



**Lady Reading Hospital (LRH)**  
**Medical Teaching Institution (MTI)**  
Peshawar  
Contact No: 091-9211927

**AFTER PRE-BID**  
**BID SOLICITATION DOCUMENTS**  
**For**

**REF: (ME- 23 Procurement of Medical Equipment's 2024-26 )**

**Note:** The prospective bidder is expected to examine the Bidding Documents carefully, including all Instructions, Terms & Conditions, and Specifications etc. Failure to furnish all information required by the Bidding documents or submission of a Bid not substantially responsive to the Bidding Documents in every respect would result in the rejection of the Bid.

Manager Material Management  
LRH/MTI Peshawar

AD Legal  
LRH/MTI Peshawar

HOD Gynae  
LRH/MTI Peshawar

HOD ENT  
LRH/MTI Peshawar

Manager Inpatient  
LRH/MTI Peshawar

Bio-Medical Engineer  
LRH/MTI Peshawar

Director Finance  
LRH/MTI Peshawar

Nursing Director  
LRH/MTI Peshawar

Associate Hospital Director  
LRH/MTI Peshawar

Medical Director  
LRH/MTI Peshawar

Hospital Director  
LRH/MTI Peshawar

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## 1. INTRODUCTION:

Lady Reading Hospital-Medical Teaching Institution (LRH-MTI) Peshawar invites item wise sealed bids from the Manufacturer/Authorized Dealers for procurement of **“ME- 23 Procurement of Medical Equipment’s 2024-26”** for Hospital Open Competitive Bidding under rule 6(2) (b) **“Single Stage Two Envelope”** bidding procedures of Khyber Pakhtunkhwa Public Procurement Regulatory Authority (KPPRA) Rules 2014.

## 2. INSTRUCTIONS TO BIDDERS:

1. This Bidding procedure will be conducted in light of Khyber Pakhtunkhwa Public Procurement Regulatory Authority (KPPRA) Laws, Rules made there under along with Standard Bidding Documents.
2. Both Technical Bids and Financial Bids must be submitted in two separate sealed inner envelopes marked “1-Technical Bids” and “2-Financial Bids” which should be packed in one outer envelope.
3. The technical bids will be opened on / /2025 at **11:30 AM** in presence of the bidders/representatives who choose to attend while the financial bids will be opened later on after the evaluation of technical bids. Financial bids of only technically qualified responsive bidders will be opened while the financial bids of technically unqualified bidders will be returned unopened.
4. An affidavit is mandatory, without indicating the figure in the Technical Bid that bid security is placed in the financial bid. Duly attested by notary public.
5. Pre-bid meeting with the interested bidders will be held on / /2025 at **11:00 AM** hrs in MMD Office of the Institution.
6. Any bid received after the deadline for submission of bids shall not be entertained and shall be returned unopened to the Bidder.
7. All the bidders are required to provide annexure wise complete requisite documents with page marking for their Technical Evaluation / Qualification as prescribed under the rules.
8. The bid should be complete in all respect and must be signed by the bidder.
9. All prices should quote in Pak rupees PKR & CNF and should include all taxes applicable by Govt. (at any stage of tender process/till the validity of rates). If not specifically mentioned in the Quotation, it will be presumed that the prices include all the taxes.
10. Bidders are essentially required to provide correct and latest postal/email/web addresses, phone/mobile/fax numbers for actively and timely communication.
11. For any query, clarification regarding Services / Bid Solicitation Documents, the applicants may send a written request at least one day prior to the opening date.
12. The Bidder may after its submission withdraw its bid prior to the expiry of the deadline prescribed for submission of bids. Withdrawn bids will be returned unopened to the Bidders.

13. Any bid not received as per terms and conditions laid down in this document are liable to be ignored. No offer shall be considered if:
  - a. Received without earnest money;
  - b. It is received after the date and time fixed for its receipt;
  - c. The tender document and the bid is unsigned;
  - d. The offer is ambiguous;
  - e. The offer is conditional i.e. advance payment, or currency fluctuations etc.
  - f. The offer is from blacklisted firm in any Federal / Provincial Govt. Dept.:
  - g. Only typed tender on original prescribing letter pad, sealed & signed (Every Page) should be submitted, the quoted Price must be preprinted and hand written quoted price will not be acceptable. The tenders must be according to hospital specification; alternate rates will not be acceptable
14. Usage of correction fluid & corrections are strictly prohibited unless duly initiated.
15. Any erasing / cutting etc. appearing on the offer, must be properly signed by the person signing the tender.
16. Bids will be rejected if the Bid is in some way connected with bids submitted under names different from his own.
17. In case of Bid Tie, the decision will be taken by making toss/draw/Recall sealed quotation in front of the bidders.
18. Any direct or indirect effort by a bidding firm to influence this institution during the process of selection of a bidder or award of contract may besides rejection of its bid result into its disqualification from participation in the LRH-MTI Peshawar's future bids.
19. The bidder shall provide an undertaking that the bidder has not been declared black listed by any Governmental/ Semi-Governmental institutions.
20. Bidders shall not be eligible to bid if they are under a declaration of Ineligibility for corrupt and fraudulent practices issued by any government organization in accordance with the Section 44(1) KPP Rules 2014.

### **3. GENERAL CONDITIONS: -**

1. LRH-MTI Peshawar shall evaluate the proposal in a manner prescribed in advance, without reference to the price and reject any proposal which does not conform to the specified requirements.
2. Alternative bid shall not be considered and shall be rejected by the Competent Authority.
3. LRH-MTI Peshawar may increase or decrease the quantity of the items required, as per KPPRA rules.
4. At any time prior to the deadline for submission of bids, LRH-MTI Peshawar may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective Bidder, modify the bidding documents by amendment.
5. If a bid is not substantially responsive, it will be rejected by the Procuring Entity and may not subsequently be made responsive by the Bidder by correction of the nonconformity.
6. LRH-MTI Peshawar may accept or reject any or all of the bids under Rule 47 of KPPRA Rules, 2014.
7. Additional documents will not be acceptable after Bid Submission.
8. **Rates will be valid till 30 June 2026.**

**INVITATION FOR BIDS**  
**Lady Reading Hospital**  
**Medical Teaching Institute**  
**Peshawar**  
Phone: 091-9211927

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**INVITATION FOR BIDS**

Hospital Director, Medical Teaching Institute, **Lady Reading Hospital Peshawar** invites sealed bids from Manufacturer/Importers/Authorized Distributors under National Competitive Bidding for the procurement of **“ME- 23 Procurement of Medical Equipment’s 2024-26”** for Hospital, under rule 6(2)(b) **“Single stage Two envelope procedure”** of KPPRA Rules 2014, from Manufacturer/Authorized Dealers registered with the Income / Sales tax, reflected on Active Taxpayer List of FBR.

The bidders are required to submit bid security @ **1,500,000/-PKR** in the name of Hospital Director LRH-MTI Peshawar. Pre-bid meeting with the interested bidders will be held **on / /2025 at 11:00** AM at Material Management Department of the institution.

The tenders complete in all respect must reach the undersigned by **11:00 AM on / /2025**, which will be opened at 11:30 AM on the same day in conference room / AHD office of the Hospital in the presence of the procurement committee and the bidders / representatives who may choose to attend.

Competent Authority reserves the right to reject any or all the bids as per provisions contained in Rule 47 of KPPRA Rules 2014.

**4. BID Security**

- i. Bid security @ **1,500,000** (refundable) drawn in favor of “Hospital Director LRH-MTI Peshawar”
- ii. The bid security in the shape CDR will be accepted only.

The bid security may be forfeited:

- i) If a Bidder withdraws its bid during the period of bid validity specified by the Bidder on the Bid Form; or
- ii) In the case of a successful Bidder, if the Bidder fails to sign the contract or to furnish performance Guarantee.

**5. BID VALIDITY:**

- i) The bids should be valid for 180 days.
- ii) In exceptional circumstances, LRH-MTI Hospital may solicit the Bidder’s consent to an extension of the period of validity reasons shall be recorded in writing. The request and the responses there to shall be made in writing. The bid security provided shall also be suitably extended. A Bidder may refuse the request without forfeiting its bid security. A Bidder granting the request will not be required nor permitted to modify its bid, except as provided in the bidding document.

## **6. BLACKLISTING OF DEFAULTED BIDDER/CONTRACTOR**

### **Conditions for Blacklisting of Defaulted Bidder/Contractor under rule 44 of KPPRA Rules 2014**

The following are the events which would lead to initiate (Rule 44 of KPPRA Rules 2014) blacklisting/debarment process;

- Consistent failure to provide satisfactory performances.
- Found involved in corrupt/fraudulent practices.
- Abandoned the place of work permanently

### **Conditions for debarment of Defaulted Bidder/Contractor**

Failure or refusal to;

- Accept Purchases Order / Services order terms;
- Make supplies as per specifications agreed;
- Fulfill contractual obligations as per contract
- Non execution of work as per terms & condition of contract.
- Any unethical or unlawful professional or business behavior detrimental to good conduct and integrity of the public procurement process.
- Persistent and intentional violation of important conditions of contract.
- Non-adherence to quality specifications despite being importunately pointed out.
- Security consideration of the State i.e., any action that jeopardizes the security of the State or good repute of the LRH- MTI Peshawar.

### **Procedure for blacklisting and debarment**

1. Competent authority of Lady Reading Hospital -MTI Peshawar may on information, or on its own motion, issue show cause notice to the bidder.
2. The Show Cause notice shall contain the statement of allegation against the Bidder.
3. The bidder will be given maximum of seven days to submit the written reply of the show cause notice.
4. In case the bidder fails to submit written reply within the requisite time, the competent authority may proceed forth with ex-pa rte. against the bidder.
5. Direct to issue notice of personal hearing to the bidder/ authorized representative of the bidder and the competent authority shall decide the matter on the basis of available record and personal hearing, if availed.
6. The competent authority shall decide the matter within thirty days from the initiation of proceedings.
7. The order of competent authority shall be communicated to the bidder by indicating reasons.
8. The order past as above shall be duly conveyed to the KPPRA and defaulting bidder within three days of passing order.
9. The duration of debarment may vary up to five years depending upon the nature of violation.

## 7. DISPUTES AND CONTROVERSIES/DISPUTE RESOLUTION

1. The purchaser shall constitute a committee comprising of disagreed & notified by the competent authority proper powers and authorizations to address the complaints of bidders that may occur prior to the entry into force of the procurement contract.
2. Any bidder feeling aggrieved by any act of the purchaser after the submission of his bid may lodge a written complaint concerning his grievances not later than 03 days after the announcement of the bid evaluation report.
3. The grievance redress Officer shall investigate and decide upon the complaint within 06 days of the receipt of the complaint. The report along with decision shall be forwarded to the purchaser officer within the prescribed period.
4. Mere fact of lodging of a complaint shall not warrant suspension of the procurement process.  
**Note:** Grievance notified & designated who can invite appropriate official as co-opted member for grievance.
5. Any dispute or difference arising out of the Agreement which cannot be amicably settled between the Parties, shall be finally settled by KPPRA whose decision will final and binding on both the parties.

## 8. STATEMENT OF REQUIREMENT WITH SPECIFICATION

S.No	Specifications
1	Laparoscope instruments for gynecological procedure with full high definition camera system
2	Hysteroscopy System
3	Complete Bronchoscopy set with Audio, Video system Forceps
4	Orthopedic Drill with complete Accessories
5	ENT Microscope with Attachment
6	Cautery Machine
7	Ultrasound Machine high end
8	OT Tables
9	Adjustable Lights
10	Defibrillator
11	Delivery Beds
12	Motorized Patient Beds (ICU's)
13	Motorized Patient Beds for Ward's
14	Anesthesia Machine
15	Patient Monitors 5 Parameters
16	Portable X Ray Machine (Digital)
17	800Ma or more Digital X-ray Machine
18	Portable Ultrasound Machine
19	Ceiling OT Light
20	Spica Table
21	Dialysis Machine
22	OCT Machine
23	Dental Chair Complete Unit
24	Baby Resuscitation Trolley
25	C-Arm Machine
26	Echo Cardiography
27	Hess Chart Electric with remote Controller
28	Biometry
29	Slit lamp



SPECIFICATION GYNE LAPAROSCOPE WITH FULL HIGH DEFINITION CAMERA SYSTEM		
S No.	Description	Qty
	<b>LAPAROSCOPE INSTRUMENTS FOR GYNCOLOGICAL PROCEDURE WITH FULL HIGH DEFINITION CAMERA SYSTEM</b>	
	<b>Special Note : + - 10% acceptable</b>	
1	Forward-Oblique Telescope 30°, diameter 5 mm, length 29 cm, autoclavable, fiber optic transmission light incorporated,	1
2	Forward-Oblique Telescope 30°, enlarged view, diameter 10 mm, length 31 cm, autoclavable, fiber optic light transmission incorporated,	1
3	Trocar, size 11 mm, <b>INCLUDING:</b> Trocar only, with pyramidal tip Cannula without valve, with insufflation stopcock, length 10.5 cm Multifunctional Valve	2
4	Trocar, size 6 mm, , <b>INCLUDING:</b> Trocar only, with blunt tip Cannula without valve, with insufflation stopcock, length 10.5 cm Multifunctional Valve, size 6 mm	2
5	Trocar, size 6 mm, <b>INCLUDING:</b> Trocar only, with pyramidal tip Cannula, without valve, with insufflation stopcock, length 10.5 cm Multifunctional Valve Seal Set 50/4 26G Mandrel, for opening automatic valves	2
6	Trocar, size 6 mm, <b>INCLUDING:</b> Trocar only, with blunt tip Cannula without valve, with insufflation stopcock, length 10.5 cm Multifunctional Valve, size 6 mm	2
7	VERESS Pneumoperitoneum Needle, with spring-loaded blunt inner cannula, LUER-Lock, autoclavable, diameter 2.1 mm, length 13 cm	1

8	Reducer, 11/5 mm		1
9	Dissecting and Grasping Forceps, rotating, with connector pin for unipolar coagulation, size 5 mm, length 36 cm, double action jaws,		1
	<b>INCLUDING:</b>		
	Plastic Handle, without ratchet, with larger contact area		
	Outer Tube, insulated		
	Forceps Insert		
10	Grasping Forceps, rotating, with connector pin for unipolar coagulation, size 5 mm, length 36 cm, atraumatic, fenestrated, single action jaws,		1
	<b>INCLUDING:</b>		
	Plastic Handle, without ratchet, with larger contact area		
	Outer Tube, insulated		
	Forceps Insert		
11	Claw Grasping Forceps, rotating, with connector pin for unipolar coagulation, size 5 mm, length 36 cm, 2 x 3 teeth, single action jaws,		1
	<b>INCLUDING:</b>		
	Plastic Handle, with hemostat style ratchet, with larger contact area		
	Outer Tube, insulated		
	Forceps Insert		
12	Bowel Grasper, rotating, with connector pin for unipolar coagulation, size 5 mm, length 36 cm, double action jaws,		1
	<b>INCLUDING:</b>		
	Plastic Handle, without ratchet, with larger contact area		
	Outer Tube, insulated		
	Forceps Insert		
13	Tissue Forceps, rotating, dismantling, without connector pin for unipolar coagulation, with LUER-Lock irrigation connector for cleaning, double action jaws, size 10 mm, length 36 cm,		1
	<b>INCLUDING:</b>		
	Metal Handle, without ratchet, with larger contact area		
	Outer Sheath, insulated		
	Forceps Insert		
14	METZENBAUM Scissors, rotating, dismantling, with connector pin for unipolar coagulation, with LUER- Lock connector for cleaning, double action jaws, curved, length of jaws 15 mm, size 5 mm, length 36 cm,		1
	<b>INCLUDING:</b>		
	Plastic Handle, without ratchet, with larger contact area at the finger ring		

	Metal Outer Sheath, insulated		
	Forceps Insert		
15	Coagulating and Dissecting Electrode, L-shaped, with connector pin for unipolar coagulation, size 5 mm, working length 36 cm		1
16	Coagulating and Dissecting Electrode, spatula-sheaped, blunt with connector pin for unipolar coagulation, size 5 mm, working length 36 cm		1
17	Suction and Irrigation Tube, with lateral holes, anti-reflex surface, with two-way stopcock for single-hand control, size 5 mm+10mm, length 36 cm		1
18	Macro Needle Holder, straight handle with ratchet, ratchet position on top, jaws curved to left, with tungsten carbide inserts, size 5 mm, length 33 cm		1
19	Clip Applicator, dismantling, rotating, size 10 mm, length 36 cm, with ratchet to lock the jaw holding the clip, <b>INCLUDING:</b>		1
	Metal Handle, with ratchet		
	Metal Outer Sheath		
	Insert, for use with Ethicon Titanium-Clips(medium large)		
20	Unipolar High Frequency Cord, with 4 mm plug, length 300 cm,		2
21	Uterine Manipulator, <b>INCLUDING:</b>		1
	Handle		
	Manipulator Rod, including Working Inserts		
	Cap, diameter 34 mm, length 36 mm		
	Cap, diameter 24 mm, length 36 mm		
	Cap, diameter 42 mm, length 36 mm		
22	Uterine Cannula, with LUER- Lock connector for cleaning, <b>INCLUDING:</b>		1
	Uterine Cannula		
	Cone, large		
	Cone, small		
23	Grasping Forceps, rotating, dismantling, with connector pin for bipolar coagulation, suitable for dissection, double action jaws, size 5 mm, length 36 cm, <b>INCLUDING:</b>		1
	Plastic Handle, without ratchet		
	Metal Outer Sheath		
	Forceps Insert		

24	Bipolar High Frequency Cord, length 300 cm	2
25	Plastic Container, for sterilization and storage, with removable instrument rack and insert tray for storage of up to 12 instruments with diameter 2.5 to 10mm and up to 6 trocars, perforated, with transparent lid, external dimensions (w x d x h): 532 x 254 x 165 mm	1
26	Wire Tray, for the cleaning, sterilization and storage of two rigid endoscopes and one light cable, including holder for light post adaptors, silicone telescope holders and lid, external dimensions (w x d x h) : 487 x 125 x 54 mm, for rigid endoscopes up to diameter 10 mm and working length 32 cm	1
27	<b>Full HD Camera System for both Rigid endoscopy.</b> Camera System (CCU & Camera head) should be 1920 x 1080p with 2 camera inputs for Flexible video endoscope connection and rigid camera system as well. The system must comprises of following Full HD 1080p Video Processor CCU with integrated documentation functions for image and video capturing with CMOS FULL HD camera Heads with following technical data or Better or Equivalent <ul style="list-style-type: none"> <li>Connections :- 1 x DVI-D</li> <li>Max. Resolution :- 1920 x 1080p</li> <li>USB membrane Keyboard with Touch pad</li> <li>Should have internal Storage of 50 GB or better</li> <li>Special Features:</li> <li>Should be compatible with multiple camera heads, multiple connectors for different camera heads present.</li> <li>Still image capturing in Full HD (JPEG) Format via camera head buttons</li> <li>Video Capturing in Full HD Quality (MPEG4 Format) via Camera head buttons</li> </ul>	1
28	CMOS FULL HD Camera Head, compatible, progressive scan, soakable, gas- and plasma-sterilizable, with focal length f = 16 mm, 2 freely programmable camera head buttons <b>Technical data:</b> <ul style="list-style-type: none"> <li>Image sensor: 1/3" CMOS chip</li> <li>Pixels: 1920 (h) x 1080 (v) pixels per chip.</li> <li>Sensor type: CMOS</li> <li>Aspect Ratio: 16:9</li> <li>Progressive scan (full frame) for Integrated zoom lens</li> <li>f = 16 mm</li> <li>Display of 50 or 60 frames per second. Lens:</li> </ul>	1

	• Control buttons: 3 (2 of them freely programmable).	
29	LED light source 150 with one light port	1
	<b>Technical data:</b>	
	Lamp type: High performance LED. Color temperature: approx. 6000 K.	
	Light intensity adjustment: Continuously manual	
	Power supply: 100-240 VAC. Frequency: 50-60 Hz.	
	Certified to: IEC 60601-1, IEC 60601-2-18, UL 60601-1, CSA M601.1,	
	CE according to MDD, protection class I / safety class CF.	
	Special features:	
	Extremely long average lamp life time of 30,000 hours.	
30	Fiber Optic Light Cable, with straight connector, extremely heat- resistant, enhanced light transmission,	1
	diameter 4.8 mm, length 250 cm	
31	27" FULL HD Monitor, screen resolution 1920 x 1080, image format 16: 9, power supply 100 – 240 VAC,	1
	50/60 Hz, 5 V DC output (1 A), VESA 100 adaptor, Video inputs: 2x DVI, 1x 3G-SDI, 1x VGA, 1x S-Video, 1x	
	Composite, Video outputs: 1x DVI, 1x 3G-SDI, 1x Composite,	
	<b>Specifications :</b>	
	Screen diagonal	27"
	Resolution	1920 x 1080 pixels
	Aspect ratio	16 : 9
	Contrast ratio	1000:1
	Brightness	900 cd/m2 (type)
	Max. viewing angle	178° vertical / horizontal
	Video inputs	2x DVI-D, 1x 3G-SDI, 1x RGBS (VGA),
		1x S-Video, 1x Composite
	Video outputs	1x DVI-D, 1 x 3G-SDI, 1x Composite,
	RS-232C connector	1x
	USB output	5V/1A
	Mount	100 mm VESA
	Power supply	external
	Unit properties	Picture-in-Picture
	Power consumption	72 W
	Power supply	100 – 240 VAC
	Power frequency	50/60 Hz
	Dimens. w x h x d	660 x 400 x 87 mm
	Weight	8.5 kg
	Cleaning	wipe disinfection
	Degree of ingress protection	IP32
	<b>including:</b>	
	1x External 24 VDC Power Supply	
	1x Mains Cord	
	1x cable cover	
	4x mounting screws M4	

32	Electronic CO2 insufflator with Smoke Evacuation/Anti-Fogging system		1
	<b>Technical data:</b>		
	Gas flow: 0.4-40 l/min.		
	Pressure: 0-30 mmHg (4000Pa).		
	Two insufflation modes: High flow mode (0 to 40 l/min.) and in addition innovative sensitive mode for sensitive applications (e.g. in pediatrics).		
	Electronic control and 7" color touch screen.		
	Power supply: 100-240 VAC, 50/60 Hz.		
	Average power consumption: 240 VAC: 230 W, 100 VAC: 130 W.		
	Certified to: IEC 60601-1, CE label acc. to MDD, medical product Class IIb.		
	Type of protection against electrical shocks: Protection Class 1.		
	Degree of protection against electric shocks: Applied part type CF.		
	International protection code (IP Code): IP21.		
33	<b>Trolley Should be from Same manufacturer</b>		1
34	UPS upto 30Min backup		
<b>HYSTEROSCOPE System</b>	<b>Special Note : + - 10% acceptable SPECIFICATION</b>  1.Forward Oblique Telescope 30°, diameter 2.9 mm, length 30 cm, autoclavable, fiber optic light connection incorporated, 2.Inner Sheath, size 4.3 mm 3.Outer Sheath, size 5 mm 4.Scissors, pointed, single action jaws, semirigid, 5 Fr., 34 cm 5.Biopsy Spoon Forceps, semirigid, double action jaws, 5 Fr., length 34 cm 6.Punch, through-cutting, single action jaws, semirigid, 5 Fr., length 34 cm 7.Bipolar Vaporization Electrode, semirigid, 5 Fr., needle electrode angled 90°, length 42 cm 8.Palpation Probe, semirigid, scaled, 5 Fr., length 34 cm 9.Bipolar High Frequency Cord, length 300 cm, 10.Fiber Optic Light Cable, with straight connector, diameter 3.5 mm, length 230 cm 11.telescope 30°, size 2.9 mm, length 24 cm, with irrigation connector, for use with Continuous-Flow Operating Sheaths 12.Continuous-Flow Operating Sheath, size 4.4 mm, length 16 cm, with channel for semi rigid 5 Fr. instruments, with 1 stopcock and 1 LUER-Lock adaptor, for use with telescope. 13.Continuous-Flow Operating Sheath, size 4.4 mm, length 16 cm, with channel for semi rigid 5 Fr. instruments, with 1 stopcock and 1 LUER-Lock adaptor, for use with telescope. 14.endoscopic video unit with 2 camera inputs (X-Line and C- Line) for use with flexible video endoscopes and one-chip camera heads (up to FULL HD), incl. LED light source, digital Image Processing Module with USB and network storage options as well as 18.5" FULL HD touch screen monitor, power supply 100 – 240 VAC, 50/60 Hz,  15.CMOS FULL HD Camera Head, compatible, progressive scan, Technical data: • Image sensor: 1/3" CMOS chip		

	<ul style="list-style-type: none"> <li>• Pixels: 1920 (h) x 1080 (v) pixels per chip.</li> <li>• Sensor type: CMOS</li> <li>• Aspect Ratio: 16:9</li> <li>• Progressive scan (full frame) for Integrated zoom lens</li> <li>• f = 16 mm</li> <li>• Display of 50 or 60 frames per second. Lens:</li> <li>• Control buttons: 3 (2 of them freely programmable).</li> </ul> <p>16.suction or irrigation pump, incl. mains cord, power supply 100 – 240 VAC, 50/60 Hz, with integrated unit communication.</p> <p>17.Hysteroscopy Software, License, allows selection of the procedure HYS, for use with suction &amp; irrigation pump</p> <p>18.Advanced Package Software, License, extends the functions of installed software packages, for use with suction &amp; irrigation pump</p> <p>19.Tubing Set, Irrigation, PC, sterile, for single use, package of 10, for use with suction &amp; irrigation pump</p> <p>20.TROLLEY From Same Manufacturer.</p>	
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**SPECIFICATION**  
**for Complete Bronchoscopy set with Audio, Video system Forceps**

S.No	Description	Qty
	<b>Special Note : + - 10% acceptable</b>	
	<b><u>RIGID BRONCOSCOPE PAEDS</u></b>	
1	Bronchoscope, size 6, outer diameter 8.9 mm, inner diameter 7.5 mm, length 30 cm	1
2	Bronchoscope, size 4.5, outer diameter 8.0 mm, inner diameter 6.6 mm, length 30 cm	1
3	Bronchoscope, size 3.5, outer diameter 6.2 mm, inner diameter 5 mm, length 30 cm	1
4	Prismatic Light Deflector, autoclavable, with connection to fiber optic light cable, not to be used with	1
5	Glass Window Plug	1
6	Rubber Telescope Guide, for use with telescopes or optical forceps	1
7	FLUVOG Adaptor, with sliding glass window plug, sealing cap, notched lens and keyhole opening, Movable	1
8	Adjustable magnifier, swing-away type, with ring adaption, autoclavable	1
9	Adaptor, for respirator	1
10	Instrument Guide for Suction Catheter, short, outer diameter 15 mm, length 30 cm, for use with the	1

	bronchoscope series	
11	Injection Cannula, LUER-Lock, outer diameter 3.5 mm, length 63 mm, for use with the bronchoscope series	1
12	Telescope 0°, diameter 2.9 mm, length 36 cm, autoclavable, fiber optic light transmission incorporated,	1
13	Telescope Bridge, for fixed position between Telescopes and Bronchoscopes as well as Esophagoscopes	1
14	Optical Forceps, flat, serrated, 2 x 2 jaws, double action jaws, with spring-action handle, working length 34 cm, incl. cleaning adaptor, for use with Telescope	1
15	Optical Forceps, alligator, serrated, double action jaws, with spring-action handle, working length 34 cm, incl. cleaning adaptor, for use with Telescope	1
16	Optical Forceps, with bean jaws, blunt grooved, double action jaws, with spring-action handle, working length 34 cm, incl. cleaning adaptor, for use with Telescope	1
17	Optical Forceps, universal, serrated, with spring-action handle, working length 34 cm, incl. cleaning adaptor, for use with Telescope	1
18	Forceps, alligator, serrated, width of jaws 3.5 mm, double action jaws, sheath diameter 1.5 mm, working length 35 cm, with LUER-Lock irrigation connector for cleaning	1
19	Forceps, pointed, serrated, width of jaws 3.1 mm, double action jaws, sheath diameter 1.5 mm, working length 35 cm, with LUER-Lock irrigation connector for cleaning	1
20	Forceps, bean jaws, blunt grooved, width of jaws 5 mm, double action jaws, sheath diameter 1.5 mm, working length 35 cm, with LUER-Lock irrigation connector for cleaning	1
21	Forceps, universal, serrated, width of jaws 3.5 mm, double action jaws, sheath diameter 1.5 mm, working length 35 cm, with LUER-Lock irrigation connector for cleaning	1
22	Rigid Suction Tube, outer diameter 3 mm, working length 35 cm	1
23	Cotton Carrier, working length 35 cm	1



24	Sponge Holder, spring handle, working length 35 cm	1
25	Foreign Body Basket, with ring handle, working length 35 cm	1
26	Wire Tray, for the cleaning, sterilization and storage of instruments and accessories for bronchoscopy and oesophagoscopy, including silicone telescope holders and lid, external dimensions (w x d x h) : 640 x 216 x 78 mm	1
27	LED 150, High-Performance LED Cold Light Fountain with one light outlet, power supply 100 - 240 VAC, 50/60 Hz	1
28	Fiber Optic Light Cable, with straight connector, diameter 3.5 mm, length 180 cm	1
	<b><u>RIGID BRONCHOSCOPE ADULT</u></b>	
1	Universal Bronchoscope, size 8.5, outer diameter 11.2 mm, inner diameter 10.5 mm, length 43 cm,	1
	<b>INCLUDING:</b>	
	Universal Bronchoscope	
	Fiber Optic Light Carrier	
2	Universal Bronchoscope, size 6.5, outer diameter 9.2 mm, inner diameter 8.5 mm, length 43 cm,	1
	<b>INCLUDING:</b>	
	Universal Bronchoscope	
	Fiber Optic Light Carrier	
3	Glass Window Plug	1
4	Rubber Telescope Guide	1
5	Adaptor, with sliding glass window plug, sealing cap, notched lens and keyhole opening, movable	1
6	Injection Cannula, LUER-Lock, outer diameter 3.5 mm, length 63 mm, for use with the bronchoscope series	1
7	Instrument Guide, for suction catheter	1
8	Adjustable magnifier, swing-away type, with ring adaption, autoclavable	1
9	Adaptor, for respirator	1
10	Telescope 0°, diameter 5.5 mm, length 50 cm, autoclavable, fiber optic	1

	light transmission incorporated,	
11	Optical Forceps, large jaws, alligator, serrated, double action jaws, working length 45 cm, with spring-	1
	action handle, incl. cleaning adaptor, for use with Telescopes	
12	Optical Forceps, bean jaws, blunt grooved, double action jaws, with spring-action handle, working length 45 cm, incl. cleaning adaptor, for use with Telescopes	1
13	Optical Forceps, round, spoon- shaped, double action jaws, working length 45 cm, incl. cleaning adaptor, for use with Telescopes	1
14	Forceps, alligator, serrated, width of jaws 3.3 mm, double action jaws, sheath diameter 2.5 mm, working length 50 cm, with LUER-Lock irrigation connector for cleaning	1
15	Forceps, pointed, serrated, width of jaws 2.7 mm, double action jaws, sheath diameter 2.5 mm, working length 50 cm, with LUER-Lock irrigation connector for cleaning	1
16	Forceps, round, spoon-shaped, width of jaws 5.5 mm, double action jaws, sheath diameter 2.5 mm, working length 50 cm, with LUER-Lock irrigation connector for cleaning	1
17	Forceps, bean jaws, blunt grooved, width of jaws 7.5 mm, double action jaws, sheath diameter 2.5 mm, working length 50 cm, with LUER-Lock irrigation connector for cleaning	1
18	Suction Tube, diameter 4 mm, working length 50 cm	1
19	Cotton Carrier, working length 50 cm	1
20	Sponge Holder, with spring handle, working length 50 cm	1
21	Foreign Body Basket, with ring handle, working length 50 cm	1
22	Wire basket, for cleaning, sterilization and storage of endoscopes and accessories for Bronchoscopy,	1
	including silicone telescope holders and lid. External dimensions (w x d x h): 640 x 150 x 77 mm	
23	LED 150, High-Performance LED Cold Light Fountain with one light outlet, power supply 100 - 240 VAC,	1
	50/60 Hz	
24	Fiber Optic Light Cable, with straight connector, diameter 3.5 mm, length 180 cm	1
25	<b>Full HD Camera System.</b>	
	Camera System (CCU & Camera head) should be 1920 x 1080p	
	The system must comprises of following	
	Full HD 1080p Video Processor CCU with integrated documentation	

	functions for image and	
	video capturing with CMOS FULL HD camera Heads with following technical data or Better or Equivalent	
	• Connections :- 1 x DVI-D	
	• Max. Resolution :- 1920 x 1080p	
	• USB membrane Keyboard with Touch pad	
	• Should have internal Storage of 50 GB or better	
	• Special Features:	
	• Should be compatible with multiple camera heads, multiple connectors for different	
	• camera heads present.	
	• Still image capturing in Full HD (JPEG) Format via camera head buttons	
	• Video Capturing in Full HD Quality (MPEG4 Format) via Camera head buttons	
26	CMOS FULL HD Camera Head, compatible, progressive scan, soakable, gas- and plasma-sterilizable, with focal length f = 16 mm, 2 freely programmable camera head buttons	
	<b>Technical data:</b>	
	• Image sensor: 1/3" CMOS chip	
	• Pixels: 1920 (h) x 1080 (v) pixels per chip.	
	Sensor type: CMOS	
	• Aspect Ratio: 16:9	
	• Progressive scan (full frame) for Integrated zoom lens	
	• f = 16 mm	
	• Display of 50 or 60 frames per second. Lens:	
	• Control buttons: 3 (2 of them freely programmable).	
27	LED light source 150 with one light port	
	<b>Technical data:</b>	
	Lamp type: High performance LED. Color temperature: approx. 6000 K.	
	Light intensity adjustment: Continuously manual	
	Power supply: 100-240 VAC. Frequency: 50-60 Hz.	
	Certified to: IEC 60601-1, IEC 60601-2-18, UL 60601-1, CSA M601.1,	
	CE according to MDD, protection class I / safety class CF.	
	Special features:	
	Extremely long average lamp life time of 30,000 hours.	
28	Fiber Optic Light Cable, with straight connector, extremely heat-resistant, enhanced light transmission, diameter 4.8 mm, length 250 cm/3 Meter	
29	27" FULL HD Monitor, screen resolution 1920 x 1080, image format 16:9, power supply 100 – 240 VAC, 50/60 Hz, 5 V DC output (1 A), VESA 100 adaptor, Video inputs: 2x DVI, 1x 3G-SDI, 1x VGA, 1x S-Video, 1x	

	Composite, Video outputs: 1x DVI, 1x 3G-SDI, 1x Composite,	
	<b>Specifications :</b>	
	Screen diagonal	27"
	Resolution	1920 x 1080 pixels
	Aspect ratio	16 : 9
	Contrast ratio	1000:1
	Brightness	900 cd/m2 (type)
	Max. viewing angle	178° vertical / horizontal
	Video inputs	2x DVI-D, 1x 3G-SDI, 1x RGBS (VGA),
		1x S-Video, 1x Composite
	Video outputs	1x DVI-D, 1 x 3G-SDI, 1x Composite,
	RS-232C connector	1x
	USB output	5V/1A
	Mount	100 mm VESA
	Power supply	external
	Unit properties	Picture-in-Picture
	Power consumption	72 W
	Power supply	100 – 240 VAC
	Power frequency	50/60 Hz
	Dimens. w x h x d	660 x 400 x 87 mm
	Weight	8.5 kg
	Cleaning	wipe disinfection
	Degree of ingress protection	IP32
	<b>including:</b>	
	1x External 24 VDC Power Supply	
	1x Mains Cord	
	1x cable cover	
	4x mounting screws M4	
<b>30</b>	<b>Trolley Should be from Same manufacturer</b>	

Sr. No	<b><u>ORTHOPEDIC DRILL AND REAMER</u></b>	Qty
1	Easy handling - Titanium /PEEK/S.S housing allows mechanical alkaline reprocessing	1
	Reliable - battery and control electronic are not sterilized	
	Dual trigger hand piece for forward and reverse option/safe option	
	<u>Specification:</u>	
	WEIGHT 650 GRAM	
	oscillating attachment	
	Washable handpiece with all attachments	

2	LI-ION OR NIMH BATTERY	1
3	LID	1
4	<b>Oscillating</b> Attachment	1
	>Powerful - up to 250 watt	
	>Reliable - battery and control electronic are not sterilised	
	>360 degree rotatable saw blade for optimal access visibility within the operating site	
	<u>Specification:</u>	
	rpm 0-22,000 1/m	
7	<b>DRILL ATTACHMENT LARGE JACUB CHUCK</b>	2 Qty with each drill
	<b>WITH JACUB CHUCK 0.0-7.4 MM</b>	
	<b>3 NM</b>	
	RPM 0-1200 1/min	
	Cannulation 3.0 mm	
8	<b>K-WIRE ATTACHMENT 0.2 - 3.0MM</b>	2 Qty with each drill
	<b>1250 RPM or more</b>	
9	<b>DRILL BIT ATTACHMENT/Reamer</b>	2 Qty with each drill
	drill attachment	
	Cannulation 3.0 mm	
	RPM 0-1200 1/min	
	Torque 10NM or more	
10	REUSABLE SAW BLADE CUTING LENGTH 0.5 MM/0.5MM TOTAL LENGTH 20MM/20MM ±15	2 Qty with each drill
11	REUSABLE SAW BLADE CUTING LENGTH 0.5 MM/0.7 MM TOTAL LENGTH 35MM/10MM ±15	2 Qty with each drill
12	REUSABLE SAW BLADE CUTING LENGTH 0.5 MM/0.7 MM TOTAL LENGTH 35MM/20MM ±15	2 Qty with each drill
13	REUSABLE SAW BLADE CUTING LENGTH 0.5 MM/0.9 MM TOTAL LENGTH 50MM/25MM ±15	2 Qty with each drill
	<b><u>SPECIALIZED CONTAINER SYSTEM WITH FIXATION BASKET 5000 TIME AUTOCLAVABLE</u></b>	
14	ECCOS SET DRILL	1
15	BOTTOM FOR 1/1 CONTAINER HEIGHT: 120MM	1
16	PRIMELINE PRO 1/1 LID RED	1
17	<b>CHARGER</b>	1
	For Li-ion and NIMH Batteries	

	<u>specifications:</u>	
	100 - 240 v	
	50/60 Hz	
	4 tunnels for charging batteries ( 4 batteries charge at a time )	
18	Oil Spray (For lubrication) <b>Imported</b>	3 Qty with each drill
19	MAINS CORD 5M LONG	1
20	<b>Two Certificate Mandatory</b>	

<b><u>MICROSCOPE</u></b> <b><u>with</u></b> <b><u>attachment</u></b>	<p>Microsurgical System for Otorhinolaryngology</p> <ul style="list-style-type: none"> <li>• Optical carrier in swivable and tiltable suspension</li> <li>• Mobile floor stand with lock in provision equipped with electronic brake system, rotatable joint arms and overhead clearance</li> <li>• Effortless positioning in all directions via gross focus handles for all movements for ear, nose and throat surgery with hand controls for all functions</li> <li>• Automatic balancing</li> <li>• Active vibration damping strengthened by robotic movements</li> <li>• Automatic / Manual drape function with a set of drapes</li> <li>• Motorized x &amp; y movement with adjustable speed</li> <li>• Motorized fine focusing and continuously variable focusing from 200 to 600 mm via front lens, with adjustable speed</li> <li>• Motorized zoom 1:6 with adjustable speed</li> <li>• Fully integrated fiber optic LED (Light Emitting Diode) illumination system with automatic adjustment of light intensity according to the selected working distance and magnification, including automatic adaptation of the luminous field and enhanced depth of field.</li> </ul> <p>OR</p> <p>High-performance Xenon light source with automatic adjustment of light intensity according to the selected working distance and magnification, including automatic adaptation of the luminous field and enhanced depth of field.</p> <p><b>Note: In case of offering Xenon light source, the bidder shall be responsible for the supply of 10 Xenon bulbs along with the system.</b></p> <ul style="list-style-type: none"> <li>• Tiltable binocular tube 0 to 180° with adjustment of inter pupillary distance</li> <li>• Wide angle oculars 10X with dioptric adjustment</li> <li>• One set of sterilizable caps</li> <li>• Dust cover</li> <li>• Operable on 220 V AC, 50 Hz</li> <li>• Integrated beam splitter</li> <li>• Video camera three chip full high definition (1080p) originally integrated in the optical head, integrated high definition recorder with integrated 1 TB hard disc drive and USB port for recording on external media, integrated monitor.</li> <li>• Stereo co-observation attachment with three axis inclination and image erection, straight binocular tube, wide angle oculars 10X with dioptric adjustment.</li> <li>• <b>Two Certificate Mandatory</b></li> </ul>
<b>Cautery</b>	<ul style="list-style-type: none"> <li>• Microprocessor based solid state electrosurgical unit for normal and under water</li> </ul>

Machine	<p>cutting</p> <ul style="list-style-type: none"> <li>• Should have easy electrode application system</li> <li>• At least 300 programs must be available in device</li> <li>• Separate controls for monopolar and bipolar coagulation</li> <li>• Should have atleast touch screen of 3 inch TFT display with 4 or more LCD Displays</li> <li>• RF power for monopolar cutting not below 300 watts</li> <li>• Monopolar coagulation 300 watts or better</li> <li>• At least 5 - 8 blend modes</li> <li>• Bipolar coagulation not below 50 watts with floating output</li> <li>• Spray coagulation</li> <li>• Bipolar cutting power 350 W or better</li> <li>• Complete with following accessories</li> <li>• Foot switch, reusable patient plate, monopolar handle with cord and surgical needles</li> <li>• (Knife, ball electrode, loop electrode and needle 12</li> <li>• Non-stick bipolar forceps with cord cable (Straight &amp; bayonet &amp; Angled shaped allelectrosurgical unit to conform to IEC 601-1 standard</li> <li>• Locally trolley with imported lockable wheels</li> <li>• The system must have automatic self-test</li> </ul> <p>220V 50Hz 1-Phase</p> <ul style="list-style-type: none"> <li>• Bipolar Reusable (Attachment) Qty 2</li> <li>• Mono polar Lead (10Piece) Disposable</li> <li>• <b>One certificate mandatory</b></li> </ul>
Ultrasound Machine	<p>High End Color Doppler Ultrasound: Fully Digital Beam Former Having <b>1000,000</b> or More Digital Processing Channels with Integrated Data Management System Having 1000/500 SSD GB Hard Disk Drive for Still and Cine Clips Storage</p> <ul style="list-style-type: none"> <li>• Modes</li> </ul> <p>2D/M-Mode, Doppler, Pw, Hprf Doppler, Color Flow Imaging</p> <ul style="list-style-type: none"> <li>• Tissue Harmonic Imaging</li> <li>• System Capability 1.5 – 18 MHz or more</li> <li>• Viewing Depth: 40cms or better.</li> <li>• Frame Rate: 2000 FPS or better.</li> <li>• Built-In Cine Loop: 20000 Frames or better.</li> <li>• Real time freeze &amp; image magnification ability better than 4x Pre &amp; Post Processing</li> <li>• Sweep Speed: Slow, Medium, Fast</li> <li>• <b>10"</b> or better Touch Command screen with gesture Control &amp; angle adjustable for easy Operation of the System.</li> </ul> <p><b>Doppler Mode Specifications:</b></p> <ul style="list-style-type: none"> <li>• System Must be Trolley Mounted</li> <li>• On Line <b>4-Ports</b> or more for Trans-thoracic Probes</li> </ul>

	<p>Doppler Beam Steering and Bi-Directional Stereo Audio</p> <ul style="list-style-type: none"> <li>• Color Doppler</li> <li>• PW Doppler Must Be Continuously Steerable In Color Blood Flow Imaging Mode in Real Time</li> <li>• Colorized Spectrum Display</li> <li>• Tissue Harmonic Imaging with Three or more Frequencies</li> <li>• Built in battery for backup of at least 60 mins or more</li> <li>• 2D Image with Color Flow</li> <li>• Power Doppler</li> <li>• DICOM</li> <li>• Auto Image Optimization/Quick Scan for Single Button Optimization of All Scanning Parameters Including STC Overall Gain and Doppler Spectrum.</li> <li>• Compound Scanning Using Frequency as Well as Spatial Compounding.</li> <li>• Trapezoid Imaging for Linear Probes</li> <li>• Live strain rate Elastography with quantification for body organs specially breast to visualize lesions</li> </ul> <p><b>Measurement Package/Complete Gynae/OBS Package</b></p> <ul style="list-style-type: none"> <li>• To provide comprehensive software package for measurement of distance circumference, area, time, depth etc.</li> <li>• System Must have 3D software for the acquisition of 3D Images.</li> <li>• Automatic measurement for intima-media thickness</li> <li>• Automatic measurement for pediatric hip for neonates</li> <li>• Automatic calculation of Bladder Volume</li> <li>• Comprehensive software package for Needle Visualization</li> <li>• <b>Fatel/ Biometry.</b></li> </ul> <p><b>System Complete with Following Facilities and Accessories:</b></p> <ul style="list-style-type: none"> <li>• 21-Inches or better Color Monitor</li> </ul> <p><b>Standard Probes:</b></p> <ul style="list-style-type: none"> <li>• 1.5 – 5.0 MHz or More Multi-Frequency Convex Probe</li> <li>• 3.0 – 13 MHz or More Multi-Frequency Linear Probe</li> <li>• 3.0 – 12 MHz or More Multi-Frequency TVS Probe</li> <li>• 6.0 – 16MHz or More Multi-Frequency Liner Probe for Vascular Optional</li> </ul> <p><b>STD Recording Devices:</b></p> <ul style="list-style-type: none"> <li>• Built-In / Separate Compatible Imported <b>Branded Online Ups (Minimum Backup Time &gt; 30Minutes)</b></li> <li>• B/W Thermal Printer (Model/Make must be mentioned)</li> <li>• <b>Rolls 10 Pcs</b></li> <li>• <b>Two Certificate Mandatory</b></li> </ul>
<b>OT Table</b>	<p>It shall be battery powered and electric /electro-hydraulic operating table.</p> <p>It shall have working load of at least 450 kg or more guaranteeing highest safety and stability.</p> <p>It shall be with modular design tabletop. And the back plate should be able to spit to 2 pcs, in between should be about to add the extension plate to extend the length of OT table;</p> <p>To have a better C arm performance, the head plate and leg plate of the table should be able to exchange the position;</p> <p>The table base with stainless steel cover should be less than 140mm for C arm free movement.</p> <p>The table base should be flat design, and the column should use bellow-free design to make the clean of table easier;</p>



	<p>It shall be with One-button Connection Design make it easy just one click to change table components module.</p> <p>it should be water-proof and anti-static material and can be washed by water directly; each joint should be sealed by ultrasonic not glue and sewing.</p> <p>The thick of the mattress should be more than 70mm.</p> <p>It shall have the electric-hydraulic movements including tabletop up and down, back plate up and down, turn left and right, trendelenburg and reverse trendelenburg, lock and unlock.</p> <p>It should have bi-directional electric longitudinal shift function not less than 300mm for free access to C-arm.</p> <p>It shall be more than 3 ways to control the table, including corded and Bluetooth wireless hand control, backup column control Panel and optional manual override system.</p> <p>The remote hand control be with more than 3.5'color LCD that will show the information on the display, such as tilt or slope degree, battery, brake, normal/reverse patient orientation, etc.</p> <p>The remote hand control shall be with the backlight for operating in a dark environment</p> <p>The remote hand control shall support automatic reset to zero/leveling position by pressing one button. It also shall be with Flex, reflex position short cut keys.</p> <p>It shall be with 4 double-swivel castors that enables the user move the table 360° freely.</p> <p>Manual/Electric brake by hand/column control provides higher stability.</p> <p>It shall have a battery inside the table, which can work 50-80 operations for two weeks</p> <p>Manual Override System allows table articulation movements and release the brake in the event of primary control or power/battery malfunction, through an independent hydraulic circuit. All the hydraulic movement (table height adjustment, Trendelenburg and reverse Trendelenburg, left and right tilt, sliding function, etc) can be achieved by the foot pedal and function selection knob, even electro isolated.</p> <p>Technical Specification</p> <p>The highest adjustable 680-1050mm</p> <p>Longitudinal shift <math>\geq 350</math> mm</p> <p>Turn left <math>\geq 20^\circ</math></p> <p>Turn right <math>\geq 20^\circ</math></p> <p>Trendelenburg position <math>\geq 35^\circ</math></p> <p>Reverse Trendelenburg position <math>\geq 35^\circ</math></p> <p>Back plate up position <math>\geq 70^\circ</math></p> <p>Back plate down position <math>\geq 40^\circ</math></p> <p>Flex position <math>\geq 220^\circ</math></p> <p>Re-flex position <math>\geq 110^\circ</math></p> <p>“0”position by one electric button</p> <p>Leg plate with gas spring assisted up <math>\geq 10^\circ</math></p> <p>Leg plate with gas spring assisted down <math>\geq 90^\circ</math></p> <p>Head plate up <math>\geq 45^\circ</math></p> <p>Head plate down <math>\geq 90^\circ</math></p> <p>Accessories</p> <p>Arm board - 1 pair</p> <p>Anaesthesia screen I shaped with clamp-1 no</p> <p>Body strap – 1 no.</p> <p>Body Support - 1 pair</p>
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	<p>leg support – 1 pair</p> <p>Complete Gynae accessory:</p> <p>Waterproof rating with test certificate IPX5</p> <p><b>Two Certificate Mandatory</b></p>
<b>Adjustable Lights</b>	<p>1. DESCRIPTION OF FUNCTION</p> <p>LED Surgical lights illuminate the surgical site for optimal visualization of small, low-contrast objects at varying depths in incisions and body cavities.</p> <p>2. GENERAL REQUIREMENTS</p> <p>a) The light shall adopt latest LED technology to create a homogeneous light patch without emitting any inf rad rays.</p> <p>b) Light intensity shall be adjustable at least between 5%-100% and at least 10 different levels.</p> <p>c) Control panel should be equipped in the lighthouse as standard configuration with Ambient mode through separate control key</p> <p>d) The maximum movement angle of the spring arm shall be at least up 45° and down 45°.</p> <p>f) Each LED shall be replaceable individually with the new one to save cost in case of failure, instead of replacing the module with several LEDs.</p> <p>3. TECHNICAL REQUIREMENTS</p> <p>Central luminance (lx) <math>\geq 160,000</math> lx</p> <p>Light Field Diameter (D10)(mm) <math>\geq 22</math>cm</p> <p>Color Temperature (K) 4,350K</p> <p>Color Rendering Index Ra <math>\geq 99</math></p> <p>Color Rendering Index R9 <math>\geq 96</math></p> <p>Depth of Illumination(L1+L2) (mm) <math>\geq 1,200</math>mm</p> <p>Dimming Range: 5~100%</p> <p>Ambient(Endoscopy) Illumination 6,500lx</p> <p>Radiant energy(average) <math>\leq 3.6</math>W/(m<sup>2</sup>*lx)</p> <p>Number of LED Bulbs on the Light Head: 18</p> <p>LED Service Life: <math>\geq 60,000</math>hrs</p> <p>Light Head Dimension: 520mm</p> <p>Light Head Weight: <math>\leq 5.6</math> kg</p> <p>Max. power consumption of all light sources <math>\leq 65</math>W</p> <p>Power Supply: 100~240VAC, 50~60Hz</p> <p>• <b>Two Certificate Mandatory</b></p>
<b>Defibrillator</b>	<p>Applicable people Adult, pediatric, neonate.</p> <p>Biphasic truncated exponential (BTE) waveform, auto-compensation according to patient impedance.</p> <p>Max energy output 360J/200J.</p> <p>Defibrillation mode under manual mode Synchronization and Non-Synchronization not less than 23 levels for energy selection.</p> <p>Charging time With battery: less than 3 seconds to 200J.</p> <p>Screen 6 inch LCD or better color capacitive touch display, protected by tempered glass 1024X768 pixels.</p> <p>Not less than 5 waveforms, Trace freeze function, Screenshot function, Auto-</p>

	<p>brightness Support gesture control.  Sweep speed 6.25, 12.5, 25, 50mm/s .  Boot time No more than 5 seconds.  There should be indicators both on screen and external paddle showing the contact impedance status between the patient and paddle/pads. The impedance value on display is configurable.  Energy selection can be done through both the device panel and external paddles  Patient impedance range 25 to 300Ω for external defibrillation.  ECG recovery time after defibrillation No more than 5 seconds  Automatic rhythm analysis in manual  Operation guide in manual defib mode  AC input 100V-240V  Battery Lithium-ion battery, support not less than 100 shocks @ 200J, or 6.5 hours monitoring, or 3 hours pacing at one charge with a new battery  Water/solids resistance ≥IP55/IP44</p> <p><b>Note: One certificate is mandatory</b></p>
<b>Delivery Beds</b>	<ul style="list-style-type: none"> <li>• 3 Motors or better</li> <li>• Electronic/Electro Hydraulic adjustments of backrest and height</li> <li>• Trendelenburg and Reverse Trendelenburg must be present</li> <li>• Hand Remote Control should be available</li> <li>• Antimicrobial, liquid-tight, flame-resistant and air-permeable mattress</li> <li>• Removable foot mattress should be available</li> <li>• Stainless steel grab handles should be available</li> <li>• Stainless steel waste tub should be available</li> <li>• Lockable and fold-away PP side rails should be available</li> <li>• Easy to clean, lockable and removable PP bedside and footboard panels should be available</li> <li>• Lockable, adjustable polyurethane leg supports should be available</li> <li>• ABS coated bottom chassis should be available</li> <li>• Stainless steel accessory rails should be available</li> <li>• Easy to clean, ABS mattress platform should be available</li> <li>• Electrostatic powder coated metal frame should be available</li> <li>• Urine bag hooks on both sides should be available</li> <li>• Pole sockets should be available</li> <li>• Height adjustable stainless steel IV pole should be available</li> <li>• Protective plastic corner bumpers should be available</li> </ul> <ul style="list-style-type: none"> <li>• External Dimensions (W x L)      Min 100 x 150 cm or more  Max 100 x 200 or better</li> <li>• Mattress Platform                      80cm x 80cm or more</li> <li>• Back and Pelvic Area Mattress  Thickness                                  7cm or more</li> <li>• Footboard mattress thickness      10cm or better</li> <li>• Trendelenburg                            14° or better  Trendelenburg Angle</li> <li>• Bed Safe Working Weight            220 Kg or more</li> <li>• Electrical Shock Protection</li> </ul>

	Liquid Ingress Protection
	<b>Note: Two certificate is mandatory (Listing FDA Acceptable)</b>
<b>Motorized Patients Beds (ICU's)</b>	<ul style="list-style-type: none"> <li>• 4 motors</li> <li>• Electronic adjustments of backrest, footrest, height</li> <li>• Trendelenburg and Reverse Trendelenburg functions</li> <li>• Fowler, Vascular and Cardiac positions</li> <li>• Auto-contour</li> <li>• Function-Lock System to prevent unauthorized use</li> <li>• Angle indicator for backrest adjustment and</li> <li>• Auto-regression system</li> <li>• <b>Manual CPR</b></li> <li>• Auto-CPR button</li> <li>• Electronic Scale System</li> <li>• <b>Lockable and fold-away PP side rails /ABS/PPE/HDPE</b></li> <li>• Lockable and detachable Polypropylene head and foot boards</li> <li>• 4 section, detachable mattress platform</li> <li>• <b>Epoxy powder coated metal frame</b></li> <li>• Gradually adjustable footrest</li> <li>• Drainage bag hooks at both sides</li> <li>• IV pole sockets located at four corners</li> <li>• Protective plastic corner bumpers</li> <li>• Central lockable castors</li> <li>• Height adjustable stainless steel IV pole</li> <li>• Electrical and Technical Data</li> <li>• Power 200-240VAC</li> <li>• Electrical shock protection, Class 1, Type B</li> <li>• Liquid ingress protection, IPX4-IP66</li> <li>• Battery backup</li> <li>• Overall length 210cm or better</li> <li>• Overall width 99 cm or better</li> <li>• Height Range 35-75cm or better</li> <li>• Trendelenburg 0-150 or better</li> <li>• Reverse Trendelenburg 0-150 or better</li> <li>• Back rest angle maximum 70 or better</li> <li>• Leg rest angle maximum 35 or better</li> <li>• Caster diameter 15cm or better</li> <li>• Safe working load 250 Kg or more</li> <li>• Oxygen bottle holder</li> <li>• Bedside Cabinet, ABS</li> <li>• Wooden construction</li> <li>• PVC covered borders</li> <li>• ABS platform, drawer and cabinet door</li> <li>• Functional drawer</li> <li>• Cupboard with shelf</li> <li>• Lockable castors</li> <li>• Overbed Table, Gas Spring</li> <li>• Epoxy powder coated metal frame</li> </ul>

	<ul style="list-style-type: none"> <li>• Height adjustment by gas spring</li> <li>• ABS platform</li> <li>• Lockable castors</li> <li>• <b>Two Certificate Mandatory (Listing FDA Acceptable)</b></li> </ul>
<b>Motorized Patient Beds for Wards</b>	<ol style="list-style-type: none"> <li>1. 3 Motors</li> <li>2. Hand remote control or <b>built in side rail</b></li> <li>3. Electrical Backrest and Footrest, Trendelenburg and Reverse Trendelenburg adjustments</li> <li>4. Manual footrest adjustment</li> <li>5. Auto-Regression on back part is 14,5 cm</li> <li>6. Auto-Regression on knee part is 10,5 cm</li> <li>7. Lockable and fold-away <b>PP/PE</b> side rails/ABS/PPE/HDPE</li> <li>8. Lockable and detachable head board and foot boards</li> <li>9. 4 section detachable PP double layer mattress platform</li> <li>10. Metal body structure with epoxy powder paint.</li> <li>11. Angle indicators</li> <li>12. Urine bag holder in both sides</li> <li>13. IV pole sockets on four corners</li> <li>14. Height adjustable stainless steel IV pole</li> <li>15. Protective plastic bumpers on each corner</li> <li>16. Diagonal lockable castors</li> </ol> <p><b>Technical Specifications:</b></p> <ol style="list-style-type: none"> <li>1. External Dimensions: 99 x 220 cm or better</li> <li>2. Mattress Platform: 85 x 195 cm or better</li> <li>3. Height: 35 – 70 cm or better</li> <li>4. Backrest Angle: 0° – 70° or better</li> <li>5. Footrest Angle: 0° – 35° or better</li> <li>6. Trendelenburg and Reverse Trendelenburg: 0° – 15° or better</li> <li>7. Castor Diameter: 125 mm</li> <li>8. Safe Working Load Capacity: 230 kg or more</li> </ol> <p><b>ELECTRICAL DATA SPECIFICATIONS</b></p> <ol style="list-style-type: none"> <li>1. Power Input: 3.15A 100V – 240V ~ 50/60 Hz</li> <li>2. Electrical Shock Protection: Class I, Type B</li> <li>3. Liquid Ingress Protection: IP66 or better</li> </ol> <p><b>Note: Two certificate mandatory for beds(Listing FDA Acceptable).</b></p> <p><b>Bedside Cabinet, ABS</b></p> <ul style="list-style-type: none"> <li>• Wooden construction</li> <li>• PVC covered borders</li> <li>• ABS platform, drawer and cabinet door</li> <li>• Functional drawer</li> <li>• Cupboard with shelf</li> <li>• Lockable castors</li> </ul> <p><b>Over bed Table, Gas Spring</b></p> <ul style="list-style-type: none"> <li>• Epoxy powder coated metal frame</li> <li>• Height adjustment by gas spring</li> </ul>

	<ul style="list-style-type: none"> <li>• ABS platform</li> <li>• Lockable castors</li> </ul>
<b>Anesthesia Machine</b>	<p><b><u>Anesthesia Machine with Ventilator and Modular Patient Monitor</u></b></p> <ul style="list-style-type: none"> <li>• 3 Gas System having O2,N2O and air</li> <li>• Machine having two or more drawers</li> <li>• Pin index Cylinder yokes for O2 and N2O</li> <li>• Pipeline and Cylinder Mechanical / Electronic Gauges for O2 ,N2O and Air</li> <li>• Central gas driven Unit, fresh gas outlet and O2 flush control (35-50L/min or better)</li> <li>• 4 Antistatic castors, with brake system</li> <li>• Electronic Display/ <b>Virtual Display</b> with Mechanical Controlled Flow Meter O2, N2O and Air with hypoxic guard with no less than 25% O2 concentration</li> <li>• O2: 0 to 15 Liters/Minute or better</li> <li>• N2O: 0 to 10 Liters/Minute or better</li> <li>• Air: 0 to 15 Liters/Minute or better</li> <li>• Auxiliary O2 and Air outlet</li> <li>• 1400ml or better Absorber capacity, fully Autoclavable, including Bag/Vent Switch, CO2 bypass and Manometer Gauge. Complete with mounting Bracket. Absorber detachable (reusable) including Fresh Gas Hose.</li> <li>• Vacuum suction along with jar on machine</li> <li>• Anesthesia machine should be Modular design and Modules can be swapped in both Anesthesia and Monitor.<b>(If Available/Applicable)</b></li> <li>• Anesthesia Machine should have separate module for NMT and BIS to display measurement on ventilator screen. (optional Manadatory to Quote the price price must be quoted for BIS and NMT)</li> <li>• Heated Breathing System</li> <li>• Auto-seal O2 sensor design, which means circuit could automatically sealed when changing O2 sensor.</li> <li>• Slectatec back bar with interlocking function for minimum two vaporizers or more</li> <li>• O2 Vaporizer: Isoflurane &amp; Sevoflurane (Manufactured by same Manufacturer)</li> <li>• Four Electrical outlet sockets or more</li> <li>• The unit should include Active / Passive anesthesia Gas Scavenging system</li> <li>• Independent ACGO Function</li> <li>• Emergency Oxygen cylinder for backup on machine</li> </ul> <p><b>Built-in Anesthesia Ventilator:</b></p> <ul style="list-style-type: none"> <li>• Advanced Anesthesia Ventilator with Adult, Child and Infant capability</li> <li>• Electronic / Microprocessor Controlled and Pneumatically driven</li> <li>• Display: Large 15” or better full color TFT/LCD Display, Touch –Screen display parameters, all settings and Alarm Parameters with Back-up touch pad.</li> </ul> <p><b>Ventilation Modes:</b></p> <ul style="list-style-type: none"> <li>• Manual/ Spontaneous Ventilation</li> </ul>

- Volume Control VCV (IPPV/mode)
- Pressure Control PCV with volume guarantee/ **Auto Flow**
- SIMV Volume Control + SIMV Pressure Control
- Pressure Support with Apnea
- Cardiac Bypass Mode

**Ventilation Monitoring:**

- Fio2
- Inspired and Expired Volume
- Spirometer Loops
- PAW, Pressure Waveform, Flow Waveform
- **Inverse I:E** 4:1 - 1:10 or better
- **Tidal Volume:** 10 to 1500ml or better
- **BPM Rate:** 2 to 100 bpm or better
- **PEEP:** off, 2 to **35mH2O** or better
- **Pressure Inspired:** 03 to 80cmH2O or better
- Pressure Limit: 10 to **80cmH2O** or better
- Pressure Support Range: 03 to 60cmH2O or better

**Power Supply: 220V/50HZ AC**

**Battery Backup: Minimum 1.5 Hours or better**

**User Set Alarm:**

- Air Pressure High
- Air Pressure Low
- MV High
- MV Low
- High Oxygen
- Low Oxygen

**Static Alarms**

- Apnea
- Power Fail
- Battery Low

**Multi Gas Monitoring Module for Anesthesia Workstation**

- Side-stream measurements with accessories such as sampling line and water trap.
- Method: Infrared / Absorption Gases: Agent Halothane, Isoflurane, Enflurane, Sevoflurane and Desflurane CO2, N2O and O2
- Automatic Anesthesia Agent Identification display
- User selectable Alarm limits

**Modular Vital Sign Monitor Attached with Anesthesia Machine**

- Monitor should be Modular support with ETCO2, IBP and Basic function support ECG, NIBP, TEMP, RESP, HR, SPO2, ST Analysis built in.
- At least 7 parameter Anesthesia Patient monitor
- It should have 15" or more TFT LCD touch display with 12 waveforms or better.
- It should have following as standard configuration: ECG, HR, RESP, NIBP, SPO2 and TEMP, ST analysis, ETCO2, 2xIBP Diathermy/electro surgical protection.

	<ul style="list-style-type: none"> <li>• Should have alarms for warnings</li> <li>• Trend: Store and review 48 hours or more</li> </ul> <p><b>Standard Accessories Adult &amp; Paeds:</b></p> <ul style="list-style-type: none"> <li>• 5 Lead patient cable ECG, Software for both 3 &amp; 5 lead monitoring</li> <li>• SPO2 Fix Wire(Adult, Paeds, Neonate)---2 Qty each</li> <li>• NIBP connecting Hose with cuff for adult, pediatric and neonate each (2Cuffs for each)</li> <li>• Temperature probe peripheral</li> <li>• Main cable</li> <li>• ETCO2 Accessory</li> <li>• Instruction manual</li> <li>• 2 IBP cable for IBP monitoring with 5 disposable domes</li> </ul> <p><b>Battery:</b></p> <ul style="list-style-type: none"> <li>• Operating time under the normal use and full charge: 04 hrs or more</li> </ul> <p><b>Power supply:</b></p> <ul style="list-style-type: none"> <li>• Power Voltage: 220V-240V 50/60 Hz</li> <li>• Battery backup 02 hour or more</li> <li>• Monitor, Vaporizer must be from same manufacture as of Anesthesia Main Unit</li> </ul> <p><b>Note : Two certificate mandatory For both Anesthesia and Patient Monitor.</b></p>
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<b>Patient Monitors 5 Parameters</b>	<p>Patient Monitor 5 parameter (<b>5ch ECG, SpO2, NIBP, TEMP, Resp</b>) for Adult, Pediatric and Neonate patients</p> <p>Display for easy Viewing 15" or better color TFT/LCD/ LED for easy set-up User selective 10 or better traces/ waveform display.</p> <p>Display screen support Up to 10 waveform channels</p> <p>ECG, SpO2, NIBP, 2-TEMP, and Respiration</p> <p>23 or more Arrhythmias analysis should be detected and alarmed</p> <p>Multi-lead ECG algorithm</p> <p>Multi-lead ECG algorithm is implemented to analyze the ECG signals from multiple leads to ensure the measurement accuracy when one lead is interfered</p> <p>Smart Lead-off detection enables the continues monitoring if the electrode is disconnected</p> <p>S-T and QT Analysis</p> <p>Pacemaker detection.</p> <p>Support heart rate analysis and dynamic NIBP analysis</p> <p>Support Drug, Hemodynamic, Oxygenation, Ventilation, Renal calculations and Titration table.</p> <p>Support 24 hour ECG summary analysis</p> <p>Can Support Clinical Assistive Applications for decision making: EWS score, GCS scoring , ST graphic , or more</p> <p>Save up to 500 or more Event management and 48 hours or more waveforms</p> <p>Up to 72 hours of graphic and tabular trend of all parameters,</p> <p>View other bed function enables user to check data of any patient in the same network without the requirement of central station</p> <p>Support OxyCRG screen suitable for neonates: Up to 24 hours of OxyCRG events</p> <p><b>PERFORMANCE:</b></p> <p><b>Heart rate:</b> 30 ~ 300 bpm or better on either sides and Ped/Neo:15-350bpm or better</p> <p><b>Respiration</b></p>
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Respiration rate: 2~150bpm or better on either side.

**SPO2:**

Range: 0 ~ 100% or better on either side

**Temperature:**

Range: 0 -50C° (32 - 122F°)

**NIBP:**

Range: Adult: SYS 25-290mmHg DIA 10-250mmHg Average: 15- 260mmHg

Pediatric: SYS:25-240mmHg DIA:10-200mmHg Average:15- 215mmHg

Neonatal: SYS:25-140mmHg DIA:10-115mmHg Average :15- 125mmHg

**Alarm**

Alarm: All parameters on/off selective independently

Power input 220Vac,50Hz

With Battery Backup time: **Minimum 02 hours or better**

**ACCESSORIES:**

- ECG 5 Lead cable. 1
- Disposable Electrodes Adult, Neonate & Paeds. 20 each
- SPO2 Finger probe with fixed wire (each for adult, Paeds and neonate) 2
- NIBP Reusable Neonate, Paeds & Adult Cuff 2
- NIBP Hose 1
- Temperature sensor & cable 1

**Note: Two certificate mandatory .**

**Central Station Must be Quoted(Optional Mandatory to Quote the price)**

- Unit shall be capable of monitoring a minimum of 8 beds and a maximum of 32 beds.
- Shall provide Most recent 240 hours of tabular trends and graphic trends for all parameters
- Shall allow instant alarm bed viewing
- Each bed monitor window shall always be displayed
- The user shall be able to easily configure the display
- Shall be capable of producing a shift report including graphic trends report, tabular trends
- Report, full disclosure overview report, full disclosure detail report, waveform segment report, event report, 12-lead interpretation report, multi-lead ECG report, ST report, ECG summary report, Arrhythmia statistics report etc
- Provide graphical analytic tool for myocardial ischemia which can help to quickly view the ST value changes

Shall be supplied with the following:-

- Installation Kit including Hub Controller, cabling (according to the need of institution)
- Laser Printer Interface, Laser Printer (Model and Make must be mentioned)
- Central Monitor Size (Model and Make must be mentioned): 42" or better **(Branded Samsung or Sony original)**

- Software from same manufacturer with all certificates

Branded CPU (Model and Make must be mentioned):

- Intel Core i5 or better
- Processor 2.40GHz or better

	<ul style="list-style-type: none"> <li>• 4GB RAM or better</li> <li>• 1TB internal Hard Disk or better</li> <li>• DVD R/W</li> <li>• With Keyboard and Mouse</li> <li>• Online UPS with 20mints backup (Branded)</li> </ul> <p>The parameters displayed on the monitors should also be displayed on the central station monitor and should be compatible with each other.</p>
<b>Portable X Ray Machine (Digital)</b>	<p><b><u>DIGITAL RADIOGRAPHY MOBILE X-RAY MACHINE 500 mA SPECIFICATIONS:</u></b></p> <ul style="list-style-type: none"> <li>• The Digital Mobile X-ray Machine must be Picture Archiving Communication System- (PACS) ready and able to retrieve and send imaging studies to the SPMC PACS through wireless and wired LAN.</li> <li>• The machine can temporarily store images in Dicom format (the supplier must provide the maximum number of images that can be stored)</li> <li>• The machine should have a column that supports the tube arm.</li> <li>• The tube arm can reach up to 2000mm or better from floor to accommodate larger beds and crowded rooms.</li> <li>• The machine should be motor driven operation. The system should have bins for the detectors.</li> <li>• An integrated system and screen that automatically logs the operator into the software and displays the patient work list.</li> <li>• The machine shall be provided with technique selector and digital display for KV, mA and or mAs, exposure time and microprocessor controlled anatomical programming function keys</li> <li>• The machine have integrated 15 inch or higher touch panel color LCD monitor for image display</li> <li>• The system must be capable of integrating with the existing PACS/MIS at no extra cost.</li> <li>• The supplier must provide integrated battery charger/s for detector batteries</li> </ul> <p><b><u>The X-Ray Generator of the machine shall have the following capability:</u></b></p> <ul style="list-style-type: none"> <li>• High frequency inverter type generator 30KW or more</li> <li>• Maximum KV setting up to 125kVp or higher</li> <li>• Maximum tube current not less than 500 mA</li> <li>• mAs setting up to 320 mAs or higher</li> <li>• Power supply: Single phase at 100 – 240 Volts</li> <li>• inverting frequency: <math>\geq 400\text{kHz}</math></li> </ul> <p><b><u>The X-ray Tube and collimator must be of the following specification</u></b></p> <ul style="list-style-type: none"> <li>• Should be rotating anode, dual focus</li> <li>• Focal Spot Size: small focus range within 0.3-0.7mm / large focus range within 1.0-1.3 mm</li> <li>• Anode Heat Capacity: 100 kHU or higher</li> <li>• Collimator adjusting knobs must available on both front and back sides</li> <li>• Collimator, high voltage generator and FPD (Flat panel detector) manufactured by the same brand of x-ray system itself. From other brands or OEM solutions are not acceptable in order to make sure good compatibility and stability</li> </ul> <p><b><u>The x-ray mechanical movement and battery must be of the following specification</u></b></p> <ul style="list-style-type: none"> <li>• System moving mode: electric &amp; manual, and moving can be controlled by a remoter</li> <li>• The system battery is lithium, Pb-acid not acceptable which is old technology and pollution to environment.</li> </ul>

	<ul style="list-style-type: none"> <li>• X-ray system must be equipped with at least 2 independent batteries to reduce system failure risk, and supports the function of instant exposure plugged in when the battery runs out.</li> <li>• Rotation angle of X-ray tube assembly around vertical axis (RVA): <math>\geq -300^{\circ} \sim +300^{\circ}</math></li> <li>• Rotation angle of X-ray tube assembly around horizontal axis (RHA): <math>\geq -180^{\circ} \sim +180^{\circ}</math></li> <li>• The tube arm can reach up to 2000mm from floor</li> <li>• X-ray tube supporting arm stretching range: <math>\geq 600\text{mm}</math></li> </ul> <p><b><u>Flat panel detector</u></b></p> <ul style="list-style-type: none"> <li>• FPD lock function integrated in the FPD slot: equipped</li> <li>• Battery capability, full charged can take <math>\geq 100</math> exposures</li> <li>• FPD battery charging integrated in the FPD slot, once the FPD put in the right position, it will be automatically charged and cut off when fully charged, manual cable connection and external charging is not acceptable.</li> <li>• Image transmission mode: wireless</li> <li>• FPD pixel size: <math>\leq 140\mu\text{m}</math> or better</li> <li>• Matrix: <math>\geq 2500 \times 3000</math> or better</li> <li>• Spatial resolution of 3.5 line pairs/mm or more</li> </ul> <p><b><u>Image processing workstation system</u></b></p> <ul style="list-style-type: none"> <li>• RAM: <math>\geq 4\text{GB}</math> or better</li> <li>• Type of hard disk: solid state hard disk</li> <li>• Wireless and wired dual mode data transmission</li> <li>• Size of touch screen: <math>\geq 19</math> inches or better mandatory</li> <li>• Display resolution: <math>\geq 1280 \times 1024</math> or better</li> <li>• compatible with existing RIS and HIS systems</li> <li>• Support user-defined patient list display</li> <li>• Basic post-processing functions of image, such as image preview, zoom, window width/level adjustment, annotation, reverse color, flip, rotation, length measurement and correction, cropping function, region of interest and angle measurement</li> <li>• Support DICOM3.0, including DICOM SEND, DICOM PRINT, DICOM STORAGE COMMITMENT, DICOM WORKLIST</li> <li>• Online UPS with min Backup of 30Min</li> </ul> <p><b>Note : Two certificate mandatory</b></p>
<b>800MA or more Digital X-ray</b>	<p>800 mA STATIC X-RAY MACHINE GENERAL SPECIFICATIONS</p> <p>800mA Static Radiographic X-Ray system floor mounted X-Ray tube support and high frequency inverter generator for general-purpose radiography.</p> <p>1. X-RAY GENERATOR</p> <ol style="list-style-type: none"> <li>a) High Frequency Inverter type generator: 80 kW or more</li> <li>b) Ratings: 40 - 150 KV or more in 1KV steps</li> <li>c) mA Setting range: 10 mA – 600 mA or more</li> <li>d) Easy to read and easy display for KV, mA and time.</li> <li>e) User programming functions: Multi parameters / Anatomic Programmed: 45 programmable radiographic conditions or more</li> <li>f) Exposure Time: 1 msec to 9 sec or better</li> <li>g) Overload Protection</li> <li>h) Automatic Line compensation: <math>\pm 10\%</math> or better</li> <li>i) Single Phase AC - 200/220/230/240 V</li> </ol> <p>2. X-RAY TUBE</p> <ol style="list-style-type: none"> <li>a) Dual Focal spot 0.6 mm and 1.2 mm or better.</li> <li>b) Anode heat storage 300 KHU or more.</li> <li>c) Max Tube Voltage: 150 V or better</li> <li>d) Standard Collimator with OEM filtration values</li> </ol>

3. FLOOR MOUNTED TUBE SUPPORT

4. CHEST STAND

- a) Vertical Diagnostic Bucky stand
- b) Detachable type grid
- c) Grid Ratio 12:1 or better
- d) Grid movement shall be oscillating to filter scatter radiation.
- e) Manual Vertical movement range 120 cm or more
- f) All cassette sizes shall be compatible.
- g) Chest stand shall be able to retain FPD cassette of size 8x10 to 14x17 or better.
- h) The detector must be fixed

5. SIX WAY FLOATING DIAGNOSTIC PATIENT TABLE

- a) Six Way floating type diagnostic patient table
- b) It must be able to hold FPD
- c) Detector must be fixed
- d) Tabletop Size: 80 x 200 cm or better
- e) Tabletop Longitudinal movement: 90 cm or better
- f) Tabletop Lateral movement:  $\pm 12$  cm or better
- g) Height from floor: Adjustable height 35 cm to 90 cm or better range.
- h) Weight bearing capacity: 150 kg or more
- i) Electromagnetic Locks
- j) Grid movement shall be oscillating to filter scatter radiation.
- k) Grid Ratio: 8:1 or better
- l) Grid Density: 40 l/cm

6. WORKSTATION

- a) The workstation must be licensed
- b) It must be equipped with all the required image post-processing features.
- c) It must be loaded with DICOM 3.0 compliance including worklist package.
- d) It must be able to connect to hospital's PACS / HMIS system.
- e) It must be able to connect to any X-Ray film printer (laser or thermal)

7. ACCESSORIES

- a) Lead aprons 0.5mm Pb or better - Quantity 03
- b) Thyroid shield: 0.5mm Pb or better - Quantity 03
- a) Lead goggles - Quantity 03
- b) Gonadal shields - Quantity 03

8. SITE RENOVATION

- a) Complete Site renovation of the system, console and UPS room, including lead shielding of the system room and doors
- b) Air- Conditioning, False ceiling, painting, Antistatic flooring, Electrical DB, Earthing and Power cable from Main Transformer / Hospital LT Panel will be the responsibility of the supplier.
- c) The installation will be a turnkey project and any modification in the existing site will be the responsibility of the firm.
- d) The firm will be responsible for complete interface free installation keeping in view the requirement and recommendation of manufacturers and its surroundings to ensure artifacts examinations/procedures.

9. MANDATORY REQUIREMENT

- a) All major parts of the machine i.e., Tube, Generator, FPD, diagnostic table, chest stand shall be from the same OEM.

10. OPTIONAL MANDATORY TO QUOTE THE PRICE REQUIREMENT (must be quoted)

- a) 100 KW Power generator for backup – Mandatory to quote but the price will be optional
- b) Dual Tray X-Ray film laser printer – Mandatory to quote but the price will be optional

	<p>c) Price of the films of all applicable sizes – Mandatory to quote but the price will be optional</p> <p>11. QUALITY AND SAFETY STANDARDS</p> <p>a) <b>US-FDA, CE-MDD, MHLW Japan.</b></p> <p>b) <b>Any two certificates are mandatory.</b></p> <p>12. WARRANTY AND POST WARRANTY</p> <p>a) Five years comprehensive warranty(Including Tube, Detector and X-ray generator) from manufacturer head office including tube, generator and all major parts and services.</p> <p>b) Post warranty % age(Including Tube, Detector and X-ray generator) must be quoted per annum.</p> <p>Special note: the vender will ensure that robust protection system in place including automatic voltage regulator(AVR), surge protector, and under/over voltage cut-off devices, to safeguard against fluctuation and potential damage.</p>
<b>Portable Ultrasound Machine</b>	<ul style="list-style-type: none"> <li>• A dedicated POC (Point of care) Ultrasound for Anesthesia, Emergency, <b>Critical care &amp; ICU having 15" or better</b> fully touch screen <ul style="list-style-type: none"> <li>• <b>15" or better Large image and high definition</b> (1080*1920) fully touch display</li> <li>• Intuitive touch control even with gloves on</li> <li>• Transducer cable management for avoiding wheel rolling compaction</li> <li>• Retractable power cable for easy movement of machine</li> <li>• Built-in battery for upto 60 Mins or more</li> <li>• 10s screen locking feature for disinfection</li> <li>• High quality materials selection with high chemical resistance and durability</li> <li>• Supporting wide range of disinfectants</li> <li>• Imported trolley</li> <li>• Automatically gain full screen view from distance</li> </ul> </li> </ul> <p><b>Standard Transducers</b></p> <ul style="list-style-type: none"> <li>• 2-5 MHz multiple frequency convex probe for FAST Exams</li> <li>• 4-11 MHz multiple frequency linear button probe for Anesthesia, ICU and critical care exams</li> <li>• 2-5 MHz sector probe for cardiac exams in Traum</li> <li>• Convex + Liner Optional</li> </ul> <p><b>System must have following dedicated software's:</b></p> <p>Needle navigator: Real-time needle navigation technology based.</p> <p><b>Smart FHR OB1</b></p> <p>Fetal Heart Rate measure and monitoring for first trimester (10-14 weeks)</p> <ul style="list-style-type: none"> <li>• Auto measure fetal heart rate in B-mode</li> <li>• Real-time monitor and display the result</li> </ul> <p>Automatically detect three diameters of bladder, and calculate the bladder volume</p> <p><b>Dedicated inbuilt educational tool</b></p> <ul style="list-style-type: none"> <li>• Include FAST, Focused Echo, Nerve, Abdomen, Thyroid, Breast, Testicle and OB/GYN applications</li> <li>• Complete protocols for EM, CAR, MSK, ABD, OBG, VAS and SMP</li> </ul> <p>Vascular, Small Parts, Orthopedics.</p> <ul style="list-style-type: none"> <li>• Power Supply: 220 VAC, 50Hz</li> <li>• Standard Configurations:</li> </ul> <p>Main Unit</p> <ul style="list-style-type: none"> <li>• 3 active Probe Connector.</li> <li>• Tissue Harmonic Imaging.</li> <li>• B, B/B,M&amp; B/M Mood</li> </ul>

	<ul style="list-style-type: none"> <li>• USB Ports minimum 2</li> <li>• Measurement and Calculation Software Packages</li> <li>• Thermal Printer (Branded, model and make must be mentioned)</li> <li>• 50 Roles Thermal Paper.</li> <li>• With built in/external UPS system for minimum 1 hour backup.</li> <li>• Ultrasound Gel 20Ltr</li> <li>• With built in mounted trolley.</li> </ul>
<b>Ceiling OT Light</b>	<ul style="list-style-type: none"> <li>• The light system shall have double domes, one major and the other satellite.</li> <li>• Light intensity shall be adjustable at least between 8%-100% and at least 10 different levels or better</li> <li>• Stopless rotation: all lighthouse joints support stopless rotation</li> <li>• The lighthouse shall be shape to avoid laminar flow influence by turbulence, with verified certificate Din-1946 Part 4</li> <li>• Protection against harmful ingress of water or particulate matter: <math>\geq</math>IP54</li> <li>• The maximum movement angle of the spring arm for display shall be at least up to 45° and down to 70° or better</li> <li>• Various color temperature adjustment, from 3,500-5,100K or better</li> </ul> <p><b>TECHNICAL SPECIFICATIONS</b></p> <ul style="list-style-type: none"> <li>• Central Illuminance (lx) <math>\geq</math> 160,000 lx or better</li> <li>• Light Field Diameter adjustable from 140~300mm or better</li> <li>• Color Temperature adjustable from 3,500-5,100K in 5 ranks as an option or better</li> <li>• Color Rendering Index Ra <math>\geq</math> 99 or better</li> <li>• Color Rendering Index R9 <math>\geq</math> 97 or better</li> <li>• Dimming Range: 20~100% or better</li> <li>• Ambient(Endoscopy) Illumination: D50/D10: 60% or better</li> <li>• Radiant energy(average) <math>\leq</math> 3.5mW/(m<sup>2</sup>*lx) or better</li> <li>• Shadow dilution with one lateral mask: 76% or better</li> <li>• LED Service Life: <math>\geq</math> 60,000hrs or better</li> <li>• Power Supply: 100~240VAC</li> <li>• Protection against harmful ingress of water or particulate matter <math>\geq</math>IP54</li> <li>• Quick lock system: easy transfer the camera among different operating rooms with no special tools needed</li> </ul> <p><b>Integrated digital camera system in one dome</b></p> <ul style="list-style-type: none"> <li>• Two Mega Pixels HD (1920 × 1080 pixels) Camera</li> <li>• Light Camera to be Fixed in one Dome of Light</li> <li>• Medical grade LCD 27" or better on third arm</li> <li>• Supporting HDMI/YpPr/HD-SDI/DVI-D/VGA input signal and Video output</li> </ul> <p><b>Digital video recorder</b></p> <ul style="list-style-type: none"> <li>• Supporting external USB storage device</li> <li>• Default with camera control function</li> <li>• Supporting video recording from other medical devices source</li> <li>• <b>Note : Two certificate mandatory</b></li> </ul>
<b>Spica</b>	<p>A spica table is a device used by orthopedic surgeons to apply casts to a patient's hips or femurs. It helps keep the hip in the correct position while the cast dries.</p>

<b>Table</b>	<p>The extreme load capacity of up to 450 kg.  All positions should permitted up to overall load of 250 kg.  The longitudinal shift up to 350mm for free to access to C-arm. 595 mm lowest table position for neurosurgery, while 1,095 mm highest table position for orthopedics.  Intelligent Collision Protection System to stop the table movement before collision occurs.  Bluetooth hand control for unobstructed control in operating rooms.  Triple-layer decompression pad to redistribute the patient's weight.</p> <p><b>Modular Design</b>  The modular design of the tabletop is tailored for various surgical discipline needs, which can also lower the cost for hospitals as they only need to buy the specific module, instead of a new table, for an additional surgical type.</p> <p><b>Huge Imaging Access</b>  1700 mm Head-end imaging area  1500 mm Foot-end imaging area</p> <p><b>Bidirectional longitudinal shift</b>  Head-end shift:190 mm  Foot-end shift:160 mm</p> <p><b>Carbon fiber tabletop</b>  Radiolucent carbon fiber tabletop provides better imaging</p> <p><b>Intelligent Collision Protection System</b>  Based on the Module Recognition System collision protection algorithm monitors the movement and avoid crash to the floor or table itself.</p> <p><b>Multi-layer Decompression Pad</b>  Flame resistant and fireproof  Ultra-sonically welded seams and waterproof  Superior internal air circulation design</p> <p><b>Note : Two certificates mandatory</b></p>
<b>Dialysis Machine</b>	<p>COMPUTERIZED HAEMODIALYSIS Machine</p> <p>SPECIFICATION</p> <p>Computerized programmable with graphical/Touch Screen.</p> <ul style="list-style-type: none"> <li>• Electronic control of flow rate and blood flows</li> <li>• Variable Bicarbonate / Acetate Concentration.</li> <li>• Automatic control for various Set Bicarbonate proportions.</li> <li>• Variable sodium concentration</li> <li>• Sodium , UF Profiles</li> <li>• Variable temperature control</li> <li>• Programmable Ultra filtration with control or varying rate</li> <li>• Ultra filtration with diffusion</li> <li>• Programmable Heparin Management, with bolus option</li> <li>• Automatic priming with display</li> <li>• Display for service diagnostic and calibration</li> <li>• Automatic clean and rinsing mechanism</li> <li>• Automatic Thermal disinfect mechanism (upto 80C or above)</li> <li>• Blood Pump: 15 to 400ml/minute or above</li> <li>• Heparin pump: 0-10cc/hour</li> <li>• Selectable Dialysate Flow : 600ml/min or above</li> <li>• Temperature Control: up to 39 deg. C.(Adjustable)</li> <li>• Arterial Pressure Monitor:- 300mmHg to +52mmHg or above</li> <li>• Venous Pressure Monitor :-52 mmHg to +400mmHg or above.</li> </ul>



	<ul style="list-style-type: none"> <li>· Ultra filtration Rate Control: Range of UI R0.0 to 2.4 kg – hour are above.</li> <li>· Balanced ultra filtration control to eliminate patient systems that result from poor fluid management</li> <li>· Air Bubble Detection: Air bubble detector alarm threshold.</li> <li>· Blood Leak Detection:</li> <li>· (Conductivity Control: Acetate and Bicarbonate Solutions Liquid and powder (internal automatic mixing).</li> <li>· Automatic Blood Pump capability for peads &amp; for adult dialysis treatment</li> <li>· Real Time graphical display for dialysis dose delivery Kt/v</li> <li>· Endotoxin Filter</li> <li>· Dialysate flow stop feature</li> <li>· 220 V, 50 Hz power with Automatic Battery backup for at least 15-min.</li> <li>· Integrated B.P monitor</li> </ul> <p><b>Note: one certificate mandatory</b></p>
<b>OCT Machine</b>	<p>Optical Coherence Tomography System OCT and OCT Angiography</p> <p>Features:</p> <p>Next generation HD OCT with high speed and wide field of view. High-definition spectral domain imaging and analysis for glaucoma and retinal disease management. Superior visualization for complex retinal pathologies. High-definition OCT scans offering precise detail of retinal tissue and pathology. Imaging speed of 100,000 scans per second. Detailed thickness maps to support monitoring of disease progression or regression. High-definition, high-resolution scans to reveal anatomical details for better visualization and disease understanding. Compact footprint and integrated design suitable for busy or space-limited practices. Integrated high-performance multi-core computer system. Windows-based operating system. Right-angle patient-to-technician orientation to facilitate setup and scanning. Single-screen output displaying all relevant images and information. Motorized chinrest and mouse-driven alignment for superior image acquisition.</p> <p>OCTA Features:</p> <p>12x12mm single-shot OCTA scan, in addition to 8x8mm, 6x6mm, and 3x3mm options. Scan depth up to 2.9mm. Quantitative OCTA metrics and analysis tools.</p> <p>Technical Specifications:</p> <p>Fast-Track Retinal Tracking SystemMethodology: Spectral Domain OCT Optical Source: Super luminescent Diode (SLD), 840nm A-Scan Depth: 2.0 – 2.9mm (in tissue) Scan Speed: 100,000 A-scans per second Minimum Pupil Diameter: 2.0mm Resolution: Axial: 5µm (in tissue), 1.95µm (digital) Transverse: 15µm (in tissue)</p>



Refractive Error Adjustment: -20D to +20D  
 Fundus Imaging:  
 Methodology: Line Scanning Laser Ophthalmoscope (LSO)  
 Optical Source: SLD 750nm  
 Field of View: 36° x 30°  
 Posterior Segment Scans:  
 OCT:  
 Cube Scan (Macula and Optic Disc)  
 HD Raster (1, 5, 21-line, cross, and radial)  
 Raster scan length: 3–12mm; image averaging up to 100x  
 OCTA:  
 Scan sizes: 3x3mm, 6x6mm, 8x8mm, 12x12mm (Macula), 4.5x4.5mm (ONH), 14x10mm & 14x14mm (Montage)  
 Anterior Segment Scans:  
 Cube, HD Cornea, Pachymetry, HD Angle, Wide Angle-to-Angle, Anterior Chamber, 5-Line Raster  
  
 Analytical Applications:  
 Retina:  
 Macular Thickness Analysis with reference databases (including diversified and Asian datasets)  
 Macular Change Analysis  
 Advanced RPE Analysis  
 3D Visualization  
 En Face Analysis  
 Wellness Exam  
 Glaucoma:  
 Guided Progression Analysis  
 Ganglion Cell/IPL Thickness with reference databases  
 RNFL Thickness with reference databases  
 ONH Parameters with reference databases  
 Average cup-to-disc ratio  
 Sectoral RNFL Thickness (average, superior, inferior)  
 Wellness Exam  
 Anterior Segment:  
 9mm Epithelial Thickness and Pachymetry Mapping  
 HD Cornea with Cornea Caliper Tool  
 Full Anterior Chamber Imaging for phakic IOL sizing and safety distance  
 Angle Imaging and Measurement tools: AOD, TISA, SSA  
 OCT Angiography Quantification (Metrix):  
 Macular and Foveal Avascular Zone  
 Perfusion and Vessel Density (ETDRS grid)  
 Optic Nerve Head Capillary Perfusion Density and Capillary Flux Index  
 Two-visit Comparison Tool  
 Supplier must quote Original instrument table with wheelchair accessibility  
  
 Eye Management Software  
 Retina Analysis Software  
 Server and required connectivity for data management  
  
 Optional:

	<p>Anterior Segment Premium Module (for extended anterior imaging and diagnostics)</p> <p><b>Note : Two certificate mandatory</b></p>
<b>Dental Chair</b>	<p><b>Complete Dental Unit (Turnkey Project)</b></p> <p><b><u>DOCTOR'S TRAY</u></b></p> <ul style="list-style-type: none"> <li>• One-piece Hand pieces console easy to wipe and clean.</li> <li>• Soft touch control panel for chair positions, cup filler, Bowl flush, water heater, X-Ray Illuminator &amp; Dental Light.</li> <li>• Swing out swivel balance arm with air operated tray locking system</li> <li>• Handle for easy tray movement</li> <li>• Four (4) Hand pieces automatic lock out system.</li> <li>• Swing in/out flexible balance arm.</li> <li>• Large instrument tray.</li> <li>• Rectangular air pressure gauge.</li> <li>• Water flow control.</li> <li>• Individual air pressure controls.</li> <li>• One 3 way syringe for doctor with quick disconnect tip for autoclave.</li> <li>• 3-Aseptic easy clean, tubing's and fitting for the hand piece straight.</li> <li>• Builtin X-Ray Viewer DC type non flicking articulating.</li> <li>• High Speed air turbine</li> <li>• Slow speed air motor with contra &amp; Straight attachment</li> <li>• Built-in Scalar</li> </ul> <p><b><u>DENTAL CHAIR</u></b></p> <ul style="list-style-type: none"> <li>• Fully computer control Motorized chair.</li> <li>• Comfortable arm rests. Right arm swings for patient use.</li> <li>• THICKER AND STRONGER METAL CHAIR FRAME (WHOLE UNIT IS NOT SHAKED)</li> <li>• Leather Upholstery with Ergonomic design of the backrest and cushion are made Patient feel more comfortable horizontal compensation upto 12cm, eliminate the uncomfortable feeling of patient during the movement of backrest.</li> <li>• Double articulating head rest adjustable for neck positioning &amp; pediatric use also.</li> <li>• Two Preset Positions. <ul style="list-style-type: none"> <li>A- One touch last position/ gargling position.</li> <li>B- One touch zero return system.</li> </ul> </li> <li>• Nine or more programmable positions by user</li> <li>• Super down low seat operation</li> <li>• Emergency stoppage by single touch of switch.</li> <li>• Seamless anatomically design chair upholstery</li> <li>• No chair movement when any hand piece in use.</li> <li>• Transparent &amp; protective foot rest cover.</li> </ul> <p><b><u>DENTAL LIGHT</u></b></p> <ul style="list-style-type: none"> <li>• <b>Touch Less Sensor Light</b></li> <li>• Cold light, Heatless, Shadow less.</li> <li>• Large Round reflector,</li> <li>• Power supply : AC12V-24V</li> <li>• Power consumption : 2*5W</li> <li>• Light intensity (lux) : 7000-32000lux</li> <li>• Colour temperature (° K) : 4500K</li> <li>• Triple intensity operatable from both side touch control panel &amp; Dental light On/Off switch.</li> <li>• Automatic On/ Off function with chair movement.</li> </ul> <p><b><u>CUSPIDOR UNIT</u></b></p>

	<ul style="list-style-type: none"> <li>• One piece ceramic bowl rotatable 90°.</li> <li>• 90° rotatable Assistant Arm.</li> <li>• Built-in Patient tray.</li> <li>• Built-in Tissue box.</li> <li>• Built-in Glass holder.</li> <li>• Interruptible time controlled automatic cup filler(adjustable).</li> <li>• Interruptible time controlled automatic bowl flush.</li> <li>• Strainer basket for bowl</li> <li>• Solid collector / Filter for SE &amp; HVE</li> <li>• One 3 way syringe with quick disconnect tip for autoclave.</li> <li>• High volume evacuator (air operated) with flow control hand piece.</li> <li>• Saliva Ejector (Water operated) with flow control hand piece.</li> <li>• Water heater.</li> <li>• Built-out injection purified water system.</li> <li>• Touchpad installed on the top of the assistant table, offering the convenient control of operating light, chair positioning, and cuspidor rising</li> <li>• Multi functional air operated foot switch (with combination of gargling spitting &amp; Joy Stick for Chair).</li> </ul> <p><b><u>FUNCTION BOX</u></b></p> <ul style="list-style-type: none"> <li>• Air Filter &amp; Regulator</li> <li>• Water Filter</li> <li>• Air &amp; Water supply lines.</li> <li>• Safe electrical compartment with Transformer, fuse, main_Switch etc. to give output. 24 VAC for safety.</li> <li>• Main 220/240V.</li> </ul> <p><b><u>INCLUDED:</u></b>  Full Back Doctor Stool  Operating Stool  The package should include civil work, pipes, electrification, floor tiles, false ceiling and walls paint.  <b>Central Compressor for 10 units with installation, fittings and connection to all units.</b>  <b>Separate Compressor for one unit (Price Must Be Quoted Separate)</b>  <b>Note : One certificate mandatory</b></p>
<b>Baby Resuscitation Trolley</b>	<p><b><u>Resuscitation Unit with Fixed Baby Cradle &amp; Drawers with Microprocessor based temperature controller with 4 modes Skin/Air/Manual/Pre warm Mode</u></b></p> <p><b><u>Mechanical Specifications:</u></b></p> <ul style="list-style-type: none"> <li>• Fixed height warmer with attached baby cradle mounted on 4" (100mm) wheels, 2 with brake</li> <li>• Stainless steel baby tray with water proof, zipped cover mattress of density approx. 21-25 kg/m<sup>3</sup></li> <li>• Continuous head up/down facility</li> <li>• X-Ray cassette holder</li> <li>• Collapsible/lockable Side Supports made up of Unbreakable polycarbonate material</li> <li>• Slots for sensor and ventilator tubing</li> <li>• Side tray for placement of monitor</li> <li>• Stainless steel infusion rod with facility to mount Syringe/infusion pump</li> <li>• Lower shelf below baby tray to facilitate under surface phototherapy. Three drawer for storage.</li> <li>• Integrated support for 10L Oxygen bottle.</li> <li>• Oxygen regulator with pressure gauge, flow meter and humidifier bottle along with</li> </ul>

	<p>silicon tubing for delivery of oxygen from humidifier bottle to patient.</p> <ul style="list-style-type: none"> <li>• Integrated electrical operated Slow Suction unit with Vacuum Regulator, Vacuum Gauge and Autoclavable fluid jar.</li> <li>• Silicone manual Resuscitator for Infant (250ml) along with face masks size 00 and 01.</li> <li>• Laryngoscope - Penlight handle with straight blade size 0 and 1.</li> <li>• Silicone Airways - size 000, 00, and 0</li> <li>• Height: 74.5" (1890 mm), Width: 28.0" (710 mm), Length: 39.0" (990 mm)</li> <li>• Bed to Floor Height: 37.5" (950 mm)</li> <li>• Distance between baby bed and heater: 33" (840 mm)</li> <li>• Mattress size: 30" (762 mm) x 20" (508 mm)</li> <li>• Height of side panel above baby bed: 5.75" (145 mm)</li> </ul> <p><b>Performance/Electrical Specifications:</b></p> <ul style="list-style-type: none"> <li>• Microprocessor based temperature controller with Pre-warm, Manual and Skin Servo modes</li> <li>• LED Display of Skin Temp., Air Temp., Set Temp. (Resolution 0.1°C) &amp; Heater Power %.</li> <li>• LCD to display modes of operation, Alarm messages, Skin Temperature in °F and Timer.</li> <li>• Thermistor based sensor with Accuracy of +/- 0.2°C (Temp. Calibration not require)</li> <li>• Modes of Operation: Skin Servo, Air, Manual and Pre-Warm</li> <li>• Keypad lock facility</li> <li>• Skin mode: Temperature range: 34 to 38°C , Resolution : 0.1°C</li> <li>• Air mode: Temperature range: Room temp. to 39°C, Resolution: 0.1°C</li> <li>• Manual mode: Adjustable Heater Power 0 to 100% (with an increment of 5%), Time duration:15mins</li> <li>• Pre-warm mode: To pre-warm the cradle before baby is placed on the bed. (No alarm will be activated during Pre warm mode) Adjustable Heater Power 0 to 25% (with an increment of 5%), Time duration:30mins</li> <li>• Overhead heater box: Swiveling, Consists of Ceramic heater (650 Watts) placed in parabolic reflector with a safety grill &amp; Halogen observation light (12V/50W) for observing the baby</li> <li>• Operating Voltage: 220-240 VAC, 50Hz</li> <li>• Power: 800W (Max.)</li> <li>• Alarm: Audio alarm with 10-minute mute facility &amp; Visual alarms with message on LCD</li> <li>• Power Fail Alarm: Audio with LED indicator</li> </ul>
<p><b>C-Arm Machine</b></p>	<p style="text-align: center;"><b><u>Surgical C-Arm</u></b></p> <p>Surgical Mobile C-Arm with microprocessor controlled &amp; High frequency, X-Ray Generator.</p> <p>Output Power: 15 KW or better</p> <p>Radiography &amp; Fluoroscopy KV: 40-110 KV or better with 0.3-100 mAs or better</p> <p>Technique selector switch for Fluoro &amp; Rad. Mode Selection.</p> <p>Anatomical Programmed should be provided in radiography mode.</p> <p>Continuous Fluoroscopy:</p> <p>Boost mode mA range:</p> <p>System should have ABC control.</p> <p>System should have auto-Mode and Manual mode for user in fluoroscopy</p> <p>26 x 26cm Dynamic flat panel detector or better</p> <p>Pixel Pitch : 100µm or better</p> <p>Rotating Anode Double Focus x-ray tube 300 KHU or better</p> <p>Focal spot 0.3, 0.6 or less</p> <p>10 inch or more touch screen apart from main 2 screens of 19 inches.</p>

	<p>Live image on touch screen must be present</p> <p>2 No's medical grade TFT monitors on trolley, Size: 19 inch or better.</p> <p>Software must be DICOM supported. Should have the facility to store 20,000 or better images and having last image hold, zoom, invert image, contrast adjustment, to export patient images to USB or CD/DVD and through PACS system, have the facility to show patient ID, name, gender, age, date and hospital name etc.</p> <p>C-Arm movement</p> <p>Orbital rotation should have 120° or better.</p> <p>Rotation +180°</p> <p>Horizontal travel 200mm or more</p> <p>Motorized Vertical Up/Down 400 mm or more</p> <p>Wigwag + 12° or better</p> <p>Power Requirement: 220VAC , 50Hz</p> <p>Accessories for Protection</p> <p>"3 Apron lead thickness 0.5m</p> <p>3 Thyroid shield lead thickness 0.5mm</p> <p>3 Apron Hangers</p> <p>3 Goggles and Caps</p> <p>Compatible online UPS for at least 15 minutes or more backup</p> <p>FDA, CE and MHLW Approved (FDA Mandatory and 1 among 2 must be available)</p>
<b>Sr. #</b>	<b><u>ECHOCARDIOGRAPHY MACHINE</u></b>
<b>1</b>	Digital Echocardiography unit for wide range of premium performance application of cardiovascular imaging in pediatrics and adult. System should have compatibility to handle upto 22MHz multifrequency probes.
<b>2</b>	<p><b><u>DISPLAY:</u></b></p> <p>22" or more High Definition LCD/LED Monitor with resolution 1920 x 1080, tilt able and swiveable type</p>
<b>3</b>	<p><b><u>OPERATION MODES</u></b></p> <p>B, 2D, M-Mode, Power Doppler, HPRF, Spectral Doppler, Color Doppler, THI, D-THI, TDI, Duplex and Triplex Doppler, PW Doppler, CW Doppler Steerable and ECG Gating.</p>
<b>4</b>	<b><u>CONTROL PANEL</u></b>
<b>A</b>	Alphanumeric keyboard with trackball.
<b>B</b>	12-Inches Touch Control Panel Screen.
<b>C</b>	Direct access to system functions through dedicated keys.
<b>D</b>	Adjustable transmit focusing control.
<b>E</b>	TGC / STC : 8-step slide controls
<b>F</b>	4-Active Transducer Connector for Transthoracic probes.

5	<b><u>CALIPERS / MEASUREMENTS:</u></b> Measurements for: Distance, angle, Stenosis %, area, circumferences, volume, slope, time, heart rate and acceleration. LV (left ventricular function) measurements, LA (left atrial volume) measurements, AV (aortic valve) measurements, MV (mitral valve) measurements, PV (pulmonary valve) measurements, PISA measurements, LV MASS measurements, Vascular measurements (CCA, ECA, ICA, VA, SA), Flex-M/Anatomical M-Mode, Auto EF measurements, Auto IMT should also be provided.
6	<b><u>APPLICATION:</u></b> Cardiac, Peripheral, Pediatric, Adult Cephalic, and Vascular with software for measurements.
7	<b><u>FRAME RATE:</u></b> 2000fps or more.
8	<b><u>CINE MEMORY:</u></b> Cine Memory : 900MB or more.
9	<b><u>SYSTEM SCANNING DEPTH:</u></b> 48cm or more
10	<b><u>SYSTEM FREQUENCY RANGE:</u></b> 2 – 22 MHz or More
11	<b><u>STORAGE DEVICE:</u></b> Built-in CD / DVD Drive. 1000GB HDD/500GB SSD.
13	<b><u>SYSTEM DYNAMIC RANGE:</u></b> Dynamic range minimum 300 dB or more
14	<b><u>COMMUNICATION SOFTWARE:</u></b> DICOM communication software for Storage (server / media), print, Verification (export/import), MPPS, MWM, Query / Retrieve.
15	<b><u>PORTS:</u></b> Video Output, 4 or more USB Ports, Networking. Provision for 3D export output for 3D printing.

16	<p><b><u>IMAGING MODES / TECHNIQUES:</u></b></p> <ul style="list-style-type: none"> <li>- Tissue harmonic Imaging, Color Angio, Tissue Doppler Imaging.</li> <li>- Exercise and pharmacological stress echo examinations. Data Acquisition &amp; Review Mode. Stress echo module for storing and reporting stress echo.</li> <li>- Full Focus in all parts of image without the need to adjust focus to reduced operation steps/keystrokes along with higher image uniformity without compromising the frame rate.</li> <li>- 2D Tissue Strain Imaging / Wall motion tracking alongwith polar map and graphic display, local &amp; whole myocardial wall motion parameter curve display.</li> <li>- Artificial Intelligence for measurement of Auto EF, Auto E/A, Auto TR, LVOT, Auto Ao.</li> <li>- Reference Imaging for Ultrasound to Ultrasound, Ultrasound to CT and Ultrasound to MRI for Image Comparison.</li> </ul>
17	<b><u>STANDARD TRANSDUCERS:</u></b>
A	Multi frequency Linear Probe to cover 5.0 – 11.0 MHz for vascular.
B	Multi frequency Phased array <b>single crystal</b> sector probe to cover 2.0 – 5.0MHz for adults.
C	Multi frequency Phased array sector probe to cover 3.0 – 8.0MHz for peads.
18	<p><b><u>ACCESSORIES</u></b></p> <p>a. Compatible online UPS with backup 30min .</p> <p>b. Digital B/W Thermal Printer.</p> <p>c. Rolls 20 Qty</p>
19	<b><u>OPTIONAL (Mandatory to Quote Separately):</u></b>
A.	Multiplane TEE Transducer (3.0 – 6.0 MHz) for Adults.
B.	Multiplane TEE Transducer (3-7 MHz) for Paeds.
C.	Multiplane TEE Transducer (4-8 MHz) for neonates with shaft diameter of 5.2mm.
D.	MPI (Myocardial Performance Index) value should be calculated from the time change curve in TDI.
E.	Multi frequency <b>Single Crystal</b> Convex Probe to cover 2.0–9.0 MHz with 2D Wall Motion Tracking / Strain Rate Imaging for fetal heart echo using single crystal convex.
F.	18 MHz high frequency Linear Probe.
G.	22MHz Multifrequency Hockey Stick Linear Probe.
H.	Multi frequency Phased array sector probe to cover 4.0 – 12.0MHz for Neonates.
20	<b>Note: Two certificates Mandatory</b>

<b>Remote Control Electric Hess Chart</b>	<ul style="list-style-type: none"> <li>• Remote Control Electric Hess Screenconsisting of rigid grey matt marked with intersecting parabolae at each 5 degree, a red LED situated at 15 deg and 30 degree intersects, supplied with:</li> <li>• Infrared transmitter cordless remote control</li> <li>• battery operated green foster torch</li> <li>• Diplopia goggles moulded from translucent red and green plastic materials with adjustable elastic headband and reversible</li> <li>• head and chinrest assembly</li> <li>• pad of charts</li> <li>• height adjustable patient's stool</li> <li>• Wall mounted head and chinrest assembly for</li> <li>• maintaining correct testing distance for patient fixation,</li> <li>• <b>Note: One certificate Mandatory</b></li> </ul>
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<b>Biometry Machine</b>	<p>1. SWEPT Source based Optical Biometer</p> <p><b>Features:</b> SWEPT Source based for non-contact measurement and visualization of axial length of the eye, corneal curvature and thickness, anterior chamber, lens, retina, pupil and “white to white” with an integrated PC for the calculation of intraocular lenses and calculation of intraocular lenses after corneal refractive surgery. Data export possible to a PC or to office management systems.</p> <p><b><u>Specifications:</u></b></p> <p><b>Measurement range:</b></p> <ul style="list-style-type: none"> <li>→ Axial length 14 – 38 mm</li> <li>→ Corneal radii 5 – 11 mm</li> <li>→ Anterior chamber depth 0.7 – 8 mm</li> <li>→ Lens thickness 1 – 10 mm (phakic eye) 0.13 – 2.5 mm (pseudophakic eye)</li> <li>→ Central corneal thickness 0.2 – 12 mm</li> <li>→ White to white 8 – 16 mm</li> </ul> <p><b>Display Scaling:</b></p> <ul style="list-style-type: none"> <li>→ Axial length 0.01 mm</li> <li>→ Corneal radii 0.01 mm</li> <li>→ Anterior chamber depth 0.01 mm</li> <li>→ Lens thickness 0.01 mm</li> <li>→ Central corneal thickness 1 µm</li> <li>→ White to white 0.1 mm</li> </ul> <p><b>SD of repeatability:</b></p> <ul style="list-style-type: none"> <li>→ Axial length 9 µm</li> <li>→ Corneal radii 0.07 D</li> <li>→ Cylinder &gt;0.75 D axis 4.5°</li> <li>→ Anterior chamber depth 10 µm</li> <li>→ Lens thickness 19 µm</li> <li>→ Central corneal thickness 2 µm</li> <li>→ Central corneal thickness 2 µm</li> <li>→ White to white 90 µm</li> </ul> <p><b>IOL Calculation Formulas:</b></p> <p>HaigisSuite (includes Haigis, Haigis-L (for eyes following myopic / hyperopic LASIK / PRK / LASEK, Haigis-T (for toric IOL power calculation), Hoffer Q, Holladay 2, SRK/T</p> <p><b>Interfaces possibilities:</b></p> <ul style="list-style-type: none"> <li>→ FORUM eye care data management system</li> <li>→ computer-assisted cataract surgery system CALLISTO eye (via USB &amp; FORUM)</li> <li>→ Data interface for electronic media` record (EMR) / patient management systems (PMS)</li> <li>→ Data export to USB storage media</li> <li>→ Ethernet port for network connection and network printer</li> </ul> <p><b><u>With:</u></b></p> <p>Special imported motorized stand with extended tabletop and Compatible Monochrome Laser Jet Printer Complete.</p> <p><b>Note: Two certificates Mandatory</b></p>
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<b>Slit Lamp Microscope</b>	<p>Slit Lamp Microscope</p> <p>Specifications:</p> <p>Microscope type : Stereoscopic Microscope</p> <p>Magnification Selection : 3 steps by objective lens rotation</p> <p>Objective : 1.0X, 1.6X</p> <p>Eye piece : 10X</p> <p>Pupillary Adjustment : 55mm ~ 82mm</p> <p>Slit Illumination:</p> <p>Slit width : Continuous from 0 to 9 mm (circle at 9mm)</p> <p>Slit Length : Continuous from 1 to 8mm</p> <p>Aperture diameter : 9, 8, 5, 3, 2, 1, 0.2mm</p> <p>Slit angle : 0 ~ 180°</p> <p>Slit inclination : 5°, 10°, 15°, 20°</p> <p>Filters : Cobalt blue, Red-free, 13% ND, Heat absorbing,</p> <p>UV cut (Normal use), IR cut (normal use)</p> <p>Illumination lamp : 6V 20W Halogen /LED</p> <p>Local Motorized stand</p> <p><b>Optional Mandatory to Quote Price.</b></p> <p><b>Optional:</b> Original Goldmann Applanation Tonometer</p> <p><b>Note: Two certificates Mandatory (FDA Listing Acceptable)</b></p>
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## 9. EVALUATION CRITERIA

The bids / proposals will be evaluated on the basis of advertisement, bid solicitation documents and the point system as specified below.

A proposal shall be rejected during the technical evaluation if the bid does not fulfill the minimum specified requirements OR if it fails to achieve the minimum score as indicated in the below mentioned table. Relevant certificates / documents must be attached.

### Evaluation Criteria for Procurement of Equipment:

Total Marks (Technical Criteria + Financial Criteria): TM: 70 + 30 =100 Marks No chance will be provided for re-submission of secondary documentation. The bidders must carefully read the instructions; Non-compliance to the stated instruction may lead to their technical disqualification.

(Technical Evaluation Marks: 70)

### TECHNICAL EVALUATION CRITERIA

S#	Description of Variables	Allocated Marks
1.	Letter of Authorization the Authorized agent (importer) shall have to produce Exclusive letter of embassy attested authorization / Sole Agency Certificate from Manufacturer and in case of Manufacturer, documentary proof to the effect that they are the original Manufacturer of the required goods shall be provided or joint venture/ consortium/ alliance of the local Sole agents/manufacturers. In case of imported products, the authorization shall be attested from the embassy of Pakistan in the country of manufacturing or embassy of the manufacturing country in Pakistan or having the apostle certificate from the country of origin. <b>For Radiology Items Valid and Active PNRA Certificate.</b>	Mandatory
	Comprehensive Warranty Period of five years both for spare parts and services from the date of Installation / Commissioning	
	Availability of workshop in Peshawar to be verified from Ownership / Rent Agreement.	
	Firm / bidder registration at relevant forum (SECP/ or Registrar of Firm / bidder/ FBR).	
	Firm / bidder registered with DRAP (Drug Regularity Authority of Pakistan) or PEC (Pakistan Engineering Council) in code ME06.	
	Annual Sales tax returns for last Three years	
	Annual Income tax returns for last Three years	
2.	<b><u>Conformance to required Specification</u></b> Fully compliance with the required specifications as per Statement of Requirement. Minor deviations may be accommodated up to 4, subject to the condition that main function and performance in any aspect would not be affected. More than 4 minor deviations will be considered as major deviation and the bidder will be considered as non-responsive for the quoted item. (2 points for each deviation will be deducted).	22

3	Additional Features of the quoted equipment (1 marks will be given against each feature (max 03 marks))	3
4A.	Certificate of US Food and Drug Administration (USFDA) for the quoted model. 1. Registration if the quoted product belongs to class I. 2. USFDA 510K if the quoted product belongs to class II. 3. Pre-Market approval (PMA) if the quoted product belongs to class III.	2
4B.	Certificate of European community (93/42/EEC Medical devices, 98/79/EC In vitro diagnostic medical devices (Full Quality Assurance or Product Quality Assurance) or Regulation (EU) 2017/745 on medical devices, Regulation (EU) 2017/746 on in vitro diagnostic medical devices for the quoted product / manufacturer. The certificate must be issued from the European Commission notify bodies. Or European Union Medical Device Regulation (EU MDR) for the quoted product	2
4C.	Certificate of Ministry of health labor and welfare Japan (MHLW) for the quoted model/Product/Manufacturer. (Translated English Version)	2
5.	Valid ISO 13485 Medical Devices Quality Management Systems certificate of manufacturing plant from International Accreditation Forum (IAF) Accredited	2
6.	Valid ISO 45001 Occupational Health & Safety Certificate of manufacturing plant from International Accreditation Forum (IAF) Accredited Bodies.	1
7.	Valid ISO 9001 Quality management systems certificate of the manufacturer issued by authorized body duly accredited with International Accreditation Forum (IAF), (duly attested by senior executive of the firm).	1
8.	Two mark for each after sale satisfactory performance certificate (verifiable) of the firm / bidder in last 10 years on letter head signed and stamped letter by the end- user for the quoted model or previous provided model of equipment from the public/private sector medical institution of Pakistan. Performance certificate shall be coupled with supply order / purchase order from public sector medical institution.	10
9.	Graduate Engineer with PEC Registration in electrical / electronics, biomedical / mechatronics / mechanical / industrial. PEC registration card of the engineer must be submitted. (2 marks for each Engineer), last three months' salary must be attached for proof.	4
10.	Professional Engineer with PEC in electrical / electronics, biomedical / mechatronics / mechanical / industrial. (2 marks for each professional engineer maximum 4 marks) PEC card must be submitted.	4
11.	List of related tools available at workshop. Details shall be submitted with technical bid.	1
12.	List of Testing and Calibration tools for the quoted items available at workshop. Details shall be submitted with technical bid. These marks shall be subject to inspection of the premises by the procurement entity	1
13.	Detail of Spare parts availability at workshop for the quoted items. Details shall be submitted with technical bid.	1

14.	<b>Financial Position of the company/firm:</b> <ul style="list-style-type: none"> <li>04 Marks will be given to the firm having Capital Resource of Rs. 500 Million or above as at June 30<sup>th</sup>, 2024.</li> <li>03 marks will be given to the firm having Capital Resource of Rs. 250 Million or above upto 499.99 million as at June 30<sup>th</sup>, 2024.</li> <li>01 marks will be given to the firm having Capital Resource of Rs. 100 Million or above upto 249.99 million as at June 30<sup>th</sup>, 2024.</li> </ul>	4
15.	Valid ISO 9001 Quality Management Certificate of the firm / bidder from PNAC accredited bodies.	2
16.	Valid ISO 45001 Occupational health and safety management systems certificate of the firm / bidder from PNAC accredited bodies (Attested by senior executive of the firm).	2
17.	Valid ISO 13485 Quality Management Certificate of the firm / bidder from PNAC accredited bodies.	2
18.	<b>Post warranty maintenance contract</b> , including service, parts, (Tube, Generator and detector if Applicable) rates (companies to offer percentage (%) of the contract value in the technical bid. The lowest will get the full marks.	4
	<b>Total Marks</b>	<b>70</b>

### Financial Evaluation and Scoring System for Bids

(Maximum Allocable Marks Score = 30 marks)

- The financial bids of technically qualified bidders will be opened publicly at the time to be announced by the Procuring Agency and the financial bids found technically non-responsive shall be returned unopened to the respective Bidders.
  - Total Allocable marks for Technical Proposal = 70
  - Total Allocable marks in Financial Proposal= 30
  - Total Combined Allocable Score for individual bids =Marks obtained in Technical Evaluation Marks obtained in Financial Evaluation = 100
- Scoring Methodology:

- Contract will be awarded to the best evaluated fair and responsive bidder whose product ranks highest in the Combined Evaluation scoring calculated through the Marks awarded to Technical Proposal and Financial Proposal as stated in the Bid Data Sheet of these Standard Bidding Documents.
- The Evaluation Methodology is a combination of non-price factors (in Technical Criteria) and price factor (in Financial Criteria); and each having points as elaborated in the evaluation preforms provided in these SBDs.
- Procedure for the Marks Scoring: Marks will be awarded or otherwise for various technical parameters to each quoted product based on the prescribed Technical and Financial criteria. The total combined marks will determine the highest-ranking product in each product category for contract award.
- The formula to calculate the marks for the price by the bidders other than lowest bidder is given below
- Financial Evaluation Score of individual quoted Product: = [Lowest quoted Price of the item ÷ Next higher proposed Price of the competing item] x Total allocable financial score.

Total Marks in Technical Criteria: **70**

Qualifying Percentage in Technical Criteria: **70%**

Qualifying Marks: 49

### Financial Criteria (30 Marks):

S	Parameters	Sub-Parameters	Total
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#			Marks:
	Price		30
		<p>Lowest Price will get full marks.</p> <p>The formula to calculate the marks for the price submitted is:</p> <p><math display="block">\frac{[\text{Lowest Price (Fm)}/\text{Price of Bid under consideration (F)}] \times 100 \times 0.30}{1}</math></p>	30

Bids having items not fulfilling/in compliance with the required specifications shall be treated as non-responsive bids.

## 10. REDRESSING OF GRIEVANCES

1. The purchaser shall constitute a committee comprising of disagreed & notified by the competent authority proper powers and authorizations to address the complaints of bidders that may occur prior to the entry into force of the procurement contract.
2. Any bidder feeling aggrieved by any act of the purchaser after the submission of his bid may lodge a written complaint concerning his grievances not later than 05 days after the announcement of the bid evaluation report.
3. The grievance redressed Officer shall investigate and decide upon the complaint within 06 days of the receipt of the complaint. The report along with decision shall be forwarded to the purchaser officer within the prescribed period.
4. Mere fact of lodging of a complaint shall not warrant suspension of the procurement process.
5. Note: Grievance notified & designated who can invite appropriate official as co-opted member for grievance.

## 11. AWARD OF CONTRACT:

Contracts shall be confirmed through a written agreement signed by the successful bidder and the LRH-MTI Peshawar.

## 12. PAYMENT:

- a. No advance payment will be permissible.
- b. The payment will be made after successful supply, installation/inspection and test run of all requisite items.

## 13. Sub-Letting Contract:

The supplier shall not sub-let or assign this Contract or any part thereof without the written permission of the procuring entity. In the event of the Services provider subletting or assigning this Contract or any part thereof without such permission, the procuring entity shall be entitled cancel the Contract and to purchase the goods elsewhere on the supplier account and risk and the supplier shall be liable for any loss or damage which the procuring entity may sustain in consequence of arising out of such purchase.