH WITH AUDIOMETER COMPLETE ACCESSORIES**
- Finishing : Exterior – Spray coating / Interior – Steel punching panel(3Ø,5p)
- Ventilation system : With 3.0m 2/min(once per 2 minute)capacity, no noise and compulsory abrupt ventilation type
- Panel structure : With 100mm thickness/ external steel/ sound-absorbing material/ Sound-blocking sheet and so on./Finishing interior with punching steel
- Door : Double magnetic packing and 77mm thickness steel sound-proof door
- Window : Double intensified glass of 97 thickness air layer/ sound-proof window with 700mm X 600mm shape
- Light : 1 set of interior type 12W light facility inside panel
- Dimension : OUT : 1200(W) X 1200(D) X 2150(H)
- IN : 1000(W) X 1000(W) X 1800(H)
NOISE REDUCTION;
<table><tr><td>Center frequency Hz</td><td>125</td><td>250</td><td>500</td><td>1000</td><td>2000</td><td>4000</td><td>8000</td></tr><tr><td>Single wall room</td><td>26</td><td>35</td><td>40</td><td>47</td><td>54</td><td>59</td><td>61</td></tr></table>
Quoted product should be certified: FDA, CE , ISO, TUV
MAKE / ORIGIN U.S.A. Japan , Europe, Korea or equivalent</td><td>**01**</td><td></td><td></td><td></td><td></td></tr>
<tr><td>**36**</td><td>**ADVANCED COLOR DOPPLER ULTRASOUND MACHINE**
21.5 inch LED Medical Grade Monitor with up/down and left/right rotation.
12.1 inchMedical Grade Touch Screen.
Touch screen angle adjustment up to 10°
Articular Arm, Flexible Adjusting Control Panel including height and left/right rotation.
Built-in Gel Warmer
5 transducer ports with one additional Port for Pencil probe with automatic recognition.</td><td>**01**</td><td></td><td></td><td></td><td></td></tr>
</table>

	DICOM 3.0 Connectivity Multiple USB Ports and DVD-RW 500 Hard Disk. Wireless Wi-Fi Connection. Modes: 2D Mode., 3D Mode., Dual Mode / Quad Mode., Stress Echo ,User Defined Pre-set image settings.User Define Keys for Calculation. Speckle reduction Technology. 5-band adjustable frequency in B mode., Tissue characteristic index., Tissue Harmonic Imaging mode., Pulse Inversion Harmonic Imaging mode., Image rotation function., Spatial Compound imaging., Frequency Compound imaging., Trapezoidal imaging., Color mode., PDI mode., DPDI mode., PW mode., HPRF Support., Duplex and Triplex mode., FreeHand 3D., Anatomical M mode with multiple scan lines with rotatable angles., Color M mode., TDI mode., CW mode., Auto EF, Auto IMT, Live Spectral Auto Trace, Auto NT, Auto follicle Calculation., Real time panoramic imaging in 2D mode., Real time panoramic imaging in color flow mode., VIS Needle function for enhanced needle visualization for Biopsies and Interventional cases. Dual Live Mode: View B-mode image and Color Flow image side by side in two separate windows. Steer Mode: Beam angle steering for linear probe. DICOM transmission. DICOM Work List. DICOM MPPS. DICOM C-store. DICOM Q/R. One button image optimization for 2D, Color and PW modes.Biopsy guide through software. In built PDF reporting system with complete patient information, data and images. Contrast Imaging. Advanced Compression Elastography Imaging. Digital front-end technology. Multi-beam forming technology. C-Field beam for continuous dynamic focus for improved imaging. High pulse repetition frequency technology. 4D imaging 4D rendering mode with light source. 4D rendering mode with depth information. Dynamic Range: 20dB to 280dB (adjustable) Gain Control: Separate knobs for Gain control of B-Mode, M-Mode, Color-Mode, PW /CW-Mode. TGC: 8 bands Lateral Gain Compensation: 2 bands. Real Time Image Zoom: 0.8-10 times Physical Channels: 128 Nos. Digital Channels: > 98,000 Channels. Sampling Width: 0.3mm – 25mm (adjustable). B Mode Frame Rate: 1493 fps Color Mode Frame Rate: 200 fps GSC: 256 shades. Power: 1 – 100 (Adjustable) Cine Loop Playback: Up to 1000 frames.					

	Real time transfer of images and videos. Long video recording for continuous scanning and long procedures. FDA 510(k) and CE approved. **<u>Complete with:</u>** 1 x Convex Probe (1.0 – 7.0 MHz). 1 x Linear Probe (3.0 – 17.0 MHz). 1 x TVS Probe Printer Compatible UPS Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent					
37	**<u>DEFIBRILLATOR WITH COLOUR MONITOR RECORDER</u>** Latest Technology with Biphasic Waveform, Made for adult, pediatric and neonate patients. The monitored parameters are: ECG and heart frequency Should be lightweight and compact device, Modern and practical design, adequate for use in emergency cases and transportation within hospitals or in ambulances. With LCD High Resolution ColourDisplay . <u>Description:</u> • ECG Monitoring • High Resolution Thermal Head Printer . • AC Operated as well as Battery Back-up. • Auto/Manual Record. • One touch operation. • BIG LCD Colour Display. Power: AC: 100 to 265 VAC, 50/60 HZ External DC: 11 to 16 VDC Removable Battery Type: NiMH, 14.4V DC 4,5 A/h Max. Energy level 360 joules shock Full charge battery (completely discharged) 8 hours. Battery storage: Storing the battery for a long period under temperatures higher than 40 C will reduce battery capacity and its life cycle. Patients stored: >150 patients ECG: Recording of 2.5 hours continuous Storage: 15 seconds of ECG when in shock,	**01**				

	physiological alarm and panel events. Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent					
38	**MOBILE DOCTOR WORKSTATION** Wireless and broadband connection. Support usage of EMR (electronic medical records) / HIS / PACS / LIS. Aluminum alloy construction, durable powder paint. Aluminum alloy tabletop. Retractable shelf for keyboard. Mouse holder. Air spring from Germany. Height adjustable from 850mm to 1115mm. Four (dia 100mm) swivel casters, two with brakes. Mobile power and PC are optional **MOBILE NURSE WORKSTATION** Wireless and broadband connection. Modular ABS plastic tabletop and drawer. Aluminum alloy stands. Touch screen, compact computer and power system. Accessary: Mouse, keyboard, I.V pole, sharp container, trash can, storage box and mesh basket **MOBILE COMPUTING WORKSTATION (ELECTRONIC KEYLESS ENTRY)** ABS plastic tabletop. Twelve medication bins(size: 280mm×160mm×61mm) Accessed by password(keyless entry system); Each time a correct password is input, a corresponding green light will appear on the medication bin, the bin will be popping up automatically. Manual lock is available Accessory: I.V pole, sharp container, wire mesh basket, side storage, medication cup Dispenser **Mobile Doctor Workstation (Laptop)** Aluminum alloy and steel frame, durable powder paint. Keyboard shelf. Key lock to avoid laptop theft. Mouse holder. Air spring from Germany. USB port. Hole for cable connection. Power system is optional.	**01**				

	Overall Dimensions: 541mm×486mm×895mm or more **Automated Medication Dispensing & Supply System** The system offers a solution to the problem of providing secure, around-the clock access to medications (especially for some important medications and narcotics). Trolley offers reliable hardware and user-friendly software; The intuitive software can be mastered by nurses in about ten minutes. The system adopts both wireless communication and RJ45, which can connect seamlessly with HIS. Password or double authority management. The system can be individually configured to meet your needs. Specification: Steel construction, electrostatic painting ABS plastic drawers, 40 drawers total (305mmx87mmx47mm) or more Includes a touch screen, mini computer, battery pack and barcode scanner Working table：567mmx503mmx987mm or more **Multi-function Teleconferencing Terminal** For remote operation monitoring, ICU, and telemedicine. WIFI and broadband connection. Aluminum alloy frame. German air spring. Height range: 905-1135mm. Rotatable monitor bracket. Battery lasts 6 hours minimum. Working table: 550mmx500mmx905mm or more **Mobile Computer Trolley** Features designed for nurse. Providing convenience for medication delivery and HIS access anytime while the nurse makes round of wards, expanding the hospital information system to the patient bedside. Accommodates PC, monitor, lithium iron phosphate battery pack, power status indicator, Wifi and RJ45 connection port, loudspeaker. Aluminum alloy frame with powder coated finish, modular ABS plastic top. Two removable medication cassettes, eight bins with electronic label (net size: 200mmx110mmx63mm)；Key lock for bins and turn latch for cassettes. Accessory：Scanner gun bracket, I.V pole, wire mesh basket, pedal waste container, medication cup dispenser Option: scanner gun, electronic label Working Table: 604mmx457mmx1050mm or more					

	Hospital Information System Series Medication Cassette Transfer Trolley Match up with model YC-31-J-03520 Mobile Computer Cart. Eight removable medication cassette in dual sides. Medication bins size: 200mmx110mmx63mm Aluminum alloy frame with powder coated finish, modular ABS plastic top. Key lock for bins and turn latch for cassettes. Option: electronic label Working Table: 604mmx457mmx1280 mm or more ICU HD Visiting SystemHospital Information System Series The system uses computer and communication technology, combines medical technology, aims at improving visit and medical level, reducing medical expense and meeting people's visit demand. Encoder is based on H.264+、MPEG-4 video coding standard, multiresolution display; Support G.722.1、AMR-WB voice coding standard, provides multi-rate encoding （6Kbps ~32Kpbs） for complicated internet condition; Support simultaneous visiting room. Different rooms can use different visiting modes, and increase the number of visiting rooms according to user Real-time record audio, video and screen information such as, document sharing and collaborative browsing etc. Height adjustable: 850mm-1080mm Working table: 520mm×450mm×850mm or more **3D HD Surgery Broadcast System** With MVC coding standard and embedded OS ensure the qualities of stability, high definition, low bit rate and low delay. The system combines a variety of 3D signal sources, integration design, touch screen, front USB ports. Hardware encoding software solutions Intergration design. Operation on the touch screen. FULL HD 3D MVC coding.Support AAC MPEG-4 Support 3D TV, Autostereoscopic 3D mobile phone, PC with 3D graphic card and 3D screen MVC coding standard and embedded OS ensure the qualities of stability, high definition, low bit rate and low delay. The system combines a variety of 3D signal sources, integration design, touch screen, front USB ports.					

	Hardware encoding software solutions Intergration design. Operation on the touch screen. FULL HD 3D MVC coding.Support AAC MPEG-4 Support 3D TV, Autostereoscopic 3D mobile phone, PC with 3D graphic card and 3D screen Working table: 527mm×630mm×993mm or more Anesthesia Trolley Steel frame, durable powder paint. Artificial marble top. Four castors (dia 100mm), two with brakes. Working table: 605mm×410mm×977mm or more Operation, Anesthesia Series Waste Trolley Stable structure ABS plastic lids Include a buffer system, noiseless operation Additional disposable waste bag needed Overall Dimension: 808mm×570mm×910mm or more Operation, Anesthesia Series Safety Medication Dispensing Trolley Safety environment friendly. Steel frame, aluminum alloy stands. With functions of air filtering and ultraviolet disinfection and light, keep workers away from volatile drugs. Keep the top container isolate from outside, 95%filtration by active carbon, ensure all exhaust safe for human. Active carbon is fast and easy to be replaced. Include a power pack. Working table: 636mm×490mm×715mm or more , Nursing Series Difficult Intubation Crash Trolley (Keyless Entry System) Aluminum alloy frame, modular ABS plastic top Accommodates proximity card, pin code and key lock. Automatic relock according to a preset time. Ten tilt bins Accessory: Laptop holder, pedal waste container, sharp container. Working Table: 604 mm×457 mm×1030 mm or more					

	Emergency, Nursing Series Treatment Trolley Unique design. Chemsurf top, scratchproof, corrosion resistant. Max loading 100kg totally. Monitor bracket is opotional. Drawers configuration is optional. Working table: 544mm×470mm×965mm or more Emergency, Nursing Series Multi-purpose Treatment Trolley Steel frame with electrostatic powder coated finish, stainless steel top, light weight, rust proof, easy to move and strong structure The top open towards two sides, Five tilt bins, with removable material box, medication tray and mesh basket Sanitizer basket, sharp container, medical chart holder, trash can Working Table: 730mm×450mm×960mm or more **Treatment Trolley** Unique streamline design. Lightweight, stable structure. Steel shelf, raised edge. Automated absorb slides from Austria. Working table: 480mm×450mm×830mm or more **Medicine Trolley (Double Sides)** Aluminum alloy and ABS plastic frame. Modular ABS plastic top. Self-locking drawer, rust proof. Key centrol lock. 3"/6"/9" drawers are optional. Large/Medium/Small medicine trays are optional. Complete packing as the picture shown. Working table: 604mm×457mm×1030mm or more **Instrument Trolley** Aluminum alloy stands. Steel shelf. Detachable. Shelf adjustable. Cable container. Power socket. Grounding terminal.					

	Endoscope bracket. Monitor and camera bracket is optional. **I.V. Trolley** Steel frame, durable powder paint. ABS plastic top, sratchproof, corrosion resistant, leakproof, easy cleaning. Emergency, Nursing Series Linen Trolley Steel frame, durable powder paint. Removable canvas bag: 337mm×403mm×700mm. Complete packing as the picture shown. Working table: 475mm×463mm×825mm Emergency, Dirt Trolley Stainless steel frame. Cusomer-made is available. Bag can be changed easily for cleaning. Overall Dimensions: 855mm×610mm×890mm Spray Cart For nursing disabled. Hair and foot washing. Heat by heating pipes. Central panel. Overall Dimensions: 1100mm×505mm×870mm Medical Record Trolley Steel frame, durable powder paint. ABS plastic top,scratch proof, corrosion resistant, leakproof, easy cleaning. **Medicine Cabinet** Detachable. Aluminum alloy frame. Tempered glass door with lock, easy operating, noiseless. 13 units medicine trays totally. Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent					
39	**<u>MOBILE SUCTION MACHINE (HEAVY DUTY)</u>** MOBILE HEAVY DUTY SUCTION MACHINE FOR O.T/SURGERY/OB/GYNE (GENERAL PURPOSE) CONVIENENT HANDLE FOR EASY MOVEMNET	**01**				

	COMPARTMENT FOR KEEPING ASSESSORIES HIGH VACUMME AND HIGH FLOW RATE FLOW RATE 60/90 L/MIN (HEAVY DUTY) MAX. VACUUM PRESSURE: 675 MMHG TWO UNBREAKABLE & AUTOCLAVABLE JARS WITH ANTIBACTERAIL & HYDROHOBIC FILTER CAPACITY EACH JAR 4000/5000 ML OIL LESS PISTON TYPE VACUUM PUMP, OVER FLOW VALVE SYSTEM STANDARD SILICON AUTOCLAVABLE TUBES MOBILE ANTISTATIC CASTERS 04 WITH 02 BRAKES, FULL ABS STRONG BODY Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent					
40	**PORTABLE SUCTION MACHINE** FLOW RATE MIN: 35/40 L/MIN MAX. VACUUM PRESSURE: 650 mmHG OIL LESS PISTON TYPE PUMP COLLECTION BOTTLES WITH LID COLLECTION BOTTLE CAPACITY: 2000/3000 CC Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent	**01**				
41	**PROFESSIONAL ECG WORKSTATION** **18 CHANNELS ECG MACHINE:** **DISPLAY** **15" or more touch screen** Keyboard: Water proof alphanumeric keyboard LEAD: STANDARD 15/18 LEADS RECORDING CHANNEL: 9, 12, 15, 18 Channels ECG STORAGE: 1000 ECGS OR MORE RECORDING PAPER: Z FOLD 8.5 INCH (A4 SIZE) LCD DISPLAY: BIG LCD COLOR DISPLAY SAMPLING RATE: 1000Hz A/D CONVERSION: 16BIT OR MORE COMMUNICATION: PC COMMUNICATION WITH RS232 INTERFACE AND LAN AS STANDARD PRINTER/WRITER: THERMAL ARRAY SENSITIVITY: 5, 10, 20mm/mV PAPER SPEED: 5, 10, 25, 50mm/s FILTERS 04: AC LINE FILTER, LOW PASS FILTER,	01				

	ASELINE FILTER, MUSCLE FILTER. COMMAN MORE REJECTION: 100DB OR MORE PATIENT LEAGAGE CURRENT: 10uA FREQUENCY RESPONSE: 0.05 – 150Hz FIRMWARE UPDATES: LATEST VIA USB MEMORY STICK WEIGHT: LESS THEN 5 KGS WITH BATTERY BATTERY: BUILTIN RECHARGABLE (14.4V. NI-MH) POWER: AC OR BATTERY (AC 110/240V – 50/60Hz) COMPLIANCE: CLASS I, TYPE CF WITH DEFIB. PROTECTION EEC DIRECTIVE FOR MEDICAL DEVICES, ISO9001:2000 FOR MEDICAL DEVICES. Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent					
42	**PORTABLE DIGITAL COLOR DOPPLE IMAGING SYSTEM:** Unit should beportable 15" LCD and designed to be the most cost-efficient Color Doppler system for women's healthcare application with a full range of transducers for Obstetrics, GynecolOgy, Breast imaging, Small parts, Msk, vascular. Abdominal, urology. Unit should also provides a series of advanced imaging techniques, such as THI, HPRF and freehand 3D imaging, even real time 4D imaging Specialized in OBIGYN exams, and for General Purpose/Abdominal use in a hospital. Features: ● **Reliable 20 image with advanced transducer techniques:** Dead B mode, conveniently AFI measurement NI-Tuning: one button image optimization for 2D and spectral Doppler Maximum penetration up to 32.9 cm Endocavity transducer with wide 150 'scanning angle Endocavity transducer with temperature detectron technology ● **Specialized OB/GYN software package enables better quantification and calculation:** Obstetrical GS, CRL, BPD, FIC, AC, FL, CER. OFD, Fibula, AA, etc Gynecological- UT-L, UT-H, UT-W, Cx, EN-T, AFI, OV UMW, etc Measurement Methods: Hadlock, Jeanty, Kurtz, Hansman, Nelson, Tokyo, etc. EFW Measurement Methods, WEI/SAB, Shepard, Hadlock, Hansmann, etc. ● **Freehand 3D imaging:** Freehand 3D imaging supported by all transducers	**01**				

	Real-time zooming capability to acquire more image details Complete rendering modes, including MaxIP, X-ray and Volume; help observe different physical structures, such as bones, vessels and tumors Fast switch between single, double and multi-window review, provides more flexibility • **Optional update** to real-time **4D,** for **better visualization of** the **fetus:** High quality volumetric 4D transducer realizes precise automatic scanning to construct 3D volume data with superb accuracy Multi Slice: displays images slice by slice, allows doctors to analyze the images and locate lesion in certain slice Clip Plane: freely adjust and analyze the slice in 4D mode Cine Review: Review the images of fetus, enables the doctors to compare end analyze the movement of fetus Trace Cut: Gut the residues and interferences, to display a clearer image • **User-friendly 0 B measurement and** report Provide user-definable OB formulae function User-definable Growth Rate Charts and EFW method Four fetuses' professional OB report Ten Shortcut keys for 08 measurement items **Standard Configurations** 15" High Resolution LCD color monitor Two transducer connectors USB 2.0/ Hard Disk 320 G **Standard Software include:** Imaging modes: B/ 2B/ 4B/ M/ THI/ CFM/ PDI/ DirPDI/ PW/ Compounding Imaging, M-Tuning: one button image optimization **With 02 standard probes:** Convex array Multi frequency 2-6Mhz Linear array Multi frequency 17Mhz Optional Phased Array Adult Bultin battery/UPS and BW Thermal Printer Note: **This offered unit should be FDA/CE certified.** Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent					

43	**<u>MODULAR PATIENT MONITOR SYSTEM (LATEST HIGH END)</u>** Modular Design Large 17" high resolution color TFT-LCD touch screen Pacemaker detection, electrosurgical interference proof Defibrillation protection and defibrillation synchronization Unique iSEAP algorithm specially optimized for arrhythmia patients Dual-mode anti-interference pulse oximetry Clinically validated NIBP Powerful data storage capacity VGA output and analog output Support barcode scanner Built-in rechargeable Li-ion battery Bi-directional communication with MFM-CMS central station Nurse call function standard Support HL7 via XML files / LAN/Wi-Fi connectivity standard module/ monitor / ECG /NIBP/SPO2 /PR /Resp/Temp With original wall mount **Optional modules to be quoted separately:** AG module, 2/4IBP, ETCO2 Main stream, BIS Module, **Standard Parameters:** Module for 5 leads ECG, SpO2, RESP, Temp, Module for 2IBP, Module for Etco2 side stream, Extension Module Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent	**01**				
44	**<u>Modular Operation Theatre (Glass Walls)</u>** Consisting Of Following Items: Suspended False Ceiling Ceiling Light For OT Air Intake Modules Digital Stop Watch Builtin Panel for electric Builtin Control Panel Module Text Display Xray Film Viewer Stainless Steel Cabinet Single Automatic Door Swing Double Automatic Door Swing Hinged Door	**01**				

	Conductive Flooring Laminar Air Flow Unit HVAC System Including AHU, Condenser MCC Electrical Work Refrigerating Machine/Compressor Work Station Table Pass Through Window Medical Grade Display For OT Modular OT Should Be Equipped With: Led Operating Light Double Dome Electrohydrualic Ot Table 4/5 Section Anesthesia Machine With Ventilator Electrosurgical Unit 400 Watts Surgical Pendandt Dual Arm Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent					
45	**AUTOMATIC SLIDING DOOR FOR ICU** OVERALL DIMENSION 3600X2500MM MANUAL SLIDING AND MANUAL FOLDING ARCHITRAVEFOR SLIDING CARRIERS INTIGRATION INNER AND OUTER PULL HANDLE IN SS CLEAR LAMINATED GLASS 4+4/1 MM	**01**				
46	**AUTOMATIC SURGICAL SCRUB FOR 02 SS WITH TAP SENSOR FOR ICU** SS QUALITY AISI304 SURFACEFINISH 2BA SATIN LENGTH 1400MM DEPTH 445MM RIGHT SIDE DRAIN HIGH BACK SPLASH FIXATION TO WALL INCLUDED ELECTRONIC TAP WITH SENSOR Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent	**01**				

47	**OR DOOR AUTOMATIC HERMATIC SLIDING DOOR FOR ICU** 01 DOOR LEAF WITH PROFILE IN ALMINUM SILVER ANODIZED WITH COLOURED GLASS 5+5/1 CLEAR PASSAGE DIMENSION 1400X2100MM REGISTERABLE COVER 90MM HEIGHT, DOOR LEAF 45MM FRAME 90X65MM IN SS AISI304 MATT WITH SUPPORTING SYSTEM AWAQ Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent	**01**				
48	**OT AND ICU WALL PANEL, ANTI BECTARIAL SIZE 4 & 12MM** HIGH PRESSURE COMPACT LAMINATE NON TOXIC AND TOTALLY HYGENIC, FIRE RESISTANT, STRONG RESISTANCE TO SCRATCH AND IMPACT SELF SUPORTING AND LOND TERM STABILITY Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent	**01**				
49	**ICU DOUBLE DOOR COMPELTE WITH GLASS AND ATTACHMENTS** Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent	**01**				
50	FLOORING FOR OT AND ICU ANTI BECTARIAL, HEAT PROOF, ANTI STATIC, SPECIAL FOR HYGENIC HEALTHCARE PURPOSE Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent	**01**				
51	**ANATOMAGE TABLE AND ANATOMAGE TABLE CONVERTIBLE:** LENGTH: 87”, HEIGHT: 33” WIDTH: 28” DIPLAY SIZE: 84” SCREEN: 23” X 81” TYPE: 5MM TEMPERED GLASS, MULTI TOUCH SURFACE, INDUSTRIAL LCD DISPLAY, EXTERNAL USB (3) VIDEO OUTPUT (2), IEC POWER INLET, RJ45 NETWORK CONNECTION THE ACUURACY OF THE REAL HUMAN ANATOMEY AND THE QUANITTY OF THE CLINICAL EXAMPLES ARE UNIQUE ASPECTS OF THE ANOTOMAGE TABLE, COMBINED WITH POWERFUL HARDWARE AND SOFTWARE, THE TABLE SHOULD OFFER UNPRECENDTEND ADVANCE TECHNOLOGY FOR MEDICAL EDUCATION, STUDENTS SHOULD BE MOTIVATED AND CAN BE EASILY DIGEST COMPLICATED 3D SHAPES FOR HUMAN ANOTOMY WHICH MAKES THE TABLE VERY EFFECTIVE ANATOMY EDUCATION. THE OFFERED TABLE SHOULD BE OF HIGH QUALITY LAB EXPERIENCE WITHOUT ANY CHEMICALS NO LEAKS, NO ENVIORMENTAL CONCERNS, NO ADDITIONAL VENTIALTION REQUIRED. TABLE SHOULD COVER FULL ANATOMY CLASS, MORE EFFECTIVE THEN EM BALMED CADAVERS, TABLE CAN BE USED IN CONJUNTION WITH EXISITING ACAVER DISSECTIONS, TABLE CAN BE USED DURING LECTURES SINCE IT CAN CONTACT TO PROJECTOR, STRONG PATHOLOCGICAL AND PROCEDURAL TRAINING TOOL, VISIULAZATION IS EASIER FOR PATIENTS WHEN VIEWING 3D COLOR, TABLE IS CAN BE USED FOR FORENSICE AND VIRTUAL AUTOPSY PURPOSE,	**02**				

	THE CAN BE ALSO USED FOR VETERINARY USAGE TOO, GROSS ANATOMY CONTNTS, REGIONAL ANATOMY CONTENTS, RADIOLOGICAL IMAGING WORKSATION, INTERACTIVE CUTTING SEGMENTATION FULL ANNOTAITONS, QUIZ MODE, LIFE SIZE DISPLAY AND BED FORM FACTOR, 4D SCANS, COMPARITIVE ANALYSIS, CLASS ROOM INTERGATUON, VOLMTERIC SOFWARE PERFORM AND CAPTURE SIMULATIONS, SHOULD BE ALL STANDARD ACCESSORIES/INSTALLATION/COMMISSIONING/TRAINING NOTE: UNT SHOULD BE LATEST AND FDA AND CE APPROVED Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent					
52	**ETT System complete with 12 Channels ECG Machine with STRESS FUNCION and complete with Treadmill** **Introduction:** The twelve-channel ECG Machine which support both resting ECG and Exercise ECG. Alphanumeric keyboard and one touch operation design to make it a perfect choice. **Features:** 12.1 inch high-resolution foldable color TFT touch-screen Specific function keys for Exercise ECG test Complete digital filters, resisting baseline drift, AC and EMG interference Ethernet and RS-232 interface for data transmission to PC Built-in rechargeable Lithium battery for up to 4 hour backup Sleep mode for saving energy and extending LCD life Real-time waveform freezing 120 seconds ECG waveform reviewable Waveforms and auto-diagnosis results preview before printing Automatic arrhythmia detection and recording 180 ECGs recording in internal memory Automatic measurement and interpretation Heart rate variability (HRV) analysis **Standard Accessories:** ECG Machine 12 channel with stress with original trolley, Treadmill latest USA,Optional:Exercise Blood Pressure Monitor, Bicycle compete with all accessories. Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent					
53	**PASSENGER LIFT 2 TYPES** Capacity;1000 KG as per European /KG as per European / Korean Standard Speed (m/s) : 1.0 m/s Drive : With Gear Control System : Variable Voltage Variable Frequency Control (VVVF) Traction : Electric Indirect Traction	**02**				

	Stop : 04 Stops 04 Opening Serving Floors: G+1+2+3(04) Car Entrance Size: Through Door Opening (opening size 1200x2100) Power / Voltage: 380 Volts AC 50 Hz Three (3) Phase Lighting Voltage: 440/220 V(+/-3%) Frequency: 50 Hz (Sharp) Machine Type: With Gear Box Counter Weight : Complete with Concrete with MS Frame Safety Gear (Speed Governor): Progressive for Car mechanical safety Roping System: One by one (1/1) Steel Rope Dimensions: Approx. width 1420xDepth 1900mm can be verified/checked physically at Site. Car Size: 1500x2500mm (Well Size) Type of Entrance: Door Central Opening and Closing (2-Pane Centre Opening) Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent					
54	**HIGH END TRANSPORT MONITOR (SHOCK & WATER PROOF)** **FOR AMBULANCES/EMERGENCY/TRANSPORTATION (FDA)** RESISTANCE PERFORMANCE SIGNAL INTENSITY MEASUREMENT AS A BLOOD PERFUSION INDICATIOR NIBP ALGORITHIM OPTIMIZED FOR CARDIAC PATIENTS, HYPERTENSIVE PATIENTS AND NEONATAL PATIENTS LATEST NO FAN DESIGN, BI DIRECTIONAL COMMUNICAITON WITH CENTRAL MONITORING SYSTEM, SUPPORT HL7 VIA XML FILES WITH RECHARABLE LION BATTERY 4 HOURS, TOUCH SCREEN STANDARD Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent	**01**				
55	**MEDICAL OXYGEN FILLING STATION UNIT WITH COMPLETE RAMP** Capacity: 7/10 Cylinders per hour basis, 5 liters to 50 liters all cylinders type Inlet pressure 5 Bar or more Discharge pressure: 150 Bar or more Ramp for two cylinders or more Complete system with all parts and installation and commissioning. Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent	**01**				
56	**MOBILE BP MERCURY TYOE WITH WHEELS** Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent	**01**				
57	**MOBILE BP APPARATUS DIAL TYPE**	**01**				

	Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent					
58	**STETHOSCOPE DUAL HEAD** Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent	**01**				
60	**LED VIEWER SLIM TYPE 1/2/3/4 SECTIONS / SENSOR TYPE** Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent	**01**				
61	**LABORATORY / HOSPITAL USE SLAB DIFFERENT SIZE / COLORS** Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent	**01**				
62	**MODULAR DIAGNOSTIC SYSTEM WITH FOLLOWING ITEMS:** Vital Sign Monitor, BP Dial Type, Auto scope, Largo scope latest, Ear Thermometer with wall fitting (one package) Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent	**01**				
63	**TROLLEY / GURNEY (DUAL-PURPOSE IMAGING TABLE & TRAUMA STRETCHER)** The trolley /gurney top height can be adjusted vertically by 0 to 340mm via a foot operated switches, either end can be individually adjusting to allow Trendelenburg angles up to +/- 10 degrees. Radiolucent Carbon Fiber Patient Safety Rails – Either rail can be left in place during normal 2D x-ray procedures, adjusted to different off-setting heights and/or fully retracted, as needed. Patient X-ray Capacity: 200 to 300 kgs / 440 to 660 lbs. Dimensions: 2240 x 740 x 810 (LxWxH) FDA/CE/Certified products should be quoted to be attached with Low Dose X-Ray Unit/System. Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent	**02**				
64	**<u>RO SYSTEM FOR 15 TO 20 MACHINES.</u>** System : Direct Feed / Loop Base **Permeate Capacity : 800 Ltr/H** **Concentrate Flow : 600 Ltr/H** **Salt Rejection : 98%** **Permeate Pressure : 2 ~ 3 Bar** **Frame : Stainless Steel** **Tubing : Stainless Steel** **Membrane Housing : Stainless Steel** ▪ Multistage Pump Three Phase **02** ▪ Pump Throttling Valve ▪ R.O. Membrane (8x40) **01** ▪ SS Membrane Housing Dead space free (8x40) **01**	**02**				

	▪ SS Membrane End Caps Flange Type ▪ 5-Micron Sediment Pre-Filter with SS Plate ▪ Concentrate Pressure Gauge ▪ Loop to Pressure Gauge ▪ Loop from Pressure Gauge ▪ Low pressure cut-off switch ▪ Loop pressure cut-off switch ▪ Pump High Pressure cut off switch ▪ Permeate Flow Meter ▪ Concentrate Flow Meter ▪ Concentrate Recycle Flow Meter ▪ Loop Return Flow Meter ▪ Electric Console ▪ System controlling P.C.B. ▪ Four Color patrol lamp ▪ Loop / Product Water (T.D.S, Conductivity, Temperature) Meter ▪ Feed Water (T.D.S, Conductivity, Temperature) Meter ▪ Emergency Stop ▪ R.O internal fitting completely argon welded SS along with Frame **a. Automatic Multimedia Sand Filter (13X54) 01** **b. Automatic Activated carbon Filter (13X54) 01** **c. Automatic Water Softener (16X65) 02** **d. Booster Pump with Pressure Kit 1Hp 220v 01** **e. Sediment Filter 20" Slim 02** Origin : Local Assembled					
65	**DIALYZER RE-PROCESSOR** Electricity: 100-240 VAC 50/60 Hz. Consumption (max): 130 W Water Quality: Must meet ANSI/AAMI RD-62 and RD-67. Feed Flow: 2 to 4 liters/minute at 25 psig. Dialyzer Reprocessing Type: All Types. Process: Automatic Cleaning, Volume Measuring, Leak Testing and Chemical Filling. Reprocessing time: Approximately 10 minutes/cycle. Water consumption: Approximately 25 liters/cycle. Dialyzer reprocessing Program (Low Flux), (Medium Flux), (High Flux) Other programs: (Disinfection), (Force Rinse), (Self Test), (System Cleaning) Display Type: VFD (Vacuum Fluorescent Display) Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent	**01**				

66	**HEMODIALYSIS MACHINE** • Large Display LCD Touch Screen 12.1” • Chemical and Hot water disinfection mechanism with auto and multiple function. • Digital and graphical monitoring of all parameters • Machine Self-test • Battery Back Up System • Purification of Dialysate System • Accurate Ultrafiltration • Dialysate Filter • Machine & Treatment History • Ultra filtration with diffusion and without diffusion. • Blood pump flow setting40 to 600 ml/min. • Blood Pump Adjustable • Air Bubble Detector at 250 flow rate 0.02ml 0.0003ml bubbles • Blood leak Detector. • Volumetric UF Control. • Maintain temperature • Maintenance Window to monitor the Operation of Each Function • Flow Diagramed for checking each part of Hydraulic Circuit • Profiling (Ultra-Filtration , Conductivity) • Universal Machine for to use with any type of Standard Disposables and Disinfectant easily available in open market and not bonding with special brand. • Every Vendor should quote their Latest Models Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent	**10**				
67	**MEDICAL WASTE NATURAL GAS FIRED INCINERATOR (100KG/H)** • Horizontal solid hearth, refractory lined Primary Combustion Chamber (PCC) • Batch load door • Full sized PCC bulk load and ash removal door • 1 off PCC ignition burner(s) – temperature controlled (Singe Stage) • 1 off PCC Thermocouple • 1 off combustion air supply fan and distribution system	**01**				

	• High Temperature secondary combustion chamber • 1 off afterburner – temperature controlled (dual stage) • 1 off SCC Thermocouple • Control panel – automatic operation complete with Temperature indication for Primary and Secondary chambers • Chimney to a height of 7.0 meters • Fitted and fully tested prior to dispatch • Refractory curing in our works • 2 sets of O & M Manuals (English only) Design Burn Rate : 100 kg/hr Duration of Operation : up to 12 h/day Waste : Medical Waste Calorific Value (ARCV) of Waste : up to 16,750 kj/kg (4,000 kcal/kg) Ash Content of Waste : 5 to 10% w/w Volumetric Reducation : Circa 90 to 96% Auxiliary Fuel : Natural Gas Secondary Chamber operation Temp : 850 to 1000C VOC Thermal Destruction Efficiency : > 99.5% Maximum Noise Level : 82 db [A] @1m Ambient Operating Condition : -5C to 55C Fuel Consumption Natural Gas : 8.1m3/h Electrical Consumption : 2.44 kWh/h (Average SF100), 3.29 kWh/h (Average SF100+ Scr **Bulk Density of Waste** Design : 120 kg/m3 (assumed) Minimum : 60 kg/m3 Maximum : 350 kg/m3 **Moisture Content of Waste** Design : 15% Minimum : 0% Maximum : 65% **Design Standards** Designed in accordance with BS3316 CE Certificated to BS EN 746.2 1997 (Industrial thermo-processing equipment) Low Voltage directive 73/23/EEC					

	<u>Environmental Standards</u> World Bank Emission Standards UK Clean Air Act 1993 British Standards Hospital Incinerator BS3316 Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent					
68	**BLOOD BANK REFEIGERATED CENTRIFUGE (CRYOFUGE) Qty:01** • **Swing out Rotor 6x1000mlMax RPM:** 4250 **Max RCF** 5735g • **Buckets 1000ml set of 06** • **Blood Bag Adaptors** - Floor stand, refrigerated, high capacity centrifuge - Dedicated to clinical applications - Dimension (w-d-h mm): 780 - 900 - 945 **BLOOD BANK REFRIGERATOR** **142 L / 66 BAGS 2°C to 10°C 230V- 50HZCE CERTIFIED Qty:01** **Chart Paper (11cm Dia -5 to +60C) Pack of 52** • Temperature Controller With Alarm/Monitor System 1. Mounted In Door 2. Led Digital Display Of Chamber Temperature 3. Programmable Operating Temperature Range 4. Single Temperature Probe 5. Programmable High And Low Temperature Alarms With Visual And Audible Indicators 6. Manual Alarm Checks • Auto Condensate Evaporation System • 2 Solid Stainless Steel Drawers W/ Sure-Grip • Bacteria-Resistant Powder Coated Interior And Exterior • Door W/ Innovative Sure-Seal System With Magnetic Closure And Self Closing • Under counter, Free-Standing, And Stackable	**01 set**				

	• 7-Day Inkless Chart Recorder • 4 Leveling Feet • Key Lock • R134a Non-Cfc Gas, Cfc/HCFC Free **BENCH TUBE SEALER WITH SEALING HAND UNIT** **Qty:01** • Bench top, heavy-duty sealer, easy to operate • Built-in sealing head, detachable and easy to clean, providing spatter protection • Sealing progress displayed on LED indicator • Accepts extensive range of the blood bag tubes, through automatic detection • No pre-heating required • Optional mobile, hand held sealing unit is available upon request **Tubing diameter** 2 - 6 mm **Sealing time** . 8 - 1.2 sec **Dimensions (WxDxH)** 123 x 302 x 243 mm **Weight** 8 kg **Electrical supply** 20V - 50/60Hz **BLOOD COLLECTION MONITOR** **Qty:01** • Easy to operate, economic mixer with built-in emergency back up • Equipped with LCD screen and visual / audible alarms • Accepts wide range of blood bag types and sizes • Digital weight calibration • Accurate weighing and mixing technology • Optional accessories such as bar code reader and portable battery are available upon request **Tray speed (adjustable)** 15 - 45 RPM **Collection volume** (1 ml increment) 0 ~ 999 ml **Total weight** (programmed with 1 g increment) 0 ~ 1,500 g **Target volume set** 0 ~ 4 figures (adjustable between 10 ~ 600ml) **Preprogrammed target volumes** 350/400/450/500 **Dimensions (WxDxH)** 190 x 290 x 158 mm **Weight (with battery)** 1.8 kg					

	Electrical supply 220V - 50/60Hz Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent					
`69	**PATIENT SHOWER TROLLEY** • Height-adjustable shower trolley. • Hydraulic or electric version. • Sturdy stretcher with gentle slope for water run-off. • Automatic leveling when lowered against a bed. • Stretcher with hinged side supports, including double safety latches. • Tiltable sideways for optimum cleaning and drying. • Soft mattress with recessed drain and run-off channels. • Head pillow and drain plug. • Horizontal adjustment lever. • Electric version, battery-powered with removable and rechargeable battery. • Electric version, handheld control unit for raising and lowering. • Brakes on all four castors. • Straight steering device on two castors. • Drainage hose with dual holders. • Electric version, extra batteries and charger available. • Lifting capacity 150 kg (330 lbs). Max total safe working load 175 kg Max resident/patient weight 150 kg Lifting stroke 320 mm (12 1/2”) Height, top position to stretcher 570-890 mm (22 1/2-35”) Weight 74 kg Width, stretcher 650 mm (25 1/2”) Total width (incl. side supports) 760 mm (30”) Total length (different stretcher lengths) 1600 mm (63") 1850 to 1950 mm (73 to 76 3/4”) 2250 mm (88 1/2”) Length of chassis (incl. wheel frame) 980 mm (38 1/2”) Height of chassis 150 mm (6”) Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent	**06**				

70	**PATIENT LIFTER:** • Flexibility for the diverse challenges of everyday care • The attachment enables smooth switching between different spreader bars. • Various different resident/patient interfaces to choose from, with the widest range of spreader bars in the market. • The most comprehensive range of slings available. • Stability for safe, comfortable transfers • A vertical lifting action.n - Stable Vertical System (SVS) - means safer lifting routines. • Dynamic Positioning System (DPS) spreader bars help to prevent the sling from swinging during transfers. • Reliability for high quality care routines at all times • Proven durability record - the actuator is tested for thousands of cycles. • High quality battery-powered features that the caregiver and resident/patient can rely on. • Supplied with two batteries as standard, allowing reliable 24 hour use • Safe working load 227 kg (500 lbs). • Positioning handle for precise handling during transfers. • Stable Vertical System (SVS) comprising: a vertical lift, anti-swing, jib, pivot point spreader bar attached and clip sling design. • Ergonomically designed manoeuvring handle. • Slings with a body contoured design for maximum comfort, • Colour-coded bar chart on the spreader bar for identification of the correct sling size. • Sling attachment for spreader bar, with a four-point keyhole clip system. • Electrical opening chassis operated via the handheld control unit. • A Battery Discharge Indicator (BDI) with colour display to indicate remaining battery power level. • Additional audible warning signal to indicate that the battery requires changing. • Handheld control unit for complete control when working with residents/patients. • Secondary operating controls mounted on the mast. • A service indicator measured in hours provides accurate actuator usage, indicating service requirements. • System failure override. • Automatic safety cut-off if lowered onto an obstacle. • Low friction castors, rear two with brakes Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent	**01**				
71	**PATIENT CEILING LIFTER:** • Full room coverage. The X-Y system allows full room coverage and can be installed in various ways, including solutions such as embedded track and wall mounting. • Embedded solution is mounted into the ceiling, which enables a more discrete look, as well as increasing the lifting stroke.	**01**				

	• ECS (Enhanced Charging System) ensures the lift is always ready for use, as the batteries are continuously charged wherever the lift is located on the track. • Curtain pass- through solution. Through a gap in KWIKtrak, curtain cass pass through to provide privacy for a patient. • Mirror strip can easily be attached to the track and reflects the surroundings and thereby allowing the track to blend in more to the environment. • gates • turntable • exchangers • Semi-permanent solution - "GANTRY" system Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent					
72	**HEMATOLOGY ANALYSER** • 3 part differential with 22 parameters • Throughput minimum 60 samples/hour • Memory for last 50000 sample • Touch color screen for easy operation • Built-in mixer for up to 5 sample at time • MPA micro-capillary adapter for capillary samples without pre-dilution • QC program (Mean,SD,CV,Levey-Jennings plot and X-B with>10,000 sample history) • Virtual incorporated keyboard(External keyboard possible) • Open tube inlet as well as pre-dilution • Sipping volume minimum 90UL • Automatic barcode reading option • Floating Discriminator • Motor driven closed tube adapter • Built-in self test program • Automatic HGB blanking • Automatic Orifice Cleaning Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent	**01**				
73	**FULLY AUTOMATED CHEMISTRY ANLYZER** **General Performance Throughput** **Combined** Throughput (ISE+Photometry) 200 test/h (without electrolytes) 267 test/h (3 channels) 300 test/h (4 channels)	**01**				

		Principles of analysis	Colorimetry, turbidimetry, ISE method:Na+,K+,Cl(Li+ as optional)						
		Sample and reagent handling							
		Capacity of rotor	88 (44 bottles of 20 mL, 60 mL or sample tube + 44 bottles of 20 mL or sample tubes)						
		Barcode Detector	YES						
		Sample tube size	Diameter from 12 mm to 16 mm (height up to 100 mm)						
		Pediatric well	13.5 mm diameter						
		Type of syringe	Ceramic piston pump with low maintenance						
		Pipetting volume	from 2 µL to 40 µL						
		Pipetting resolution	0.1 µL						
		Dilution (Pre/Post) Ratio	From 1:1 to 1:200						
		Level detection	Yes						
		Tip wash	Inside and outside						
		Clot detector	Yes						
		Vertical collision detector	Yes						
		Volume of reagent bottles	20 mL, 60 mL						
		Cooling Unit	Yes (Samples & Reagents)						
		Temperature range of refrigerator	From 6° C to 11° C (measured at 21° C)						
		Reagent volume R1	From 90 µL to 300 µL						
		Reagent volume R2	From 10 µL to 100 µ						
		Reactions rotor							
		Minimum reaction volume	180 µL						
		Maximum reaction volume	440 µL						
		Number of wells	120						
		Well material	UV methacrylate						
		Type of incubation	5 min (fixed)						
		Temperature reaction rotor	37 ° C						
		Accuracy of temperature	± 0.2 ° C						
		Temperature stability	± 0.1 ° C						
		Mixers	1						
		Cuvette washing system							
		Washing station type	7 step with drying						
		Consumption of washing solution	1.42 mL/cycle (=7.11 µLcws*)						
		Optical System							
		Light Source	LED + Hard Coating filter						
		Number of wavelengths	8						

	Wavelengths Filters bandwidth Photometric range Internal resolution Detector Measurement accuracy (for 340 nm, 405 nm and 505 nm)	340 - 405 - 505 - 535 - 560 - 600 - 635 - 670 nm ± 2 nm -0.2 to 3.5 A 0.0001 Main Photodiode + reference photodiode CV < 1% at 0.1 A CV < 0.1% at 2 A						
	ISE Module (optional) Sample type Electrode type Sample volume	 Serum, Plasma or Urine Na +, K +, Cl -, Li + (optional) Serum: 100 µL / Urine: 200 µL						
	Environmental Requirements **Ambient** temperature Relative humidity	 10 ° C to 35 ° C 10 ° C to 30 ° C (With ISE module) <85% without condensation						
	Dimensions and weight Dimensions (width, depth and height) Weight	 1077 mm x 690 mm x 680 mm 166 Kg						
	Electrical Requirements Mains voltage Mains frequency Electric power	 115 V to 230 V 50 Hz or 60 Hz Max. 500 VA Average power: 260 VA						
	Fluidic Requirements Water inlet Type of water Water consumption High concentration waste tank Washing solution tank	 External tank or mains water supply Purified type II (CLSI) <9 L/h 2.4 L 2.4 L						
	Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent							
74	**<u>MORTUARY/COLD CHAMBER 6 BODY</u>** **Cold Chamber must be for 6 bodies with Two Doors** Finish: All Galvanized Sheet Steel Access: one door per 3 body (02 Doors) Temperature: (+2/+4°C) Insulation: 80 mm			**01**				

	Working space: 0.70m x 1.90m **<u>With following Accessories</u>** Roller conveyor with rails 02 Rail with stop- grey paint 06 Rail without stop- grey paint 06 Stainless steel body tray on wheels 06 Top Mounted Refrigeration Unit 230/1-50 01 Regulator mounted on the cooling unit 01 Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent					
75	**<u>AMBULANCE FOR HOSPITAL (fully equipped)</u>** Air Conditioner Special LED Light Bar and Side lamps - Siren System Inverter (2000 W) Rectifier (15 AH) Fluorescent (LED) Additional Battery Heater (Water type) Electronic Command Panel (with sense of touch) Floor Coating Front and rear sensors Set of Tools & Dustbin Multimedia Device(For Communicating) Integrated Cabinets (ABS) Turbo Ventilation Sliding Side Door Window Seat Left Seat Right Seat at Separation Wall Reflective Sheeting & Logos Isolation Ceiling & Side Walls (ABS) **<u>FULLY EQUIPPED WITH</u>** Main Stretcher Two Movement Stretcher Platform Chair Stretcher Oxygen System (2x10l.complete set) Vacuum Stretcher	**02**				

	Scoop Stretcher Spine Board Wall Type Sphygmomanometer Portable Type Sphygmomanometer Diagnostic Set Air Splint Set Disposable Materials Portable Vacuum Aspirator Stethoscope Corpse Bag Traction Splint Set Body Splint Transport Ventilator Defibrillator Transport Monitor Complete Emergency Kit First Aid Kit Burn Set Birth Set Cervical Collar Set Head Immobilizer I.V. Holder Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent					
76	**<u>Telemetry Monitoring System with central monitoring software</u>** Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent	**01**				
77	**<u>HOLTER MONITORING SYSTEM WITH 4 RECORDERS</u>** Recorder weight 50g, IP27 water proof and dust proof, real time wave form display, upto 8days recording, with micro SG card, pace maker detection, with complete software with analysis, automatic ST alevation / depration analysis automatic atrial fibrillation, flutter analysis hot rate variability HRV analysis, Data management and reporting transmitting, automatic arrhythmia analysis, real time event list update and user defined work flow, smart QRS template classification and sub-template categorizing. Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent	**01set**				
78	**ENDOSCOPY SYSTEM** **Technical Specification** Touchpad for device panel , anti-splash front panel High definition image (resolution ≥1280×720)	**01**				

	Automatic memory white balance Color tone adjustment (Red: -8 to +8; Blue: -8 to +8; Chroma: -8 to +8) Zoom: ×1.4, ×1.6, ×1.8 Color enhancement: 0 to 8 levels, adjust in three modes Structure enhancement: 0 to 8 levels, adjust in three modes Edge enhancement: 0 to 8 levels, adjust in three modes Contrast: low,mid ,high three levels Auto gain control: On/Off Imaging spectrometer system, unique spectral staining technology ,increase the diagnosis ratein early cancer CHb color display Three metering modes : Auto、 peak and average (-9 to +9) Image size adjustment ,full screen Picture beside picture mode, adjustable screen size and position ≥ 2 display modes adjustment ≥ 500GB built-in workstation Image freeze/snap , ≥ 2imageformats Timely video record and review in high definition (resolution≥1280×960) Order list ≥100 Patient list ＞10 thousands Customizable hospital name≥32 words Editable patient information, edit report ,print report and export report; Video printer function; DICOM 3.0 output ×1; USB ports ×3; Video output modes : DVI×1,SDI×1, S-VIDEO×1,CVBS×1,VGA×1 Foot switch port ×1,available for bi-switch and customizable foot switch function Hot-plugging function Light source: Lamp ≥300W xenon light , Average lifetime of main lamp: 500 hours (continuous operation);CCT≥5900K Spare lamp:60W halogen lamp Auto and manual brightness adjustment Brightness adjustment : 1 to 19 levels Filter function; Transparency function (6-8 seconds) Long life mute air pump , maximum pump pressure 45kPa～65kPa Air pump flow range: 2.0-5.5L/min Lamp lifetime indicator					

	Video Gastroscope View field≥140° View depth 3-100mm Outer diameter of the distal end≤9.3mm Outer diameter of the insertion section ≤9.3mm Diameter of the instrument channel≥2.8mm Bending Angle: Up 210°, down 90°, Left 100°, right 100° Working length: 1050mm Water jet function Four customizable button in control section Endoscope information storage **Video Gastroscope** View field≥140° View depth 3-100mm Outer diameter of the distal end≤12mm Outer diameter of the insertion section ≤13.8mm Diameter of the instrument channel≥3.8mm Bending Angle: Up 180°, down 180°, Left 160°, right 160° Working length: 1700mm Water jet function Four customizable button in control section Endoscope information storage **Medical monitor** 24 inch medical LCD monitor ; resolution≥1280×1024 Trolley system Endoscopy trolley system ; 360°arm adjustment Suction pump Suction speed ≥20L/min Bottles ≥2500ml × 2 Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent					
79	**TROLLEY MOUNTED HIGH END ADVANCED ULTRASOUND COLOR DOPPLER** **1. <u>GENERAL</u>** a) Digital Shared Service Advanced Color Doppler Ultrasound system with Obs/Gyn, radiology, cardiology, urology, vascular, breast, small parts and pediatric scanning functionality etc. **2. <u>DISPLAY</u>**	**01**				

	a) 21-Inches Minimum TFT / LED Color Monitor with anti-flickering technology. b) Screen should move vertically and horizontally c) Control panel height should be adjustable and rotatable. d) Touch Command Screen Control at least 12-inches LCD / TFT e) Full screen image zoom. **3. <u>ERGONOMICS</u>** a) 4 or more active universal transducer connectors. b) Alphanumeric keyboard. c) 500 Gb hard drive or more. d) USB ports DVD writer for data transfer. e) Video/HDMI ports for external monitor connectivity. f) Built-in DICOM Compatibility (3.0 with all components). g) Voltage: 220V – 240V, 50 – 60 HZ **4. <u>STANDARD OPERATING MODES</u>** a) B mode, M mode, THI mode, CDI mode, PDI mode, Directional PDI mode, TDI mode, PW mode, CW mode, Spatial Compound imaging mode, Frequency compound imaging mode, Trapezoid imaging mode, Noise reduction technology, HPRF, Anatomical M Mode, Color M mode, Steer M mode, Strain Elastography imaging, Contrast imaging, Stress Echo, Needle enhancement mode, Real Time panoramic mode in B-Mode and CDI, Biopsy guidance software, grid biopsy guidance software for Endo-cavity biopsy procedures. **5. <u>B-MODE SPECIFICATIONS</u>** a) Digital image zoom of 1-10 times or more. b) Dynamic range: 250db or better. c) B-Mode Frame rate: 1500fps or more. d) CDI- Frame rate: 200fps or more. e) Grayscale level: 256 or better. f) Focus points: 10 or more, focus span should be adjustable. g) Cine loop: 1000 frames or better. h) Scanning Depth: 30cm or better. i) Frequency: 5 bands or more. Should be adjustable. j) Line Density: 3 levels or more. Should be adjustable k) Needle Enhancement feature. l) Needle/Biopsy Guide Function: (a) Needle/Biopsy lines angle adjustable (b) Needle/Biopsy lines offset adjustable. m) Grayscale Curve: 5 or more selectable. n) Trapezoid Imaging (Linear probe). o) B steer mode (linear probe).					

	p) Auto image enhancement function. **6. <u>M MODE SPECIFICATIONS</u>** a) Sweep Speed: Slow, Medium and Fast. b) Color Display of M -Mode. c) Steer M: 3 sample lines or more with adjustable angle d) Video Inversion **7. <u>COLOR DOPPLER MODE SPECIFICATIONS</u>** a) Color Flow Invert. b) PW/CW Spectrum Invert. c) Frequency Range: 5 steps or more. Should be adjustable. d) Wall Filter: 20-700Hz or better. e) PRF: 1-10 kHz or better (CDI). f) Line Density: 4 levels or more. g) Color baseline adjustment: ±10 steps or better. h) Auto image enhancement function: (a) Auto Adjusting Baseline, (b) Auto Adjusting PRF. i) Triplex Mode. j) Sample Volume and Position for PW Doppler: 1-20mm or better. k) Real-time Automatic Trace of PW/CW Spectrum. **8. <u>MEASUREMENTS AND CALCULATIONS</u>** a) To provide Comprehensive Software Package for Measurement of Distance, Circumference, Area, Time, Depth, ANGLE, IMT, Velocity, Frequency, Heart Rate, Volumes. b) Auto-calculation: Auto IMT, Auto NT, Auto AVC, Real-time Auto PW/CW Trace, Auto EF. c) All measurement Software to be provided as a Standard (including TOE probe for future addition). **9. <u>STANDARD PROBES</u>** a) 2–6 MHz or better Multi-Frequency Convex Probe (128 elements or more) for B/M/CDI/PW. b) 5-17 MHz or better Multi-Frequency Linear Probe (190 elements or more) for B/M/CDI/PW. c) 2-6 MHz or better Multi-Frequency Adults Cardiac Probe (80 elements or more) for B/M/CDI/PW/CW/TDI d) 3-15 MHz or better Multi-Frequency TVS Probe (150 elements or more) for B/CDI/PW/CW **NOTE:** Probes should be of same Country of Manufacturer & Origin as main unit **10. <u>CERTIFICATIONS AND QUALITY STANDARDS</u>** a) ISO Certifications. b) Equipment should have at least two of the following certifications: I. FDA 510(k)					

	II. JIS III. CE **11. <u>WARRANTY</u>** a) 2 years warranty or more. **12. <u>SYSTEM COMPLETE WITH FOLLOWING CONFIGURATION</u>** a) B/W Thermal Printer. b) Upgradable system software. c) ECG cables. Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN U.S.A. Japan , Europe or equivalent**					
80	**DIGITAL X-RAY FLUOROSCOPY UNIT WITH FLAT PANEL DETECTOR** **1.** GENERATOR **a)** High frequency inverter type microprocessor controlled touch screen **b)** Three phase 50 Kw or more. **c)** Maximum 600 mA or more **d)** 40 to 150 kV in step **e)** Exposure time 0.001 to 10 seconds **f)** Fluoroscopy kVp range 50 to 120 kV. **g)** Automatic over-load protection device and automatic line compensation. **h)** Fluro mA 0.5 – 4mA or more and Radiographic mA 10-630mA **i)** System with AEC / ABC and APR Facility. 2. X -RAY TUBE **a)** Anode heat storage capacity of at least 400 KHU or more. **b)** Rotating anode X-ray Tube, with dual focus, small 0.6mm & large 1.2mm. 3. X RAY BEAM COLLIMATOR **a)** Automatic/manual collimator with rectangular diaphragm with push button ON/OFF system having builtin time for illumination of x-ray beam area. **b)** dose reduction, automatic collimation and filters and a video camera to position the patient without radiation **c)** Touch screen for table console 4. FLAT PANEL DETECTOR **a)** Panel Detector (CSi technology) **b)** Portable and detachable detector for radiographic and fluoroscopic examinations	**01**				

	c) Matrix dimensions 2,200 x 2,600 pixels. **d)** Pixel size 160 µm or better **e)** 14” x 17” image size **f)** 14 bits Analog to digital converter **g)** DQE: 65% or better **h)** 4096 gray levels **i)** fluoro image immediately **j)** Radiographic image display within 3-4 seconds or better **k)** Acquisition: 15 images/ sec in 14 x 17 inch and 30 images / sec. in 9 x 9” field. **l)** Acquisition console **m)** 21” Colour LCD monitor **n)** 900 or more anatomical protocols **o)** Image display and post-processing, sending to network or printer **p)** Programmable annotations like hospital name, radiologist name, date, hour, patient data (name, DOB…), **q)** Intel core workstation , hard disk for software and image storage **r)** CD/DVD writer **s)** DICOM Compatible: Store, work list, print, MPPS etc. 5. REMOTE CONTROL TABLE **a)** Over couch tube **b)** Height adjustable (Automatic) **c)** Tilting table 90° to -25° **d)** Equipped with soft start/stop **e)** Dimension of table large than 210 x 65 cm or better **f)** SID : 110cm extendable up to 150cm or more **g)** Patient coverage : Longer than 200cm **h)** Patient load : 130kg or more **i)** Motorized compression cone **j)** Auto self – center function. **k)** One composite foot rest, one adjustable stool, two patient handles, two winches & one belt **l)** 3 x lead apron, 3 pairs of lead gloves, 3 lead goggles 6. PACS **a)** PACS for three modalities **b)** Upgrade able to other modalities **c)** Server with 15 work station inclusive of installation. **d)** Easy to configure **e)** Scalable and up-gradable **f)** High operating speed **g)** Advance DICOM print for Different Layouts and sub-layouts **h)** Paper print					

	i) e-mail, CD burn **j)** Capable to export DICOM images in different format **k)** Capable to store patient history **l)** Reporting Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent					
81	**DUAL HEAD MECHANICAL BEAM CEILING PENDANT** Lengthened aluminum alloy beam Max. load: 300kg Length: 2500~3000mm customizable Mechanical vertical distributor for wet zone Distributor shape: hexagon style, 330*210*800mm Max. power socket: 8 Max. RJ45/RJ11 socket: 2 Max. equipotental socket: 2 Max. gas terminal: 5(G-G), 4(H-E), 5(HF-G), 4(J-A) Mechanical horizontal distributor for dry zone Distributor shape: 830*380*220mm Max. power socket: 8 Max. RJ45/RJ11 socket: 2 Max. equipotental socket: 2 Max. gas terminal: 6(G-G), 4(H-E), 6(HF-G), 6(J-A) Ceiling hight: 2600~3200mm; The distance between the bottom of beam and ground: 2000mm Recommended to be applied as ICU pendant & emergency pendant Basic configurations include fixing accessories, plinths, arms or beams, distributors or racks and necessory functional parts only. Customers should order proper power & data sockets and gas terminals in additional. Flange 02 Ceiling cover 02 Lengthened Beam, 300kg load, 2500-3000mm 01 Mechanical vertical distributor, 330*210*800mm 01 Mechanical horizontal distributor, 830*380*220mm 01 Fixed shelf for horizontal distributor & rack for dry zone, 600*400mm 02 Drawer w/o cover, 600*400mm 01 Foldable shelf for vertical distributor, 450*400mm 02 Drawer w/o cover, 400*330mm 01					

	IV pole 02 Extension arm (track mounted) 02 Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent					
82	**HOSPITAL BEDS COMPLETE SET** **MOTORIZED:** 4 MOTORS INTESIVE CARE PATIENT BED **BED SIZE:** 975 x 2285 mm H MIN : 460 mm H MAX : 860 mm * MOTORIZED HEADREST ADJUSTMENT * MOTORIZED LEGREST ADJUSTMENT * MOTORIZED HEIGHT ADJUSTMENT * MOTORIZED TRENDELENBURG/ REVERSE TRENDELENBURG ADJUSTMENT * HAND CONTROL UNIT * MECHANICAL CPR (FLAT POSITION OF BED BACKREST FOR EMERGENCY) * FOWLER AND VASCULAR POSITIONS * KNEE MOVES ADJUSTMENT WITH GRADUAL MECHANISM * EASILY REMOVABLE FIXED HEAD/FOOT BOARDS * SIDE RAILS MADE FROM ALUMINIUM AND COMPACT LAMINATE MATERIAL * 360º MOVABLE CASTORS WITH CENTRAL LOCKING (150 mm) * PLASTIC PROTECTION BUMPERS * BELT HOOK * ACCESSORIES SLOTS * URINE BAG HOLDER * HEIGHT ADJUSTABLE IV POLE * ELECTROSTATIC POWDER COATING * BATTERY * X-RAY AT BACKREST * BED EXTENSION (18 cm) * NURSE CONTROL PANEL * 5th CASTOR • HIGH DANSITY MATTRESS. **OVERBED TABLE WITH ALIMINIUM LEGS** **Size:** 400 x 800 mm H MIN : 795 mm.H MAX : 1040 mm. LATERAL SYSTEM TOP TABLE AND DAMPER SYSTEM COMPACT OVER BED TABLE WITH ALIMINIUM LEGS AND PLASTIC CASTORS **BED SIDE CABINET** Size: 504 x 529 x 734 H ALL PEACES ARE COMPACT MATERIAL. METAL HANDLE. CASTORS. Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent	**100**				
83	**WHEEL CHAIR** Size: 740 x 1140 x 980 H mm • SPACE SAVINGS WITH NESATBLE DESIGN. • STAINLESS STEEL FRAME. • POLYURETHANE ARMREST, SEATING AND BACKREST FOR MAXIMUM COMFORT. • HEIGHT ADJUSTABLE IV STAND. • HIDABLE FOOTBOARDS. • COIN RETURN MECHANISM. • 360º SWIVEL CASTORS TO GIVE EASIER MOVEMENTS. • COIN / CARD MECHANISMS AND PARK STATION ARE OPTIONS. **PARK STATION FOR WHEEL CHAIRS** METAL ELECTROSTATIC PAINTED FRAME and NAME BAR	**01**				

	Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent					
84	**COIN LOCK (DEPOSIT)** **CARD SYSTEM** **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent	**01**				
85	**SYRINGE PUMP** **Features:** Compatible with universal syringe from 5/10/20/30/50ml, 60ml Unique remaining infusing time display Maximum stackable to 8 channels Three working modes: Rate Mode, Time Mode, Body-weight Mode With more than 5000 history events can be recorded in the pump High accuracy of (+, - 2%) after correct calibration Power Source: AC power supply: AC 100 to 240V (+/-10), 50/60Hz; Built-in Lithium Battery: Rechargeable, 11.1V, 2000mAh. 10 hours of continuous operation. Dimension/N. W: 385mm*155mm*117mm, 2.5kg Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent	**01**				
86	**INFUSION PUMP** **Features:** Compatible with universal infusion set Three working modes: Rate Mode, Time Mode, Volume Mode With more than 5000 history events can be recorded in the pump Brightness could be adjustable to adapt the clinical use of the environment Power Source: AC Power Supply: AC 100 to 240V (+/-10%), 50/60Hz; DC PowerSupply:12-15V, power>15w; Built-in Lithium Battery: Rechargeable, 11.1V, 2000mAh 12 hours of continuous operation Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent	**01**				
87	**BIOMEDICAL WASTE MANAGEMENT UNIT** TECHNOLOGY GINDING BY ROTATING BLADES AND HEATING BY MICROWAVES AVERAGE CYCLE TIME 30 MINS OR LESS BACTERIAL INACTIVATION HIGHER THAN 8LOG 10 REDUCES VOLUME OF WASTE UP TO 75% OR MORE REDUCES WEIGHT UP TO 25%O OR MORE SYSTEM MUST BE READY TO USE WHICH REQUIRES NO SPECIFIC TECHNICAL QUAILIFICATIONS SYSTEM SHOULD BE ENVIRONMENT FRIENDLY WITH NO LIQUID EFFLUENT	**01**				

	FINAL WASTE SHOULD BE UNRECOGNIZABLE,INERT,DRY,STABLE MUNICIPLE WASTE LOADING PROCESS MANUAL OR AUTOMATIC[PLEASE QUOTE SEPERATELY] MAXIMUM WORKING SPACE 10 TO 15sq m MICROWAVE BASED HOSPITAL WASTE DISPOSAL PLANT SYSTEM SHOULD BE CE APPROVED AND MEET ALL THE INTERNATIONAL STANDARDS FOR HOSPITAL WASTE DISPOSAL ENERGY REQUIREMENT 3 PHASE/400 V/NOT MORE THAN 80A. Loading Bio-Hazardous Waste / Grinding / Heating and Sterilization All type of medical waste, laboratory waste, solid and liquid medical waste, human and animal pathological waste, sharps and prickly hospital waste with their containers, cultures and stocks Compact solution of so site waste management Waste Capacity: 200l/h Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent					
88	**SHARPS CONTAINERS** **WASTE CONTAINERS** **WASTE TROLLIES** **VARIOUS SIZES FOR ALL HOSPITAL WARDS** Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent	**01**				
89	**Mobile Folding screen various sizes imported** **Ward railing system with curtains imported** **Telescopic screen cubical (wall and ceiling) imported** Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent	**01**				
90	**<u>THROMBOELASTOGRAPH</u>** • Test / Assays: For measuring clot formation, clot kinetics, clot strength & clot stability. • Suited for all point-of-care& lab testing situations. • Microprocessor-controlled electromechanical coagulation instrument to determine all phases of coagulation in fresh and citrated whole blood samples. • Two (2) independent measuring channels per analyzer & up to eight (8) channels per computer. • Built in Platelet Mapping Option for common anti platelet drugs. • Individual temperature control for each channel. • Measuring technique — shear elasticity of a coagulating sample, determined by motion of the pin. • Disposable cups and pins with Heparinase. • Anticoagulant dosages can be adjusted. • Data management and connectivity-ready capability. • Long-term data storage and retrieval, with access to patient and quality control test data. • Test results are stored in the order in which they are performed.	**01**				

	• The ability to externally transfer or save data enhances the system's versatility. • Cup drive — Line-synchronized, with synchronous motor • Transducer — Electrical-mechanical transducer of movement of torsion wire connected to the suspended pin • Sample volume — 360 µ L or less. • Power — external power supply, 220V model @ 50 Hz • Initial warm-up time — Less than five minutes to warm sample • Operating position — Setting verified with spirit level • Desktop PC with windows • Weight not more than 08 kg. Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent					
91	**HAND HELD BLOOD ANALYZER** Point of care analyzer to blood test for blood gases, basic Haematology, electrolytes / chemistry, Coagulation, Cardiac markers, β-HCG Analytes. The analyzer should be hand held should be able to store a minimum of 1000 results. The output should be printable wirelessly. Portable printer with infrared window. It should have bar code scanner Analysis time should not be more than 120 seconds for Blood Gases, basic Haematology, electrolytes / chemistry Using just two or three drops of blood, the system provides time sensitive tests at the patient's side in just minutes. **Technical Specifications:** **Power** — Battery operated **Cartridge** — Provided with drug neutralizer **Electrode Technology** — ISE (Ion sensitive electrode) **Storage** — 1000 Tests **Certifications** — FDA / CE **Communication links** — Infrared light – emitting diode (LED) **Country of origin** — USA, Western Europe, Japan Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent					
92	**ORTHOPEDIC INSTRUMENTS:** **1. Small Fragment Instrument Set** **Consist of Following:**	**01set**				

		Double Drill Guide, φ2.5/φ3.5	1						
		Double Drill Guide, φ2.5/φ3.0	1						
		DCP Drill Guide φ2.5, for neutral and load position	1						
		Depth Gauge	1						
		T-Handle With Quick Coupling	1						
		Countersink, for Quick Coupling	1						
		Tap for Cortex Screws φ3.5	1						
		Tap for Cancellous Screws φ4.0	1						
		Bending Template for DCP 3.5 and LC-DCP 3.5	1						
		Bending Template for Straight Reconstruction Plates 3.5	1						
		Bending Iron, left	1						
		Screw Forceps, self-holding	1						
		Screwdriver Shaft, hexagonal, φ2.5	1						
		Holding Sleeve	1						
		Screwdriver, hexagonal, φ2.5	1						
		Reduction Forceps with Points	1						
		Bone Holding Forceps, self-centering	1						
		Extraction Screw for Screws, φ2.5	1						
		Broken Screw Extractor	1						
		Drill Bit, φ2.5	1						
		Drill Bit, φ3.0	1						
		Periosteal Elevator, round edge	1						
		Periosteal Elevator, straight	1						
		Bone Lever, small	1						
		Bone Lever, large	1						
		Bending Iron, right	1						
		Instrument Case	1						

	2. <u>Large Fragment Instrument Set</u>		**01 set**			
	<u>Consist of Following:</u>					
	Double Drill Guide, φ3.2/φ4.5	1				
	Double Drill Guide, φ3.2/φ6.5	1				
	DCP Drill Guide, φ3.2	1				
	Drill Guide, pointed	1				
	Drill Sleeve Insert with Stop for Screws φ4.5	1				
	Drill Sleeve for Drill Bits, φ3.2	1				
	Depth Gauge	1				
	T-Handle with Quick Coupling	1				
	Countersink, large, for Cortex Screws φ4.5	1				
	Tap for Cortex Screws φ4.5	1				
	Tap for Cancellous Screws φ6.5	1				
	Bending Template, long	1				
	Bending Template, short	1				
	Bending Iron, left	1				
	Screw Forceps, self-holding	1				
	Screwdriver Shaft, hexagonal, large, φ3.5	1				
	Screwdriver, hexagonal, large, φ3.5	1				
	Holding Sleeve	1				
	Reduction Forceps with Points	1				
	Bone Holding Forceps, self-centering, large	1				
	Extraction Screw for Screws φ4.5	1				
	Broken Screw Extractor	1				
	Drill Bit, φ3.2	1				
	Drill Bit, φ4.5	1				

	Periosteal Elevator, round edge	1						
	Periosteal Elevator, straight	1						
	Bone Lever, small	1						
	Bone Lever, large	1						
	Bending Iron, right	1						
	Instrument Case	1						
	3.DHS / DCS Instrument Set			**01 set**				
	Consist of Following:							
	Drill Guide φ2.5, for Guide Wire	1						
	Depth Gauge	1						
	DHS/DCS Cleaning Brush	1						
	DHS/DCS Guide Wire, φ2.5, length 250 mm	4						
	DHS/DCS Guide Wire, φ2.5, length 250 mm, with threaded tip	4						
	DHS/DCS Direct Measuring Device, φ2.5, length 250mm	1						
	Double Drill Guide, φ3.2/φ4.5	1						
	Double Drill Guide, φ3.2/φ6.5	1						
	DCP Drill Guide, for neutral and load position	1						
	Tap for Cortex Screws φ4.5	1						
	Tap for Cancellous Bone Screws φ6.5	1						
	Centering Sleeve for Tap	1						
	Tap for DHS/DCS screws	1						
	DHS Angled Guide, 135°	1						
	DCS Angled Guide, 95°	1						
	Drill Bit, φ3.2	1						
	Drill Bit, φ4.5	1						
	T-Handle with Quick Coupling	1						
	Connecting Screw, for DHS/DCS wrench	1						

	DHS Triple Reamer	1						
	DCS Triple Reamer	1						
	Wrench for DHS/DCS Lag Screws	1						
	Centering Sleeve, for DHS/DCS Wrench	1						
	T- Wrench for One-step Insertion. φ5.5	1						
	Screw Forceps, self-holding	1						
	Screwdriver, hexagonal, φ3.5	1						
	Holding Sleeve	1						
	Extraction Screw for Screws φ4.5	1						
	DHS/DCS Impactor	1						
	Instrument Case	1						
	4.Instrument Set for Medium Distractors			**01 set**				
	Consist of Following:							
	Drill Bit, φ3.8	2						
	Bone Screw, length 150mm	4						
	Bone Screw, length 175mm	4						
	Bone Screw, length 200mm	4						
	Drill Sleeve φ3.5, for Drill Bits	2						
	Drill Sleeve φ5.0, for Drill Bits	2						
	Trocar	2						
	Universal T-Handle with Quick Coupling	1						
	Key	1						
	Combination Wrench	1						
	Sliding Carriage with Adjusting Nut	1						
	Holding Sleeve with Wing Screw, long	2						
	Holding Sleeve With Wing Screw, short	2						

	Pin Wrench	1						
	Knurled Nut	3						
	Double Joint, complete	1						
	Threaded Rod, long	1						
	Threaded Rod, short	1						
	Instrument Case	1						
	5.Instrument Set for Removal of Damaged Screws			**01 set**				
	Consist of Following:							
	Pliers for Screw Removal	1						
	Handle with Quick Coupling	1						
	Gouge	1						
	Universal Broken Screw Extractor	1						
	T-Handle with Quick Coupling	1						
	Extraction Screw, φ2.5, large	1						
	Extraction Screw, φ2.5, small	1						
	Extraction Screw, φ3.5	1						
	Broken Screw Extractor, φ3.5	1						
	Broken Screw Extractor, φ4.5	1						
	Broken Screw Extractor, φ6.5	1						
	Wrench, φ3.5	1						
	Wrench, φ4.0	1						
	Wrench, φ2.5	1						
	Stardrive Wrench, φ4.4	1						
	Stardrive Wrench, φ3.8	1						
	Hollow Reamer, φ4.5	1						
	Hollow Reamer, φ6.5	1						
	Hollow Reamer, φ3.5	1						

	Sharp Awl	1						
	Sharp Hook	1						
	Spare Centering Tube for Hollow Reamer, φ4.5	1						
	Spare Centering Pin for Hollow Reamer, φ4.5	1						
	Spare Centering Tube for Hollow Reamer, φ6.5	1						
	Spare Centering Pin for Hollow Reamer, φ6.5	1						
	Spare Centering Tube for Hollow Reamer, φ3.5	1						
	Spare Centering Pin for Hollow Reamer, φ3.5	1						
	HSS Drill Bit, φ4.0	1						
	HSS Drill Bit, φ6.0	1						
	Instrument Case for Removal of Damaged Screws, small	1						
	Instrument Case	1						
	6.Small Locking Instrument Set			**01 set**				
	Consist of Following:							
	Guide Wire, φ1.5, length 150mm	4						
	Drill Bit, φ2.8	2						
	Drill Sleeve for Drill Bits, φ2.8	2						
	Depth Gauge for Locking Screws	1						
	Drill Bit, φ2.5	2						
	Bending Iron, left	1						
	Tap for Cortex Screws φ3.5	1						
	Torque Indicating Screwdriver, 1.5Nm	1						
	Screwdriver, hexagonal, φ2.5	1						
	Holding Sleeve	1						
	Double Drill Guide, φ2.5/φ3.5	1						
	Extraction Screw for Screws, φ2.5	1						
	Broken Screw Extractor	1						

		T-Handle with Quick Coupling	1		01 set				
		Screw Forceps, self-holding	1						
		Drill Sleeve, for Guide Wire φ1.5, short	2						
		Screwdriver Shaft, hexagonal, φ2.5	1						
		Bending Iron, right	1						
		Reduction Forceps with Points	1						
		Bone Holding Forceps, self-centering	1						
		Periosteal Elevator, round edge	1						
		Periosteal Elevator, straight	1						
		Bone Lever, small	1						
		Bone Lever, large	1						
		Holding Sleeve for Torque Indicating Screwdriver	1						
		Instrument Case	1						
		7.Large Locking Instrument Set							
		Consist of Following:							
		Drill Bit, φ4.3	2						
		Drill Sleeve for Drill Bits, φ4.3	2						
		Depth Gauge, for Locking Screws	1						
		Drill Bit, φ3.2	2						
		Bending Iron, left	1						
		Tap for Cortex Screws φ4.5	1						
		Torque Indicating Screwdriver, 4.0Nm	1						
		Screwdriver, hexagonal, φ3.5	1						
		Holding Sleeve	1						
		Double Drill Guide, φ3.2/φ4.5	1						
		Extraction Screw for Screws, φ3.5	1						

	Broken Screw Extractor	1						
	T-Handle with Quick Coupling	1						
	Screw Forceps, self-holding	1						
	Drill Sleeve for Guide Wire, φ2.5, short	2						
	Screwdriver Shaft, hexagonal, φ3.5	1						
	Guide Wire, φ2.5, length 250mm	4						
	Bending Iron, right	1						
	Reduction Forceps with Points	1						
	Bone Holding Forceps, self-centering	1						
	Periosteal Elevator, round edge	1						
	Periosteal Elevator, straight	1						
	Bone Lever, small	1						
	Bone Lever, large	1						
	Holding Sleeve for Torque Indicating Screwdriver	1						
	Instrument Case	1						
	8. 4.0mm Cannulated Screw Instrument Set			**01 set**				
	Consist of Following:							
	Guide Wire φ1.0, length150mm	8						
	Guide Sleeve φ1.2/φ3.0, for guide wire	1						
	Drill Sleeve, φ3.0	1						
	Direct Measuring Device, for φ4.0 cannulated screws	1						
	Drill Bit φ2.8, cannulated	2						
	Fixation Sleeve φ3.0, for Drill Bits	1						
	Screw Forceps, self-holding	1						
	Screwdriver, hexagonal, cannulated, φ2.5	1						
	Holding Sleeve	1						
	Cleaning Brush φ1.0, length 150mm	1						

	Screwdriver, hexagonal, φ2.5	1						
	Wrench for Fixation Sleeve	1						
	Instrument Case	1						
	9. 7.3mm Cannulated Screw Instrument Set			**01 set**				
	Consist of Following:							
	Drill Sleeve, for Guide Wire	1						
	Drill Sleeve	1						
	Spreader	1						
	Cleaning Brush	1						
	Holding Sleeve	1						
	Parallel Wire Guide ,for φ2.5 Guide Wire, adjustable	1						
	Drill Bit φ5.0, cannulated	2						
	Wrench, for Parallel Wire Guide	1						
	Multiple Wire Guide, for φ2.5 Guide Wire	1						
	Tap for Cannulated Screws φ7.3, cannulated	1						
	Screwdriver, hexagonal, cannulated, φ4.0	1						
	Screwdriver, hexagonal, φ4.0	1						
	Holding Sleeve	1						
	Guide Wire φ 2.5, length 250mm	3						
	Guide Wire φ 2.5, length 250 mm, with threaded tip	3						
	Direct Measuring Device, for φ7.3 Cannulated Screws	1						
	Fixation Sleeve φ5.0, for Cannulated Drill Bits	1						
	Wrench for Fixation Sleeve	1						
	Instrument Case	1						

	10. Proximal Femoral Nail, Anti-rotation Instrument Set		**01 Set**				
	Consist of Following:						
	Measuring Device, for PFNA	1					
	Protection Sleeve, φ17.5	1					
	Drill Sleeve, φ17.5/φ3.2	1					
	Drill Bit, φ17.5/φ3.2, cannulated, for PFNA	1					
	T-Handle with Quick Coupling	1					
	Reverse Awl, cannulated, for PFNA	1					
	Tissue Protector	1					
	Insertion Handle for PFNA	1					
	Connecting Screw for PFNA	2					
	Wrench, hexagonal, with T-Handle, for Connecting Screw	1					
	Connector for PFNA	1					
	Combination Wrench, φ11.0	1					
	Hammer, for Inserting PFNA Blade	1					
	Aiming Arm, for PFNA Blade	1					
	Protection Sleeve, φ10.9, for PFNA Blade	1					
	Buttress/Compression Nut, for PFNA blade	1					
	Drill Sleeve, φ10.9/φ3.2, for PFNA Blade	1					
	Trocar φ3.2, for PFNA Blade	1					
	Guide Wire, φ3.2, length 400mm, with threaded tip	4					
	Direct Measuring Device for Guide Wire, φ3.2	1					
	Drill Bit, φ10.5/φ3.2, cannulated, for PFNA Blade	1					
	Reamer, φ9.3/φ3.2, cannulated, for PFNA Blade	1					
	Fixation Sleeve	1					

		Impactor for PFNA Blade	1						
		Key for PFNA Blade	1						
		PFNA Aiming Arm for Dynamic and Static Locking, length 170mm	1						
		PFNA Aiming Arm for Dynamic and Static Locking, length 200mm	1						
		PFNA Aiming Arm for Dynamic and Static Locking, length 240mm	1						
		Protection Sleeve, φ11.0/φ8.2	2						
		Drill Sleeve, φ8.2/φ4.2	2						
		Trocar, φ4.2	1						
		Drill Bit, φ4.2, for PFNA	3						
		Fixation Sleeve for Drill Bits, φ4.2	1						
		L-Wrench, hexagonal, φ3.0	1						
		Measuring Device for Locking Bolts	1						
		Screwdriver, hexagonal, φ4.0	1						
		Wrench, hexagonal, with T-Handle and Universal Joint for Connecting Screw	1						
		Guide Wire for End Cap, with Hook, φ2.8	1						
		Screwdriver Shaft for End Cap, φ4.0	1						
		Screwdriver, hexagonal, cannulated, for End Cap φ4.0	1						
		Extraction Screw for PFNA Blade	1						
		Slide Hammer	1						
		Hammer Guide for Slide Hammer	1						
		Cleaning Stylet, φ2.8, for Cannulated Instruments	1						
		Guide Wire φ2.5, length 660mm, with olive head	1						
		Guide Wire φ2.5, length 660mm, without olive head	1						
		Drill Guide for Guide Wire	1						
		Connecting Shaft for Extracting PFNA Blade	1						

	Stretch Aiming Arm for PFNA	1						
	Stretch Aiming Arm Shaft, for PFNA, long	1						
	Stretch Aiming Arm for PFNA, distal	1						
	Drill Bit with Flat Head, φ5.0	1						
	Drill Bit, φ5.0	1						
	Fixation Sleeve for Calibrating Pin	1						
	Drill Sleeve for Calibrating Pin, φ5.0	1						
	Trocar for Calibrating Pin	1						
	L-Wrench, hexagonal, φ5.0	1						
	Locking Screw Ⅰ for Aiming Arm	3						
	Locking Screw Ⅱ for Aiming Arm	2						
	U-Clip	1						
	Calibrating Pin	1						
	Instrument Case	1						
	11 Universal Femoral Nail II Instrument Set							
	Consist of Following:							
	Radiographic Ruler	1						
	Guide Wire, with threaded tip, φ3.2, 400mm	2						
	Protection Sleeve	1		**01 set**				
	Location Sleeve, multi-holes	1						
	Drill Bit, φ14.2/φ3.2, cannulated	1						
	T-Handle with Quick Coupling	1						
	Awl, cannulated	1						
	Tissue Protector	1						
	Reduction Rod	1						
	Guide Wire, with olive head	2						

		Insertion Handle	1						
		Connecting Screw, for insertion handle	2						
		Wrench, for Connecting Screw	1						
		Connector Block	1						
		Connector Shaft	1						
		Ratchet Wrench, SW11	1						
		Extraction Screw for Femoral Nail	1						
		Wrench for Fixation Sleeve, SW3	1						
		Slide Hammer	1						
		Aiming Shaft, Proximal	1						
		Aiming Shaft, Distal	1						
		Location Arm, Distal	1						
		Locking Screw for insertion handle	1						
		Connecting Screw, for aiming shaft	1						
		L-Wrench, hexagonal, SW5	1						
		Locking Screw for Aiming shaft, M6	2						
		Location Block for distal end	1						
		Protection Sleeve, φ10/φ8.1	1						
		Trocar, φ8.1	1						
		Drill Sleeve, φ8.1/φ5	1						
		Drill Bit, φ5	1						
		Drill Bit with Flat Head	1						
		Calibrating Pin	1						
		U-Clip	1						
		Outer Sleeve, for distal locking	2						
		Drill Sleeve, for distal locking	2						
		Screwdriver, stardrive, cannulated, T30	1						

	Trocar, φ4.2	1						
	Drill Bit, φ4.2	1						
	Drill Bit, φ4.2, 350mm	1						
	Fixation Sleeve, φ4.2	1						
	Depth Gauge	1						
	Screwdriver Shaft, stardrive, T25	1						
	Aiming Arm	1						
	Locking screw for aiming arm	1						
	Compression screw	1						
	Drill Sleeve, for Guide Wire, φ8.2/φ2.5	2						
	Trocar, φ2.5	1						
	Guide Wire, φ2.5, 320mm	3						
	Guide Wire, with threaded tip, φ2.5, 320mm	3						
	Direct Measuring Device for Guide Wire	1						
	Drill Bit, cannulated	1						
	Fixation Sleeve, φ8	1						
	Guide Wire, with Hook	1						
	Screwdriver, Stardrive, T25	1						
	Universal Wrench, SW6.5	1						
	Holder for guide wire	1						
	Instrument Case	1						
	12 Universal Tibial Nail II Instrument Set							
	Consist of Following:							
	Radiographic Ruler	1						
	Guide Wire, with threaded tip, φ3.2, 320mm	3						
	Holder for guide wire	1						

		Protection Sleeve	1		**01 set**				
		Chisel, cannulated	1						
		Tissue Protector	1						
		Awl, cannulated	1						
		Reaming Drill, Proximal	1						
		T-Handle with Quick Coupling	1						
		Reduction Rod	1						
		Guide Wire, with olive head	1						
		Insertion Handle	1						
		Connecting Screw, for insertion handle	2						
		Wrench, for Connecting Screw	1						
		Connector Block	1						
		Connector Shaft	1						
		Ratchet Wrench, SW11	1						
		Extraction Screw for Tibial Nail	1						
		Slide Hammer	1						
		Aiming Arm	1						
		Connecting screw, for aiming shaft	2						
		Wrench for connecting screw, SW5	1						
		Drill Sleeve for Calibrating Pin, φ5.0	1						
		Drill Bit, φ5	1						
		Drill Bit with Flat Head	1						
		Calibrating Pin	1						
		Stretch Aiming Arm,distal	1						
		Aiming arm, distal	1						
		Connecting screw, for aiming shaft, M6	3						
		Protection Sleeve, φ8.1/φ10	3						

	Trocar, φ8.1	1						
	Drill Sleeve for Drill Bits, φ8.1/φ4.2	2						
	Drill Bit, φ4.2	1						
	Drill Bit, φ4.2, 350mm	1						
	Fixation Sleeve, φ4.2	1						
	Wrench for Fixation Sleeve, SW3	1						
	Depth Gauge	1						
	Screwdriver, Stardrive, T25	1						
	Screwdriver Shaft, Stardrive, T25	1						
	Proximal Aiming Arm, Left	1						
	Proximal Aiming Arm, Right	1						
	Aiming Arm for Cancellous Bone, proximal	1						
	Drill Sleeve, φ8.1/φ3.4	2						
	Drill Bit, φ3.4	1						
	Fixation Sleeve, φ3.4	1						
	Compression screw	1						
	Screwdriver, stardrive, cannulated, T25	1						
	Universal Wrench, SW6.5	1						
	Screwdriver Shaft for End Cap	1						
	U-Clip	1						
	Drill Bit, φ3.4, 320mm	1						
	Instrument Case	1						
	Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent							
	13. Battery Operated Modular Drill system							
	Consist of Following:							
	Modular Drive Hand Piece	1						

		reverse forward option							
		Double trigger system			**01 set**				
		Cannulation of hand piece 4.0mm							
		Battery Charger	1						
		4-Charging bays in single charger							
		LCD screen to moniter charging							
		Charging Volts: 21.6 Volts							
		Power socket output 25.2 V/14 A							
		Power Module	4						
		Capicity 3.1 Ah							
		Voltage 21.6 Volts							
		Led battery charge status indicator							
		Charging short beep							
		Battery Case Autoclavable	4						
		Steam sterlization at 2 bar 134 ^{o}C							
		Battery Funnel for Ascptic Battery Loading	4						
		Steam sterlization at 2 bar 134 ^{o}C							
		Chuck with Key Drill Attachment	1						
		cannulation 4.0mm							
		Power Torque 7 NM							
		Chucking range upto 6.35mm							
		Hybrid Chuck	1						
		Both keyed & keyless operation							
		cannulation 4.0mm							
		Power Torque 7 NM							
		Chuck range upto 6.35mm							
		AO Quick Coupling Attachment	1						

		Power Torque 7 NM							
		Quick Coupling for Kirshner Wires Attachment							
		a: Cannulation upto 0.7-2.5mm	1						
		Power Torque 7 NM							
		b: Cannulation upto 1.5 - 4.0mm	1						
		Power Torque 7 NM							
		Hudson Drill Attachment	1						
		Cannulation 4.0mm							
		Power Torque 7 NM							
		Speed: 300 RPM							
		AO Reamer Attachment	1						
		Cannulation 4.0mm							
		Power Torque 7 NM							
		Speed: 300 RPM							
		Sagittal Saw Attachment Short	1						
		Length 56 x 80mm							
		Wright: 410grm							
		Sagittal Saw Attachment Long	1						
		Length 56 x 165mm							
		Wright: 640grm							
		Oscillating Saw Hand Piece	1						
		12000-16000 Oscillating per min							
		Weight without lid 1.14Kg							
		Oscillating angle 4.5 degree							
		Lubrication Spray	6						
		Saw Blades							
		Saw Blade Size 13 x 90 x 1.27	5						

		Saw Blade Size 19 x 90 x 1.27	5						
		Saw Blade Size 18.5 x 68 x 0.8	5						
		Saw Blade Size 15 x 23 x 0.6	5						
		Saw Blade Size 10 x 25 x 0.6	5						
		Power Cord for Direct Use	1						
		Steam sterlization at 2 bar 134 ^{o}C							
		Weight 310grm							
		Sterlization Container							
		Basket with silicon fixation for hand piece 540 x 253 x 113mm	1						
		Basket with silicon fixation for battery cases 540 x 253 x 113mm	1						
		Sterlization Container 600 x 272 x 138mm	1						
		Led for sterlization container 602 x 285mm	1						
		Label Paper with Indicator	100						
		Modular Autolock Mechanish	2						
		Security Seal	100						
		Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent							

14	**Cable System Instrument Set**		**1-Set**
	Consist of Following:		
	Cable Tensioner	1	
	Cable Tension Holder	2	
	Attachment Bit for Tension Holder	2	
	Cable Passer, large	1	
	Cable Passer, small	1	
	Cable Crimper	1	
	Cable Cutter	1	

			Cable Passer, large, curved	1							
			Cable Passer, small, curved	1							
			Cable System Instrument Set Case	1							
		15	Screw Box for 3.5mm Cortical Screws	2-Pcs							
		16	Screw Box for 3.5mm Locking Screws	2-Pcs							
		17	Screw Box for 5.0mm Locking Screws	2-Pcs							
		18	Implant Box for Proximal Femoral Nail, Left / Right	1-Pcs							
		19	Implant Box for Universal Femoral Nail II Left / Right	1-Pcs							
		20	Implant Box for Tibial Nail II	1-Pcs							
		21	Screw Driver Ø3.5mm	2-Pcs							
		22	Screw Driver Ø4.5mm	2-Pcs							
		23	Guide Wires for Interlocking Nail with Olive Tip	50-Pcs							
		24	Plate Holdings Small / Medium / Large	6-Pcs							
		25	Pelvic Reduction Forceps, Angled Small with pointed ball tips	2-Pcs							
		26	Pelvic Reduction Forceps, Angled Large with pointed ball tips	2-Pcs							
		Orthopedic Implants:		-	-						
		27	DCP Narrow Plates steel		50-Pcs						
		28	DCP Broad Plates steel		50-Pcs						
		29	Small Fragment Plates steel		50-Pcs						
		30	One Third Tubular Plates steel		50-Pcs						
		31	DHS Plate Plates Short Barrel / Standard Barrel steel		50-Pcs						
		32	DCS Plate steel		50-Pcs						

	33	Leg Screws for DHS/DCS with Compression Screw steel		100-Pcs						
	34	Standard T-Plate steel		40-Pcs						
	35	T-Buttress Plates steel		20-Pcs						
	36	L-Plate Left / Right steel		20-Pcs						
	37	K-Wires steel		500-Pcs						
	38	Suture Wire steel		20-Pcs						
	39	External Fixator 10" steel		10-Pcs						
	40	External Fixator 12" steel		10-Pcs						
	41	External Fixator 14" steel		15-Pcs						
	42	External Fixator 16" steel		10-Pcs						
	43	External fixator Rods Different Lengths steel		50-Pcs						
	44	Clamp for External Fixator steel		100-Pcs						
	45	Shan Screws 3.5mm steel		50-Pcs						
	46	Shan Screws 4.5mm steel		70-Pcs						
	47	Shan Screws 5mm steel		50-Pcs						
	48	Austin Moor Hip Prosthesis Narrow Stamp steel		50-Pcs						
	49	Austin Moor Hip Prosthesis Standard Stamp steel		50-Pcs						
	50	3.5mm Cortical Screws steel		500-Pcs						
	51	4.0mm Cancellous Screws steel		150-Pcs						
	52	3.5mm Washer steel		50-Pcs						
	53	4.5mm Washer steel		50-Pcs						
	54	Patella Claw Plate steel		15-Pcs						
	55	Bone Cement Gentamicin steel		5-Pcs						
	56	Narrow Limited Contact Locking Plate (Combi-Holes) Titanium		30-Pcs						
	57	Broad Limited Contact Locking Plate (Combi-Holes) Titanium		30-Pcs						
	58	Small Limited Contact Locking Plate (Combi-		50-Pcs						

			Holes)Titanium								
		59	One Third Tubular Locking Plate Titanium		20-Pcs						
		60	Distal Lateral Humeral Locking Plate (Combi-Holes) Left / Right Titanium		20-Pcs						
		61	Distal Medial Humeral Locking Plate (Combi-Holes) Left / Right Titanium		20-Pcs						
		62	Olecranon Locking Plate II (Combi-Holes) Left / Right Titanium		20-Pcs						
		63	Distal Fibular Locking Plate Left / Right Titanium		40-Pcs						
		64	Reconstruction Locking Plate Titanium		10-Pcs						
		65	DHS Locking Plate (Combi-Holes) Titanium		25-Pcs						
		66	DCS Locking Plate (Combi-Holes) Titanium		25-Pcs						
		67	Leg Screws for DHS/DCS with Compression Screw Titanium		50-Pcs						
		68	Distal Medial Tibial Locking Plate (Combi-Holes) Left / Right Titanium		20-Pcs						
		69	Distal Femoral Locking Plate (Combi-Holes) Left / Right Titanium		20-Pcs						
		70									
		71	Mini T-Locking Plate Oblique Angled (Combi-Holes) Titanium		10-Pcs						
		72	Mini T-Locking Plate Right Angled (Combi-Holes) Titanium		10-Pcs						
		73	Cable Co-Cralloy		10-Pcs						
		74	Lateral Tibial Head Buttress Locking Plate (Combi-Holes) Left / Right Titanium		20-Pcs						
		75	Proximal Femoral Nail, Anti-rotation Left/Right Titanium		50-Pcs						
		76	PFNA Spiral Blade Titanium		12-Pcs						
		77	End Cap for PFNA Short / Long Titanium		4-Pcs						
		78	Universal Femoral Nail II Left / Right Titanium		40-Pcs						
		79	6.9mm Femoral Neck Screw Titanium		30-Pcs						

	80	4.9mm Locking Screws Titanium		100-Pcs						
	81	Universal Tibial Nail II Titanium		40-Pcs						
	82	4.0mm Locking Screw Titanium		100-Pcs						
	83	5.0mm Locking Screw Titanium		150-Pcs						
	84	End Cap for Elastic Nail Titanium		10-Pcs						
	85	Titanium Elastic Nail Titanium		50-Pcs						
	86	3.5mm Locking Screws Self-Tapping Titanium		400-Pcs						
	87	3.5mm Cortical Screws Self-Tapping Titanium		100-Pcs						
	88	Clasp Titanium		10-Pcs						
	89	5.0mm Locking Screws Self-Tapping Titanium		400-Pcs						
	90	4.5mm Cortical Screws Self-Tapping Titanium		100-Pcs						
	91	4.0mm Cannulated Screws Self-Tapping Titanium		100-Pcs						
	92	7.3mm Cannulated Screws Titanium		100-Pcs						
	93	3.5mm Washer Titanium		20-Pcs						
	94	4.0mm Washer Titanium		30-Pcs						
	95	4.5mm Washer Titanium		20-Pcs						
	96	7.3mm Washer Titanium		30-Pcs						
	97	Bone Substitute		10-Pcs						
	98	Pulse Flashing System		15-Pcs						
	Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent									
92	**OPERATING TABLE** Head Rest 02 2-part Leg Plates 02 Long Intermediate Plate 02 **Standard accessories**					**01**				

	Universal holder for side and back rest, without clamp. 02 Clamp for holder 02 Side and back rest, with pad. Without clamp, dimensions pad: 220 x 100 x 30 mm. 02 Side rest with rapid-action fixing clamp, for side rails 25 x 10 mm. With pad. Dimens 02 Arm rest, with arm strap and attachment clamp 04 Anesthesia screen, rigid, with 2 drape clips. Without radial setting clamp. 02 Radial setting clamp with fixing screw, rotating, for bars Ø 16 - 18 mm. 06 Goepel Leg support 04 Body restraint strap, with clamp and Velcro fastener 02 Leg strap, strap divided. Measure leg strap: 1050 x 105 mm. Made of polyester mater 02 Infusion pole with fixing clamp, extendable. With clamp. Upper part with 4 bottle hook 02 Head support, donut head pad, dimensions:2 0 x 7.5 x 4.5 cm. 02 Universal positioning element, rounded, dimensions: 38 x 12.5 x 6.3 cm 02 Universal positioning element, half rounded, with flat bottom side, dimensions:50x10x85cm 2 Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent					
93	**MTS SYSTEM** Side rail 25 x 10 mm, universal mobile operating table (without head) Head rest standard with side rails 25 x 10 mm. Tilting up and down Leg plates 2-part with side rails 25 x 10 mm. Standard leg plates, Accessories Ortho lower extremity, tibia, femur, hip Stability support with locking lever removable Supplement bar with plate, right Supplement bar with plate, left Additional joint, for bar Traction bar ADVANCED, carbon-fiber (1 piece) Multi clamp (25 mm) for traction bar ADVANCED Traction bar metal Perineal rod Perineal rod for arthroscopy Offset holder, for perineal rod Traction unit Extension shoe MTS, white Adapter for lower leg surgery Foot plate adult ZSB, right (extension device) Central rail adapter Holder for knee rest Radial setting clamp with star screw Head rest system	**01**				

	Lateral extension plate for head rest system, left Lateral extension plate for head rest system, right Extension plate, 02 Head Pad for MTS (10 pieces) Traction unit, vertical shift Telescopic support MTS Trolley Accessories Spine and Basic accessories Schure Spine Frame, radiolucent Arm rest with rapid-action fixing clamp, with ball and socket joint, for side rails 25x10mm. Anesthesia screen, rigid, with 2 drape clips. Without radial setting clamp. Radial setting clamp with fixing screw, rotating, for bars Ø 16 - 18 mm. Infusion pole with fixing clamp, extendable. With clamp. Upper part with 4 bottle hooks. Height Head support, donut head pad, dimensions:20 x 7.5 x 4.5 cm. Head support, donut head pad, dimensions:20 x 7.5 x 4.5 cm. Universal positioning element, rounded, dimensions: 38 x 12.5 x 6.3 cm. Universal positioning element, half rounded, with flat bottom side, dimensions: 50 x 10 x 8.5 cm. View TM Head Positioning Device (HPD) Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent					
94	**MOBILE INTRA OPERATIVE CT (complete package)** For cranial spine and trauma procedure and OR suites Helical CT-Scanner with 32 slice detector Extra large bor size of 107cm Scan volume D50x100cm allows to image entire spine Integration of hi-end table for reproducible imaging Patented air cooling system Electrical (Battery power drive system) Latest generation navigation platform Software for cranial, spine and trauma DATA management DICOM / VIEWER 3D calibration package Phantom with case and stand adhesive flat markers CT-Scanner calibration phantom Automatic image transfer and registration software for cranial and spine Reference array spine claims PATIENT SCAN DRAPE Cranial reference package and Unit	**01**				

	ADOPTER KIT FOR DRAPE Complete with technical onsite training and installation **Centralized OR information HUB for pure Dicom viewing or image planning to complete digital OR functionality including video management, documentation and communication.** 42" HD display with Led back light and ultra slim capacitive multitouch interface that displays excellent image quality in full HD, 6 viewing displays and all components like microphone, loud speaker and camera can be covered Integration of Hospital information system (HIS) Data management, Dicom viewer, Dicom viewer 3D streaming and recording with web portal integration of OR Pc into digital OR audio and video conferencing surgical check list \ Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent					
95	**VIEN FINDER COMPLETE WITH STAND (ADULT AND PEADS)** Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent	**10**				
96	**PATIENT DIAGNOSTIC SET WITH MONITOR AND SCOPES** Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent	**10**				
97	**THE BODY BOX / BODY PLETHYSMOGRAPH** Combines powerful software, advanced digital technology and flow sensor to provide unparalleled ease of operation, reliability and infection control solutions for complete Pulmonary Function assessment. Body Plethysmograph offers comfort, easy access and flexible Testing options for all patients, children through adults. Spirometry, Thoracic Gas Volumes (TGV), Airways Resistance (RAW & SGAW), Diffusing Capacity (DLCO) by Real Time Multi Gas Technology, Respiratory Mechanics (MIP/MEP), User-Defined Predicted Sets, Trending, HIPAA Security Software, RTD Diffusing Capacity. Regulator Kit for RTD DLCO ED Gas, DLCO 21% O2, 0.3% CH4, 0.3% CO, Bal N2 ·Cabin Design Virtually no · Small internal volume improves sensitivity and provides rapid equilibration. ·Maximizes usable space for patient comfort while maintaining low total volume. Data management solutions include system connectivity, physician review station and electronic medical record interface. On screen alerts based on ATS/ERS criteria and standards, · Real-time help screens, · Report Designer. · Powerful Microsoft SQL database. · Easy to learn, "one button" testing. · Patient can easily be transferred from a wheelchair eliminating need for special ramps. Software · Complete spirometry, delusional lung volumes and diffusing capacity can be performed outside the chamber. · Quiet, inflatable door seal with no mechanical latches. Easy Access for all Patients · limit to accommodate larger patients Meets or exceed current ATS/ERS standards and · No warm-up or re-calibration between patients. · Easy to disinfect. · The flow sensor can be sterilized. · On-board indicator lights. Flow Sensor · Automatic gas calibration. · ADC Module. ·Advanced Digital Electronics specifications. PC and Printer will provide locally	**01**				

	Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent					
98	**MEDICAL GRADE MONITORS** 6MP -23" and 30" COLOR LCD MONITOR A 6 megapixel monitor ideal for viewing a variety of medical images at the same time including CR, DR, CT, MRI, and ultrasound. Monitor offers precise medical image viewing as well as ease-of-use. Display Both Monochrome and Color 10-bit colors (Display Port) : 1.07 billion (maximum) colors 8-bit colors: 16.77 million from a palette of 543 billion colors Video signal, Input terminals-DVI-D (dual link) x 1, Display Port x 2 Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent	**02**				
99	**DUAL TRACTION FOR RELAXING TREATMENT:** Motorized Intermittent Traction Unit. Integrated dual style for both cervical and lumber traction in reclined position. Cervical traction force 29-245N (3-25 kgf) Lumber traction force 49-588N (5-60 kgf) Compared to the sitting position, it relives lower muscle strain free from the weight of the head for safe and relaxing treatment. **LUMBER TRACTION-SMOOTH TRACTION, GENTLE FIT:** Gentle yet firm fixing of the waist allows for relaxing traction, settable with a three stage tightening force. Relaxing mode automatically discharges air during rest time, quickly reducing strain to the wais Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent	**01**				
100	**ORTHOPEDIC FRACTURE TABLE WITH COMPLETE ACCESSORIES** ***Features*:** **a)** Specifically designed to enhance reduction and fixation of acetabular and pelvic fractures. Benefits of the table can be an easier reduction, making closed reduction possible, making open reduction possible through a lesser approach, and making the most difficult reductions possible at all. The narrow contact area the table makes with the pelvic area also enhances access. **b)** Unobstructed radiolucent pelvic table area **c)** Radiolucent Leg Spar **d)** Unrestricted C-Arm Access **e)** Aids surgeon with articulation of torso and legs **f)** Low table profile for easy patient transfer **g)** Patient weight capacity 450 lbs(205kg)	**01**				

h) Free and Clear Imaging from Chin to Toes

Standard Features:

1. Carbon Fiber Table Top
2. Automatic Power Floor Locks
3. Built-in standard OR side accessory rails
4. Stainless steel base
5. Spherical Spatial Positioning System (SSPS)
6. Supine, lateral, and prone position capabilities
7. Traction accessories for all positions
8. 2 in (5cm) Tempure-Pedic Medical Table Top Pad
9. Patient Safety Strap

Technical Specifications:

Patient Weight Capacity	450 lbs (205kg)
Table Top Width	21 in (53cm)
Table Top Length	62 in - 149 in (155cm- 378cm)
Table Top Height Range	31" to 41" (79cm -104cm)
Leg Spar Articulation	35◦ Up/Down. 20º adduction, 45º abduction
Spar Mount Translation	8.5" (21cm) each side
Lateral Tilt	±20º right / left
Trend/Reverse Trend	±15º
Power Supply	200-230V, 50/60 MHz
Warranty	02Years with parts and labour

Standard Components:

1. Pubic Lateral Positioner
2. Shoulder/Sacral Pad Assembly (2)
3. Clark Socket (3)
4. Side Rail Clamp (3)
5. Patient Safety Strap (2)
6. Traction Unit
7. Accessory Clamp (3)
8. Tibia Traction Upright
9. Well Leg Holder
10. Cross Arm Support with Pad
11. Drape Hanger Upright (2)
12. Drape Hanger Top Rail, Foot-End
13. Drape Hanger Top Rail, Head-End
14. Articulated Bracket

	15. Traction Lifter Bracket 16. Femoral Hook Support 17. Traction Device Hook 18. Bow Holder 19. Lateral Perineal Support Assy.with Pad 20. Low Leg Support (2) 21. Mounting Bracket for Lateral Perineal Post 22. Spar Assembly Left 23. Spar Assembly Right 24. Tibia Traction Boot Adapter 25. Traction Boot Adapter Assy.(2) 26. Well Leg Support Arm 27. Dust Cover 28. Lateral Perineal Post 29. Perineal Post 30. Prone Skeleton Traction Holder 31. Traction Hook Extender 32. Traction Lifter 33. Traction Boot, Small, Left & Right, Pair 34. Traction Boot, Large, Left & Right, Pair 35. Lateral Perineal Post, Curved 36. Pivoting Arm Board (2) 37. Equipment Cart 38. Pelvic Pad 39. Main Table Pad 40. Accessory Attachment Bracket 41. Lateral Traction Device 42. Femoral Hook Right 43. Femoral Hook Left 44. Crank Handle Assembly, Long 45. Attachment Mounting Bracket 46. Patient Care Kit ***Procedures & Applications***: 1. Acetabular Fracture 2. Pelvic Fracture 3. Pelvic Reconstruction 4. Minimally Invasive Hip Replacement 5. Femur Fracture 6. Hip Fracture					

	7. Tibial Fracture Thoracic and Lumber Spine Surgery Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent						
101	**THORACOSCOPY (MEDICAL THORACOSCOPY / PLEUROSCOPE) SYSTEM**			**01**			
	1 Straight Forward Tele- scope 0°, with parallel eyepiece, diameter 10 mm, length 27 cm, autoclavable, fiber optic light transmission incorporated, with 6 mm, instrument channel	1					
	2 Forward-Oblique Telescope 30°, diameter 4 mm, length 30 cm, autoclavable, fiber optic light transmission incorporated, color code: red	1					
	3 Trocar, with blunt tip, flexible cannula, autoclavable, size 6 mm, working length 8.5 cm, color code: black,	1					
	Consisting of:						
	Cannula						
	Trocar only						
	4 Optical Suction Tube, for use with Telescope	1					
	5 Optical Biopsy Forceps, double action jaws, for use with telescope	1					
	6 Optical Powder Blower,		1				
	Consisting of:						
	Sheath for Optical Powder Blower						
	Rubber Hose						
	Rubber Insuflation Bulb						
	Bottle, for use with Telescope						
	7 Optical Dissection Electrode, L-shaped, with connector pin for unipolar coagulation, for use with Telescope	1					
	8 Pneumoperitoneum Needle, with spring-loaded blunt inner cannula, LUER-Lock, autoclavable, diameter 2.1 mm, length 10 cm	1					
	9 Pleurabiopsy Needle		1				
	Consisting of:						
	Biopsy Needle, with LUER-Lock connector, with stopcock						
	Rider, as stop screw						
	Cannula, with LUER-Lock connector, with stopcock, diameter 3 mm, length 6.5 mm						
	Trocar only, with pyramidal tip						

	10	Trocar, size 11 mm, color code: green-white **Consisting of:** Trocar only, with blunt tip Cannula without valve, with insufflation stop- cock, length 8.5 cm, Multifunctional Valve, size 11 mm		1					
	11	Trocar, size 11 mm, **Consisting of:** Trocar only, with blunt tip Cannula flexible, with silicone leaflet lip valve, length 8.5 cm		1					
	12	MANHES Biopsy Forceps, rotating, dismantling, insulated, with connector pin for unipolar coagulation, with irrigation connection for cleaning, single action jaws, large jaws, size 5 mm, length 43 cm **Consisting of:** Metal Handle, insulated, without ratchet Outer Sheath, insulated Forceps Insert	1						
	13	Coagulation and Dissecting Electrode, with suction channel, with connector pin for unipolar coagulation, size 5 mm, length 43 cm	1						
	14	Handle with Trumpet Valve, for suction or irrigation, autoclavable, for use with coagulation suction tubes size 5 mm	1						
	15	Powder Blower, rubber insufflation bulb, straight sheath, size 5 mm, length 42 cm, **Consisting of:** Sheath Rubber insufflation bulb Bottle	1						
	16	Coagulating and Dissecting Electrode, L-shaped, size 5 mm, length 43 cm	1						
	17	Unipolar High Frequency Cord, with 4 mm plug, length 300 cm	1						
	18	HD module, for use with up to 3 link modules, resolution 1920 x 1080 pixels, with integrated and digital Image Processing Module, power supply 100 - 120 VAC, 50/60 Hz; 200 - 240 VAC, 50/60 Hz							

		Consisting of: Mains Cord, length 300 cm DVI Signal Cable, length 300 cm Connecting Cable, length 100 cm USB Flash Drive, 32 GB	1					
	19	link module, for use with HD One chip camera heads, power supply 100 - 120 VAC/200 - 240 VAC, 50/60 Hz, **Consisting of:** Mains Cord, length 300 cm Link Cable, length 20 cm	1 1					
	20	One-Chip FULL HD Camera Head, 50/60 Hz, fixed focus, progressive scan, soakable, gas- and plasma-sterilizable, focal length f = 16 mm, 2 freely programmable camera head buttons, for use with HD						
	21	27" FULL HD Monitor, color systems PAL/NTSC, max. screen resolution 1920 x 1080, image format 16:9, Interface: RS 232, power supply 85 - 264 VAC, 50/60 Hz, wall mount with VESA 100 adaptor **Including:** External 24 VDC Power Supply Mains Cord						
	22	LED light source 150 within Built CO2 insufflations features						
	23	Equipment Cart Powder Coated With 4 Antistatic Dual Castor Wheels with shelves and drawers (Locally Supply)	1					
	24	Multi angel Telescope from 0 - 120 deg with fiber optic light transmission with 10 mm diameter for widest pleural examination	1					
		Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent						
102		**HOSPITAL FURNITURE ITEMS SS (EXPORT QUALITY)** Examination Couch GYNE examination couch Dressing Trolley Instrument trolley Mayo Table		**10 each**				

	Ward Screen Examination stool Foot Step Bowl stand Kick Bucket Linen Trolley IV stand Instrument box Strelizer drum Instrument tray Kidney bowls Male Urinal SS Female Urinal SS Bed Pan SS Forcep jar Dressing Jar Cylinder trolley Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent					
103	**HOSPITAL APPAREL (EXPORT QUALITY)** Doctor Coats various sizes and colors Lab Coats various sizes/ colors Scrub Suits various sizes /colors Surgeon and Patient Gowns , towels sizes /colors Theater Sheets various sizes Hospital bed sheets, fitted Sheets and pillows covers Chef Coats and Aprons WORK MENWEAR Staff Uniforms and Coveralls Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent	**10 each**				
104	**SURGICAL INSTRUMENT SETS (EXPORT QUALITY)** GENERAL SURGERY SET GYNAE SURGERY SET DENTAL INSTRUMENTS SET EYE SURGERY SET Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent	**01 each**				
105	**CONSUMABLES FOR NEONATAL SIMULATOR**					

	Battery consumable for premature neonatal simulator. Tablet PC replacement for premature neonatal simulator. With stylus control. Includes RF module and software Battery consumable for. Tablet PC replacement for five year old pediatric simulator. With stylus control. Includes RF module and UNI software Battery consumable for adult birthing simulator. Tablet PC replacement for adult birthing simulator. With stylus control. Includes RF module and software Battery consumable for adult female advanced simulator. Tablet PC replacement for adult female advanced simulator. With stylus control. Includes RF module and software Battery consumable forforty week neonatal simulator. Tablet PC replacement for forty week neonatal simulator. With stylus control. Includes RF module Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent					

106	**URETERO-RENOSCOPE** Uretero-Renoscope, Semi-Rigid, 430mm Hd 6/7.5ch, 2 X 2.4ch Instrument Channel **01** Scissors,Flexible, 600mm,D.1.6mm, 5charr **02** Foreign Body Grasping Forceps,Semi-Rigid 600mm, D.1.6mm, 5 Charr. **02** Uretero- Renoscope, Semi-Rigid, 430mm Hd 7,5/9,8ch, 2 X 3ch Instrument Channel **01** HD-Uretero-Renescope, Semi-Rigid, 424mm 4.9/6.5, 5ch 1X3ch instrument channel Biopsy Grasping Forceps,Semi-Rigid,600mm D. 1.0mm, 3 Charr. **01** Foreign Body Grasping Forceps, Semi-Rigid D.1.0mm, 3 Charr. **01** Scissors, Semi-Rigid, 600mm,D.1.0mm 3 Charr. **01** HD-Objective, C-Mount, F=14mm (Urology) **01** Mini Compact Scope, 0 deg, 220mm, HD Sheath 9 Charr., Working Channel 4.8 Charr, Autoclavable **01** Mini Compact Scope, 0 deg, 220mm, HD Sheath 12 Charr., Working Channel 6.6 Charr, Autoclavable **01** Dilatator for OTIS Urethrotome **01** Guyon Catheter Introducer Curved 35cm **01** Stockmann Penis Clamp **02** Ellik Evacuator, Tube with Cone, Rubber Ball, Complete Set **02** Silicon Cap, 1 Pack **01** Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent	**01**				

107	**HEART LUNG MACHINE** **1. PUMP CONSOLE** a. The unit should have 5-pump console compactly arranged with separate power supply and control modules. Should have easy access connectors for interchanging the pump. b. Each individual roller pump should be capable of running independently on 180-270 V/50- 60 Hz supply. c. Should have a spill proof base. d. The unit should be supplied with a Battery backup for all five pumps, all safety systems and accessories for a minimum of 60 minutes. Switch over from main power to battery backup should be automatic and immediate. The battery unit should be built in to the pump base and it should be recharged automatically when the system is operating with main power supply. e. Individual pump heads should have Harvey Roller pumps with facility for tubing to be used, adjustable from ¼" to 5/8" through 3/8" and ½" including 1/16" for cardioplegia by easily changeable mechanism. f. At least two pumps should be able to deliver pulsatile flow. g. Individual pump heads should have digital display of the total infusion volume in litres and delivery time, the flow rates in LPM and in RPM h. Each Pump should have easy mechanism for occlusion setting for different thickness of tubes available in the market, 1/32" to 3/32". i. Should have unidirectional hand crank facility as a critical safety feature. Hand crank loading should be from top for faster access. j. The Console should have a compact base mount for the entire pump heads together, with poles and handles. k. Should have variable, changeable tubing holders in each pump head: 1/4", 3/8", ½", 5/8" and double ¼". l. Should have movable oxygenator holder. m. Roller pump should have a self diagnostic circuit with provision to detect and display critical alarm conditions. n. Should have a venous control module with single pole mast with electronic venous line occluder.	**01**				

	o. Should have a monitor mount with adjustable monitoring arm p. Instrument tray positionable with long monitoring arm q. Lightweight surface table; writing surface. **2. MONITORS** a. PRESSURE MONITOR: Facility to monitor one arterial line pressure and one cardioplegia line pressures (total 2); along with necessary pressure transducers, cables six (2 x 3 = 6) and domes (reusable), with accurate digital display and alarm facilities audio and visual. b. TIME MONITOR: Facility for 4 time displays -- 2 for arterial and 2 for cardioplegia delivery. With stop, reset and start function. c. TEMPERATURE MONITOR: 6 temperature displays for patient monitoring and for cardioplegia monitoring with digital display in Celsius with 6 necessary compatible temperature 6 probes and 6 additional probes (6x2=12 probes) with 3x2 = 6 of them for nasal, rectal and esophageal use **3. AIR- OXYGEN BLENDER** To work at 50-60 PSI for membrane oxygenator with water trap attachedwith necessary hoses and connections of minimum of 5 meters lengthand with triple flow glass flow meters. **4. SAFETY DEVICES** a. Safety monitor should have optional capability for computer interface to retrieve perfusion data. b. ULTRASONIC AIR SENSOR: Ultra sonic air sensor to detect bubbles to work equally well with crystalloid and blood; should be possible to fit anywhere in the circuit easily. c. LEVEL SENSOR SYSTEM: Ultrasonic transducers to work well with crystalloid and blood with adhesive pads, with alarm settings. **5. ACCESSORIES** a. LED lamp with flexible arm b. Stainless steel line clamps for cardio pulmonary bypass 12 nos. c. Instrument tray with mounting arm					

	d. At least one thermal blanket. e. On-line measurement of PH , PCO2 & Hb for neonatal cardiac surgery (optional) **6. SYSTEM CONFIGURATION ACCESSORIES, SPARES AND CONSUMABLES** a. Machine cover b. System should be provided with appropriate furniture like adjustable revolving chair for the perfusionist to operate the system. c. The system should contain all the above accessories in Integrated or as separate accessories. **7. ENVIRONMENTAL FACTORS** a. The unit shall be capable of operating continuously in ambient temperature of 05-45 0 C and relative humidity of 15-90% b. The unit shall be capable of being stored continuously in ambient temperature of 05-45 0 C and relative humidity of 15-90% c. Shall meet IEC-60601- 1-2 :2001(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility. **8. POWER SUPPLY** a. Power input to be 180-270VAC, 50-60 Hz,/440 V 3 Phase as appropriate fitted with special imported plug dedicated to the unit. b. Resettable over current breaker shall be fitted for protection c. Suitable Servo controlled Stabilizer/CVT(Optional) d. UPS of suitable rating with voltage regulation and spike protection for 60 minutes back up.(Optional Accessory) (Optional) **9. STANDARDS, SAFETY AND TRAINING** a. Should be FDA or CE approved product b. Electrical safety conforms to standards for electrical safety IEC-60601 / IS-13450 c. One engineer should be posted for a week to impart training d. Manufacturer should have ISO certification for quality standards. Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent					

108	**NEURO INSTRUMENT SET** **A) LAMINECTOMY INSTRUMENT SET** **B) CRANIOTOMY INSTRUMENT SET** **C) TRANSPHENOIDAL PITUATARY SET** **D) VASCULAR BASIC SET** **E) SET OF MICROSURGERY INSTRUMENTS FOR NEUROSURGERY** **F) OIL SPRAY FOR INSTRUMENTS** Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent	**01**				
109	**CARDIAC INSTRUMENTS SETS & BATTERY OPERATED STERNUM SAW** **A) MICRO INSTRUMENT SET** **B) PRIME-LINE CONTAINERS SYSTEM** **C) VALIDATED FOR 5000 CYCLES(LIFE TIME CONTAINERS.)** **D) LARGE SIZE CONTAINER** **E) BATTERY OPERATED STERNUM SAW WITH ECCOS SYSTEM** Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent	**01**				
110	**LAPAROSCOPES INSTRUMENTS SET WITH TELESCOPES** Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent	**01**				
111	**CATH MACHINE BIPLANE AND HYBIRD** Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent	**01**				
112	**IVUS AND FFR MACHINE WITH IFR FUNTIONS** Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent	**01**				
113	**CONSUMABLES FOR IVUS AND FFR** Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent	**01**				
114	**ROTAL ABLATOR MACHINE** Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent	**01**				
115	**ROTA WIRE AND ROTA BURR (1.25 AND 1.5)IABP MACHINE** Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent	**01**				

116	**TRANSDUCER CABLES WITH DOMES FOR CCU BEDS** Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent	**01**				
117	**CENTRAL MONITOR** Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent	**01**				
118	**PRESSURE BAGS** Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent	**01**				
119	**ECHO MACHINE WITH PEADIATRIC AND ADULT PROBE** Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent	**01**				
120	**PORTABLE ECHO MACHINE** Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent	**01**				
121	**'IT 'SYSTEMS REVAMPING** Dual Processors Blade with software LIC. Dual hard drive 1G/10G network supported built in raid support Ram required more than 1 TB FC support included SFP/10 module should also be included with accessories	**02**				
122	**SAN STORAGE** 10G Connectivity Support Dual controller Space Required (3000TB)	**01**				
123	**SYSTEMS BACKUP AND RECOVERY SOLUTION**	**01**				

124	**RENEWAL OF SYSTEM WARRANTY SERVICES**	**01**				
125	**10G NETWORK SWITCHES**	**01**				
126	**<u>NETWORKING</u>** CAT 6 Modular Jack (I/O) 1 Dual shutter Face Plate 3M 1 Cat 6 Patch cord (1 m) of 3M 1 Cat 6 Patch cord (3 m) of 3M 1 24 Port Patch Panel 1 Electrical Face Plate (multisocket) 1	**01**				
127	**ELECTRIC WORK** Providing, fixing and connecting of sub UPS DB All existing power circuit identification and separate & make ups circuit & connect UPS DB Providing, fixing and connecting of 16mm 4 core + 2 x 16mm s/c pvc cable in sub UPS DB with lugs and other accessories. Wiring of ups socket with 2 x 2.5mm + 1 x 1.5mm pvc wire Testing of old earth pit Making of new earth point with 25mm dia x10 feet long copper rod with chemical. Providing and connecting of 2x70mm copper wire for earthing Providing and fixing of earth testing point with 300mm x 25mm x 5mm copper bar with bolt and lugs Wiring of industrial socket for ups in out with 6mm 4 core + 1 x 6mm pvc cable (3phase) Providing, fixing & connecting of 32A 5 Pin industrial socket (3 phase) clipsal make Wiring of industrial socket for ups in out with 6mm 3 core pvc cable (1 phase) Providing, fixing & connecting of 32A 5 Pin industrial socket (1 phase) clipsal make Providing and laying of following pvc conduit and dura built channel. 25mm dia pvc conduit 38mm dia pvc conduit 50mm dia pvc conduit 25mm x 25mm pvc dura channel 38mm x 25mm pvc dura channel 50mm x 50mm pvc dura channel	**6** **8** **480** **180** **10** **1** **1** **80** **1** **6** **6** **8** **8** **50**				

128	**ICU bed with Patient Integration.** Safe working load 270 ~ 290 kg Maximum patient weight 227 ~ 250 kg Overall length Position 2 (standard) 230 cm Overall length Position 3 (extended) 242 cm Overall width 103 cm Mattress length Position 2 (standard) 202 cm Mattress length Position 3 (extended) 214 cm Mattress width 88 cm Mattress thickness 15 cm to 20.5 cm Mattress and control unit weight (approx) Mattress 16 kg Control unit 25 kg Height Range (with 125mm / 5in castors) 34 cm to 78 cm Head / Foot down tilt angle 12° min Backrest angle 62° Backrest pause 30° Thigh angle 20° Calf angle 16° Power input 9.5A max at 115 VAC 60Hz 4.5A max at 230 VAC 50Hz Liquid ingress protection IPX4 Electric shock protection Class I type B EMC Complies with EN 60601-1-2: 2002 and 2007 Safety standards ANSI/AAMI ES60601-1-2005 CAN/CSA C22 2 no. 60601-1-DB IEC 60601-2-52-2009 **Standard** • Integrated Therapy Surfaces • Tailored pressure ulcer prevention therapies to individual patient needs • Flexibility in mattress choice (Active or Reactive therapies) • Universal platform translating to lower lifetime costs • IEC 60601-2-52 Safety Standards Certified by third party UL					

	• Light-weight and easy to maneuver • Practical infection control: easy cleaning and disinfection through openly accessible components (removable deck sheets) • Pit stop maintenance – self lubricating joints helps minimize preventative maintenance • 20 degree lateral turn for patient repositioning • Weighing in Bed • Under bed Anti Entrapment System (AES) • Varizone patient movement detection & Bed Exit Alarm • One button CPR which delivers the CPR mode simultaneously to the mattress and the frame • Ergonomic Attendant and Patient controls • Function lockouts • Pro-Contour Profiling • Automatic pressure compensation in the seat section when the head of bed is adjusted • Trendelenburg / Reverse Trendelenburg (min 12 degrees) • Auto 30° backrest pause • One button Cardiac Chair • Skin IQ Outlet • Underbed night light • Linked brake castors • 3 step bed extension • Zero transfer gap (split sides) • Battery back up Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent					
129	ICU PENDANT: High load capacity up to 350 kg. 330-degree rotation, and user-friendly positioning. Accommodate diverse surgical disciplines, room configurations, and staff preferences. Easily be added, moved, and subtracted as desired. Ergonomic Positioning (EPoS) System.	**10**				

	Power supply can be added and removed in line with changing needs. Mechanical and electro-magnetic brakes. With fully enclosed cables and no exposed screws, rubber, or sharp edges, the unit is much easier to clean, helping to reduce the risk of nosocomial infections. Increase safety, raise efficiency and improve access to instruments and patients. Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent					
130	**ICU Walls:** fully-integrated modular wall system that is suitable for new buildings as well as modification and expansion projects. Short construction times, the highest degree of flexibility. The system consists of hard-wearing wall elements that are made of water-resistant composite board with a sturdy finishing. The system itself is a complete unit - wall and clean room ceiling elements are sealed down to the substructure Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent	**10**				
131	**MATTRESS COVER FOR PRESSURE ULCER:** Products can be applied to most support surfaces for effective pressure ulcer prevention and treatment. Negative Airflow Technology (NAT) to continually draw away excess moisture from the skin/surface interface, for superior microclimate management. - improved laminar airflow that eliminates surface billowing seen with standard air pumps - increased air velocity beneath the patient for maximal moisture control. Quoted product should be certified: FDA, CE , ISO, TUV **MAKE / ORIGIN** U.S.A. Japan , Europe or equivalent					

132	**D.B - DATA ROOM.**					
	(SIZE : HEIGHT=2000, WIDTH=1400, DEPTH=600MM).					
	COMPONENT LIST					
	COMPONENT DESCRIPTION					
	INCOMING					
	-					
	630A TP MCCB 36KA 1					
	DIGITAL VOLT METER (0-500V)+S/S 1					
	DIGITAL AMPERE METER (0-600/5A)+S/S 1					
	C.T'S (600/5A) 3					
	PHASE INDICATION LIGHTS 3					
	CONTROL FUSES (06A SP) 3					
	EMERGENCY PUSH BUTTON 1					
	OUTGOINGS					
	-	01				
	FOR 200KVA UPS (02 NOS)					
	300A TP MCCB 25KA 2					
	FOR LIGHT/POWER/AC					
	20A TP MCB 10KA 4					
	10A SP MCB 10KA 3					
	16A SP MCB 10KA 3					
	SUB - INCOMING - 1 (200KVA UPS-1)					
	(FOR RACK/STORAGE - 1)					

	300A TP MCCB 25KA					
	SHUNT TRIP 220VAC					
	400A 4P CHANGE OVER SWITCH					
	PHASE INDICATION LIGHTS					
	CONTROL FUSES (06A SP)					
	SUB - OUTGOINGS - 1 (200KVA UPS-1)					
	(FOR RACK/STORAGE - 1)					
	20A TP MCB 10KA					
	20A DP MCB 10KA					
	16A SP MCB 10KA					
	SUB - INCOMING - 2 (200KVA UPS-2)					
	(FOR RACK/STORAGE - 2)					
	300A TP MCCB 25KA					
	SHUNT TRIP 220VAC					
	400A 4P CHANGE OVER SWITCH					
	PHASE INDICATION LIGHTS					
	CONTROL FUSES (06A SP)					
	SUB - OUTGOINGS - 2 (200KVA UPS-2)					
	(FOR RACK/STORAGE - 2)					
	20A TP MCB 10KA					
	20A DP MCB 10KA					
	16A SP MCB 10KA					

133	**4 MP POE IP IR DAY/NIGHT CAMERAS - BULLET** 1/2.7” 2Megapixel progressive scan CMOS H.264&MJPEG dual-stream encoding 25/30fps@1080P(1920×1080) DWDR, Day/Night(ICR), 3DNR, AWB, AGC, BLC Multiple network monitoring: Web viewer, CMS(DSS/PSS) & DMSS 3.6mm fixed lens (6mm optional) Max. IR LEDs Length 30m IP67, PoE	360	NOS			
134	**4 MP POE IP IR DAY/NIGHT CAMERAS - DOME** 1/2.7” 2Megapixel progressive scan CMOS H.264&MJPEG dual-stream encoding 25/30fps@1080P(1920×1080) DWDR, Day/Night(ICR), 3DNR, AWB, AGC, BLC Multiple network monitoring: Web viewer, CMS(DSS/PSS) & DMSS 3.6mm fixed lens (6mm optional) Max. IR LEDs Length 30m IP67, PoE	450	NOS			
135	**2 MP OUTDOOR DAY/NIGHT SPEED DOME CAMERAS** 30x optical zoom, 16X Digital Zoom Support Triple-streams encoding Max. 25/30fps @1080P(1920x1080) & 50/60fps @720P resolution DWDR, Day/Night(ICR), Ultra DNR, Auto iris, Auto focus Multiple network monitoring: Web viewer, CMS(DSS/PSS) & DMSS Max 400°/s pan speed, 360° endless pan rotation Up to 300 presets, 5 auto scan, 8 tour, 5 pattern Built-in 2/1 alarm in/out Support intelligent 3D positioning with DH-SD protocol >Micro SD memory, IP66, POE+ IR Distance up to 100m(AC24V)/ 80m(DC12V)	75	NOS			

136	**2 MP INDOOR DAY/NIGHT SPEED DOME CAMERAS** 30x optical zoom, 16X Digital Zoom Support Triple-streams encoding Max. 25/30fps @1080P(1920x1080) & 50/60fps @720P resolution DWDR, Day/Night(ICR), Ultra DNR, Auto iris, Auto focus Multiple network monitoring: Web viewer, CMS(DSS/PSS) & DMSS Max 400°/s pan speed, 360° endless pan rotation Up to 300 presets, 5 auto scan, 8 tour, 5 pattern Built-in 2/1 alarm in/out Support intelligent 3D positioning with DH-SD protocol >Micro SD memory, IP66, POE+ IR Distance up to 100m(AC24V)/ 80m(DC12V)	35	NOS			
137	**16 CH NVR** Up to16 channel IP camera input H.264/MJPEG dual codec decoding Max 200Mbps incoming bandwidth Up to 5Mp resolution preview & playback HDMI/VGA/TV simultaneous video output 8/16 channel synchronous real time playback, ONVIF Version 2.4 conformance Support 4 SATA HDDs up to 16TB, 1 e SATA port, 2 USB(1 USB3.0) Support P2P, QR code scan & add Multiple network monitoring: Web viewer, CMS(DSS/PSS) & DMSS	60	NOS			
138	4 TB HDDS	120				
139	24 PORT POE SWITCH	120				
140	24 PORT NETWORK SWITCH	45				
141	24 PORT SFP SWITCH	15				
142	SECURITY GATEWAY / FIREWALL (UBNT)	2				
143	WIRELESS ACCESS POINTS (UBNT)	25				
144	POINT TO POINT CONNCETIVITY HARDWARE (UBNT)	15				
145	PVC BACK BOXES	1500				
146	CAT-6 IOS	1500				
147	24 PORT PATCH PANEL (LOADED) - 3M	135				

148	CABLE MANAGER (3M)	135				
149	3 METER PATCH CORDS (3M)	1500				
150	1 METER PATCH CORDS (3M)	1500				
151	RJ-45 CONNECTORS	60 BOX				
152	CAT-6 3M NETWORK WIRE	95000FT				
153	1" PVC CONDUIT WITH ACCESSORIES	15000FT				
154	1.5" PVC CONSUIT WITH ACCESSORIES	12000FT				
155	2 X 7.029 + ECC ELECTRIC WIRE (PAKISTAN CABLES) FOR SD	7200MTR				
156	12 CORE S.M FIBER OPTIC CABLE	8000MTR				
157	24 CORE LOADED ODF	10				
158	12 PORT LOADED ODF	15				
159	SC-SC PATCH CORDS	150				
160	GIGABIT MEDIA CONVERTER (PAIR)	45				
161	42 U NETWORK RACK (HP) WITH COOLING FANS AND PDU	8				
162	12 U WALL MOUNT NETWORK RACK WITH COOLING FANS AND PDU	34				
163	INSTALLATION, WIRING, COMISSIONING AND TRAINING CHARGES	1				
164	**DATA CENTRE AND OTHER ITEMS**					
1	10+10 KVA DOUBLE CONVERSION ONLINE UPS SYSTEM WITH PARALLEING KIT EXTRENAL BATTERY CHARGER 2 BATTERY BANKS (20 X 100 AH DRY BATTERIES FOR 3-4 HRS BACKUP	2 set				
2	VIDEO WALL SOLUTION FOR 9 X 42" LED SCREENS AND VIDEO SERVER	2set				
3	COR i7 NUC PCs	20				
4	24" HIGH DEFINITION SCREENS	20				
5	ELECTRICAL DISTRIBUTION PANEL FOR CCTV, PA SYSTEM AND NETWORK RACK WITH BREAKERS AND ACCESSORIES	2st				
6	10 mm 4 CORE ARMORED WIRE WITH 10 mm SQ ECC CABLE	4000mtr				
7	DATA CENTRE RAISED FLOORING	1				
8	FM 200 FIRE SUPRESSION SYSTEM	1set				

165	**RFID ACCESS CONTROL SYSTEM**					
1	IP65 RATED RFID READER, WITH BUILT-IN TCP/ SUPPORT IP, MULTI-COLOR LEDS, 40,000 USER CAPACITY & 50,000 TRANSACTION STORAGE MODEL XPASS (IN)	20				
2	IP65 RATED RFID READER, WITH BUILT-IN TCP/ SUPPORT IP, MULTI-COLOR LEDS, 40,000 USER CAPACITY & 50,000 TRANSACTION STORAGE MODEL XPASS (IN)	20				
3	MANUAL EXIT BUTTON (OUT)	20				
4	ELECTROMAGNET LOCK 600 LBS	20				
5	MONITORING SOFTWARE	1				
6	INSTALLATION AND TRAINING CHARGES	1				
166	**TICKETING COUNTER**					
1	TICKETING SYSTEM WITH A TICKETING PANEL 5 X TICKETING DISPLAYS ANNOUNCEMENET SYSTEM 5 X MANUAL CALL STATION COUNTER TICKET PRINTER	2				
167	**OTHER ITEMS**					
1	MULTIZONE WALK THROUGH GATES	15				
2	ROAD BARRIERS / TURNSTILES	8				
2	MULTIZONE SPEED GATES	10				
3	HAND HELD METAL DETECTOR	40				
4	WIRELESS COMMUNICATION SYSTEM (40 UNITS)	1				
5	FALSE CEILING	30000				
6	WALL PAPERS	15000				
7	ROLLER BLINDS (DIFFERENT SIZES)	350				

8	CEILING LIGHT PANELS	250				
9	5" ROUND CEILING LIGHTS	50				
10	8" ROUND CEILING LIGHTS	50				
11	4" ROUND CEILING LIGHTS	50				
12	3" ROUND CEILING LIGHTS	50				
13	2700 LUMENS PROJECTORS	10				
14	PROJECTOR MOUNTING KIT	10				
15	7 FT MOTORIZED PROJECTOR SCREENS	10				
16	CHROME CAST	10				
17	Ci7 LAPTOPS	7				
18	BUG KILLER	6				
19	HANGING LAMPS	6				
20	QUE MAKER	4				
21	WALL CLOCKS	4				
22	COAXIAL CABLE	10				
23	INTERACTIVE WHITE BOARDS	15				

24	DOCUMENT CAMERAS	15				
25	MISC. INSTALLATION ACCESSORIES	1				
26	55" LED SCREEN	6				
27	INSTLLATION, TESTING AND COMMISSIONING CHARGES	1				

S#	Technical Specifications	Qty	CIF Price		FOR Price	
			Unit Price	Total Price	Unit Price	Total Price
ENDOSCOPY ACCESSORIES						
1	**Double pigtail Plastic biliary stents**	**150**				
a	Double Pigtail Plastic biliary pigtail stents 7fr x 5cm					
b	Double Pigtail Plastic biliary pigtail stents 7fr x 10cm					
c	Double Pigtail Plastic biliary pigtail stents 7fr x 12cm					
d	Double Pigtail Plastic biliary pigtail stents 10fr x 5cm					
e	Double Pigtail Plastic biliary pigtail stents 10fr x 10cm					
f	Double Pigtail Plastic biliary pigtail stents 10fr x 12cm					
2	**Soehendra biliary plastic stents**	**50**				
a	Soehendra biliaryt stent 8.5 fr x 7cm					

b	Soehendra biliaryt stent 8.5 fr x 9cm					
c	Soehendra biliaryt stent 8.5 fr x 10cm					
d	Soehendra biliaryt stent 8.5 fr x 12cm					
e	Soehendra biliaryt stent 10 fr x 7cm					
f	Soehendra biliaryt stent 10 fr x 9cm					
g	Soehendra biliaryt stent 10 fr x 10 cm					
3	**Plastic biliary stents with sets**	**50**				
a	Plastic biliary stent sets 8.5 fr x 8 cm					
b	Plastic biliary stent sets 8.5 fr x 9 cm					
c	Plastic biliary stent sets 8.5 fr x 10 cm					
d	Plastic biliary stent sets 8.5 fr x 12 cm					
e	Plastic biliary stent sets 8.5 fr x 15 cm					
f	Plastic biliary stent sets 10 fr x 8 cm					

g	Plastic biliary stent sets 10 fr x 9 cm					
h	Plastic biliary stent sets 10 fr x 10 cm					
i	Plastic biliary stent sets 10 fr x 12 cm					
j	Plastic biliary stent sets 10 fr x 15 cm					
4	**Plastic biliary stents without sets**	**150**				
a	Plastic biliary stent 7 fr x 7 cm					
b	Plastic biliary stent 7 fr x 8 cm					
c	Plastic biliary stent 7 fr x 9 cm					
d	Plastic biliary stent 7 fr x 10 cm					
e	Plastic biliary stents 7 fr x 12 cm					
f	Plastic biliary stent 7 fr x 15 cm					
g	Plastic biliary stent 8.5 fr x 7 cm					
h	Plastic biliary stent 8.5 fr x 8 cm					

i	Plastic biliary stent 8.5 fr x 9 cm					
j	Plastic biliary stent 8.5 fr x 10 cm					
k	Plastic biliary stent 8.5 fr x 12 cm					
l	Plastic biliary stent 8.5 fr x 15 cm					
m	Plastic biliary stent 10 fr x 7 cm					
n	Plastic biliary stent 10 fr x 8 cm					
o	Plastic biliary stent 10 fr x 9 cm					
p	Plastic biliary stent 10 fr x 10 cm					
q	Plastic biliary stent 10 fr x 12 cm					
r	Plastic biliary stent 10 fr x 15 cm					
6	**METALLIC BILIARY STENTS**	**50**				
a	METALLIC BILIARY STENTS 10 x 60mm (covered)					
b	METALLIC BILIARY STENTS 10 x 80 mm (covered)					

c	METALLIC BILIARY STENTS 10 x 100 mm (uncovered)					
7	**PANCREATIC STENT**	**100**				
a	pancreatic stent only 7fr x 9cm					
b	pancreatic stent only 7fr x 7cm					
c	pancreatic stent only 7fr x 5cm					
d	pancreatic stent only 8.5fr x 9cm					
e	pancreatic stent only 8.5fr x 7cm					
	CANNULA	**20**				
8	**ERCP CATHETER (Ball Tip)**	**2**				
a	ERCP CATHETER (Ball Tip)					
9	**ERCP CATHETER (Taper Tip)**	**2**				
a	ERCP CATHETER (Taper Tip)					
10	**ERCP CATHETER (Standard Tip)**	**2**				

a	ERCP CATHETER (Standard Tip)					
11	**ERCP CATHETER (Glo Tip)**	**2**				
a	ERCP CATHETER (Glo Tip)					
12	**GL0 - TIP SPRAY CATHETER**	**2**				
a	GL0 - TIP SPRAY CATHETER					
13	**ERCP Double lumen Catheter**	**4**				
a	6fr/200cm catheter radio opaque band					
b	ERCP Swing catheter					
14	**SPHINCTEROTOME**	**100**				
a	Triple lumen sphincterotome 25mm					
b	Triple lumen sphincterotome 30mm					
c	Double lumen sphincterotome 20mm					
d	Ultrataper sphincterotome 20mm					

e	Triple lumen sphincterotome 20 mm					
f	Triple lumen sphincterotome long nose 20 mm					
g	Triple lumen sphincterotome long nose 30 mm					
h	Triple lumen balloon sphincterotome short nose					
15	**NEEDLE KNIFE**	**10**				
a	single lumen needle Knife					
b	triple lumen needle Knife					
16	**GUIDE WIRE**	**100**				
a	guide wire straight 0.21/480cm					
b	guide wire straight 0.25/480cm					
c	guide wire straight 0.35/480cm					
17	**GLIDE WIRE**	**20**				
a	GLIDE WIRE 0.20 guage					

b	GLIDE WIRE 0.21 guage					
c	GLIDE WIRE 0.25 guage					
d	GLIDE WIRE 0.35 guage					
18	**Savary Gilliard wire guide**	**5**				
a	200cm length,Savary Gilliard wire					
b	250cm length,Savary Gilliard wire					
19	**BASKET**	**20**				
a	4 wire soft basket 7fr/220cm 2x4cm					
b	4 wire soft basket 7fr/220cm 2.5 x 5cm					
c	4 wire soft basket 7fr/220cm 3 x 6cm					
d	6 wire soft basket 7fr/220cm 2x 4cm					
e	6 wire soft basket 7fr/220cm 3 x 6cm					
f	8 wire soft basket 7fr/240cm 2 x 4cm					

g	8 wire soft basket 7fr/240cm 3x 6cm					
20	**Foreign Body retrieval Basket**	**3**				
a	Double lumen extraction basket 8fr/200cm 2x4cm					
21	**Wire guided dormia basket**	**5**				
b	Double lumen extraction basket 8fr/200cm 2x4cm					
22	**Net Dormia basket**	**2**				
23	**Roth Net Basket**	**2**				
24	**Lithotriptor Basket of different sizes and shapes**	**10**				
a	Lithotriptor Basket 2.5cm					
b	Lithotriptor Basket 2 cm					
c	Lithotriptor Basket 3 cm					
25	**Stent retrieval basket (device)**	**2**				
26	**EXTRACTOR BALOON**	**100**				

a	Tri-Ex multiple size radiopaque extractor balloon 7fr/200cm					
27	**PLASTIC NASOBILIARY DRAIN**	**20**				
a	Nasobiliary drainage set 7fr x 250 cm 5 sideholes					
b	Nasobiliary drainage set 7fr x 250 cm 9 sideholes					
c	Nasobiliary drainage set 8.5fr x 250 cm 5 sideholes					
d	Nasobiliary drainage set 10fr x 250 cm 5 sideholes					
e	Nasobiliary drainage set 10fr x 250 cm 9 sideholes					
28	**BIOPSY FORCEP**	**20**				
a	Nonspiked re-usable gastroscopy forcep (2.3 mm)					
b	Nonspiked re-usable gastroscopy biopsy forcep (1.8 mm)					
c	Nonspiked re-usable colonoscopy biopsy forcep					
d	spiked re-usable gastroscopy forcep					
e	spiked re-usable colonoscopy biopsy forcep					

29	**Hot biopsy forcep**	**3**				
a	Colonoscopy Hot Biopsy Forcep					
30	**RAT TOOTh FORCEP**	**2**				
31	**CROCODILE FORCEP**	**2**				
32	**TRIPOD forcep**	**2**				
a	Single-use 3 prongs grasping forcep 5.5 fr sheet CGF-1-240 colonoscope					
33	**TRICLIP ENDOSCOPIC CLIPPING DEVICE (Disposable)**	**30**				
a	3 prong/12mm clip 7 fr catheter					
34	**BICLIP ENDOSCOPIC CLIPPING DEVICE (Re-Usable)**	**3**				
a	Rotatable clip fixing device (EGD)					
b	Rotatable clip fixing device (Colonoscopy)					
c	Rotatable clip fixing device (ERCP)					
35	**CLIPS**	**40**				

a	Long clip 40 pc/set					
b	Standard clip 40 pc/set					
c	Short clip 40 pc/set					
36	**PEG TUBES**	**30**				
a	18 Fr percutaneous endoscopic gastrostomy set					
b	24 fr/5.5cm 150cm percutaneous endoscopic gastrostomy set					
c	20 fr percutaneous endoscopic gastrostomy set					
37	**Balloon replacement gastrostomy tube**	**2**				
a	18 fr Balloon replacement gastrostomy tube					
b	20fr Balloon replacement gastrostomy tube					
c	24 fr Balloon replacement gastrostomy tube					
38	**Gastrostomy tube Replacement button**	**2**				
a	24 fr Passport low profile gastrostomy device					

b	24 fr Passport low profile gastrostomy device					
39	**BAND LIGATOR**	**200**				
a	Esophageal varices band ligator MBL-6					
b	Esophageal varices band ligator 10 bands MBL-10					
c	Esophageal varices band ligator 6 bands on small barrel MBL-6-XS					
d	Esophageal varices band ligator 10 bands on small barrel MBL-10-XS					
e	Esophageal varices band ligator 6 bands on extra large barrel MBL-6-XL-C					
f	Esophageal varices band ligator 4 bands on extra large barrel MBL-4-XL-C					
40	**ESOPHAGEAL STENT**	**20**				
a	Esophageal covered metallic stents of variable sizes					
b	Esophageal covered metallic stents 20mm x 10 cm					
c	Esophageal covered metallic stents 20mm x 12 cm					
d	Esophageal covered metallic stents 20mm x14cm					

41	**Esophageal uncovered metallic stents of variable sizes**	**5**				
a	Esophageal uncovered metallic stents 20mm x 10 cm					
b	Esophageal uncovered metallic stents 20mm x 12 cm					
c	Esophageal uncovered metallic stents 20mm x 14 cm					
42	**ENTERAL METALLIC STENT**	**25**				
a	ENTERAL METALLIC STENT (25x60mm)					
b	ENTERAL METALLIC STENT (22x 60mm)					
c	ENTERAL METALLIC STENT (22 x 90 mm)					
d	ENTERAL METALLIC STENT (25 x 90 mm)					
e	ENTERAL METALLIC STENT (22 x 120 mm)					
f	ENTERAL METALLIC STENT (22 x 140 mm)					
43	**INJECTORS**	**100**				
a	Disposable injector 23Guage (Pediatric)					

b	Disposable injector 23Guage (Upper)					
c	Disposable injector 21Guage (Upper)					
d	Disposable injector 23 Guage (Colon)					
44	**Sengstaken blakemore**	**1**				
a	Sengstaken Esophageal varices tube blakemore type 18fr					
c	Sengstaken Esophageal varices tube blakemore type 16fr					
45	**GOLD PROBE**	**2**				
a	gold probe (Gastroscope)					
b	gold probe (colonoscope)					
46	**XENON BULB**	**6**				
47	**ARGON PLASMA COAGULATION PROBE**	**10**				
a	Argon Plasma Coagulation Probe (gastroscope)					
b	Argon Plasma Coagulation Probe (Colonoscope)					

48	**HEMOSTASIS LOOPS**	**5**				
a	**Locking device**	**1**				
49	wire guided locking device					
50	**CYTOLOGY BRUSH**	**20**				
a	2mm diameter brush gastroscope					
b	3mm diameter brush gastroscope					
c	3mm diameter brush colonoscope					
51	**SCOPE CLEANSING BRUSH**	**10**				
a	endoscopic cleansing brush double end brush					
b	endoscopic cleansing brush single end brush					
52	**SAVARY CLEANSING BRUSH**	**2**				
a	Savary cleaning brush 3mm/110cm					
53	**ACHALASIA BALLOON DILATORS**	**2**				

a	Achalasia balloon diameter 3.5 mm					
54	**Biliary inflation device**	**1**				
a	Biliary balloon inflation device					
b	achlasia balloon inflation device					
c	CRE balloon inflation device					
55	**Soehenndra biliary dilators**	**15**				
a	Soehenndra biliary dilation catheter 6fr /200cm					
b	Soehenndra biliary dilation catheter 7fr /200cm					
c	Soehenndra biliary dilation catheter 8.5 fr /200cm					
d	Soehenndra biliary dilation catheter 10 fr /200cm					
e	Soehenndra biliary dilation catheter 11.5 fr /200cm					
56	**CRE Balloon**	**50**				
a	CRE wire guided balloon dilatation 6,7,8 mm					

b	CRE wire guided balloon dilatation 8,9,10 mm					
c	CRE wire guided balloon dilatation 10,11,12 mm					
d	CRE wire guided balloon dilatation 12,13.5,15 mm					
e	CRE wire guided balloon dilatation15,16.5,18 mm					
f	CRE wire guided balloon dilatation18,19,20 mm					
57	**Biliary balloon Dilator**	**20**				
a	Biliary balloon Dilator 6mm x 2cm					
b	Biliary balloon Dilator 6mm x 4cm					
c	Biliary balloon Dilator 8mm x 2cm					
d	Biliary balloon Dilator 8mm x 3cm					
58	**Savary Gilliard dilator**	**5**				
a	Savary gilliard dilator complete set					
59	**SNARES**	**25**				

a	standard oval snare Braided loop 7fr/240cm, 2.5x5.5cm					
b	jumbo oval snare Braided loop 7fr/240cm, 3x6cm					
c	Mini hexagonal snare Braided loop 7fr/240cm, 1.5x2.5 cm					
d	Mini hexagonal snare Braided loop 7fr/240cm, 3x4.5 cm					
e	Rotating Snares					
60	**Hemmoroidal multi band ligator**	**10**				
a	Short shot saeed hemorroidal multi band ligator Large Size (6 band)					
b	Short shot saeed hemorroidal multi band ligator (4 band)					
61	**Biopsy Cap valve (packets)**	**10**				
a	Biopsy channel Cap (PACK)					
62	**Suction Valve**	**20**				
a	Suction Valve					
63	**Air water Valve**	**20**				

a	Air water Valve					
64	**Soacking Caps**	**15**				
65	**Endoscopic submucosal dissection (ESD Kit)**	**2**				
a	Hook Knife	2				
b	Dual Knife	2				
c	IT knife	2				
d	Flex Knife	2				
66	Silicon OIL (1 litre Bottle)	2				
67	SCOPE LENS CLEANER (Bottle)	10				
68	WD-40 (Bottle)	**5**				
69	Filter for water sterlization 5 micron 20inch	**30**				
70	Filter for water sterlization 1 micron 20inch	**30**				
71	Filter for water sterlization 0.2 micron 20inch	**30**				

72	Carbon filter (5 micron) 20inch	**10**				
73	Over tube	**2**				
74	Disinfectant solution & Detergent (5 lit each)	**200**				
75	Hemmoroidal Gun	**10**				
76	Proctoscope with SET (Small)	**2**				
77	Proctoscope with set (medium)	**2**				
78	Proctoscope with set (Large)	**4**				
79	Hemorroidal Ruber Band (packets)	**200**				
80	Cholangioscopy Access Balloon	**10**				
81	EUS needle	**30**				
a	EUS needle No. 19	15				
b	EUS needle No. 22	15				
c	EUS needle No. 25	2				

82	OTSC Clip	20				
83	Lumen apposing Metal Stent	10				
84	Fibrin Glue/Powder for Hemostasis	10				
85	TTS Achlasia Balloon dilator	3				
86	latex Protector Hood for sharpe FB Removal	5				
87	Spray Catheter	5				
88	Rotatable Polyp Retrieval Device	**5**				