

المواصفات الفنية لاجهزة شعاعية والتخدير والجراحة (عامة+ عظام وكسور + بولية) المراد توفيرها لدائرة صحة كركوك

ت	تفاصيل الجهاز	سعر المفرد بالدينار العراقي		العدد	المبلغ بالدينار العراقي	
		رقما	كتابة		رقما	كتابة
1.	<p>تجهيز و نصب و فحص و تشغيل جهاز</p> <p><u>Flexible Fiber Endoscope For Airway Management Difficult Intubation(pediatric)</u></p> <p>بالمواصفات الفنية التالية:</p> <p><u>Application:</u> Intended use for difficult airway intubation and endotracheal intubation in emergency situation and general endotracheal intubation by mouth or nose. Used in anesthesia department , ICU.</p> <p><u>Systems consist of:-</u> <u>1. Flexible fiber optic insertion tube (pediatric):</u></p> <p>Angle of view : $\geq 90^\circ$</p> <p>Tip deflection (up/down): $\geq 120^\circ$</p> <p>Depth of view (mm): $\geq (4 - 50)$</p> <p>Insertion tube (outer diameter) (mm): ≤ 3.1</p> <p>Distal end (outer diameter) (mm): ≤ 3.1</p> <p>Suction channel diameter (ϕ): ≥ 1.2</p> <p>Working length (mm): ≥ 600</p> <p>Total length (mm): ≥ 800</p> <p>Fully Immersible, Waterproof Design</p> <p>Full package of accessories to perform reprocessing (sterilizing) procedure: water resistant cap, Cleaning Brushes, Leakage Tester, adapters and other tools which are necessary to complete reprocessing cycle.</p> <p><u>2. Light source:</u></p> <p>LIGHT SOURCE TYPE : Multipurpose</p> <p>LAMP Type : Xenon or LED</p> <p>Watts : ≥ 175 or Better</p> <p>Number of lamps ≥ 1</p> <p>Color temperature, °K : $\geq 5,900$ or Better</p>			4		

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				<p>Lamp life, hr : ≥ 30000 for LED , (or included in five year of warranty For Xenon)</p> <p>ILLUMINATION LEVEL ADJUSTMENT : Continuous or discrete with increments of 10% or less</p> <p>Mode : Manual and automatic preferred</p> <p>STANDBY MODE : Yes</p> <p>COMPATIBLE LIGHT CABLES : Multiple modes; light source/fiber cable bundle diameter should be matched to the device light post diameter to avoid risk of patient burns</p> <p>Port Number : ≥ 1</p> <p><u>3-Video system</u></p> <p>Video Processor : digital image processor (digital signal)</p> <p>Camera input : ≥ 1 input (Camera Head)</p> <p>Outputs Digital : Yes</p> <p>Illumination : Automatic (preferred)</p> <p>White balance : yes</p> <p>Recording capability : Yes, picture and video Integrated Image Enhancement features</p> <p><u>4- Display:</u></p> <p>≥ 19 HD Monitor, OR Better</p> <p>Type: Medical (LCD, LED) or Better</p> <p>Power supply 100 – 240 VAC, 50/60 Hz.</p> <p>5- Compatible trolley including flexible Holder.</p> <p>6- Power supply :</p> <p>220/240 VAC, 50/60 Hz.</p> <p>Over current & over heated protection circuit.</p> <p>Voltage corrector/stabilizer circuit of (input 160-260V & output 220-240V & 50Hz).</p> <p>UPS of suitable rating with voltage regulation & spike protection for ≥ 60 minutes back up.</p> <p>7 - The supplier confirm that: The equipment suitable for work in the climate conditions in Iraq in terms of temperature & humidity.</p>
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		4		<p style="text-align: right;">تجهيز ونصب وفحص وتشغيل جهاز</p> <p><u>Flexible Fiber Endoscope For Airway Management Difficult Intubation(adult)</u></p> <p style="text-align: right;">بالمواصفات الفنية التالية:</p> <p>Application: Intended use for difficult airway intubation and endotracheal intubation in emergency situation and general endotracheal intubation by mouth or nose. Used in anesthesia department, ICU.</p> <p><u>Systems consist of:</u></p> <p><u>1. Flexible fiber optic insertion tube (adult):</u></p> <p>Angle of view: $\geq 90^{\circ}$</p> <p>Tip deflection (up/down): $\geq 120^{\circ}$</p> <p>Depth of view (mm): $\geq (4 - 50)$</p> <p>Insertion tube (outer diameter) (mm): ≥ 3.7</p> <p>Distal end (outer diameter) (mm): ≥ 3</p> <p>Suction channel diameter (ϕ): ≥ 2</p> <p>Working length(mm): ≥ 600</p> <p>Total length (mm) : ≥ 800</p> <p>Fully Immersible, Waterproof Design</p> <p>Full package of accessories to perform reprocessing (sterilizing) procedure: water resistant cap, Cleaning Brushes, Leakage Tester, adapters and other tools which are necessary to complete reprocessing cycle.</p> <p><u>2. Light source:</u></p> <p>LIGHT SOURCE TYPE : Multipurpose</p> <p>LAMP Type : Xenon or LED</p> <p>Watts : ≥ 175 or Better</p> <p>Number of lamps ≥ 1</p> <p>Color temperature, °K : $\geq 5,900$ or Better</p> <p>Lamp life, hr : ≥ 30000 for LED , (or included in fife year of warranty For Xenon)</p> <p>ILLUMINATION LEVEL ADJUSTMENT : Continuous or discrete with</p>
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				<p>increments of 10% or less Mode : Manual and automatic preferred STANDBY MODE : Yes COMPATIBLE LIGHT CABLES : Multiple modes; light source/fiber cable bundle diameter should be matched to the device light post diameter to avoid risk of patient burns Port Number : ≥ 1 <u>3-Video system</u> Video Processor: digital image processor (digital signal) Camera input: ≥ 1 input (Camera Head) Outputs Digital: Yes Illumination: Automatic (preferred) White balance: yes Recording capability: Yes, picture and video Integrated Image Enhancement features <u>4- Display:</u> ≥ 19 HD Monitor, OR Better Type: Medical (LCD, LED) or Better Power supply 100 – 240 VAC, 50/60 Hz. 5- Compatible trolley including flexible Holder. <u>6- Power supply :</u> 220/240 VAC, 50/60 Hz. Over current & over heated protection circuit. Voltage corrector/stabilizer circuit of (input 160-260 V and output 220-240 V and 50 Hz). UPS of suitable rating with voltage regulation & spike protection for ≥ 60 minutes back up. 7 - The supplier confirm that: The equipment suitable for work in the climate conditions in Iraq in terms of temperature & humidity.</p>
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		11		<p style="text-align: right;">تجهيز ونصب وفحص وتشغيل جهاز (ICU Ventilator) بالمواصفات الفنية التالية:</p> <p><u>Ventilator</u> : provide temporary ventilator support or respiratory assistance to patients who cannot breathe on their own or how require assistance to maintain adequate ventilation because of illness, trauma, congenital defects, or drugs (e.g., anesthetics).</p> <p><u>Technical specifications.</u></p> <p>Pneumatic power:</p> <ul style="list-style-type: none"> • Compressor: internal. • Compressed gases: O2, air, central. • Advanced technology Neonatal, Infant, Pediatric & Adult Ventilator. • Enhanced invasive and non-invasive ventilation (NPPV). • Tidal Volume: minimum 5 ml to 2000 ml or more. • Respiratory rate: 1 to 80 BPM and above. • Trigger sensitivity: by Pressure & Flow both. • Flow Sensitivity: 0.5 – 20 lpm. • Breath Type: Volume Controlled, Pressure Controlled & Time Cycled Pressure limited (TCPL) Ventilation. • Ventilator Modes: Assist / Control Mandatory Ventilation (A/C), SMV, p SIMV, SIMV, CPAP/ Pressure Support Ventilation (PSV) Apnea Back-up, APRV/Biphasic, PRVC, spontaneous, PS. • Facility of manual breath, inspiratory & expiratory hold, Volume Limit, • Bias flow, inspiratory rise settings & Synchronized Nebulizer. • Should have Automatic Tube Compensation & Leak Compensation. • Comprehensive Alarm System. • Should work with double limb patient circuit both reusable & disposable. 	.3
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				<ul style="list-style-type: none"> • Inbuilt Multicolor Monitor with display of parameters on Touch screen of 8.2-12 inches size. • Display of Inspired & Expired tidal volume, Breath rate, I:E ratio, FiO2, minimum Peak Pressure, Mean Airway pressure, Plateau Pressure, PEEP. • Graphic display of at least 3 waveforms and 2 loops should be available at a time. • Should work on External/internal Air Compressor with battery back-up for at least 60 minutes for the system including air compressor. • Should be quoted with controlled Humidifier with 2 jars / chambers. • Nebulizer. • Not refurbished. • Circuit holders&drawers. • Line power, VAC: 220/240, 50/60 Hz. • Internal battery: <ul style="list-style-type: none"> • Operating time (hr): ≥ 1 • Rechargeable: yes. • Recharging time (hr): ≤ 10 • Environmental requirements: the equipment suitable for work in the climate conditions in Iraq in terms of temperature & humidity. <p style="text-align: right;">* التدريب للكادر العامل على الجهاز (طبيب , مهندس او فني , مشغل) لمدة لا تقل عن اسبوع في مركز تدريبي وتزويد المتدربين بشهادة تدريبية .</p>	
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		35		<p style="text-align: right;">4.</p> <p style="text-align: right;">تجهيز ونصب وفحص وتشغيل جهاز (Infusion Pumps, Syringe) بالمواصفات الفنية التالية:</p> <p>Application</p> <ul style="list-style-type: none"> - Anesthesia, general infusions, neurosurgery, oncology, pain relief, Parkinson's disease, pediatrics and neonatology, terminal care - Administer intravenous (IV) fluids - Highly accurate volume delivery and consistent flow for small volumes (60 mL) of potent pharmacologic agents that are typically delivered at flow settings between 0.5 and 10 mL/hr - Deliver hyperalimentation solutions or thick feeding solutions and for epidural infusions - TIVA-/TCI-capable <p>CONFIGURATION</p> <p>Number of channels ≥ 1</p> <p>Pump mechanism According to manufacturer</p> <p>Pole mounting Yes</p> <p>DISPLAY LCD</p> <p>Total volume infused yes</p> <p>Data displayed Alarms, event history, rate</p> <p>PUMP CAPABILITIES</p> <p>Flow range, mL/hr 0.1-99.9</p> <p>Increments, mL 0.1, 1</p> <p>KVO rate, mL/hr 1-5</p> <p>Accuracy, % ± 5</p> <p>Max pressure, psi ≤ 20</p> <p>Prime/purge control Yes</p> <p>MRI compatible Yes</p> <p>Fluid resistant Yes</p> <p>Nurse call jack Yes</p> <p>Bar-code reader Yes</p>	
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				<p>COMPATIBLE SYRINGES, mL 1-60 SYRINGE-SIZE DETECTION Yes AUDIBLE ALARM Volume control yes Momentary silence yes ALARMS & INDICATORS High pressure/occlusion : yes Flow error : yes System malfunction : yes Empty reservoir : yes Plunger disengaged : yes Syringe unlocked : yes Infusion near end : yes Infusion complete : yes Low battery : yes Depleted battery : yes User prompts : yes DOSE ERROR REDUCTION SYSTEM (smart technology) Pump defaults to DERS on startup : yes Library size ≥ 1,000 protocols No. of care areas ≥10 No. of drug entities/care area ≥100 Log-analysis software Yes DATA PORT : yes EVENT LOG : yes Printout : yes Time/date stamp Yes Number of events ≥200 Events stored : Key presses, error codes, alarms, drug infused, amount infused, settings, boluses requested</p>	
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				<p>Time retained : 1 year</p> <p>OTHER SPECIFICATIONS :</p> <p>- Heavy duty, compatible design</p> <p>- Drug/dose calculator; VTBI; VTBI over time; fast start</p> <p>Power supply - Medical Approved power supply board</p> <p>Line voltage - 220/240VAC,50/60Hz, Three pin (G type) plug</p> <p>Voltage stabilizer circuit (or device) -YES (170-260VAC to 220 /240 VAC)</p> <p>Integral Built in rechargeable battery(s)- Yes for \geq 120 minutes back up(with long shelf life batteries \geq 1 year)</p>	
		7		<p>تجهيز ونصب وفحص وتشغيل جهاز</p> <p>(Continuous Positive Airway Pressure Units (CPAP))</p> <p>بالمواصفات الفنية التالية:</p> <p>Application : - Deliver air or a mixture of air and oxygen (O₂) through a mask or nasal tubing to the patient's airways</p> <p>MODES : CPAP & Bi-level CPAP ,nasal IPPV(other modes should be specified)</p> <p>MASK (for adult & pediatric) Configuration : Nasal, nasal pillow, oral/nasal, full-face with head gear</p> <p>Material : Any</p> <p>CONTROLS :</p> <p>Inspiratory :</p> <p>Time, sec : yes</p> <p>Pressure, cm H₂O : yes</p> <p>Expiratory</p> <p>Time, sec</p> <p>Pressure, cm H₂O : yes</p> <p>Rate, bpm : yes</p> <p>Trigger sensitivity Automatic/adjustable</p>	5

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				<p>Leak sensitivity Yes</p> <p>Panel lock Yes</p> <p>MONITORED PARAMETERS</p> <p>Respiratory rate yes</p> <p>Flow range yes</p> <p>I/E yes</p> <p>Inspiratory time yes</p> <p>Inspiratory pressure yes</p> <p>MAP yes</p> <p>Expiratory pressure yes</p> <p>Leak % yes</p> <p>PATIENT ALARMS</p> <p>High peak inspiratory Pressure Yes</p> <p>Low peak inspiratory pressure Yes</p> <p>High O2 Yes</p> <p>Low O2 Yes</p> <p>PC COMPATIBLE yes</p> <p>EQUIPMENT ALARMS</p> <p>Power failure yes</p> <p>Overheat yes</p> <p>Fault yes</p> <p>Mask alarm yes</p> <p>Low battery yes</p> <p>OTHER ALARMS : - High leakage during session, power off - Low CPAP, high CPAP - Low-minute ventilation, apnea, high and low breath rate</p> <p>WAVEFORMS DISPLAYED Yes</p> <p>DISPLAY TYPE LED, LCD</p> <p>GAS SUPPLY</p>	
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				<p>Air/O2 supply, kPa ≥ 300 NOISE LEVEL, dBA ≤ 30 AIR FILTER Yes TUBING Length, cm (in) ≥ 180 Material Any ACCESSORIES Air/O2 blender, Flow meter, Humidifier, Oxygen analyzer, CPAP masks, PEEP valves, CPAP circuits (heated and unheated), Oxichck O2 analyzer, filter, pressure lines, headstraps, other optional OTHER SPECIFICATIONS - Snooze/autostart functions. - CPAP and BiPAP modes - C, A - Flex - Heavy duty and compatible design - Used to record apnea & hypopnea Power supply - Medical approved power supply board - 220/240 VAC, 50/60 Hz, Three pin G type plug - ≥ 8hours back up Rechargeable battery(s) with automatic charging and change over circuits Environmental requirements : Manufacturer confirm that the equipment suitable for work in the climate conditions in Iraq in terms of temperature & humidity.</p>	
		8		<p>تجهيز ونصب وفحص وتشغيل جهاز (Neonatal Ventilator) بالمواصفات الفنية التالية: ❖ Heavy duty & compatible design.</p>	6.

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				<ul style="list-style-type: none">❖ Input power: 220/240 VAC, 50/60 Hz single phase.❖ Microprocessor controlled.❖ Medical air: built-in and external.❖ Display: Both digital and graphical LCD (the graphic display system shall have freeze capabilities).❖ The unit shall have the capabilities to display trending of at least 24 hours on parameters of pressure, flow & tidal volumes.❖ (Disposable or Reusable) servo controlled exhalation valve or other type (technique) should be easy to use and fast in response.❖ Dual flow system for independent setting of in & out expiratory flow.❖ Proximal flow sensor (preferred) other should be specified.❖ battery backup❖ The ventilator have automatic switch over unit that will switch between the piped air & oxygen supply.❖ Ventilation modes:<ul style="list-style-type: none">• CPAP.• CMV.• PTV.• SIMV.	
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				<ul style="list-style-type: none"> • High frequency ventilation. ❖ Synchronized intermittent mandatory ventilation in volume & pressure mode. ❖ Continuous positive airway pressure with pressure supported ventilation: <ul style="list-style-type: none"> • Spontaneous • Manual breath (Electronically controlled with set Inspiratory Time and Pressure). • Inspiration hold • Expiration hold ❖ The ventilator provide the following breath types: <ul style="list-style-type: none"> • Pressure limited volume control. • Pressure control with volume target. • Pressure ventilation with alternating baselines. • Timed oxygenation (100%). ❖ Provided with audio/visual alarms when: <ul style="list-style-type: none"> • Patient disconnects. • Oxygen concentration variation. • Over & under patient pressure. 	
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				<ul style="list-style-type: none"> • Over & under patient volume. • High continuous pressure. • Air / oxygen % deviation. • Low battery. • Power failure. • Air & oxygen supply failure. • Air & oxygen low pressure. <p>❖ Range of set parameters:</p> <ul style="list-style-type: none"> • Tidal volume: 2-100ml. • Pressure control: (0-80 cm H₂O). • Pressure support: (0-80cm H₂O). • Peak flow (mandatory): (1-60 lpm). • Peak flow (Spontaneous): (1-60 lpm). • Fraction of inspired oxygen: (21-100%). • Inspiratory time: (0.1- 3 secs), • Respiratory Rate: (1-150 bpm). • Inlet pressure range: (1.5~6 mbar). <p>❖ Monitoring parameters:</p> <ul style="list-style-type: none"> • Pressure: Airway pressure a, auxiliary pressure, peak airway pressure,
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					<p>mean airway pressure, minimum airway pressure, plateau airway pressure</p> <ul style="list-style-type: none"> • Flow: Real time inspiratory flow, inspiratory peak flow, expiratory peak flow. • Volume: Real time tidal volume, expiratory tidal volume, leakage volume at the airway. • Time: total breathing frequency, spontaneous breathing frequency, respiratory rate, inspiratory time, expiratory time. • Lung mechanics: Static compliance, airway occlusion pressure, pressure time product, expiratory time constant, inspiratory time constant , expiratory flow resistance, inspiratory flow resistance, rapid shallow breathing index. • Oxygen: Airway oxygen concentration. <p>❖ Humidifier:</p> <ul style="list-style-type: none"> • Microprocessor controlled. • Heater wire for in & out expiratory limb possibility. • Reusable & autoclavable humidification chamber. • Dual servo controlled principle for temperature control. • Water level indicator. 	
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				<ul style="list-style-type: none"> • Warm up time less than 15 minutes. <p>❖ Trolley:</p> <ul style="list-style-type: none"> • Minimum 4 wheels, 2 with brakes. • Bracket for humidifier. <p>❖ Accessories:</p> <ul style="list-style-type: none"> • Disposable ventilator circuits with heater wire & water traps (in line) & temp probe& adapter& Bacterial filter & nebulizer circuit. <p>* التدريب للكادر العامل على الجهاز (طبيب , مهندس او فني , مشغل) لمدة لا تقل عن اسبوع في مركز تدريبي وتزويد المتدربين بشهادة تدريبية .</p>	
		17		<p>Anesthesia unit (high performance) تجهيز ونصب وفحص وتشغيل جهاز</p> <p>بالمواصفات الفنية التالية:</p> <p>Medical Application :Dispense a mixture of gases and vapors and vary the proportions to control a patient's level of consciousness and/or analgesia during surgical procedure.</p> <p>PATIENT TYPE : Adult, pediatric</p> <p>Pipeline gas inlet : At least 3 (N2O, O2, air)</p> <p>Gas cylinder yokes :(O2, N2O, air) (should include indexing system)</p> <p>Vaporizers agents : Desflurane, isoflurane, sevoflurane</p> <p>Type : According to manufacture</p>	7.

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				<p>Electronically control : yes</p> <p>Number : ≥ 2</p> <p>Interlock : yes</p> <p>Agent level indicator : yes</p> <p>Low agent alarm : yes</p> <p>O2-fail safe : Yes</p> <p>Hypoxic mixture fail-safe : yes</p> <p>Automatic ventilator : yes</p> <p>Bellows size : Adult, pediatric</p> <p>Ventilation modes: Manual / spontaneous, VCV, PCV, SIMV or pressure support & pressure control volume guaranteed</p> <p>Tidal volume (cc): Minimum (≤ 5) and for neonatal option (≤ 5), Maximum (≤ 1400)</p> <p>Minute volume (L/min) : $\leq (0-100)$</p> <p>Frequency (Bpm) : $\leq (2-100)$</p> <p>Inspiratory flow (L/min) : $\leq (0-120)$</p> <p>Pressure limit (cm H₂O) : ≤ 120 (adjustable)</p> <p>PEEP (cm H₂O) : $\leq (0-50)$</p> <p>System checks : Yes</p>	
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				<p>Scavenging system : Active or passive</p> <p>Breathing circuit : Startup kit with CO2 absorption canister (soda lime or barium lime)</p> <p>Monitors</p> <ul style="list-style-type: none"> - Air way pressure : yes <ul style="list-style-type: none"> ❖ Where measured : Inspiratory limb or expiratory limb ❖ High pressure alarm : yes ❖ Subatmospheric pressure alarm :yes ❖ Continuing pressure alarm : yes ❖ Low pressure/apnea :yes ❖ Expiratory volume/flow :yes <ul style="list-style-type: none"> ❖ Type of sensor : According to manufacture ❖ Where measured : Expiratory and/or inspiratory limb ❖ Apnea alarm :yes ❖ Reverse-flow alarm : yes ❖ High/low minute volume: yes ❖ High/low flow : yes ❖ O2 concentration : yes ❖ Type of sensor : According to manufacture
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				<p>❖ Response time (sec) : < 35</p> <p>- CO2 concentration : yes</p> <p>❖ Apnea alarm : yes</p> <p>- N2O : yes</p> <p>- Agent monitors : yes</p> <p>❖ Type of agent : Desflurane, isoflurane, sevoflurane</p> <p>❖ Auto ID : yes</p> <p>❖ Agent concentration alarm : yes</p> <p>Display :-</p> <p>NO : - ≤2</p> <p>Type : color LCD or better</p> <p>User interface : According to manufacture</p> <p>Event log : yes</p> <p>- Track alarms : yes</p> <p>- Time and date stamped : yes</p> <p>Power supply</p> <p>Input power : 220/240VAC,50/60Hz, Three pin (G type) plug, voltage stabilizing and over current protection circuit</p> <p>Back up battery : yes</p> <p>Use per charge (hr) : ≥ 0.5</p> <p>* التدريب للكادر العامل على الجهاز (طبيب , مهندس او فني , مشغل) لمدة لا تقل عن اسبوع في مركز تدريبي وتزويد المتدربين بشهادة تدريبية .</p>
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		24		<p style="text-align: right;">.8</p> <p>تجهيز ونصب وفحص وتشغيل جهاز (Operating Room Patient Monitor) بالمواصفات الفنية التالية:</p> <p><u>Acuity Area</u> : Operating Rooms.</p> <p><u>Application:</u> measure and display waveforms and numerical data for various parameters such as (ECG, NIBP,.....etc.) for patients.</p> <p>Patient Type: Adult, pediatric, neonate.(with all accessories)</p> <p>Beside or Transport: Yes.</p> <p>Modular/ configured: modular or modular and configured.</p> <p>Parameters Monitored: ECG, ETCO2, IBP, NIBP, respiration, SpO2, Temperature.</p> <p><u>B I S or Entropy:</u> Yes.</p> <p><u>Etco2 with Capnography.</u></p> <p>Adult & pediatric probe pulse oximetry.(reusable)</p> <p><u>ECG:</u> Yes.</p> <p>Number of leads: ≤12.</p> <p>12-lead interpretation: Optional.</p> <p>Arrhythmia detect: YES.</p> <p>No. of leads analyzed: ≤10.</p> <p>ST analysis: YES</p> <p>No. of leads analyzed: ≤12.</p>
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				<p>Auto lead switch: YES</p> <p><u>Respiration:</u> Yes. Method: Impedance or EtCo2. Waveform displayed: Yes. Threshold control: Yes. <u>IBP:</u> Yes with (reusable probe) No. of channels: ≥ 3 Hemodynamics, & Cardiac Output (PICCO): with all accessories needed SVO2, SCVO2 : with all accessories needed Alarms: Yes. Calibration of Transducers should be done by supplier during warranty) <u>NIBP:</u> Yes. Cuff size: Adult, pediatric, neonate. Temperature: Yes. No. of inputs: ≤ 8. Probe type: skin or others.</p> <p>Full disclosure :yes</p> <p>Length of time (hr):24</p> <p>Trending: Yes. Parameters: All.</p>	
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				<p>Graphical/tabular: Yes/ Yes.</p> <p>Length of time, hr: ≥ 24.</p> <p>Alarms default setting: Low systolic BP, High systolic BP, Low diastolic BP, High diastolic BP, Low mean BP, Low mean BP, high heart rate, low heart rate, low pulse Oximetry, low respiratory rate, and high respiratory rate.</p> <p>Alarms: Visual, Audible.</p> <p>Silence active alarm : yes</p> <ul style="list-style-type: none"> ❖ Networking: Yes. ❖ Display: LCD or LED or TFT <p>Size (inch): ≥ 8.</p> <p>Traces: ≥ 6</p> <p>Recorder: Optional</p> <p>Power: (220 -240) Volt, 50 Hz, 3 pin Plug (G type).</p> <p>Rechargeable Battery: Yes ≥ 4 hr.</p> <ul style="list-style-type: none"> ❖ Anesthetic Gas Analyzer ((volatile agent with sevoflurene +N₂O+O₂+CO₂): Yes. <p><i>Environmental requirements:</i> the equipment suitable for work in the climate conditions in Iraq in terms of temperature & humidity.</p>
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		40		<p style="text-align: right;">.9</p> <p style="text-align: right;">تجهيز ونصب وفحص وتشغيل جهاز (Suction Unit, Surgical) بالمواصفات الفنية التالية:</p> <p>Application: suctioning to remove blood and irrigating fluids that accumulate in the operative field and obstruct the surgeon's view, used in OR, Wards , ICU, and others.</p> <p>CONFIGURATION : Mobile on cart with castors</p> <p>PUMP TYPE : Piston, or Diaphragm, Others to be specified</p> <p>Number of pumps : ≥ 1</p> <p>VACUUM LIMIT, mm Hg, (cmH2O) : ≥ 500 , (679.75)</p> <p>Free airflow, L/min : ≥ 25</p> <p>VACUUM CONTROL : YES</p> <p>COLLECTION CANISTER(S) : Reusable & Disposable</p> <p>Number : ≥ 2</p> <p>Capacity limit line, mL : ≥ 2000</p> <p>Overflow protection : YES</p> <p>FILTER TYPE : Bacterial, hydrophobic</p> <p>STANDARD ACCESSORIES (Included in Warranty) :</p> <ul style="list-style-type: none"> -Collection bottle. -Filters. -Cart. -Optional **footswitch <p>Electrical Ratings:</p> <ul style="list-style-type: none"> - Power Supply -220/240VAC - Rated Frequency 50/60Hz <p>Environmental : The supplier should be confirmed that: The Equipment is suitable for work in climate conditions of Iraq in terms of temperature and humidity.</p>	
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		1		<p style="text-align: right;">10. تجهيز ونصب وفحص وتشغيل جهاز (Brain Endoscope) بالمواصفات الفنية التالية:</p> <ul style="list-style-type: none"> • Application: used to examination and therapeutic brain tumor. • Heavy duty and compatible design. • Complete work station. • Scopes: Flexible and rigid examination and therapeutic endoscope (all angle sets). • Diameter scope: range (2-5) mm. • Used through: the nose, or minimally invasive ports. • Working channel for inserting instruments through when performing certain procedures such as brain tumor biopsies. • Digital Camera: High-Definition CCD endoscope. • Display: High definition TV. (≥ 17) inch LCD. • Light source: <ul style="list-style-type: none"> ○ White cold light. ○ Effective and efficient Xenon source of illumination. ○ Halogen secondary light source. ○ Enhanced illumination control, Immediate and direct control of the shutter function. • High-definition digital video processor <ul style="list-style-type: none"> ○ With video monitors suitable for endoscopic use. ○ Electronic Magnification ○ Pre-freeze facility- enables the endoscopist to capture the optimum frozen images for image capture and recording. • Video printer <ul style="list-style-type: none"> ○ Suitable for medical use allowing still images to be captured and printed for patient notes. ○ Compact color video printer, with an output of over 350 dpi 	
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				<p>resolution.</p> <ul style="list-style-type: none"> ○ Black &white thermal printer. ○ Digital storage devices: CD/DVD recorder. ○ Cautery including bipolar cutting. <p>❖ <u>Environmental requirements:</u></p> <p>1- The unit shall be capable of being stored continuously in ambient temperature of 0-60 deg C and relative humidity of 15-90%.</p> <p>2- The unit shall be capable of operating continuously in ambient temperature of 5-50 deg C and relative humidity of 15-90%.</p> <p>* التدريب للكادر العامل على الجهاز (طبيب , مهندس او فني , مشغل) لمدة لا تقل عن اسبوع في مركز تدريبي وتزويد المتدربين بشهادة تدريبية .</p>	
		1		<p>(Endoscope Spine Surgery System) تجهيز ونصب وفحص وتشغيل جهاز</p> <p>بالمواصفات الفنية التالية:</p> <p>❖ Cameras, Full HD resolution</p> <p>❖ Light sources high-intensity xenon light source</p> <p>❖ Documentation:</p> <ul style="list-style-type: none"> ● Powerful documentation system ● Capture Full HD still images ● Record videos 	11

					<ul style="list-style-type: none"> • DVD recorder • Suitable to connect a USB printer • PACS, HIS or RIS. <p>❖ Monitor:</p> <ul style="list-style-type: none"> • LCD ≥17" • Possibility to display two Full HD images (Picture-in-picture mode) • High resolution • Excellent colors <p>❖ Suction and irrigation systems</p> <p>❖ Units for high-frequency surgery</p> <p>Access System</p> <ul style="list-style-type: none"> • “Bulls-eye” locator • 18 gauge spinal needle • Guide wire • Progressive serial dilator set • Progressive serial tubular retractors or trocars (working channels) <p><u>Endoscopic Spinal Instruments</u></p> <ul style="list-style-type: none"> • rephines Bayonet shaped dissector • Microspoon curette Standard curettes • Probe and nerve hooks • Bipolar forceps — bayonet shaped • Kerrison bone punches • Tissue forceps — bayonet with teeth • Pituitary forceps for grasping — oval 3.5 mm and 5.5 mm
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				<ul style="list-style-type: none"> • Endoscope holder (optional) <p><u>Also it must include:</u></p> <ul style="list-style-type: none"> ❖ A complete set for minimally invasive spinal work including PLIF, TLIF& ALIF with patient consumable -50 for every set. ❖ Must add an intraoperative monitoring system. <p>* التدريب للكادر العامل على الجهاز (طبيب , مهندس او فني , مشغل) لمدة لا تقل عن اسبوع في مركز تدريبي وتزويد المتدربين بشهادة تدريبية .</p>	
		1		<p>.12 تجهيز ونصب وفحص وتشغيل جهاز (Ultrasonic Surgical Aspirators) بالمواصفات الفنية التالية:</p> <ul style="list-style-type: none"> ❖ Application: use mechanical ultrasonic vibration and an irrigation/suction system to fragment and remove soft tissue and high-water-content growths from various parts of the body. ❖ Indication: general surgery, neurosurgery, others. ❖ Configuration: Tabletop with trolley or Console handpieces. ❖ Transducer Assembly: Permanently housed in handpiece. ❖ Ultrasonic System: <ul style="list-style-type: none"> • Frequency, kHz: 20-80. • Maximum amplitude, μm: 200- 400. • Oscillation system: Piezoelectric or electrostrictive or Magnetostrictive. ❖ Fluidic System: <ul style="list-style-type: none"> • Aspiration, mm Hg: ≤ 700. • Irrigation system: Central or coaxial. • Fluid: Saline. 	

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				<ul style="list-style-type: none"> • Flow rate, cc/min: 0-250, variable. ❖ Handpiece configuration: <ul style="list-style-type: none"> • Straight: Yes. • Angled: Yes. • Straight extended: Yes. • Angled extended: Yes. • Others: to be specified . ❖ TIP: <ul style="list-style-type: none"> • Type: Titanium, titanium alloy or stainless steel. • Reusable/disposable : both ❖ Sterilization or autoclavable: Yes ❖ Footswitch Control: yes, (optional wireless). ❖ Display parameters: Power, Aspiration, irrigation levels, Alerts, others. ❖ Controls: Irrigation, aspiration, ultrasound, others. ❖ Error Code Messages: Yes. ❖ Power Requirements: <ul style="list-style-type: none"> ○ 220/240 VAC, 50/60 Hz, Three pin G type plug. ❖ Environmental requirements: The supplier should be confirmed that: The Equipment is suitable for work in climate conditions of Iraq in terms of temperature and humidity. <p>* التدريب للكادر العامل على الجهاز (طبيب , مهندس او فني , مشغل) لمدة لا تقل عن اسبوع في مركز تدريبي وتزويد المتدربين بشهادة تدريبية .</p>	
		1		<p>13. تجهيز ونصب وفحص وتشغيل جهاز (Electroencephalographs (EEG)) بالمواصفات الفنية التالية:</p>	

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				<p>APPLICATIONS : OR, CCU, epilepsy monitoring, diagnostic EEG, others</p> <p>CONFIGURATION : Any</p> <p>HEAD BOX/ PREAMPLIFIER CONFIGURATION : Optically isolated, USB link to PC</p> <p>NUMBER OF CHANNELS : ≥ 16</p> <p>EEG DATA RESOLUTION, BITS : ≥ 12</p> <p>SAMPLING RATE, Hz : >200</p> <p>MONTAGE SELECTION : User selectable based on user requirements</p> <p>SPIKE & SEIZURE DETECTION : Yes</p> <p>SENSITIVITY CONTROL</p> <p>Master switch : Yes</p> <p>Individual channel override : Yes</p> <p>Steps : 14, user adjustable</p> <p>Range, $\mu\text{V}/\text{mm}$: $\geq (1-100)$</p> <p>LOW-FREQUENCY FILTERS</p> <p>Band, Hz : ≤ 0.3 at lowest setting</p> <p>Individual channel override : Yes</p> <p>HI-FREQUENCY FILTERS, Hz : ≥ 70 at highest setting</p> <p>Individual channel override : Yes</p> <p>MASTER NOTCH FILTER : Yes</p> <p>Individual channel override : Yes</p> <p>NOISE, μV : ≤ 2 p-p</p> <p>CMRR, dB : > 110 @ 50/60 Hz</p> <p>ELECTRODE-IMPEDANCE CHECK : Automatic</p> <p>REMOTE MONITORING : Yes</p> <p>PREAMPLIFIER INPUT IMPEDANCE : $\geq 10 \text{ M}\Omega$</p> <p>CALIBRATOR STEPS : Automatic</p> <p>Range, μV : User selectable</p> <p>AUXILIARY INPUTS AND OUTPUTS : Digital output, analog output,</p>
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				<p>network, modem COMPUTER : Yes SYSTEM CONFIGURATION : PC Core Duo or better Hardware platform : ≥ 250 GB (Compatible with various manufacturers) Operating system : Windows XP or better Memory, MB or GB : ≥ 2 GB NETWORK : Yes Communication protocols : TCP/IP Architecture : Microsoft Windows Hardwired/wireless : LAN/wireless DISPLAY : ≥ 17" STORAGE TYPE : HD, removable media (CD-R, DVD); selected by user requirements DIGITAL VIDEO : Yes Compression : Yes Synchronization : Yes HARD-COPY SYSTEM(S) : Printer (e.g., inkjet, laser) Chart speed, mm/sec : All standard printers Max paper width, mm : A4, thermal; A4, A3, others, laser/inkjet Video option : Yes CHART ANNOTATION : Montage, filter and gain settings, horizontal and vertical scale, events, date, time, patient ID SPECIAL CHANNELS : User defined PHOTOSTIMULATOR : Yes *Power supply : - Medical Approved power supply board Line voltage : - 220/240VAC,50/60Hz, Three pin (G type) plug Voltage stabilizer circuit(or device): -YES (170-260VAC to 220 /240 VAC) UPS (with long shelf life batteries ≥ 1 year) : - Yes for ≥ 90 minutes back up</p>
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				<p>OTHER SPECIFICATIONS</p> <p>- Options include photic stimulator; laser, inkjet color, or thermal printer; brain map; DSA; EP & trolley</p> <p>- 24 hour Video monitoring EEG , - Heavy duty, compatible design</p>	
		1		<p>14. تجهيز ونصب وفحص وتشغيل جهاز (Operative Orthopedic Table) بالمواصفات الفنية التالية:</p> <ol style="list-style-type: none"> 1. Heavy duty & compatible design. 2. Table's upper flat surface has ≥ 4 sections. 3. Configuration: Electrical. 4. If type Electrical: The electrical height, back rest, trendelenburg & lateral tilt movements of the table are controlled by hand set. 5. If type Manual: hand & footswitch. 6. Table's head & foot parts are adjusted by hydraulic gas springs. 7. Height of the table, cm: (≥ 80). 8. Back rest of the table: ($-30^{\circ} \sim +70^{\circ}$) 9. Trendelenburg: $\geq (25)$. 10. Reverse trendelenburg: $\geq (25)$. 11. Lateral tilt $\geq (18)$. 12. Head rest ($-45^{\circ} \sim +45^{\circ}$). 13. Leg rest (vertical) ($-95^{\circ} \sim +55^{\circ}$). 	

				<p>14. Leg rest (horizontal) (-95~outside).</p> <p>15. Dynamic surfaces (mattresses, Multi layer plywood, foam & leather).</p> <p>16. Power source electrically (220/240 VAC, 50/60 Hz single phase) & Battery backup (2-3 hours).</p> <p>17. The base & column of the table is made of stainless steel. Non-reflecting surface, antibacterial & is easy to clean.</p> <p>18. X-ray (flouroscopy) compatible.</p> <p>19. Compatible with orthopedic traction table and its accessories.</p> <p>Table accessories:</p> <ol style="list-style-type: none"> 1. Anesthesia screen (flexible or moving). 2. Hose holder. 3. Anaesthetic holder. 4. Surgical equipment holder. 5. Knee crutch. 6. Handcuffs of finger set. 7. Radiolucent patient supports (Thigh, leg and arm). 8. The intravenous arm board padded. 9. IV pole. 10. Hand Surgery Tables. 	
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				Arm Boards.	
		3		<p>تجهيز ونصب وفحص وتشغيل جهاز</p> <p>Electrical Bone Power System (drill, saws & accessories)</p> <p>بالمواصفات الفنية التالية:</p> <ol style="list-style-type: none"> 1. Application: the device is used in orthopedic operative procedures for the following function: <ul style="list-style-type: none"> - Drilling bones(compatible with various diameters of drill bits). - Cutting large &small sizes bone and cartilage(compatible with various saw blades(oscillating & reciprocating function)). - Low speed Reamers (compatible with handling rods for total hip & knee reamers). 2. Bone Type: large and / small. 3. Motor Type: Electric, Motor in hand piece. 4. Material (outer body): stainless steel, plastic, or better. 5. Portable device & durable. 6. Compatible Chuck Type for drill, reamer &reciprocating and oscillating saw. 7. Sterilization : can be by Autoclaves or liquid (cidex for e.g). 8. Lubrication Required: No. 9. System Functions: (better in separated hand pieces). <ul style="list-style-type: none"> A. Drill of wires, drill bits or pins. B. Saw(for Oscillating, Reciprocating, with their coupling attachment in one hand piece). C. Reaming :various couplings for different reamers rods of the common systems of total hip & total limp & total knee replacement). 10. Standard accessories: Nozzle cleaner. 11. Variable speed control. 	15

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				<p>12. Battery: rechargeable battery (optional). 13. Compact battery charger (optional). 14. Sterilizer case and tray. 15. Input power: 220/240 VAC, 50/60 Hz single phase. 16. Environmental requirements: the equipment suitable for work in the climate conditions in Iraq in terms of temperature & humidity.</p>	
		5		<p>16. تجهيز ونصب وفحص وتشغيل جهاز (Ultrasonic Knife) بالمواصفات الفنية التالية:</p> <p>Function: Ultrasonic Cutting & Coagulation Device technology controls bleeding by coaptive coagulation at low temperature ranging from 50°C to 100°C (Vessels are coapted (tamponaded) and sealed by a protein coagulum) Ultrasonic frequency: Ultrasonic generating ultrasound at (55-56)KHz Hand – piece: Hand piece with in-built transducer & silicon cable Hand-switch activation adopter: Hand-switch activation adopter for blade & hook probe Cart to house generator and accessories: Yes Dual foot switch attachment: Yes Standby mode: Yes Warning system for malfunctioning i.e.(cable, probe,...etc): Yes Power entry filters: Yes (to suppress electromagnetic disturbances to monitors) Dual foot switch receptacles: Yes (to allow simultaneous use by 2 surgeons) Vibration range : (50 ~ 100) micrometer Accessories : 1- Foot switch with max and min pedals and cable. 2- Blade system adopter 3- Hand switch adopter 4- Open Surgery Instruments 5- Endoscopic Surgery Instruments</p>	

				<p>Probes :</p> <ol style="list-style-type: none"> 1- It should have both 5mm & 10mm instruments. 2- It should have the following types of shears for open & laparoscopic surgery (10mm Coagulation shear Capable of working in 3 modes – flat, Blunt & Sharp , 5mm laparoscope curved coagulation shears, 360 Degree rotatable, capable of sealing blood vessels up to 5mm diameter with clicker & integrated bilateral Integrated hand control to enable precise operation of System by hand) 3- All hand pieces should be steam autoclavable <p>Open surgery instrument</p> <ol style="list-style-type: none"> 1- Coagulation shears. 2- Short curved coagulation shears 3- Dissecting hook. 4- Hand activated coagulating shears with clicker, curved mode <p>Endoscopic Surgery Instrument</p> <ol style="list-style-type: none"> 1- Dissecting Hook 2- Curved Blade 3- Laparoscope Coagulation shears curved mode and knife mode (different sizes) 4- Laparoscope hand activated coagulation shears, (different sizes and modes) 5- Laparoscope hand activated coagulation shears with clicker (different sizes and modes) <p>Storage temperature and humidity : (0 – 60)°C / relative humidity of 15-90%</p> <p>Operating temperature and humidity: (10 – 40)°C / relative humidity of 15-90%</p> <p>Power Supply:-</p> <ul style="list-style-type: none"> - 220/240 VAC 50/60 Hz - Three pin UK type plug - Voltage stabilizing and over current protection circuit - UPS of suitable rating with voltage regulation and spike protection for 120 minutes back up. <p>Safety :The generator must be CF isolated applied device and defibrillator</p>	
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				<p>protection must be available</p> <p>Other specification:</p> <ul style="list-style-type: none"> - Heavy duty - Compatible design <p>* التدريب للكادر العامل على الجهاز (طبيب , مهندس او فني , مشغل) لمدة لا تقل عن اسبوع في مركز تدريبي وتزويد المتدربين بشهادة تدريبية .</p>	
		20		<p>تجهيز ونصب وفحص وتشغيل جهاز</p> <p>Led Technology Operation Light With Satellite Light and Camera Capabilities</p> <p>بالمواصفات الفنية التالية:</p> <p>Ceiling light consisting of central axis, extension arms, spring arms, and light heads.</p> <p>LIGHT SOURCE, TYPE : LED</p> <p>Number of light heads : ≥ 2</p> <p>Life, hr : $\geq 30,000$</p> <p>COLOR TEMPERATURE, K : 3,000-5,000</p> <p>Depth, cm : > 50</p> <p>ILLUMINATION LEVEL, LUX: $\geq(120,000)$</p> <p>MOUNTING : Ceiling</p> <p>Field size : Adjustable</p> <p>ROTATION, ° : ≥ 360</p> <p>Heat-to-light ratio, mW/m2.lx : ≤ 6</p> <p>Colored shadow less : YES</p> <p>SATELLITES : YES</p> <p>BATTERY OR EMERGENCY BACKUP : YES</p> <p>STERILIZABLE HANDLE : YES</p> <p>Easy to maneuver : YES</p>	17

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				<p>VIDEO CAMERA : YES(HD camera) MONITOR : ≥ 15 inch LCD , HD Laminar Flow Compatible : YES</p> <ul style="list-style-type: none"> • Power input to be 220-240VAC, 50Hz. • Service manual supply with each one. • <u>Environmental requirements:</u> the equipment suitable for work in the climate conditions in Iraq in terms of temperature & humidity. 	
		20		<p style="text-align: right;">(Autoclave) تجهيز ونصب وفحص وتشغيل جهاز بالمواصفات الفنية التالية:</p> <ul style="list-style-type: none"> ❖ Application: sterilization of surgical solid instrumets, hollow instruments, packed instruments & porous loads. ❖ Heavy duty & compatible design. ❖ Microprocessor controlled. ❖ Self-evaluations on the process of sterilization, automatic failure detection report. ❖ Advanced software with multilingual display options (should include English Language). ❖ Instant vaporizer outside the chamber. ❖ Chamber capacity: 60 liter, stainless steel. ❖ Integrated printer. ❖ Robot- controlled locking system. ❖ LCD display. ❖ Wide range of sterilization programs including a completely customized cycle. ❖ Water loading pipe with filter and direct draining to the water piping system. ❖ Possibility of serial connection to a PC, with cycle data recording. ❖ Tray holder contains > 2 tray. ❖ Adjustable sterilizing time. ❖ Double tank: clean water & dirty water both compatible with chamber size. 	18

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				<ul style="list-style-type: none"> ❖ Vacuum pump performing two stage (pre& post vacuum). ❖ Thermal drying systems ❖ Input power: 220/240 VAC, 50/SO Hz single phase. Three Pin G type Plug, Voltage stabilizer and over current protection circuit. ❖ Accessories: tray extraction handle. ❖ Environmental requirements: the equipment suitable for working in the climate conditions of Iraq in terms of temperature & humidity. 	
		7		<p>operation table , General Surgery تجهيز ونصب وفحص وتشغيل جهاز بالمواصفات الفنية التالية:</p> <p>Application : General</p> <p><u>TABLE POSITIONS(Degrees from horizontal)</u></p> <p>Trendelenburg : ≥ 25</p> <p>Reverse Trendelenburg : ≥ 25</p> <p>Lateral tilt : ≥ 18</p> <p>Vertical range, cm (in) : $\geq (52- 100) (20.5- 39.4)$</p> <p>Table Sections : ≥ 4</p> <p><u>Degrees from horizontal</u></p> <p>Back section : +25 to -10 minimum</p> <p>Foot/leg section : +15 to -40 minimum</p> <p>Head section : Variable</p> <p>ACCESSORY SIDERAIL : yes</p> <p>PERINEAL CUTOUT : yes</p> <p>MAXIMUM PATIENT CAPACITY, kg (lb) : $\geq 250 (551)$ Static</p> <p>CONTROLS : Foot/hand</p> <p>Type : Electric or Electrohydraulic or Electromechanical</p> <p>Manual override : yes</p> <p>Radiolucent tabletop : yes</p> <p>C-arm accessible : yes</p> <p>ACCESSORIES : Arm boards, shoulder braces, stirrups, Other Accessories</p>	.19

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				<p>should be specified and ordered according to need DIMENSIONS, H x W x L, cm (in) Fully extended : 100 x 50 x 195 (39.4 x 19.7 x 76.7) or more Column housing : Stainless steel Caster lock : yes POWER REQUIREMENTS : Power input 220-240VAC, 50Hz. Battery : yes Environmental requirements : The supplier confirm that: The equipment suitable for work in the climate conditions in Iraq in terms of temperature & humidity.</p>	
		2		<p>20. تجهيز ونصب وفحص وتشغيل جهاز (Operating (urological) Table) بالمواصفات الفنية التالية:</p> <p>Application urological Table Sections ≥ 4 Table Positions :- Trendelenburg : Yes Reverse Trendelenburg : Yes Lateral Tilt : Yes Height Adjustment : Yes Back Section : Yes Foot/ Leg Section : Yes Head Section : Yes Accessory Sidereal : Yes Perineal Cutout : Yes Maximum Patient Capacity, Kg : ≥ 200 Controls : Hand- or Foot or Both Type : Electrohydraulic or Electric or Electromechanical Remote Control: Yes Manual Override : Yes , Preferred Accessories</p>	

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				<ul style="list-style-type: none"> - Fluid connection drain - separable leg extension - adjustable foot support - abdominal Radiolucent pads (PCNI) prone position - Arm supports - Lithotomy stirrups. <p>Radiolucent tabletop : Yes Carbon (fiber) C-Arm accessible : Yes Base Attachment : Mobile Column Housing : Stainless Steel Conductive Casters : Yes Caster Lock : Yes Line, VAC: 220-240 , Hz : 50/60 Recharging Battery: Yes Dimensions (Fully extended) Height (cm) : ≥ 90 , height adjustment $\geq \pm 10$ Width (cm) : ≥ 50 Length (cm) : ≥ 195 Environmental requirements : The supplier confirm that: The equipment suitable for work in the climate conditions in Iraq in terms of temperature & humidity.</p>	
		4		<p style="text-align: center;">Operative Laparoscope تجهيز و نصب و فحص و تشغيل جهاز</p> <p style="text-align: center;">و بالمواصفات الفنية التالية:</p> <p>Application : Diagnostic & operative Type : Carrying cart System components</p>	.21

					<ul style="list-style-type: none"> • Laparoscope and hand instruments. • Electronic CO2 insufflators. • Endo vision camera systems with video recording facility. • Display monitor. • Suction and irrigation system. • Light source. <p>Power supply</p> <ul style="list-style-type: none"> • 220/240 VAC, 50/60 Hz. • Over current & over heated protection circuit. • Three pin G type plug. • Voltage corrector/stabilizer circuit of (input 160-260 V and output 220-240 V and 50 Hz). • UPS of suitable rating with voltage regulation & spike protection for ≥ 60 minutes back up. <p>Laparoscope & hand instruments</p> <ul style="list-style-type: none"> • Telescope 30 degree , rod lens 10 mm diameter 31 cm length autoclavable.(≥ 2 no.) • Telescope 30 degree , rod lens 5 mm diameter 31 cm length autoclavable. (≥ 2 no.) • Telescope 30 degree , rod lens 3 mm diameter 31 cm length autoclavable.(≥ 2 no.) • Telescope 90 degree , rod lens 10 mm diameter 31 cm length autoclavable.(≥ 2 no.) • Telescope 0 degree , rod lens 10 mm diameter 31 cm length autoclavable.(≥ 2 no.) • Flexible Telescope 0 degree ,5mm , for choledocopy(≥ 1 no.) • Hand instruments: last generation modular instruments. Can be disassembled into separate components. Finger operated jaws &
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				<p>locking mechanism. Compatible with H.F. cable.</p> <p>Set of laparoscope instruments:</p> <ul style="list-style-type: none"> • Veress pneumoperitoneum needle , length(11 cm, 13cm, 20cm) (≥2 no. for each size) . • Port and trocars with all rubber , size 10mm , (≥3 no.) • Port and trocars with all rubber , size 12mm , (≥3 no.) • Port and trocars with all rubber , size 5 mm , (≥3 no.) • Forceps (toothed & atraumatic)(≥5 no.) & scissors (≥5 no.) (curved with and without cautery & straight with and without cautery). • Trocars & cannulae ((≥2 no.)10 mm & (≥ 5 no.) 5 mm. • Hook scissors (≥3 no.). • HF electrode. • Needle holder.(≥3 no.) • Morcellator (≥5 no.) • Dissectors forceps.(≥5 no.) • Biopsy forceps (punch biopsy forceps).(≥2 no.) • Crocodile forceps.(≥3 no.) • Suction Irrigation tube& Handle (5mm , 10mm)(≥4 no.) • Spatula(≥3 no.) <p>Electronic CO2 insufflators With thermal gas heat. Electronic CO2 insufflators with pin connectors, silicone tubing set, high pressure hose, CO2 bottle empty, with pin connection, universals wrench, Display: digital/analogue display of patient pressure & gas flow, clear adjacent bar diagram for set values & actual values allow easy</p>	
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				<p>monitoring of insufflations procedure, optical & acoustical warning signals in case of patient over pressured electronically controlled gas refill (i.e. caused by loss of gas while changing instruments). Preferable co2 heating mode to avoid hypothermia.</p> <p>INSUFFLATION PRESSURE RANGE, mm Hg : \leq (0-30) OR Better. OVERPRESSURE PROTECTION : YES Alarm type : Audible and visual PEDIATRIC PRESSURE SETTING : YES INSUFFLATION VOLUME GAUGE/DISPLAY : YES</p> <p><u>Endovision camera system</u> Full HD 3 chip camera CCD chip with zoom or Better, minimum sensitivity 3 Lux. Camera cable length 300 cm, with appropriate coupling device rigid & flexible endoscopes with standard eye piece including following Functions</p> <ul style="list-style-type: none"> • Homogeneous Illumination • Contrast enhancement • Spectral color shift and switch • Image and video data are recorded using an integrated documentation function. This data is transferred to external storage media via USB interfaces <p>Display monitor \geq24" FULL HD Monitor, OR Better , color systems PAL/NTSC, max. screen resolution \geq1920 x 1080, image format \geq16:9, video inputs:, SVideo, HDMI Composite, video outputs: DVI, 3G-SDI, Composite, power supply 100 – 240 VAC, 50/60 Hz.</p> <p>Suction & irrigation system irrigation & suction pump Automatically pressure-controlled and it can</p>
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المواصفات الفنية لاجهزة شعاعية والتخدير والجراحة (عامة+ عظام وكسور + بولية) المراد توفيرها لدائرة صحة كركوك

				<p>by Used diagnostic and operative Laparoscopy.</p> <p>LIGHT SOURCE / LAMP TYPE</p> <ul style="list-style-type: none"> • Cold light fountain xenon or LED > 175 Watt OR Better . • Light outlets: continuously adjustable light intensity from 0 to 100% either manually or automatically by the camera video output signal. <p>Specialties : Laparoscopic, General Surgery, Gynecological, other.</p> <p>Other specification : High frequency electrosurgical unit (unipolar & bipolar).</p> <p>Cart and Monitor Holder : Equipment Cart, With and not limited to wide, high, rides on 4 antistatic castors equipped with locking brakes, mains switch on cover, grounding plug. Caster diameter: ≥ 12.5 cm Drawer Unit with Lock, Equipment Rail, Camera Holder Monitor Holding Arm,</p> <p>Environmental requirements : The supplier confirm that: The equipment suitable for work in the climate conditions in Iraq in terms of temperature & humidity.</p> <p>* التدريب للكادر العامل على الجهاز (طبيب , مهندس او فني , مشغل) لمدة لا تقل عن اسبوع في مركز تدريبي وتزويد المتدربين بشهادة تدريبية .</p>	
		3		<p>تجهيز ونصب وفحص وتشغيل جهاز</p> <p>Radiographic /Fluoroscopic Units, Mobile (C-ARM) (flat panale detector)</p> <p>بالمواصفات الفنية التالية:</p> <p>Provide radiographic and fluoroscopic imaging in surgical, orthopedic, urology, neurosurgery, gastrointestinal surgery, critical care, and</p>	22

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				<p>emergency care procedures, angioplasty neuroradiology, trauma care & angiography</p> <p>X-RAY TUBE ANODE : Rotating</p> <p>Heat capacity,kHU: ≥ 300</p> <p>Cooling, HU/min: $\geq 50,000$</p> <p>Focal spot size, mm : Dual</p> <p>X-RAY GENERATOR TYPE : High-frequency</p> <p>Power rating kw @ 120kvp : ≥ 12</p> <p>Pulse fluoroscopy : Yes</p> <p>Snapshot mode : Yes</p> <p>ABS (automatic brightness stabilization) control : Yes</p> <p>IMAGE DETECTOR</p> <p>Type : Flat-panel detector</p> <p>size, cim : $\geq 20*20$</p> <p>TV MONITOR SIZE, in : ≥ 19(dual)</p> <p>HOLDER : Yes</p> <p>IMAGE PROCESSING AND STORAGE</p> <p>Image storage type (ext. hard ,dicome) : Digital (20,000)</p> <p>Capacity, number of images : $\geq 5,000$</p> <p>Last-image hold : Yes</p> <p>Frame integration : Yes</p> <p>DICOM CONFORMANCE 3.0 : Yes</p> <p>DIGITAL STORAGE : Yes</p> <p>C-ARM</p> <p>Free space, cm : ≥ 70</p> <p>Depth, cm : ≥ 60</p> <p>Orbital rotation, ° : yes</p> <p>Horizontal travel, : yes</p> <p>Vertical travel, : yes</p>	
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المواصفات الفنية لاجهزة شعاعية والتخدير والجراحة (عامة+ عظام وكسور + بولية) المراد توفيرها لدائرة صحة كركوك

				<p>Panning motion, ° : yes Pivot rotation, ° : yes angulation : $\geq \pm 45$ OTHER FEATURES other analyses tools should be specified by the manufacturer Environment requirement : The equipment suitable for working in the climate condition in Iraq in terms of condition and humidity *Power supply : - Medical Approved power supply board Line voltage : - 220/240VAC,50/60Hz, Three pin (G) type plug UPS or backup battery : yes for pc only</p> <p>*ضمان لمدة خمس سنوات مواد وعمل وتبدأ الضمان من تاريخ انجاز العمل (نصب وتشغيل والتدريب) و استحصال الموافقة على تملك واستخدام الجهاز من مديرية البيئة وتصريح المديرية بخصوص سلامة الموقع من التسرب الشعاعي والالتزام بتوفير البرامج التشغيلية وكتالوك الصيانة والعطلات مع التدريب الموقعي لكافة الكادر العامل على الجهاز لمدة ثلاثة ايام .</p> <p>* التدريب للكادر العامل على الجهاز (طبيب , مهندس او فني , مشغل) لمدة لا تقل عن اسبوع في مركز تدريبي وتزويد المتدربين بشهادة تدريبية</p>	
		4		<p>تجهيز ونصب وفحص وتشغيل جهاز</p> <p>Radiographic Systems ,Digital (DR) بالمواصفات الفنية التالية:</p> <p>Applications : perform routine diagnostic x-ray examinations RADIOGRAPHY MODES : Digital :Integrated digital (one console for control x-ray and previewing image) Number Detectors : 2 (first for table and the second for chest stand) Detector type : Flat panel detector TABLE</p>	23

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				<p>Type : 4-way float-top, elevating motorize Travel : Applicable for the need of different radiological examination Longitudinal, cm : Yes (specified by the manufacturer) Lateral, cm : Yes (specified by the manufacturer) Vertical, cm : Yes (specified by the manufacturer) Tabletop Length, cm : ≥ 210 Width, cm : ≥ 75 Minimum Height , cm : ≤ 60 Table weight capacity, kg : ≥ 200 Tabletop material : Heavy duty Locking system : Yes TABLE BUCKY SYSTEM Type : Motorized Size, cm (in) : $\geq 35 \times 43 (14 \times 17)$ AEC (Automatic exposure control) : Yes Grid ratios : $\geq 10:1$ Lines/mm (lines/in) : $\geq 4 (100)$ Cassette sizes, cm (in) : Filmless Longitudinal travel, cm : Yes UPRIGHT BUCKY Type : motorize Size, cm (in) : $\geq 40 \times 43 (14 \times 17)$ AEC (Automatic exposure control) : yes Grid ratios : $\geq 10:1$ Lines/mm (lines/in) : $\geq 4 (100)$ Cassette sizes, cm (in) : Filmless Longitudinal travel, cm : Yes DIGITAL DETECTOR</p>	
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المواصفات الفنية لاجهزة شعاعية والتخدير والجراحة (عامة+ عظام وكسور + بولية) المراد توفيرها لدائرة صحة كركوك

				<p>Detector material : CSI or GOS Matrix size : Higher preferred Pixel size : $\geq 140 \mu\text{m}$ DQE(detective quantum efficiency) : $\geq 65\%$ Image preview wait, sec : ≥ 3 Diagnostic image wait, sec : ≥ 5 Control panel Automatic parameter selection : yes Graphic-based planning : yes Anatomic-specific post processing : yes Manual processing : yes X-RAY GENERATORS : High frequency;$\geq 65\text{kW}$ X-RAY TUBES Preferred tube units : Heavy duty specified by the supplier Maximum mA at 120 kVp : ≥ 600 Focal spot sizes, mm : \geq Two focal spots (sizes specified by manufacturer) Heat capacity, kHU : ≥ 300 Cooling rate HU/min : $\geq 50,000$ Control panel on x-ray tube : yes TUBE SUSPENSION Tube-mounted x-ray control : yes Model, suspension : Any (according to manufacturer) Model, collimator : Automatic & manual ACCESSORIES Compression bands : yes Handgrips : yes Footrest : yes INTEGRATION DICOM 3.0 : yes</p>	
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				<p>OTHER SPECIFICATIONS :</p> <ul style="list-style-type: none"> - Film storage capacity \geq 120GB - monitor : \geq19" LCD (HD) - Dry film printer specified by the manufacturer - embedded DICOM Printer <p>Environment requirement : The equipment suitable for working in the climate condition in Iraq in terms of condition and humidity</p> <p>Power supply - Medical Approved power supply board</p> <p>Line voltage 220/240 VAC , 50/60 Hz single Three pin (G type) plug</p> <p>Voltage stabilizer yes</p> <p>UPS (for PC console) : Yes for \geq 10 minute power back up</p> <p>*ضمان لمدة خمس سنوات مواد وعمل وتبدأ الضمان من تاريخ انجاز العمل (نصب وتشغيل والتدريب) و استحصال الموافقة على تملك واستخدام الجهاز من مديرية البيئة وتصريح المديرية بخصوص سلامة الموقع من التسرب الشعاعي والالتزام بتوفير البرامج التشغيلية وكتالوك الصيانة والعطلات مع التدريب الموقعي لكافة الكادر العامل على الجهاز لمدة ثلاثة ايام .</p> <p>* التدريب للكادر العامل على الجهاز (طبيب , مهندس او فني , مشغل) لمدة لا تقل عن اسبوع في مركز تدريبي وتزويد المتدربين بشهادة تدريبية</p>	
		10		<p>تجهيز ونصب وفحص وتشغيل جهاز</p> <p>Radiographic Units, Mobile (DR)</p> <p>بالمواصفات الفنية التالية:</p> <p>APPLICATION : Radiographic imaging of patients who cannot be transported to radiology department</p> <p>SYSTEM TYPE : Mobile digital radiographic system</p> <p>Description : Integrated digital (not upgraded from analog to digital)i.e.</p>	24

				<p>(not retrofit)</p> <p>TYPE OF POWER SOURCE</p> <p>Battery : yes</p> <p>Can be directly powered by AC line : yes</p> <p>X-RAY TUBE ANODE : Rotating</p> <p>Heat capacity, HU : $\geq 200,000$</p> <p>Cooling, HU/min : $\geq 20,000$</p> <p>Maximum output, kVp : ≥ 120</p> <p>Range : $\geq (40-120)$</p> <p>Increments : yes</p> <p>mAs range : ≥ 300</p> <p>X-RAY GENERATOR : High-frequency generator</p> <p>Power rating, kW : ≥ 30</p> <p>ALUMINUM FILTER, mm : Yes</p> <p>SID RANGE, cm : According to manufacturer</p> <p>INDICATOR METERS</p> <p>Type : Digital</p> <p>kVp : Digital</p> <p>mAs : Digital</p> <p>TUBE MOVEMENT : Applicable for the need of different radiological examination</p> <p>Horizontal, cm : Yes (specified by the manufacturer)</p> <p>Vertical, cm : Yes (specified by the manufacturer)</p> <p>Rotation :-</p> <p>Z-axis, ° : Yes (specified by the manufacturer)</p> <p>X-axis, ° : Yes (specified by the manufacturer)</p> <p>Y-axis, ° : Yes (specified by the manufacturer)</p> <p>HANDHELD CONTROL : yes</p> <p>Cord length, m : Wire and wireless</p>	
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المواصفات الفنية لاجهزة شعاعية والتخدير والجراحة (عامة+ عظام وكسور + بولية) المراد توفيرها لدائرة صحة كركوك

				<p>DIGITAL DETECTOR : DR Type : CSI Pixel size : $\leq 160 \mu\text{m}$ Wireless : yes Size, cm : $\geq 35 \times 43$ Size of built-in display monitor : ≥ 15" color screen LCD medical monitor Type of network connection : DICOM 3.0 Processing (analyses) tools : Specified by the manufacturer Film storage capacity : ≥ 120 GB PATIENT-CENTERING/ COLLIMATOR LIGHT : Yes Printer : - Dry film (specified by the manufacturer) - embedded DICOM Printer *Power supply - Medical Approved power supply board Line voltage - 220/240 VAC , 50/60 Hz single phase, - Three pin UK type plug</p> <p>*ضمان لمدة خمس سنوات مواد وعمل وتبدأ الضمان من تاريخ انجاز العمل (نصب وتشغيل والتدريب) و استحصال الموافقة على تملك واستخدام الجهاز من مديرية البيئة وتصريح المديرية بخصوص سلامة الموقع من التسرب الشعاعي والالتزام بتوفير البرامج التشغيلية وكتالوك الصيانة والعطلات مع التدريب الموقعي لكافة الكادر العامل على الجهاز لمدة ثلاثة ايام. * التدريب للكادر العامل على الجهاز (طبيب , مهندس او فني , مشغل) لمدة لا تقل عن اسبوع في مركز تدريبي وتزويد المتدربين بشهادة تدريبية.</p>	
		5		<p>Computed Radiography (CR), Multi- (Film تجهيز ونصب وفحص وتشغيل جهاز (Film بالمواصفات الفنية التالية:</p> <p>Type : Digital CR APPLICATIONS : All radiographic exams READER/DIGITIZER :</p>	25

				<p>Description : ≥ 12 bit for (14"× 17") cassette Cassette buffer capacity : ≥ 4 Throughput per hour (cassette sizes) : ≥ 80 for (14"× 17") cassette Power consumption : ≤ 3 kW single phase PIXEL MATRIX SIZE : 35 x 43 cm cassette : $\geq 1750 \times 2150$ 35 x 35 cm cassette : $\geq 1750 \times 1750$ 24 x 30 cm cassette : $\geq 1200 \times 1500, 2400 \times 3000$ 18 x 24 cm cassette : $\geq 900 \times 1200$</p> <p>INTERNAL BRUSHES/FANS : Yes CR PLATE CHARACTERISTICS Phosphor material : Depend on manufacturer PATIENT ID : Specified by the manufacturer WORKSTATION(S) Monitor : ≥ 17" LCD or LED CPU/components : PC (specified by the manufacturer) Image storage : ≥ 250 GB SOFTWARE FEATURES : Automated image processing, image quality assurance (basic image review), quantitative exposure record, system quality control Basic image processing : : Yes Advanced image processing : : Yes Annotation and comment tools : : Yes Quality assurance audit software tools : : Yes Analysis tools : Yes (should specified by the manufacturer ...more tools preferred) INTEGRATION DICOM 3.0 : YES</p>	
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المواصفات الفنية لاجهزة شعاعية والتخدير والجراحة (عامة+ عظام وكسور + بولية) المراد توفيرها لدائرة صحة كركوك

				<p>INTERFACES : PACS(printing & picture archiving and communication system), Dry printer , DICOM Printer , CD/DVD writer</p> <p>Other specification : - Heavy duty & compatible design</p> <p>- The CD/DVD recorded by the device writer should be readable without need any additional software</p> <p>- CASSETTE included in warranty period</p> <p>Printer : - Dry film (specified by the manufacturer)</p> <p>- embedded DICOM Printer</p> <p>Power supply : Medical Approved power supply board</p> <p>Line voltage : 220/240VAC,50/60Hz, Three pin (G type) plug</p> <p>Voltage stabilizer circuit (or device) : YES (170-260VAC to 220 /240 VAC</p> <p>UPS (with long shelf life batteries \geq 1 year) : - Yes \geq 2kVA</p> <p>Environmental requirement : The equipment suitable for working in the climate condition in Iraq in terms of condition and humidity</p>	
		4		<p>Computed Radiography (CR), Single- تجهيز ونصب وفحص وتشغيل جهاز (Film</p> <p>بالمواصفات الفنية التالية:</p> <p>Type : Digital CR</p> <p>APPLICATIONS : All radiographic exams</p> <p>READER/DIGITIZER</p> <p>Description : \geq 12-bit for (14"× 17") cassette</p> <p>Cassette buffer capacity : 1</p> <p>Throughput per hour (cassette sizes) : \geq 60 for (14"× 17") cassette</p> <p>Power consumption : \leq 3 kW single phase</p> <p>PIXEL MATRIX SIZE</p>	26

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				<p>35 x 43 cm cassette : $\geq 1750*2150$ 35 x 35 cm cassette : $\geq 1750*1750$ 30 x 24 cm cassette : $\geq 1200*1500$ 18 x 24 cm cassett : $\geq 900*1200$</p> <p>INTERNAL BRUSHES/FANS : Yes CR PLATE CHARACTERISTICS : Specified by the manufacturer PATIENT ID : Yes , Specified by the manufacturer WORKSTATION(S) Monitor : ≥ 17" LCD or LED CPU/components : PC (specified by the manufacturer) Image storage : ≥ 250 GB</p> <p>SOFTWARE FEATURES : Automated image processing, image quality assurance (basic image review), quantitative exposure record, system quality control Basic image processing : yes Advanced image processing : yes Annotation and comment tools : yes Quality assurance audit software tools : yes Analysis tools : Yes (should specified by the manufacturer ...more tools preferred)</p> <p>INTEGRATION DICOM 3.0 : yes</p> <p>INTERFACES : PACS(printing & picture archiving and communication system), Dry printer , CD/DVD writer</p> <p>Other specification: - The CD/DVD recorded by the device writer should be readable in any PC without need any additional software - CASSETTE included in warranty period</p>	
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المواصفات الفنية لاجهزة شعاعية والتخدير والجراحة (عامة+ عظام وكسور + بولية) المراد توفيرها لدائرة صحة كركوك

				<p>Printer : - Dry film (specified by the manufacturer) - embedded DICOM Printer</p> <p>Environment requirement : The equipment suitable for working in the climate condition in Iraq in terms of condition and humidity</p> <p>Line voltage - 220/240VAC,50/60Hz, Three pin (G type) plug</p> <p>UPS - Yes \geq 2kVA</p>	
		7		<p>(Scanning Systems, Ultrasonic, General Purpose)</p> <p>بالمواصفات الفنية التالية:</p> <p>Clinical Applications : Abdominal, , musculoskeletal, OB/GYN, pediatric and neonatal, small parts, transcranial, urologic, vascular, other clarified</p> <p>PROBE TYPES, MHz : \geq 3 Probes chosen by customer according to specialty</p> <p>Linear array(multi frequency) : Yes ,(specification should clarify)</p> <p>Convex array(multi frequency) : Yes ,(specification should clarify)</p> <p>Endovaginal : Yes , (specification should clarify)</p> <p>Endorectal : Yes , (specification should clarify)</p> <p>Dedicated 3-D/4-D : Yes , (specification should clarify)</p> <p>Hockey stick : Yes , (specification should clarify)</p> <p>Others : Manufacturer should mention any other available probes and its clinical application</p> <p>SCAN MODES</p> <p>M-mode : Yes</p> <p>B –mode(2-D) : Yes</p> <p>3-D (freehand) : Yes</p> <p>3-D (automatic) : Yes</p> <p>4-D (automatic) : Yes</p>	.27

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				<p>Harmonic imaging : Yes</p> <p>DOPPLER</p> <p>Color Doppler : Yes</p> <p>3-D/4-D : Yes</p> <p>Power Doppler : Yes</p> <p>3-D/4-D : Yes</p> <p>Frequency display : Yes</p> <p>Velocity display : Yes</p> <p>Duplex mode : Yes</p> <p>Triplex mode : Yes</p> <p>Image Display and Processing</p> <p>Automated image optimization : Yes</p> <p>Gray scale level : ≥ 256</p> <p>Image magnification : Yes</p> <p>Maximum display ,mm : ≥ 240</p> <p>Preprocessing : Yes</p> <p>Postprocessing : Yes</p> <p>Real-time image : Yes</p> <p>Frozen image : Yes</p> <p>SPLIT SCREEN : Yes</p> <p>ANALYSIS PACKAGES</p> <p>Abdomen scanning : Yes</p> <p>Vascular scanning : Yes</p> <p>OB/GYN scanning : Yes</p> <p>Others : Urology, pediatric, hip , other specified by the manufacturer)</p> <p>FUNCTIONALITY</p> <p>Digital calipers : Yes</p> <p>Selectable dynamic range : Yes</p> <p>Adjustable transmit focus : Yes</p>	
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المواصفات الفنية لاجهزة شعاعية والتخدير والجراحة (عامة+ عظام وكسور + بولية) المراد توفيرها لدائرة صحة كركوك

				<p>Dynamic receive focus : Yes Measurements on video replay : Yes IMAGE STORAGE : HDD,DVD, USB, printer, other should specified Capacity, number of stored images : \geq 250 GB HD Cine : Yes DICOM 3.0 COMPLIANT : Yes NUMBER OF USER-PROGRAMMABLE PROTOCOLS , FORMULAS , TABLES : Yes MONITOR : \geq 17" high resolution LCD Environment requirement : The equipment suitable for working in the climate condition in Iraq in terms of condition and humidity Power supply : Medical Approved power supply board Line voltage : 220/240VAC,50/60Hz, Three pin G type plug UPS : YES smart \geq 1500 KW</p> <p>* التدريب للكادر العامل على الجهاز (طبيب , مهندس او فني , مشغل) لمدة لا تقل عن اسبوع في مركز تدريبي وتزويد المتدربين بشهادة تدريبية.</p>
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الشروط المطلوبة : - 1- ان يكون الجهاز حائز على احد شهادات الجودة (FDA الامريكية) او (CE الاوربية) ويتم تقديم هذه الشهادات مع شهادة المنشأ الى دائرة الصحة / قسم الامور الفنية لغرض مصادقتها وفق الاليات المتبعة .

2- تقديم (declaration letter) نسخة اصلية من الشركة المصنعة للجهاز التي توضح حصول الموديل المطلوب شراؤه على هذه الشهادات الى دائرة الامور الفنية – قسم ادارة الاجهزة الطبية او ارسالها للبريد الالكتروني الخاص بالقسم المذكور من قبل الشركة المصنعة.

3- ضمان لمدة خمس سنوات مواد وعمل وتبدأ الضمان من تاريخ انجاز العمل (نصب وتشغيل والتدريب) والالتزام بتوفير البرامج التشغيلية وكتالوك الصيانة والعطلات مع التدريب الموقعي لكافة الكادر العامل على الجهاز لمدة ثلاثة ايام .

4- يفضل وجود وكيل للشركة المجهزة في العراق لمتابعة خدمات مابعد البيع (النصب, الضمان, الصيانة) و ان تكون الشركة المجهزة مسجلة لدى وزارة الصحة ويجب ان لا تكون مدرجة ضمن القائمة السوداء.

المواصفات الفنية لاجهزة شعاعية والتخدير والجراحة (عامة+ عظام وكسور + بولية) المراد توفيرها لدائرة صحة كركوك

5- يفضل ان يكون الجهاز من المناشئ الرصينة والمعتمدة لدى وزارة الصحة العراقية ومن الاصناف المتوفرة في مؤسساتنا الصحية ويجب ان يكون من احدث التقنيات المنتجة خلال اخر ثلاث سنوات وان لا يكون مستعمل او معاد التاهيل.