



Patients' Aid Foundation (PAF)

on premises at the Jinnah Postgraduate Medical Center (JPMC)

Karachi

Bidding Documents

Provision of Supply, Installation and

Commissioning of Equipment for Phase-

II Surgical Complex at JPMC Karachi.

For The Financial Year 2021-2022

Due on 07th May 2022 at 11:00 am

Issued By:

Chairman Patients' Aid Foundation & Supervisory Committee, Surgical Complex, JPMC
Cyberknife & Tomotherapy, Room 16, Jinnah Postgraduate Medical Center,

Rafiqi Shaheed Road, Karachi – Pakistan 75510

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Patients' Aid Foundation
Jinnah Postgraduate Medical Centre, Karachi
Government of Sindh

**SUPPLY, INSTALLATION & COMMISSIONING OF EQUIPMENT FOR 6TH FLOOR SURGICAL COMPLEX
AT JINNAH POSTGRADUATE MEDICAL CENTRE-KARACHI**

1. The Office of the Chairman Patients' Aid Foundation & Supervisory Committee, Surgical Complex, JPMC Karachi invites sealed tenders as per following details during financial year 2021 – 2022. The International manufacturer having local agent / sole distributor with established credentials in terms of technical, financial and managerial capabilities are eligible to participate.

S.No	Tender details	Tender Fee	Pre-bid meeting	Tender due date
i.	Modular Operation Theatres	Rs. 5,000	09 th April 2022	07 th May 2022
ii.	Medical equipment for Operation theatre's.	Rs. 5,000	09 th April 2022	07 th May 2022
iii.	Bedhead panels for pre operation & recovery	Rs. 5,000	09 th April 2022	07 th May 2022
iv.	Dedicated PACS with integrated HIMS	Rs. 5,000	09 th April 2022	07 th May 2022
v.	UPS	Rs. 5,000	09 th April 2022	07 th May 2022
vi.	Lecture Hall Roof Top of Surgical Complex	Rs. 5,000	09 th April 2022	07 th May 2022
vii.	Security camera and fire alarms.	Rs. 2,000	09 th April 2022	07 th May 2022
viii.	Floor Scrubber	Rs. 5,000	09 th April 2022	07 th May 2022

2. Interested bidders may obtain Tender Documents from the office of the Secretary Supervisory Committee, Surgical Complex, (Address: Room no 16 Cyberknife & Tomotherapy Building, Jinnah Postgraduate Medical Center, Rafiqi Shaheed Road, Karachi – Pakistan 75510) on payment of non-refundable fee in the form of Pay Order/CDR/Demand Draft in the name of Patient' Aid Foundation, during office hours on or before **06th May 2022**.
3. Tender documents can also be downloaded from the website of Patients Aid Foundation /JPMC.
4. Bidders are required to submit their written application for issuance of tender documents along with copy of CNIC, NTN & GST certificate. After purchasing the tender if any firm / bidder have any reservation or observations regarding specs are required to submit their queries in writing on or before **09th April 2022**.
5. Single stage / two envelopes bidding procedure shall be adopted. The envelope shall be marked as "TECHNICAL PROPOSAL" and "FINANCIAL PROPOSAL" (sealed) in bold and legible letters. The financial proposal of bids found technically non-responsive shall be returned un-opened to the respective bidders.
6. The bidder shall ensure that their tenders are complete in all respects. The bidder should submit tender document till **07th May 2022 at 11:00 am** as per schedule at Secretary Supervisory Committee, Surgical Complex (Address: Room no 16 Cyberknife & Tomotherapy Building, Jinnah Postgraduate Medical Center, Rafiqi Shaheed Road, Karachi – Pakistan 75510). Technical proposal will be opened on the same day at **11:30 am** in the Lecture Hall 2nd Floor Department of Radiology JPMC, Karachi. The incomplete tenders and tenders received after the closing date and time will not be considered.
7. In case the date of opening or last date of submission is declared as public holiday by the Government or non-working day due to any reason, the next official working day shall deemed to be the date of submission and opening of bids. The time and venue will remain the same.

8. Original bid security / earnest money 2% of total cost in the form of Pay Order/CDR/Demand Draft in favor of Patient' Aid Foundation should be attached with the financial bid and photocopy of the same without showing the value attached with the technical bid as demanded in the bidding documents.
9. The undersigned / tenderer reserve the rights to reject any or all the tenders without assigning any reason thereof.

Chairman Patient' Aid Foundation & Supervisory Committee, Surgical Complex, JPMC
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Instructions to Bidders (ITB)

INTRODUCTION

Surgical & OPD complex of JPMC was an ECNEC approved project of Federal Government (Worth USD 60.000 million). The then PM Shoukat Aziz did its ground breaking in March 2007 at Governor House Karachi. It was announced that project will be completed in three years because of the poor condition of existing surgical block which had been declared unfit for use by Pak PWD in 2006. But till 2014, funds were not released and patients kept on suffering. Therefore, the then Executive Director Prof. Tasnim Ahsan requested PAF to arrange funds for this mega project.

Since NESPAK had already designed the project in consultation with a US based architect Cathryn Bang and partners so PAF requested the NESPAK for value engineering and agreed at a target of USD 35.000 million instead of USD 60.000 million for a nine story building having 550 beds, 18 Operation theaters and an OPD complex for 4000 patients daily.

PAF also agreed to arrange USD 21.000 million for building and USD 3.000 million for equipment. Government of Sindh pledged funding for equipment costing USD 11.000 million.

1. SOURCE OF FUND

- 1.1. The Government of Sindh has committed to provide funding Patients' Aid Foundation, Jinnah Postgraduate Medical Center-Karachi during the financial year 2021-2022, to equip the Surgical Complex of JPMC, Karachi. A Project of PAF & funded by Government of Sindh.

2. ELIGIBLE BIDDERS

- 2.1 This Invitation for Bids is open to all original Manufacturers, within Pakistan and abroad, and their Authorized Agents/Importers/Suppliers subject to the conditions that:
- 2.2 The Agents/Suppliers/Importers must possess valid sole authorization from the Manufacturer. In case of Manufacturers, they should have documentary proof to the effect that they are the original Manufacturers of the required specifications.
- 2.3 Bidders shall not be under a declaration of ineligibility for corrupt and fraudulent practices issued by any Government (Federal or Provincial), a local body or a public sector organization.
- 2.4 The bidders should have operational office(s) in Pakistan and possess financial sustainability to meet timely supply.

3. ELIGIBLE GOODS

- 3.1 In the case of Goods offered from outside the Pakistan, Certified ISO, CE , FDA and respective quality certified products as required in the bidding document shall be considered as eligible goods by the bidder;
- 3.2 Goods should be packed and transported in a material that meets international standards;
- 3.3 Goods should meet required specification in the bidding document.

THE BIDDING PROCEDURE

4. SINGLE STAGE – TWO ENVELOPES BIDDING PROCEDURE

- 4.1 Single stage - two envelopes bidding procedure will be applied.
- 4.2 The bid shall comprise a single package containing two separate envelopes. Each envelope shall contain separately the technical proposal and the financial proposal;
- 4.3 The envelopes shall be marked as "TECHNICAL PROPOSAL" and "FINANCIAL PROPOSAL" in bold and legible letters to avoid confusion;
- 4.4 Initially, only the envelope marked "TECHNICAL PROPOSAL" shall be opened; **for technical bid each vendor is requested to fill up the Performa of technical specification with the desired information in the last column with verifiable references form the data sheets / technical brochures. Please fill up on the same MS Word format as per desired information saying YES/NO and if needed give proper pagination, paragraph & line description for easy assessment by technical committee.**
- 4.5 The envelope marked as “FINANCIAL PROPOSAL” shall be retained in the custody of the Patients’ Aid Foundation without being opened.
- 4.6 Patients’ Aid Foundation shall evaluate the technical proposal, without reference to the financial proposal and reject any proposal which does not conform to the specified requirements.
- 4.7 The financial proposal of bids shall be opened in the presence of bidders qualifying in technical evaluation at time, date and venue to be announced / communicated in advance by e-mail.
- 4.8 Financial proposal of the bids failing to qualify in the technical evaluation will be returned to the bidders unopened.
- 4.9 The bidder quoting the lowest price and qualifying as per technical evaluation criteria mentioned in the bidding document shall be declared Successful.

THE BIDDING DOCUMENTS

5. CONTENTS OF BIDDING DOCUMENTS

- 5.1 The Bidding Documents:
In addition to the Tender Notice, the bidding documents include:
 - i. Instructions to Bidders (ITB);
 - ii. General Conditions of Contract (GCC);
 - iii. Special Conditions of Contract (SCC);
 - iv. Schedule of Requirements;
 - v. Technical Specifications;
 - vi. Contract Form;

- vii. Bid Form;
- viii. Price Schedule;
- ix. Integrity Pact

5.2 In case of discrepancies between the Tender Notice and the Bidding Documents listed in 5.1 above, the Bidding Documents shall take precedence.

5.3 The bidders are expected to examine all instructions, forms, terms, and specifications in the bidding documents. Failure to furnish complete information required in the bidding documents or to submit a bid not substantially responsive to the bidding documents may result in rejection.

6. AMENDMENT OF BIDDING DOCUMENTS

6.1 At any time prior to the deadline for submission of bids, Patients' Aid Foundation may, for any reason, whether at its own initiative or in response to any query or clarification requested by a prospective Bidder, modify the bidding documents by amendment.

6.2 All prospective bidders that have received the bidding documents will be notified the amendment(s) in writing or by email which will be binding on them.

6.3 In order to allow prospective bidders reasonable time to take the amendment(s) into account in preparing their bids, Patients' Aid Foundation may, at its discretion, extend the deadline for submission of the bids.

PREPARATION OF BIDS

7. LANGUAGE OF BID

7.1 Preparation of Bids

The bid prepared by the bidder, as well as all correspondence and documents relating to the bid exchanged by the bidder and Patients' Aid Foundation shall be in English. Supporting documents and printed literature furnished by the bidder may be in another language provided these are accompanied by an accurate translation of the relevant passages in English, in which case for purposes of interpretation of the Bid, the translated version shall prevail.

8. DOCUMENTS COMPRISING THE BID

8.1 The bid prepared by the Bidder shall comprise the following:

- i. Bid Form and Price Schedule (to be submitted along with financial proposal);
- ii. Documentary evidence to the effect that the Bidder is eligible to bid and is qualified to perform the Contract if its bid is accepted;
- iii. Documentary evidence to the effect that the goods to be supplied by the Bidder are eligible goods as defined in clause-3 and conform to the bidding documents; and
- iv. Photo copy of Bid Security with hidden amount.

9. BID PRICES

- 9.1 The Bidder shall indicate in the Price Schedule, the unit prices and total bid price of the goods it proposes to supply under the Contract.
- 9.2 Prices indicated on the Price Schedule shall be on CIF basis except local items.
- 9.3 Price Schedule is to be filled in very carefully, preferably typed. Any alteration/correction must be initialed.
- 9.4 The Bidder should quote the price(s) of goods according to the technical specifications as provided in the Technical Specifications. The specifications of goods inferior from the ones required by the Patients' Aid Foundation shall straightway be rejected.
- 9.5 The Bidder is required to offer competitive price(s). All price(s) must include the project management, drawing, transportation, loading/unloading/ installation/ commissioning/ up-to satisfaction of end user.

10. BID CURRENCIES

- 10.1 Prices shall be quoted in respective foreign currency for goods offered.

11. DOCUMENTS ESTABLISHING GOODS' ELIGIBILITY

- 11.1 The Bidder shall furnish along with technical proposal, as part of its bid, documents establishing eligibility and conformity of the goods which it proposes to supply under the Contract.
- 11.2 Submission of documents of Goods offered as under:
 - i. Original Brochure
 - ii. Technical Datasheet/ specifications
 - iii. ISO, CE, FDA, 510(k) or whichever certification is required
 - iv. Customer List (Local & International)
- 11.3 No technical proposal / bid will be considered in the absence of mandatory document(s) or sample(s) as per ITB 12.2. The offer will be rejected / ignored for further evaluation in such absence.

12. BID SECURITY

- 12.1 The Bidder shall furnish, as part of its financial proposal, a Bid Security (earnest money) in the amount specified in Special Conditions of Contract (SCC). Unsuccessful bidders' Bid Security will be returned soon after approval of the successful Bidder. The successful Bidder's Bid Security will be discharged upon signing of contract and furnishing the Performance Security bond, duly guaranteed by a scheduled bank.
- 12.2 The Bid Security is required to protect Patients' Aid Foundation against the risk of Bidder's conduct, which would warrant the Security's forfeiture;
- 12.3 The Bid Security may be forfeited:
 - i. If a Bidder withdraws its bid during the period of bid validity; or
 - ii. In the case of a successful Bidder, if the Bidder fails:

- a. To sign the Contract; or
- b. To complete the supplies in accordance with the General Conditions of Contract.

13. BID VALIDITY

- 13.1 Bids shall remain valid for a period of 120 days. A bid valid for a shorter period shall be treated as non-responsive
- 13.2 Patients' Aid Foundation shall ordinarily be under an obligation to process and evaluate the bids within the stipulated bid validity period. However, for any reasons to be recorded in writing, if any extension is considered necessary, all those who have submitted their bids shall be asked to extend their respective bid validity period.

SUBMISSION OF BIDS

14. SEALING AND MARKING OF BIDS

- 14.1 The envelopes shall be marked separately as "TECHNICAL PROPOSAL" and "FINANCIAL PROPOSAL" in bold and legible letters to avoid confusion. The Bidder shall seal the proposals/bids in separate envelopes and put them in a relatively bigger envelope to be sealed.
- 14.2 The inner and outer envelopes shall:
 - i) Be addressed to Patients' Aid Foundation at the address given in the Tender Notice (Invitation of Bids); and
 - ii) Bear the Project name indicated in the [Invitation for Bids (IFB)] title and number indicated, and a statement: "DO NOT OPEN BEFORE," to be completed with the time and the date specified in the Tender Notice.
- 14.3 The inner envelopes shall also indicate the name and address of the Bidder to enable Patients' Aid Foundation to return the bid unopened in case it is declared as "non-responsive" or "late" as the case may be.
- 14.4 If the outer and the inner envelopes are not sealed and marked as required, Patients' Aid Foundation will assume no responsibility for the bid's misplacement or premature opening.

15. DEADLINE FOR SUBMISSION OF BIDS

- 15.1 Bids must be submitted by the bidders and received by Patients' Aid Foundation at the specified address not later than the time and date specified in the Tender Notice.
- 15.2 Patients' Aid Foundation may, at its convenience, extend this deadline for submission of bids by amending the bidding documents in which case all rights and obligations of Patients' Aid Foundation and the Bidders previously subject to the deadline will thereafter be subject to the deadline as extended.

16. LATE BID

- 16.1 Any bid received by Patients' Aid Foundation after the deadline for submission of bids

prescribed by Patients' Aid Foundation shall not be entertained and returned unopened to the bidder.

17. WITHDRAWAL OF BIDS

- 17.1 The Bidder may after its submission withdraw prior to the expiry of the deadline prescribed for submission of bids.

OPENING AND EVALUATION OF BIDS

18. OPENING OF BIDS BY PATIENTS' AID FOUNDATION

- 18.1 The Procuring Agency will initially open only the envelopes marked "TECHNICAL PROPOSAL" in the presence of Bidders' or their representatives who choose to be present at the time of bid opening on the date, time and place specified in the Tender Notice. The bidders or their representatives who are present shall sign the Attendance Sheet evidencing their attendance. The envelope marked as "FINANCIAL PROPOSAL" shall be retained in the custody of Procuring Agency without being opened till the completion of the evaluation process.
- 18.2 The bidders' names, item(s) for which they quoted their rate(s) and such other details as Patients' Aid Foundation may consider appropriate, will be announced at the time of opening of technical proposals. However, at the time of opening of Financial Proposals on a pre-indicated date, time and venue, the bid prices, discounts (if any), and the presence or absence of requisite Bid Security and such other details as Patients' Aid Foundation, may consider appropriate, will be announced.
- 18.3 Any financial bid found without the prescribed bid security (earnest money) shall be straightaway rejected even if it qualified in the process of technical evaluation.
- 18.4 Patients' Aid Foundation will prepare minutes of the technical and financial bids opening meetings and will get these minutes signed by the Chairman and members of the Supervisory Committee constituted by Health Department Government of Sindh vide reference no: NO.SO(B)1-45/ (PAF-JPMC)2020-21.

19. CLARIFICATION OF BIDS

- 19.1 During the process of evaluation of the bids, Patients' Aid Foundation may ask a Bidder for any clarifications of its bid. The request for such clarifications and the response shall be in writing. However, no change in the quoted price or substance of the bid shall be sought, offered, or permitted.

20. PRELIMINARY EXAMINATION

- 20.1 Patients' Aid Foundation will examine the bids to determine whether they are complete; whether any computational errors have been made; whether the required sureties have been furnished; whether the documents have been properly signed and linked, and whether the bids are generally in order.
- 20.2 Arithmetical errors in a financial bid will be rectified in the following manner:
- i) If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail,

and the total price shall be corrected.

- ii) If there is a discrepancy between words and figures, the amount in words will prevail.
- iii) If the Bidder/Supplier does not accept the correction of the errors, its bid will be rejected.

- 20.3 The Project & Procurement Committee may waive any minor infirmity, non-conformity, or discrepancy in a bid if in their view, it does not constitute some material deviation, provided that such waiver does not prejudice or affect the relative ranking of any Bidder.
- 20.4 If a bid is found substantially non-responsive, it will be rejected by Patients' Aid Foundation. It cannot subsequently be made responsive by the Bidder by correction of the nonconformity / discrepancy.

21. EVALUATION & COMPARISON OF BIDS

- 21.1 Patients' Aid Foundation will evaluate and compare the bids, which have been determined to be substantially responsive.
- 21.2 The technical proposals/bids will be evaluated on the basis of Technical Specification / rule, previous supply experience, financial soundness working period / backup service with part-without part and such other details as Patients' Aid Foundation may consider appropriate for making a sound judgment. However, the financial proposal will be evaluated on the basis of price and bid Security, being major factor, without ignoring the other relevant conditions as well.

22. EVALUATION CRITERIA

22.1 Technical Proposals

DOCUMENTS **CHECKLIST**

Please review the following list of **MANDATORY DOCUMENTS** to be enclosed with the Technical Proposal.

S.No.	Document Description	Yes / No	Page No.
1.	Tender Purchase Receipt (Original) / Tender Fee Pay Order		
2.	Bid Security [Copy with value hidden in Technical Proposal; Original in Financial Proposal]		
3.	Bidding Documents issued by Patients' Aid Foundation [Duly filled, Signed & Stamped by Bidder]		
4.	Item-wise/ Feature – wise product compliance/ deviation sheet/ statement on Bidder's Letterhead. [Duly filled, Signed & Stamped by Bidder]		
5.	Technical Proposal on bidder's letterhead [Duly filled, Signed & Stamped by Bidder]		
6.	Undertaking [as per attached Sample]		
7.	Certificates [as per attached Sample]		
8.	Income Tax & GST Registration Certificate with Active tax payer status on FBR.		
9.	Valid Professional Tax Certificate (Sindh)		
10.	DRAP Registration/License [For medical devices/equipment]		
11.	Income Tax Return (last 3 years)		
12.	Audited Financial Statement (last year)		
13.	Manufacturer's Authorization to Bidder		
14.	Brochure or Catalogue (Original) [Submission in form of photocopy, photographs or word document is not acceptable]		

15.	Technical Data Sheet		
16.	Quality Certificates such as ISO, CE, FDA and Origin etc. [Required certification mentioned in tender specification of each item]		

b) Merit System:

The following merit system for weighing evaluation factors/criteria will be applied for evaluation of technical proposal.

BIDDER EVALUATION CRITERIA

To be applicable: From item No: _____
to Item No: _____

S. No.	Parameter	Max Points	Points
1	Conformity to the Technical Specifications	40	
	a) Fully compliant with the required specifications	40	
	b) Compliant with minor deviation $\leq 10\%$ from the required specifications subject to main function is not affected	30	
	c) Major deviation(s) from Tender Specifications 4 minor deviations (affecting function $\geq 10\%$) will be considered as a major deviation	0	
2	Original Equipment Manufacturer (OEM) or Brand Quoted	10	
	a) Experience of manufacturer on quoted goods ≥ 10 years ≥ 5 years and < 10 years ≥ 2 years and < 05 years < 1 year *Manufacturer's Declaration on its letterhead with proper factory address, phone, email address and website link must be mentioned.	3 2 1 0	
	c) Quality certification: ISO 9001	1	
	d) Quality certification: CE / MDD/ MHLW JIS	3	
	e) Quality certification: US FDA / FDA 510(k)	3	
3	Performance & Experience of Bidder	05	
	a) Quality management System certification. i.e. ISO 9001 etc	1	
	b) Bank Account Maintenance Certificate Accumulative annual transaction of ≥ 300 million Pak Rupees or; Accumulative annual transaction of ≥ 200 million Pak Rupees or; Accumulative annual transaction of ≥ 100 million Pak Rupees or; Accumulative annual transaction of < 100 million Pak Rupees	4 3 2 0	
4	Bidder's prior experience for supplying the Medical Equipment / Instruments to the Public / Private Sector Universities / Government / Semi-Government Organization (Provincial / Federal / Local) in Pakistan during last 3 years Documentary evidence in shape of Purchase Order / Contract Award and Installation Report / Satisfactory performance report / certificate must be attached.	20	
	a) Single Purchase Order / Contract Award valuing PRs. 15.000 million or above. (05 marks for each PO / Contract Award – Maximum 10 Marks)	10	

	b) Single Purchase Order / Contract Award valuing PRs. 10.000 million or above.	06	
	c) Single Purchase Order / Contract Award valuing PRs. 5.000 million or above.	04	
5	After Sales Services Capability of Bidder in Karachi.	15	
5(i)	Technical Staff		
	a) Diploma of Associate Engineer (DAE) in relevant field (Electronics / Biomedical) (1 mark for each)	02	
	b) Graduate Engineer in relevant field (Electronics / Biomedical) (2 marks for each)	04	
	c) Foreign Trained Engineer on quoted Product having the valid registration with Pakistan Engineering Council – Foreign Training Certificate must be attached (02 mark for each)	04	
5(ii)	Workshop facility Testing / Calibration of Equipment Availability of Workshop in Karachi with covered area of ≥ 200 sqft, list of testing and calibration tools, detail of spare parts availability in stock. Service address must be attached with Google pin (for any surprise visit of procurement committee/nominee)	05	
6	Quoted Brand's Performance	10	
	a) References of OEM brand / model		
	(i) Government / Semi-Government Teaching Hospital / Institute (1 mark for each)	05	
	(ii) International Hospital / Institute (1 mark for each)	05	
	Total Points	100	

Bidders achieving minimum 75 marks will be considered only.

22.2 Financial Proposals:

- a) After technical evaluation is completed, Patients' Aid Foundation shall inform the disqualified bidders that their bid has been found non-responsive and that their financial proposal will be returned unopened after completing the process. Patients' Aid Foundation shall simultaneously inform in writing the qualified bidders date, time and place for opening the financial proposals. Bidder's attendance at the opening of financial proposal is optional.
- b) Financial proposals shall be opened publicly in the presence of the bidders or their representatives who choose to be present. Total prices quoted by each the financial proposal shall also be announced and recorded.

23. CONTACTING Patients' Aid Foundation

- 23.1 No bidder shall contact Patients' Aid Foundation on any matter relating to its bid, from the time of the bid opening to the time the Contract is awarded. If any bidder wishes to bring additional information to the notice of Patients' Aid Foundation, it may do so in writing.

- 23.2 Any direct or indirect effort by a bidding firm to influence Patients' Aid Foundation 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 Patients' Aid Foundation future tenders.

24. REJECTION OF BIDS

- 24.1 Notwithstanding anything stated here-before after Patients' Aid Foundation may reject any or all bids at any time prior to the acceptance of a bid. Patients' Aid Foundation may upon request communicate to a bidder (subjected to decision of procurement committee), regarding grounds for its rejection, but shall not be under obligation to justify those grounds.

25. RE-BIDDING

- 25.1 If Patients' Aid Foundation has rejected all bids, it may move for a re-bidding or may seek any alternative method of procurement.

26. ANNOUNCEMENT OF EVALUATION REPORT

- 26.1 Patients' Aid Foundation will announce the Evaluation Report and the resultant acceptance or rejection of bids at least 3 days prior to the award of procurement contract.

AWARD OF CONTRACT

27. ACCEPTANCE OF BID AND AWARD CRITERIA

- 27.1 The bidder with lowest evaluated bid under clause 22, if not in conflict with any other law, rules, regulations or policy of the Government, will be awarded the contract within the original or extended period of bid validity.

28. PROCURING AGENCY'S RIGHT TO VARY QUANTITIES

- 28.1 Patients' Aid Foundation reserves the right to increase or decrease the quantity of stores originally specified in the Price Schedule and Schedule of Requirements without any change in unit price or other terms and conditions.

29. LIMITATIONS ON NEGOTIATIONS

- 29.1 Negotiations only for delivery schedule or completion schedules will be conducted.
- 29.2 Negotiations will not be used to change substantially:
- i) The technical quality or details of the requirement, including the tasks or responsibilities of the bidder or the performance of the goods;
 - ii) The terms and conditions of the Contract and;
 - iii) Anything affecting the crucial or deciding factors in the evaluation of the proposals / tenders and / or selection of successful bidder.

30. NOTIFICATION OF AWARD

- 30.1 Prior to the expiry of the original or extended period of bid validity, the successful bidder will be informed in writing of acceptance of its bid by Patients' Aid Foundation

31. SIGNING OF CONTRACT

- 31.1 While conveying acceptance of bid to the successful bidder, Patients' Aid Foundation will send him / her Contract Form provided in the bidding documents, incorporating all points of agreement between the Parties.
- 31.2 Five days after the official announcement of the award, both the successful Bidder and Patients' Aid Foundation will sign and date the Contract on legal stamp paper valuing 0.35% of the value of contract (cost shall be borne by the bidder). In case the successful Bidder, after completion of all codal formalities, shows inability to sign the Contract, its Bid Security / Earnest Money shall be forfeited. The firm may also be blacklisted from taking part in any future bidding of Procuring Agency for a period up to five years. In such a situation, Patients' Aid Foundation may make the award to the next lowest evaluated bidder or move for re-tender.

32. PERFORMANCE GUARANTEE SECURITY

- 32.1 One day before the date of signing of the Contract, the successful Bidder shall furnish 5% Performance Guarantee/Security in line with the Performance Guarantee/Security Form provided with the bidding documents. Upon submission of Performance Guarantee the Bid Security (Earnest Money) will be returned to the Bidder
- 32.2 Failure of the successful Bidder to comply with any of the requirements specified in this document shall be considered as sufficient grounds for the annulment of the award and forfeiture of the Bid Security, in which event Patients' Aid Foundation may make the award to the next lowest evaluated Bidder at the risk and cost of the former.

33. CORRUPT OR FRAUDULENT PRACTICES

- 33.1 The Procuring Agency and the Bidders / Manufacturers / Suppliers / Contractors are expected to observe the highest standard of ethics during the procurement and execution of the Contract. In pursuance of this policy, the relevant terms / phrases as may apply are defined below:
- i) "corrupt practice" means the offering, giving, receiving or soliciting of anything of value to influence the action of Members in the procurement process or in Contract execution; and
 - ii) "fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a Contract to the detriment of Patients' Aid Foundation, and includes collusive practice among Bidders (prior to or after bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive Patients' Aid Foundation of the benefits of free and open competition;
- 33.2 Patients' Aid Foundation will take all possible administrative / legal measures if it is found that the Bidder recommended for award was / is engaged in corrupt or fraudulent practice(s) before or after signing of the contract resulting into the conviction of the

proprietor under criminal case besides blacklisting of the firm either indefinitely or for such period of time as may be determined by Patients' Aid Foundation

- 33.3 Will declare a firm ineligible, either indefinitely or for a stated period of time, for the award of a Contract if it, at any time, determines that the firm has engaged in corrupt or fraudulent practices in competing for or in executing a Contract.

General Conditions of Contract (GCC)

1. DEFINITIONS

1.1. In this Contract, the following terms shall be interpreted as indicated:

- a) "The Contract" means the agreement entered into between Patients' Aid Foundation and the Supplier, as recorded in the Contract Form signed by the Parties, including all attachments and appendices thereto and all documents incorporated by reference therein.
- b) "The Contract Price" means the price payable to the Supplier under the Contract for the full and proper performance of its Contractual obligations.
- c) "The Goods" means Machinery/Equipment and Accessories which the Supplier is required to supply to Patients' Aid Foundation under the Contract.
- d) "The Services" means those services ancillary to the supply of the above goods, such as project management, drawing, and packing, transportation of goods up to the desired destinations and other such obligations of the Supplier covered under the Contract.
- e) "GCC" mean the General Conditions of Contract contained in this section.
- f) "SCC" means the Special Conditions of Contract.
- g) " Patients' Aid Foundation" means the Chairman Patient' Aid Foundation & Supervisory Committee, Surgical Complex, , Secretary Office, Room No 16 Cyberknife & Tomotherapy building, Jinnah Postgraduate Medical Centre, Karachi – 75510, Pakistan.
- h) "The Supplier" means the individual or firm supplying the goods under this Contract.
- i) "Day" means official working day excluding national holidays.

2. APPLICATION

- 2.1 These General Conditions shall apply to the extent that they are not inconsistent with provisions of other parts of the Contract.

3. STANDARDS

- 3.1 The goods supplied under this Contract shall conform to the standards mentioned in the Technical Specifications.

4. USE OF CONTRACT DOCUMENTS AND INFORMATION

- 4.1 The Supplier shall not without the Procuring Agency's prior written consent, disclose the Contract, or any provision thereof, or any specification, plan, drawing, pattern; sample, or information furnished by or on behalf of Patients' Aid Foundation in connection therewith, to any person other than a person employed by the Supplier in the performance of the Contract. Disclosure to such employed person shall be made in confidence and shall extend only, as far as may be necessary, to such performance and not further or otherwise.
- 4.2 Any document, other than the Contract itself, shall remain the property of Patients' Aid Foundation and shall be returned (all copies) on completion of the Supplier's performance under the Contract.
- 4.3 The Supplier shall permit Patients' Aid Foundation to inspect the Supplier's accounts and records relating to the performance of the Supplies.

5. PATENT RIGHTS

- 5.1 The Supplier shall indemnify Patients' Aid Foundation against all third-party claims of infringement of patent, trademark, or industrial design rights arising from use of the Goods or any part thereof in the country.

6. ENSURING STORAGE ARRANGEMENTS

- 6.1 To ensure storage arrangements for the intended supplies, the Supplier shall inform Patients' Aid Foundation at least four weeks prior to the arrival of the consignments at its store/warehouse. However, in case no space is available at its store/warehouse of PAF/JPMC at the time of supply. Holding of equipment in a safe container at parking area of Surgical Complex will be responsibility of the Vendor.

7. INSPECTIONS

- 7.1 Patients' Aid Foundation or its representative shall have the right to inspect and/or test the goods to confirm their conformity to the Contract specifications.
- 7.2 Patients' Aid Foundation reserves the right to have third party inspection, test and, where necessary, reject the goods upon arrival at Procuring Agency's destinations.

8. DELIVERY AND DOCUMENTS

- 8.1 The Supplier shall in accordance with the terms specified in the Schedule of Requirements make delivery of the goods. Details of documents to be furnished by the Supplier are specified in SCC.

9. TRANSPORTATION

- 9.1 The Supplier shall arrange such transportation of the goods at respective Floor of Surgical Complex whatever safe mode is needed to prevent them from damage or deterioration during transit to their final destination as indicated in the Schedule of Requirements.

10. INCIDENTAL SERVICES

- 10.1 The Supplier will be required to provide to the Procuring Agency incidental services

the cost of which should be included in the total bid price.

11. WARRANTY

- 11.1 Warranty mean the period of 3 years from the date on which the Stores have been put into operation and demonstrated to the Hospital staff. In any case this period shall not exceed 2½ years from the date of taking-over certificate.
- 11.2 During the period of warranty, the Contractor shall remedy, at his / her expense, all defects in design, materials, and workmanship that may develop or are revealed under normal use of the goods.
- 11.3 The contractor shall provide guarantee for spare parts for at least 10 years (where applicable).
- 12.4 Patients' Aid Foundation shall promptly notify the Supplier in writing of any claims arising out of this warranty.

12. PAYMENT

- 12.1 The method and conditions of payment to be made to the Supplier under this Contract are specified in SCC.

13. ASSIGNMENT

- 13.1 The Supplier shall not assign, in whole or in part, its obligations to perform to another party under this Contract, except with Patients' Aid Foundation prior written consent.

14. DELAYS IN THE SUPPLIER'S PERFORMANCE

- 14.1 Delivery of the goods shall be made by the Supplier in accordance with the time schedule prescribed by Patients' Aid Foundation in the Schedule of Requirements.
- 14.2 If at any time in the course of performance of the Contract, the Supplier encounters anything impeding timely delivery of the goods, he shall promptly notify Patients' Aid Foundation in writing of the causes of delay and its likely duration. As soon as practicable, after receipt of the Supplier's notice, Patients' Aid Foundation shall evaluate the situation and may, depending on merits of the situation, extend the Supplier's time for performance, with or without liquidated damages, in which case the extension shall be ratified by the Parties by a supplementary Contract to be treated as an addendum to the original contract.
- 14.3 Any undue delay by the Supplier in the performance of its delivery obligations shall render it liable to the imposition of liquidated damages.

15. TERMINATION FOR DEFAULT

- 15.1 Patients' Aid Foundation may, without prejudice to any other remedy for breach of Contract, by a written notice of default sent to the Supplier, terminate this Contract in whole or in part if:
 - a) The Supplier fails to deliver any or all installments of the goods within the period(s)

specified in the Contract, or within any extension thereof granted by Patients' Aid Foundation

- b) The Supplier fails to perform any other obligation(s) under the Contract to the satisfaction of Patients' Aid Foundation; and
- c) The Supplier, in the judgment of Patients' Aid Foundation, has engaged itself in corrupt or fraudulent practices before or after executing the Contract.

16. FORCE MAJEURE

16.1 The Supplier shall not be liable for forfeiture of its Performance Guaranty/ Bid Security, or termination / blacklisting for default if and to the extent that this delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure. For the purposes of this Clause Force Majeure means an act of God or an event beyond the control of the Supplier and not involving the Supplier's fault or negligence directly or indirectly purporting to mal-planning, mismanagement and /or lack of foresight to handle the situation. Such events may include but are not restricted to acts of Patients' Aid Foundation in its sovereign capacity, wars or revolutions, fires, floods, earthquakes, strikes, epidemics, quarantine restrictions and freight embargoes. If a Force Majeure situation arises, the Supplier shall promptly notify Patients' Aid Foundation in writing with sufficient and valid evidence of such condition and the cause thereof. The Committee, constituted for redressing grievances, will examine the pros and cons of the case and all reasonable alternative means for completion of purchase order under the Contract and will submit its recommendations to the competent authority. However, unless otherwise directed by Patients' Aid Foundation in writing, the Supplier shall continue to perform its obligations under the Contract as far as is reasonably practical and shall seek reasonable' alternative means for performance not prevented by the Force Majeure event.

17. TERMINATION FOR INSOLVENCY

17.1 Patients' Aid Foundation may at any time terminate the Contract by giving written notice of one month time to the Supplier if the Supplier becomes bankrupt or otherwise insolvent. In that event, termination will be without compensation to the Supplier, provided that such termination will not prejudice or affect any right or remedy which has accrued or will accrue thereafter to the Parties.

18. ARBITRATION AND RESOLUTION OF DISPUTES

18.1 Patients' Aid Foundation and the Supplier shall make every effort to resolve amicably by direct informal negotiations any disagreement or dispute arising between them under or in connection with the Contract.

18.2 If, after thirty (30) days from the commencement of such informal negotiations, the Patients' Aid Foundation and the Supplier have been unable to resolve amicably a Contract dispute, either party may require that the dispute be referred to the Arbitrator for resolution through arbitration.

18.3 In case of any dispute concerning the interpretation and/or application of this Contract is to be settled through arbitration, the National Centre for Dispute Resolution and an Arbitrator assigned by the Centre &/or his nominee shall act as a sole arbitrator. The decisions taken and/or award given by the sole arbitrator shall be final and binding on the Parties unless appealed in the High Court of Sindh.

19. GOVERNING LANGUAGE

19.1 The Contract shall be written in English language. All correspondence and other documents pertaining to the Contract, which are exchanged by the Parties, shall be written in English.

20. APPLICABLE LAW

20.1 This Contract shall be governed by the laws of Pakistan and the courts of Pakistan shall have exclusive jurisdiction.

Special Conditions of Contract (SCC)

21. DEFINITIONS (GCC CLAUSE 1)

GCC 1.1 (g) The Procuring Agency &/OR the Patients Aid Foundation is Chairman Patient' Aid Foundation & Supervisory Committee, Surgical Complex, Room no 16, Cyberknife & Tomotherapy, Jinnah Postgraduate Medical Center, Rafiqui Shaheed Road, Karachi – Pakistan 75510

GCC 1.1 (h) The Supplier is: _____

(Name and address of the successful bidder)

22. BID SECURITY (ITB CLAUSE 12)

ITB 12.1 The Bidder shall furnish, as part of its financial proposal/bid, refundable Valid Bid Security/Earnest Money in Pak Rupees @ 2% fixed In the shape of Bank Draft / Pay Order / Call Deposit / Bank Guarantee in the name of the Chairman Patient' Aid Foundation & Supervisory Committee, Surgical Complex, JPMC, Karachi. The financial bid found deficient of the Bid Security will be rejected. No personal cheque in lieu thereof will be acceptable at any cost. The previous Bid Security, if any, will not be considered or carried forward. However, the Bid Security of the successful Bidder will be returned upon submission of Performance Guarantee equal to 5% of the Contract amount that will remain with the **Chairman Patient' Aid Foundation & Supervisory Committee, Surgical Complex**, Room no 16, Cyberknife & Tomotherapy, Jinnah Postgraduate Medical Center, Rafiqui Shaheed Road, Karachi – Pakistan till satisfactory completion of the Contract period. In case of unsuccessful bidders, the Bid Security will be returned as soon as possible.

23. PERFORMANCE GUARANTEE/SECURITY (ITB CLAUSE 32)

ITB Clause 32.1 After signing of Contract, the successful Bidder shall furnish the Performance Guarantee/Security on legal stamp paper equivalent to 5% of the total Contract amount from any of the scheduled banks. The Performance Guarantee/Security

Form is provided in the bidding documents. Upon submission of Performance Guarantee the Bid Security would be returned to the Bidder.

24. INSPECTIONS AND TESTS (GCC CLAUSE 7)

GCC 7.1 & 7.2 The goods received in the premises of JPMC from the Supplier will be thoroughly inspected and examine by a Committee to make sure that the goods received conform to the specifications laid down in the tender documents and which have been approved by the Procurement.

Committee for procurement. The Procurements Committee reserve the right for third party inspection for the quality of Modular Operation Theatre or any other equipment. Any deficiency pointed out by the Committee shall have to be rectified by the Supplier free of cost.

25. DELIVERY AND DOCUMENTS (GCC CLAUSE 8)

GCC Clause 8.1 For Goods from outside Patients' Aid Foundation country:

The Bidder shall provide the following documents at the time of delivery of goods to the Store / Warehouse of the Patients' Aid Foundation Jinnah Postgraduate Medical Center, for verification duly completed in all respects:

- i) Manufacturer's detailed packing list.

26. WARRANTY (GCC CLAUSE 11)

GCC 12.1 The goods shall be accompanied by manufacturer standard warranty / guarantee or 3 years, whichever is more.

GCC 12.2 Patients' Aid Foundation shall promptly notify the Bidder in writing of any claims arising out of this warranty.

27. PAYMENT (GCC CLAUSE 12)

GCC 13.1 The method and conditions of payment to be made to the Supplier under this Contract shall be as follows:

- a) Payment shall be made through letter of credit at sight for the purchase order based on CPT/CFR basis
- b) Payment shall be made after delivery of goods for the purchase order based on DDP basis

28. PENALTIES/ LIQUIDATED DAMAGES (GCC CLAUSE 14)

GCC 14.1 In case deliveries are not completed within the time frame specified in the schedule of requirements, a Show Cause Notice will be served on the Supplier

which will be following by cancellation of the Contract to the extent of non-delivered portion of installments. No supplies will be accepted and the amount of Performance Guarantee / Security to the extent of non-delivered portion of supplies of relevant installments will be forfeited. If the firm fails to supply the whole installments, the entire amount of Performance Guarantee/Security will be forfeited to the Patients' Aid Foundation Account and the firm will be blacklisted at least for two years for future participation in bids:

29. ARBITRATION AND RESOLUTION OF DISPUTES (GCC CLAUSE 18)

GCC 18.3 Dispute resolution mechanism to be applied shall be as follows:
In case of any dispute concerning the interpretation and/or application of the Contract, it shall be settled through arbitration. The National Centre for Dispute Resolution & their Arbitrator assigned there-in &/or his nominee shall act as sole arbitrator. The decisions taken and/or award given by the arbitrator shall be final and binding on the Parties unless appealed in the High Court of Sindh at Karachi

30. GOVERNING LANGUAGE (GCC CLAUSE 19)

GCC 19.1 The language of this Contract shall be English.

31. APPLICABLE LAWS (GCC CLAUSE 20)

GCC 20.1 The Contract shall be governed by the Laws of Pakistan and the Courts of Pakistan shall have exclusive jurisdiction.

32. TRAININGS

Vendors should provide International service and Application (if applicable) training to biomedical Engineer for smooth and proper working of equipment for long time of machinery and local trainings for end user for satisfactory operation of equipment.

33. NOTICES Procuring Agency's address for notice purposes:

Chairman Patients' Aid Foundation & Supervisory Committee, Surgical Complex, Cyberknife & Tomotherapy, Room 16, Jinnah Postgraduate Medical Center, Rafiqi Shaheed Road, Karachi – Pakistan 75510
E-mail: chairman.paf@pafjpmc.org
Cell: +92306-2727913

Supplier's address for notice purposes:

Bidder: _____

Contact Person & Designation: _____

Phone: _____ Fax: _____

Mobile: _____

Email: _____

Schedule Of Requirement (s) Medical Equipment for Operation Theatres

Supply, installation and commissioning of Medical Equipment for Operation Theatres for the Financial Year 2021-2022

S. No	Name Of Item	Qty	Model	Brand	Country of Origin	Delivery
1.	OT Table (General Surgery, ENT, Thoracic, Plastic Surgery, Urology)	08				
2.	OT Table with Ortho Accessories (Orthopedic)	02				
3.	Anesthesia machine	10				
4.	Diathermy machine	10				
5.	Multipara Monitor	30				
6.	Hypothermia	10				
7.	Blood warmer	10				
8.	Pneumatic compression	10				
9.	Minimal invasive surgery laser therapy equipment	01				
10.	Surgical Instruments (set of 6) for each OT	10				
11.	Trolley (set of 2)	10				
12.	Abdominal Wall Retractor	12				
13.	Chest Wall Retractor	04				
14.	Thoracoscope	01				
15.	Mediastinoscope	01				
16.	Facial nerve stimulator	01				
17.	Electronic Drill	02				

18.	Microdrill	02				
19.	Ortho drill pneumatic & electric	02				
20.	Micro oscillating saw	02				
21.	Operating Microscope	02				
22.	Dermatome	01				
23.	C- Arm with FPD	03				
24.	Color Doppler	02				
25.	High End Color Doppler	01				
26.	Endoscope with Gastroscope, Duodenoscope with snare	01				
27.	Endoscope with Colono scope & Sigmoid scope	01				
28.	Harmonic Scalpel	01				
29.	Laproscope	02				
30.	RF ablation	01				
31.	Ultrasonic Surgical Aspirator	01				
32.	Electronic Tourniquet	02				
33.	Arthroscope	02				
34.	FESS	02				
35.	4K Endocam System	01				
36.	Bipolar TURP	01				
37.	Infusion pump	20				
38.	Syringe pump	40				

39.	Crash Cart Trolley with Defibrillator	06				
40.	Video Laryngoscope	10				
41.	Transport Ventilators	04				
42.	ECG Machine	04				
43.	Suction Machine	04				
44.	Mobile Ultrasound	02				
45.	Mobile X-Ray Machine with DR	02				
46.	Floor mounted Air Cleaners	02				
47.	X Ray illuminators	20				
48.	Micro Surgical System For ENT Surgery	01				
49.	Capnograph	10				

Bidder Authorized Signature: _____

Bidder Name: _____

Contact Person: _____

Contact No: _____

Bid Form

Date:

To: [Name and address of Procuring Agency]

Dear Sir,

Having examined the Bidding Documents, the receipt of which is hereby duly acknowledged, we, the undersigned, offer to supply and deliver the goods specified in the said Bidding Documents for the sum of [Total Bid Amount], [Bid Amount in words] or such other sums as may be ascertained in accordance with the Schedule of Prices attached herewith and made part of this bid.

We undertake, if our bid is accepted, to deliver the goods in accordance with the delivery schedule specified in the Schedule of Requirements.

If our bid is accepted, we shall obtain an unconditional guarantee of a bank in the sum of 5% of the Contract Price for the due performance of the Contract, in the form prescribed by Patients' Aid Foundation.

We agree to the validity of this bid till 30th June 2022 from the date fixed for financial bid opening and it shall remain binding upon us and may be accepted at any time before the expiration of that period.

Until a formal Contract is prepared and executed, this bid, together with the written acceptance thereof and notification of award, by Patients' Aid Foundation, shall constitute a binding Contract between us.

We understand that you are not bound to accept the lowest or any bid you may receive. Dated

this _____ day of _____ 2021.

Signature
(In the capacity of)

Duly authorized to sign bid for and on behalf of _____

Price Schedule

Supply, installation and commissioning of Medical Equipment for Operation Theatres for the Financial Year 2021-2022

S. No	Name Of Item	Qty	Unit Price CFR	Total Price CFR
1.	OT Table (General Surgery, ENT, Thoracic, Plastic Surgery, Urology)	08		
2.	OT Table with Ortho Accessories (Orthopedic)	02		
3.	Anesthesia machine	10		
4.	Diathermy machine	10		
5.	Multipara Monitor	30		
6.	Hypothermia	10		
7.	Blood warmer	10		
8.	Pneumatic compression	10		
9.	Minimal invasive surgery laser therapy equipment	01		
10.	Surgical Instruments (set of 6) for each OT	10		
11.	Trolley (set of 2)	10		
12.	Abdominal Wall Retractor	12		
13.	Chest Wall Retractor	04		
14.	Thoracoscope	01		
15.	Mediastinoscope	01		
16.	Facial nerve stimulator	01		
17.	Electronic Drill	02		

18.	Microdrill	02		
19.	Ortho drill pneumatic & electric	02		
20.	Micro oscillating saw	02		
21.	Operating Microscope	02		
22.	Dermatome	01		
23.	C- Arm with FPD	03		
24.	Color Doppler	02		
25.	High End Color Doppler	01		
26.	Endoscope with Gastroscope, Duodenoscope with snare	01		
27.	Endoscope with Colono scope & Sigmoid scope	01		
28.	Harmonic Scalpel	01		
29.	Laproscope	02		
30.	RF ablation	01		
31.	Ultrasonic Surgical Aspirator	01		
32.	Electronic Tourniquet	02		
33.	Arthroscope	02		
34.	FESS	02		
35.	4K Endocam System	01		
36.	Bipolar TURP	01		
37.	Infusion pump	20		
38.	Syringe pump	40		
39.	Crash Cart Trolley with Defibrillator	06		

40.	Video Laryngoscope	10		
41.	Transport Ventilators	04		
42.	ECG Machine	04		
43.	Suction Machine	04		
44.	Mobile Ultrasound	02		
45.	Mobile X-Ray Machine with DR	02		
46.	Floor mounted Air Cleaners	02		
47.	X Ray illuminators	20		
48.	Micro Surgical System For ENT Surgery	01		
49.	Capnograph	10		

[SAMPLE FORM: A]

Undertaking

WHEREAS [Bidder Name] hereby undertake against the Tender Enquiry No.____ to abide by the following clauses.

- a) Whether our tender accepted for total, partial or enhanced quantity for all or any single item. I/We agreed to supply and accept the said item(s) at the rates for the supply of contracted quantity within the stipulated period shown in the contract.
- b) If placed order, Equipment/Machinery to be supplied will be original, brand new product / latest model and none of the part is refurbished, replace or old.
- c) We understand and confirm the refund of cost difference if the same goods is/was supplied at lower rates to any other Govt. /Semi Govt. institution in the province in the same fiscal year.
- d) If any of the information submitted in accordance to this tender Enquiry found incorrect, our contract may be cancelled at any stage on our cost and risk.

[Signature for and on behalf of Bidder]

[Date]

Note: This undertaking should be on a stamp paper of Rs. 100/- arranged by the Bidder. It should be enclosed inside the Technical Proposal by the Bidder.

[SAMPLE FORM: B]

Certificate

To

[Name & Address of Patients' Aid Foundation

WHEREAS [Bidder Name] hereby certify against the Tender Enquiry No. Abide by the following clauses.

- a) We guarantee to supply the stores exactly in accordance with the requirement specified in the tender documents.
- b) We guarantee **letter** that the supplied item(s) is original / brand new product.
- c) Our firm is not black listed in any **Government** Department.

Authorized Sign & Stamp

[Bidder Name]

Note: This certificate should be on the letterhead of the Bidder and should be signed by a person competent and having the power of attorney to bind the Bidder. It should be enclosed inside the Technical Proposal by the Bidder.

[SAMPLE FORM: C]

Contract

THIS AGREEMENT made the _____ day of _____ 20____ between [name of Procuring Agency] of [country of Procuring agency] (hereinafter called “Patients’ Aid Foundation”) of the one part and [name of Supplier] of [city and country of Supplier] (hereinafter called “the Supplier”) of the other part:

WHEREAS Patients’ Aid Foundation invited bids for certain goods and ancillary services, viz., [brief description of goods and services] and has accepted a bid by the Supplier for the supply of those goods and services in the sum of [contract price in words and figures] (hereinafter called “the Contract Price”) as follows.

S. No.	Item Description	Model	Brand	Qty	Unit Price	Total Price
1	2	3	4	5	6	7

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract referred to.
2. The following documents shall be deemed to form and be read and construed as part of this Agreement, viz.:
 - (a) The Bid Form and the Price Schedule submitted by the Bidder;
 - (b) The Schedule of Requirements;
 - (c) The Technical Specifications;
 - (d) The General Conditions of Contract;
 - (e) The Special Conditions of Contract; and
 - (f) Patients’ Aid Foundation Notification of Award.
3. In consideration of the payments to be made by Patients’ Aid Foundation to the Supplier as hereinafter mentioned, the Supplier hereby covenants with Patients’ Aid Foundation to

provide the goods and services and to remedy defects therein in conformity in all respects with the provisions of the Contract

4. Patients' Aid Foundation hereby covenants to pay the Supplier in consideration of the provision of the goods and services and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the contract at the times and in the manner prescribed by the contract.

IN WITNESS where of the parties hereto have caused this Agreement to be executed in accordance with their respective laws the day and year first above written.

Patients' Aid Foundation

Supplier

Authorized Signature & Official Stamp

Authorized Signature & Official Stamp

Patients' Aid Foundation

Bidder Name

Address

Address

Contact No.

Contact No.

Witness

Witness

Name, Sign & CNIC No

Name, Sign & CNIC No

[SAMPLE FORM: D]

Performance Guarantee/Security Form

To:

[Name & Address of Patients' Aid Foundation]

Whereas [**Name of Bidder**] (hereinafter called "the Bidder") has undertaken, in pursuance of Contract No. [**Number**] dated [**date**] to supply [**description of goods**] (hereinafter called "the Contract").

And whereas it has been stipulated in the said Contract that the Bidder shall furnish to Patients' Aid Foundation with a Bank Guarantee by a scheduled bank for the sum of 5% of the total Contract amount as Security for compliance with the Bidder's performance obligations in accordance with the Contract.

And whereas we have agreed to provide a Guarantee: for the said Bidder

Therefore, we hereby unconditionally and irrevocably guarantee, on behalf of the Bidder, up to a total of [**Amount of the Guarantee in Words and Figures**] and we undertake to pay you, upon your first written demand declaring the Bidder to be in default under the Contract and without requiring Patients' Aid Foundation to initiate action against the Bidder and without cavil or argument any sum or sums within the limits of [**Amount of Guarantee**] as aforesaid. The amount stated in the demand made under this guarantee shall be conclusive proof of the amount payable by the Guarantor under this guarantee.

The obligations of the Guarantor under this guarantee shall be valid for one year after the completion of delivery of supplies by the Bidder to Patients' Aid Foundation of the full quantity of the goods for which this Guarantee is being given, and until all and any obligations and sums due have been paid in full.

[Signature and Seal of the Guarantors / Bank]

Address

Date

Integrity Pact

DECLARATION OF FEES, COMMISSION AND BROKERAGE ETC PAYABLE BY THE SUPPLIERS/CONTRACTORS/CONSULTANTS.

Contract Number: _____

Dated: _____

Contract Value: _____

Contract Title: _____

[Name of Supplier/Contractor/Consultant] hereby declares that it has not obtained or induced the procurement of any contract, right, interest, privilege or other obligation or benefit from Government of Sindh (GoS) or any administrative subdivision or agency thereof or any other entity owned or controlled by it (GoS) through any corrupt business practice.

Without limiting the generality of the foregoing, [Name of Supplier/Contractor/Consultant] represents and warrants that it has fully declared the brokerage, commission, fees etc. paid or payable to anyone and not given or agreed to give and shall not give or agree to give to anyone within or outside Pakistan either directly or indirectly through any natural or juridical person, including its affiliate, agent, associate, broker, consultant, director, promoter, shareholder, sponsor or subsidiary, any commission, gratification, bribe, finder's fee or kickback, whether described as consultation fee or otherwise, with the object of obtaining or inducing the procurement of a contract, right, interest, privilege or other obligation or benefit, in whatsoever form, from Procuring Agency (PA), (Patients' Aid Foundation, JPMC) except that which has been expressly declared pursuant hereto.

[Name of Supplier/Contractor/Consultant] certifies that it has made and will make full disclosure of all agreements and arrangements with all persons in respect of or related to the transaction with PA and has not taken any action or will not take any action to circumvent the above declaration, representation or warranty.

[Name of Supplier/Contractor/Consultant] accepts full responsibility and strict liability for making any false declaration, not making full disclosure, misrepresenting facts or taking any action likely to defeat the purpose of this declaration, representation and warranty. It agrees that any contract, right, interest, privilege or other obligation or benefit obtained or procured as aforesaid shall, without prejudice to any other right and remedies available to PA under any law, contract or other instrument, be voidable at the option of PA.

Notwithstanding any rights and remedies exercised by PA in this regard, [Name of Supplier/Contractor/Consultant] agrees to indemnify PA for any loss or damage incurred by it on account of its corrupt business practices and further pay compensation to PA in an amount equivalent to ten times the sum of any commission, gratification, bribe, finder's fee or kickback given by [Name of Supplier/Contractor/Consultant] as aforesaid for the purpose of obtaining or inducing the procurement of any contract, right, interest, privilege or other obligation or benefit, in whatsoever form, from PA.

[Procuring Agency]

[Supplier/Contractor/Consultant]

Note

1. All the above said instructions, terms and conditions in this bidding document must be read carefully for compliance; else the offer will be ignored.
2. In case of discrepancy between the unit price and total, the unit price shall prevail
3. Institute reserves the right to ask and verify any document from the participants related with Manufacturer / Importer of item, to assess the quality.
4. All the Bid documents should be submitted page wise, any missing of papers will not be responsible of procurement authority
5. The quantity of items will be increased or decreased subject to the release of funds
6. Shortfall of any document given under evaluation criteria shall render the Bidding firm ineligible for competition

Chairman Patients' Aid Foundation & Supervisory Committee, Surgical Complex,
Cyberknife & Tomotherapy, Room 16, Jinnah Postgraduate Medical Center,
Rafiqi Shaheed Road, Karachi – Pakistan 75510
E-mail: chairman.paf@pafjpmc.org
Cell: +92306-2727913

TECHNICAL SPECIFICATIONS OF MEDICAL EQUIPMENT FOR OPERATION
THEATRES

1. OT TABLE (GENERAL SURGERY, ENT, THORACIC, PLASTIC SURGERY, UROLOGY)
Electro Hydraulic operation table with tabletop slide function with high quality covering cushion
System should be operable with remote control for all electrical function
In case of complete failure of electrical power, table should be capable to work on manual system.
Override panel for backup control in emergency.
The mattress should anti-static and anti-bacterial material.
Patient weight bearing capacity should be 400 kg or more.
Longitudinal slide of 12" or more.
Table width 520 mm or more.
Table length 2000 mm or more.
Self-diagnosis system with instant error code display.
System operable with hand control switch.
Following motor driven movement control through hand set controller:
Height adjustment 680 mm to 1100 mm or more.
Trendelenburg / revered Trendelenburg: $\pm 30^\circ$ or better.
Headrest adjustment: $\pm 90^\circ$ or better.
Backrest adjustment: $+80^\circ / -50^\circ$ or better.
Leg section adjustment: $+70^\circ/-90^\circ$ or better (manual driven).
Lateral tilt adjustment: $\pm 20^\circ$ or better.
Height from floor to 44" or better.
Flex / Reverse flex: $\pm 25^\circ$ or better.
Reflex / Reverse reflex: $\pm 100^\circ$ or better.
Battery backup control of table in case of main power failure.
Power supply 220 VAC 50 Hz.
ACCESSORIES FOR GENERAL SURGERY:
Detachable Armrest, pair.
Anesthesia Screen with clamp.
Body Strap.
Infusion Stand.
Restraint Strap
ACCESSORIES FOR UROLOGY / GYNAE:
Drain Pan.
Leg Holder with clamp, pair.
Lateral Support, pair.
Shoulder Support, pair.
Restraint Strap
ACCESSORIES FOR OPHTHALMIC AND PLASTIC SURGERY:
Ophthalmic Headrest with Surgeon Wrist Support
Foot Rest, pair.
Restraint Strap
OR EQUIVALENT
COUNTRY OF ORIGIN: USA/UK/EUROPE/JAPAN

2. OT TABLE WITH ORTHO ACCESSORIES (ORTHOPEDIC)
Electro Hydraulic operation table with tabletop slide function with high quality covering cushion.
System should be operable with remote control for all electrical function.
In case of complete failure of electrical power, table should be capable to work on manual system.
Override panel for backup control in emergency.
Radio translucent Tabletop with C-arm access.
The mattress should anti-static and anti-bacterial material.
Patient weight bearing capacity should be 400 kg or more.
Longitudinal slide of 12" or more.
Table width 520 mm or more.
Table length 2000 mm or more.
Full fill x-ray and c-arm requirements.
Self-diagnosis system with instant error code display.
System operable with hand control switch.
Following motor driven movement control through hand set controller:
Height adjustment 680 mm to 1100 mm or more.
Trendelenburg / revered Trendelenburg: $\pm 30^\circ$ or better.
Headrest adjustment: $\pm 90^\circ$ or better.
Backrest adjustment: $+80^\circ / -50^\circ$ or better.
Leg section adjustment: $+70^\circ/-90^\circ$ or better (manual driven).
Lateral tilt adjustment: $\pm 20^\circ$ or better.
Height from floor to 44" or better.
Flex / Reverse flex: $\pm 25^\circ$ or better.
Reflex / Reverse reflex: $\pm 100^\circ$ or better.
Battery backup control of table in case of main power failure.
Power supply 220 VAC 50 Hz.
ORTHOPEDIC TRACTION ACCESSORIES:
1 x Radiolucent Pelvis Rest with Pad
1 x Perineal Post with Pad
1 x Hip Rest with Pad
3 x Traction Accessory Clamp
2 x Tibia & Lateral Counter-traction Support
2 x Abductor Bar Carbon Fiber
1 x Mounting Bracket, Rail type
1 x Supporting Stand
2 x Traction Unit
1 x Traction Boot, Adult
1 x Traction Boot, Pediatric
1 x Skeletal Traction Bow
1 pair Basic Stirrups
1 x Straight Traction Extension
1 x Patient Transfer Board
1 x Orthopedic Accessory Cart
OR EQUIVALENT
COUNTRY OF ORIGIN: USA/UK/EUROPE/JAPAN

3. ANESTHESIA MACHINE
Standard/Cascade flow tubes.
Cascade flow tubes with electronic flow display providing numeric representation of gas flow
Virtual flow display (VFD) numeric and graphic
Virtual flow display also provides touch screen control of back lighting
03 Gas (O ₂ / N ₂ O / Air) with ventilator Comprising of:-
3 Gas (Oxygen / N ₂ O / Air)
Two vaporizer mounting station with Isoflurane and Sevoflurane vaporizers
03 Gas Rota meter (O ₂ + N ₂ O + Air)
Mechanical Anti – Hypoxic Device.
Non – inter changeable pipeline inlets
Pipeline & Cylinder gauges for O ₂ + N ₂ O+ Air along with hoses.
Pin Index cylinder yokes.
Gas Outlet and O ₂ flush control.
O ₂ Auxiliary outlets.
O ₂ power outlets.
Lockable castors.
Monitors Shelf.
Impact resistant & easy to clean frame.
Absorber support arm.
03 Gas flow meter for O ₂ + N ₂ O + Air.
Flow and Temperature compensated
Base lockable 3 Drawer unit.
Main power outlet 220 / 240 Vac (IEC X 4)
1.5 liters or more Carbon Dioxide Absorber with Bag.
Vent and By Pass complete with detachable
ELECTRONIC VENTILATOR
10” or more Large Color Touch Screen Anesthesia Ventilator
With Built – in Oxygen Monitor,
With advance Ventilation (Volume, Pressure, Spontaneous, PSV, PVG, SIMV, SMMV and Cardiac Bypass modes)
Single / dual waveform display
High quality, multi-option product with flexible specification
Integrated Oxygen Monitor and spirometer
Inverse I:E Ratio capability
Electronic PEEP from 5 to 20 cmH ₂ O
Autoclavable Latex free bellows
Oxygen or Air drive gas
Breathing Circuit
Tidal Volume from 20 ml to 1500ml or more.
Breath rate from 5 to 80 bpm
Pressure control from 10 to 50 cmH ₂ O
Integrated ETCO ₂ and Anesthesia gas monitoring
OR EQUIVALENT
COUNTRY OF ORIGIN: USA/UK/EUROPE/JAPAN

4. DIATHERMY MACHINE
High frequency surgical diathermy for mono polar and bi polar cutting and coagulation for use in general surgery, ENT, Gynecology, Urology, Orthopedic, etc.
The machine should have facility of patient return electrode monitoring system.
The unit should have panel for mono polar and bipolar programs.
Color touchscreen display.
Output frequency should be 450 KHz or more.
Output power should be 300W or more.
Monopolar cutting with minimal tissue injuries 250W or more.
Blend
Monopolar coagulation forced 100W or more and Spray 80W or more.
Bipolar coagulation 80W or more.
Bipolar vessel sealing 100W or more.
ACCESSORIES:
Bipolar Forcep.
Reusable Bipolar Forcep Cable.
Reusable Monopolar Handle with Cable.
Reusable Twin Button Handle with Cable.
Electrodes (6 Pcs).
Foot Switch.
OR EQUIVALENT
COUNTRY OF ORIGIN: USA/UK/EUROPE/JAPAN

5. MULTIPARA MONITOR
Display for easy Viewing 15” or better color TFT/LCD/ LED for easy set-up User selective 8 or better traces / waveform display.
ECG, SpO2, NIBP, 2-TEMP, and Respiration
3ch 5 lead ECG, SpO2, NIBP, TEMP, Resp.
Arrhythmias analysis should be detected and alarmed
3/5 lead ECG algorithm
ST segment
Pacemaker detection.
Support heart rate analysis and dynamic NIBP analysis
Up to 70 hours of trend time
Heart rate: 30 ~ 300 bpm or better.
Respiration rate: 2 ~ 120 rpm or better on either side.
SPO2 range: 0 ~ 100% or better on either side
Temperature range: 30 - 50 deg C
NIBP range: Adult and Peads: SYS 45-250mmHg DIA 15-200mmHg
Neonatal: SYS: 45-130mmHg DIA:15-100mmHg
Alarm: All parameters on/off selective independently
Manage patient data on an electronic medical records platform or a HL7 based hospital information system.
Power input 220Vac,50Hz
With Battery Backup Time: Minimum 03 hours or more.
Compatible with HL7
ACCESSORIES:
ECG 5 Lead cable
SpO2 Finger sensor with fixed or detachable extension
Reusable NIBP Cuff with Hose
Temperature sensor & cable
AC power code
Operation Manual
OR EQUIVALENT
COUNTRY OF ORIGIN: USA/UK/EUROPE/JAPAN
Manufacturers from other countries (other than USA, Europe or Japan) will be accepted if equivalent has FDA 510(k), CE, JIS or JQAO certifications (Any Two Certificates)

6. HYPOTHERMIA
Mobile hypothermia prevention in the rescue field.
MicroChip technology in combination with heat-conduction fabric.
Actively warming blanket with integrated control unit.
Surface should have special PU film, blood and fluid resistant.
Cleaning should be wipeable, resistant to disinfectant
Integrated control in to the blanket.
Special textile reusable removable cover, blood and fluid resistant.
Digital control for all possible combinations
Temperature pre-setting 30°C to 40°C in steps of 0.1°C, separate settings for each blanket.
Input voltage 100 – 240 V, AC
Complete with blankets of various body parts.
OR EQUIVALENT
COUNTRY OF ORIGIN: USA/UK/EUROPE/JAPAN

7. BLOOD WARMER
High-performance, microprocessor-controlled device for warming infusions and transfusions to prevent intra and postoperative hypothermia
Encompasses a slim and ergonomic design
Free setting of temperature from 38 °C to 40 °C or more.
Should have optimized warming circuit
Economic disposables
Simultaneous warming of multiple transfusions/ infusions
Should be splash proof (IPX4)
Should have high- and low temperature alarm
Should have mounting on infusion stand
Should have integrated handle
Voltage 230 V, 50/60 Hz
Power consumption not more than 280 W
Type of protection against electric shock: I
Degree of protection against electric shock: B
Temperature setting 38 °C to 40 °C or more
Safety features should have multiple independent cut-off from 42° C
Warm up time approx. 45 sec.
OR EQUIVALENT
COUNTRY OF ORIGIN: USA/UK/EUROPE/JAPAN

8. PNEUMATIC COMPRESSION
Compression Therapy for the treatment of oedema and other venous and lymphatic disorders of the lower limb for post-surgery.
12 chamber sequential compression
Pressure 30-100 mmHg or better
Compressor 24-30 ltrs/min or better
Cycle Times 5-120 secs inflation, 5-60 secs deflation, 5-120 mind therapy
complete with Garments
Wide Trouser Garment
Wide Long Arm
Long Arm + Shoulder
Wide Long Leg
Bariatric Legging
Lymph Legging
OR EQUIVALENT
COUNTRY OF ORIGIN: USA/UK/EUROPE/JAPAN

9. MINIMAL INVASIVE SURGERY LASER THERAPY EQUIPMENT
Minimally invasive laser therapy
for: Endonasal surgery, Oropharynx , Dacryocystorhinostomy (DCR), Otolaryngology, Larynx Pediatrics etc
Wavelength : 980 nm and 1470 nm
Adjustable Power : 45 Watt
Fiber diameter : $\geq 360 \mu\text{m}$ or better
Aiming beam : 532 nm and 635 nm
User controllable intensity
Mode: CW, Pulse Mode
Pulse duration/-break 0.01–60 sec. /0.01–60 sec
Fully functional including all accessories.
OR EQUIVALENT
COUNTRY OF ORIGIN: USA/UK/EUROPE/JAPAN

10. SURGICAL INSTRUMENTS (SET OF 6) FOR EACH OT
A GTM SET
consisting of :-
a) Sponge Holding Forceps 01
b) Kidney Tray 02
c) Bowl 02
d) Needle Holder 02
e) B,P. HandeNo3 & 7 02
f) Surgeon Scissor Curved 02
g) Straight Cutting Scissor 01
h) Dissecting Forceps Non Tooth 02
i) Dissecting Forceps Tooth 02
j) Artery Curved 15
k) Straight Artery 05
l) Sinus Forceps Curved Forceps 01
m) Aneurysm Needle 01
n) W/C 01
o) Right Angle (Large (2) & Medium 2) 01
p) Round Muscle Retractor 04
q) Skin Retractor Large 02
r) Towel Clip 06
s) S.S. Tray 01
t) Depaky Forceps 10
u) Catpaw 01
B LAPAROTOMY SET (10 Sets)
consisting of :-
a) S.S. Tray 01
b) Morris Retractor 02
c) Dever Retractor Different Sizes 05
d) Crashing Clam 04
e) Non Crashing Clam Different Sizes 06
f) Rabbit Artery 06
g) Long Straight Artery 06
h) Long Dissecting Forceps 01
i) Long Curved Scissor 01
j) Lehy Forceps 02
k) Kidney Tray 01
l) Bebbcock 2
C THYROID SET

a) S.S. Tray 01
b) Kidney Tray 01
c) Bowl 02
d) Sponge Holding Forceps 02
e) B,P. Handle No3 & 7 02
f) Needle Holder 02
g) Towel Clip 06
h) Curved Scissors 02
i) Straight Scissor 01
j) Non Tooth Forceps 02
k) Tooth Forceps 02
l) Artery Curved 20
m) Artery Straight 05
n) Aneurysm Needle 01
o) Cat Paw 02
p) Skin Retector02
q) Right Angle Retractor 02
r) Round Body Retractor 02
s) Double Hook Retractor 02
t) Self Retaining Thyroid Retector02
u) Thyroid Dissector 01
v) Lahey Forceps
D LAPCHOLE SET (10 Sets)
consisting of
a) S.S. Tray 01
b) Kidney Tray 02
c) Sponge Holding Forceps 2
d) Curved Scissors 2
e) Straight Scissor 1
f) Non Tooth Forceps 2
g) Tooth Forceps 2
h) Various Needle 1
i) Morris Retractor 2
j) Dever Retractor Different Small size
k) Disjoin store holding Forceps (Straight or Curved
l) Catpaw 2
m) Artery 6
n) Straight Artery 6
E VERICOSE VEIN SET (05 Sets)
Varicose Vein Stapptener with jar 2
F DRESSING SET (10 Sets)
consisting of :-
a) Kidney Tray 1
b) Artery Curved 2
c) Bawl 1
d) Plain Forceps 1
G GALL BLADER SET (10 Sets)
consisting of :-
a) S.S. Tray 01
b) Morris Retractor 02
c) Dever Retractor 05
d) Long Curved Scissor 1
e) Long Dissecting Forceps 1

f) Needle Holder Long 1
g) Monium Forceps 6
h) Long Straight Artery 6
i) Common By Duck Dilator Different with Curved 11
j) Beacock 2
k) Lehy Forceps 2
l) Disjoin Stone Holding Forceps 2
m) SissoLatomy Stone Holding Forceps 1
n) Long Kidney Tray 1
H FISTULA SET (10 Sets)
consisting of :-
a) S.S. Tray 1
b) Proctoscope 1
c) Anal Retractor with Blade 1
d) Probe 1
e) Dissecting Forceps 1
I PLASTIC SURGERY SET (10 Sets)
consisting of :-
Sponge Holder 2
Needle Holder Fine 6 inch (Golden 2
Needle Holder Fing Long 8 inch 2
Right Angle Retractor 2
Small Right Angle Retractor 2
Cat Paw Retractor 2
Double Hook Retractor 2
Single Hook Retractor 2
Long Single Hook Retractor 2
Small Round Retractor 2
Plain Dissecting Forceps 2
Plain Dissecting Forceps 2
Dissecting Scissor (Fine) 2
Dissecting Scissor LonQ4 inch 2
Dissecting Scissor Long (Fine) 2
Stich Cutting Scissor 2
B.P. Handle (Small) 2
B.P. Handle (Large) 2
Curved Artery Forceps(Fine) 10
Suction Nozzle(Fine) 4
OR EQUIVALENT

11. INSTRUMENT TROLLEY (set of 2)
Stainless steel trolley with plastic drawer internally divided in 4 sectors.
2 shelves with up stands on four sides.
Revolving rubber castors Ø 80 mm (two with brake)
Made from imported stainless steel,
Rust resistant and Satin finish
Export Quality Material
Must be CE Marked Product / Export Quality

12. ABDOMINAL WALL RETRACTOR
Optimal view of the surgical field
Continuous retraction with adjustable winch system
Frame foldable, length 630 mm
Frame extra wide foldable, length 800 mm
Mounting support, modular
Fixation element for retractor
Blade, 50 x 39 mm, length 65 mm, 60 x 42 mm, length 75 mm, 80 x 55 mm, length 100 mm & 50 x 80 mm, length 160 mm
OR EQUIVALENT
COUNTRY OF ORIGIN: USA/UK/EUROPE/JAPAN

13. CHEST WALL RETRACTOR
Optimal view of the surgical field
Continuous retraction
winch system, adjustable
Frame foldable, length 630 mm
Frame extra wide foldable, length 800 mm
Mounting support
Mounting support, modular
Fixation element for retractor
Blade, 50 x 39 mm, fig. 1, length 65 mm
Blade, 60 x 42 mm, Fig. 2, length 75 mm
Blade, 80 x 55 mm, Fig. 3, length 100 mm
Blade, 50 x 80 mm, Fig. 4, length 160 mm
OR EQUIVALENT
COUNTRY OF ORIGIN: USA/UK/EUROPE/JAPAN

14. THORACOSCOPE
Video Assisted Thoracoscopy System
1 x Straight Forward Telescope 0°, enlarged view, diameter 10 mm, length 31 cm, autoclavable, fiber optic light transmission incorporated, color code: green
1 x Forward-Oblique Telescope 30°, enlarged view, diameter 10 mm, length 31 cm, autoclavable, fiber optic transmission light incorporated, color code: red
1 x Telescope, ø 10 mm, length 32 cm, autoclavable, variable direction of view from 0° - 120°, twisting controller to select the desired view of direction, fiber optic light transmission incorporated Color code: Gold
1 x Trocar, with blunt tip, size 6 mm, length 6 cm, consisting of: Cannula Trocar, only
1 x Trocar, with blunt tip, size 11 mm, working length 6 cm, consisting of: Cannula, with thread Trocar only
1 x Trocar, with blunt tip, size 13 mm, working length 6 cm consisting of: Cannula, with thread Trocar only
1 x Parenchymal Forceps, dismantling, atraumatic, straight jaws, single action jaws, size 5 mm, Length 28cm, Consisting of: Metal Y-Handle, with geometry, axial, with 4 locking positions. Outer Tube with Forceps Insert
1 x Lung Foreceps, dismantling, atraumatic, grasping at distal end, single curved jaws, single action jaws, size 5 mm, length 28 cm, Consisting of: Metal Handle, axial, with 4 locking positions Outer Tube with Forceps Insert
1 x Parenchymal Forceps, dismantling, atraumatic, double curved jaws, single action jaws, size 5 mm, length 28 cm, Consisting of: Metal Handle, axial, with 4 locking positions . Outer Tube with Forceps Insert
1 x Lung Foreceps, dismantling, atraumatic, curved jaws, fenestrated, single action jaws, size 5 mm length 28 cm, Consisting of: Metal Y-Handle, with geometry, axial, with 4 locking positions. Outer Tube with Forceps Insert
1 x Lung Nodule Forceps, dismantling, atraumatic, fenestrated, curved jaws, single action jaws, size 5 mm, length 28 cm, Consisting of : Metal Y-Handle, with geometry, axial, with 4 locking positions . Outer Tube with Forceps Insert
1 x Parenchymal Forceps, atraumatic, dismantling, without connector pin for unipolar coagulation, single action jaws, curved jaws, size 5 mm, length 28 cm, Consisting of:
Metal Handle, with 4 locking positions. Outer Sheath with Forceps Insert for use with linear staplers
1 x MAHNES Grasping Forceps, dismantling, atraumatic, single action jaws, straight, size 5 mm, Length 28 cm, Consisting of: Metal Y-Handle, with geometry, axial, with 4 locking positions . Outer Sheath with Forceps Insert
1 x MAHNES Grasping Forceps, "cobra jaws", dismantling, single action jaws, straight jaws, 1x 2 teeth, size 5 mm, length 28 cm, Consisting of: Metal Y-Handle, with geometry, axial, with 4 locking positions . Outer Sheath with Forceps Insert
1 x Dissecting Forceps, CLERMONT-FERRAND model, dismantling, with connector pin for bipolar coagulation, distally angled outer sheath, double action jaws, curved, jaws open horizontally to angulation, size 5 mm, length 28 cm, color code: light blue, Consisting of: Plastic Handle, with 4 ratchet positions . Forceps Insert with Outer Sheath
1 x Scissors, CLERMONT-FERRAND model, dismantling, with connector pin for bipolar coagulation, distally angled outer sheath, double action jaws, curved, scissor blades open vertically to angulation, Size 5 mm, length 28 cm, color code: light blue
Consisting of: Plastic Handle, with 4 ratchet positions. Scissors Insert with Outer Sheath
1 x LUTZ Forceps, CLERMONT-FERRAND Model, rotating, dismantling, with connector pin for Bipolar coagulation, width of the jaw 2 mm, 45° angled , to grasp and coagulate vessels, Double action jaws, size 5 mm, length 43 cm, color code: light blue Consisting of: Plastic Handle . Metal Outer Sheath, insulated Forceps Insert
1 x Suction and Irrigation Tube, with lateral holes, distally angled sheath, size 5 mm, length 28 cm or use with Handles
1 x Handle with Trumpet Valve for suction or irrigation, autoclavable, for use with 5 mm coagulating suction tubes, 3- and 5-mm suction and irrigation tubes
1 x Pistol Grip Handle, with clamping valve, for suction and irrigation, autoclavable
1 x Curette for pleura abrasion, distally angled sheath, sharp and spoon-shaped ending, size 10 mm, Length 28 cm
1 x Coagulation Suction Cannula, insulated, with connector pin for unipolar coagulation, angled handle, diameter 5 mm, length 30 cm
1 x HD module, for use with up to 3 link modules, resolution 1920 x 1080 pixels, with integrated and digital Image Processing Module
power supply 100 - 120 VAC/200 - 240 VAC, 50/60 Hz,
Consisting of: Mains Cord, length 300 cm
DVI-D Connecting Cable, length 300 cm

Connecting Cable, length 100 cm
USB Flash Drive
USB Silicone Keyboard, with touchpad, US
1 x HD Link module, for use with FULL HD three chip camera heads, power supply 100 - 120 VAC/200
240 VAC, 50/60 Hz,
Consisting of: Mains Cord, length 300 cm. Link Cable, length 20 cm
1 x Three-Chip FULL HD Camera Head, compatible, progressive scan, soakable, gas- and plasma-serializable, with integrated Parfocal Zoom Lens, focal length $f = 15 - 31$ mm (2x), 2 freely programmable camera head buttons
1 x 27" FULL HD Monitor, color systems PAL/NTSC, max. screen resolution 1920 x 1080, image format 16:9, Interface: RS 232, power supply 85 - 264 VAC, 50/60 Hz, wall mount with VESA 100 adaptor
Including: External 24 VDC Power Supply Mains Cord
1 x LED 150, LED Cold Light Fountain with one light outlet, power supply 100 - 240 VAC, 50/60 Hz
Including: Mains cord
1 x Fiber Optic Light Cable, with straight connector, diameter 3.5 mm, length 180 cm
1 x Trolley Powder Coated rides on 4 antistatic dual wheels, 2 equipped with locking brakes (front), fixed shelves, 1 drawer unit with lock
OR EQUIVALENT
COUNTRY OF ORIGIN: USA/UK/EUROPE/JAPAN

15. MEDIASTINOSCOPE
DCI® Forward-Oblique Telescope 30°, diameter 4 mm, length 16 cm, autoclavable, with go adaption to the DCI® camera head, fiber optic light transmission incorporated, for use with Distending DCI® Video Mediastinoscope
DCI® Wide Angle Forward-Oblique Telescope 30°, diameter 4 mm, length 16 cm, autoclavable adaption to the DCI® camera head, fiber optic light transmission incorporated, for use with Distending DCI® Video Mediastinoscope
Distending DCI® Video Mediastinoscope, length 22 cm, narrow blades, distension in vertical radial direction, with connection on holding system via or universal clamping jaw, for use with DCI® Telescopes cannula, length 30 cm
Aspiration Cannula, made of glass, length 30 cm
Consisting of: Cannula, Injection Needle, package of 12
Silicone Tube with LUER-Lock connector, to connect to LUER-Lock suction syringe
Biopsy Forceps, with oval jaws, size 6 x 12 mm, shaft diameter 5 mm, length 21 cm
Consisting of : Metal Handle, without ratchet, Outer Sheath
Forceps Insert, for Biopsy Forceps
Grasping and Dissecting Forceps, bent jaws, grasping at distal end, double action jaws, shaft diameter 5 mm, length 21 cm
Consisting of : Metal Handle, without ratchet , Outer Sheath
Forceps Insert, Grasping and Dissecting Forceps
Coagulation Suction Cannula, insulated, with connector pin for unipolar coagulation, angled handle, diameter 5 mm, length 30 cm
METZENBAUM Scissors, rotating, dismantling, insulated, with connector pin for unipolar coagulation, with LUER-Lock irrigation connector for cleaning, double action jaws, curved, size 5 mm, length 25 cm
Consisting of: Plastic Handle, without ratchet, with larger contact area at the finger ring Metal Outer Sheath
Scissors Insert
Biopsy Forceps, rotating, dismantling, insulated, with connector pin for unipolar coagulation
single action jaws, size 5 mm, length 25 cm
Consisting of: Plastic Handle, without ratchet, with larger contact area at the finger ring
Metal Outer Sheath, insulated Forceps Insert
FULL HD CAMERA CONTROL UNIT
Camera control unit with special image enhancement modes
Resolution 1920 x 1080 pixels progressive scan
Integrated patient data, image and video recording system
Power supply 100-240 VAC 50 Hz
Special Feature Required
Automatic White Balance
Powerful video signal processing
Image enhancement modes upto5 or better with suitable camera heads
Picture in picture mode control via camera head button
Control of peripheral i.e. light source, recording system parameter via camera head button
Still image capturing in full HD quality (JPEG) format via camera head buttons
Video capturing in full HD quality (MPEG 4 format) via camera head buttons
Grid &pointer mode for teaching and training purpose
20 individual preset or better
20 patient data backup or better
Should have compatibility with upgrades like 3-Chip Camera heads, flexible scopes,
4K or better or equivalent
Technical Features:
DVI output (2x) or better or equivalent
3G-SDI output (1x) or better or equivalent

USB connections (4x) pr better or equivalent
Consisting of: DVI Cable , Power Cord, Silicon Keyboard with touchpad, USB flash drive 32 GB or better
DCI® Camera Head, S-technologies available, 50 Hz, soakable, gas- and plasma-sterilizable, fixed focus, focal length f = 16 mm, 2 freely programmable camera head Buttons
Color systems PAL/NTSC,
Max. screen resolution 1920 x 1080,
image format 16:9,
video inputs: DVI, 3G-SDI, VGA, S-Video, Composite,
Video outputs: DVI, 3G-SDI, Composite.
power supply 100-240 VAC, 50/60Hz,
5 V DC output (1 A), wall-mounted with VESA 100 adaption, Including: External 24 VDC Power Supply Mains Cord
LED 150 Watt light source, High-Performance LED light with one light outlet power supply 100 - 240 VAC, 50/60 Hz including: Mains cord
Fiber Optic Light Cable, with straight connector, diameter 3.5 mm, length 180 cm
Equipment Cart Rides On 4 Antistatic dual castor wheels
OR EQUIVALENT
COUNTRY OF ORIGIN: USA/UK/EUROPE/JAPAN

16. FACIAL NERVE STIMULATOR
Monopolar electro stimulator required for intra operative localization of nerve and muscle structures
Should be capable of Intra operative localization and functional monitoring of motor nerves and muscles.
The localization of motor nerves should reduce the risk of intraoperative nerve injury. Precise dissection in the treatment of anorectal malformations through localization of the anal sphincter muscles.
To be used with Diathermy machine
Uses: In ENT, OMS and skull-base surgery
Facial nerve and its branches
Motor elements of the trigeminal nerve and its branches
In neck dissection
Accessory nerve and its branches
In the surgical treatment of anorectal malformations
A Anal sphincter muscles
TECHNICAL REQUIREMENT:
Potential equalization connection: Yes
Pulse shape: Negative
Pulse duration optional: 50 ms or 330 µs
Pulse frequency: 2 Hz
Stimulation type: Constant current
Stimulation current: 0.5 mA/1 – 25 mA, in 1 mA steps
Stimulation voltage: up to 100 V (depending on impedance)
Stimulation channels: 1
Classification in accordance with EC directive: 93/42/ EEC II a
Type in accordance with EN 60 601-1: CF
Classification acc. to 93/42 EWG: IIb
OR EQUIVALENT
COUNTRY OF ORIGIN: USA/UK/EUROPE/JAPAN

17. ELECTRONIC DRILL
Microprocessor Controlled.
Touch Screen 5 inch or more
Emergency ON / OFF Button.
Built-in grip for IV Pole.
Wireless Foot control
Advanced Control of mode selection speed control, reverse, forward, Variable Speed, Start, Stop functions.
1 x Motor system with colored display, touch screen operation, with integrated irrigation pump, power supply, console for motor system, Mains Cord, wireless foot control, Irrigation rod, Silicone Tubing Set, Clip Set. Single use tubing set, sterile, motor driven accessories high speed motors)
2 x High-Speed Micro-Motor, max. speed 75,000 rpm, including connecting cable, for use with console
2 x Medical grade micro motor maintenance Spray, 500 ml bottle, Spray Nozzle
10 x Tubing Set for use with motor system, single use, sterile
1 x Tray for Cleaning, Sterilization and Storage of Accessories for drill/burr system, including basket for small pieces, for use with rack.
1 x High-Speed Hand piece, medium, angled
1 x High-Speed Hand piece, long, angled
1 x High-Speed Hand piece, short, small
5 x High-Speed Diamond Burr, 1.0 mm, single use, sterile
5 x High-Speed Diamond Burr, 2.1 mm, single use, sterile
5 x High-Speed Diamond Burr, 5.0 mm, single use, sterile
5 x High-Speed Ball Burr, 3.2 mm, single use, sterile
5 x High-Speed Ball Burr, 4.8 mm, single use, sterile
5 x High-Speed Ball Burr, 6.4 mm, single use, sterile
1 x Craniotome Hand piece, straight, short., with Dura guard
1 x Craniotome Hand piece, straight, medium. with Dura guard
10 x perforator, 11/14mm, single use, sterile
System including Sterilization Box, Cleaning Brushes, lubrication spray etc.
COUNTRY OF ORIGIN: USA/UK/EUROPE/JAPAN

18. MICRO DRILL
Micro drill with excellent performance
Integrated and adjustable irrigation
Drill should have minimal vibration
High cutting efficiency
Clean low pressure cutting
Fully detachable for optimized cleaning
Should be lightweight
oscillating saw attachment
operating speed 40.000 rpm detachable
10 pcs., 8.0 mm saw blade, single use, sterile
10 pcs., 15.0 mm saw blade, single use, sterile
Unit should be complete with all accessories
OR EQUIVALENT
COUNTRY OF ORIGIN: USA/UK/EUROPE/JAPAN

19. ORTHOPEDIC DRILL PNEUMATIC AND ELECTRIC
Microprocessor Controlled.
Touch Screen 5 inch or more
Emergency ON / OFF Button.
Built-in grip for IV Pole.
Wireless Foot control
Advanced Control of mode selection speed control, reverse, forward, Variable Speed, Start, Stop functions.
1 x Motor system with colored display, touch screen operation, with integrated irrigation pump, power supply, console for motor system, Mains Cord, wireless foot control, Irrigation rod, Silicone Tubing Set, Clip Set. Single use tubing set, sterile, motor driven accessories high speed motors)
2 x High-Speed Micro-Motor, max. speed 75,000 rpm, including connecting cable, for use with console
sagittal saw attachment
10 pcs. 6.0 mm saw blade, single use, sterile
10 pcs. 10.0 mm saw blade, single use, sterile
operating speed 40.000 rpm detachable
reciprocating saw attachment operating speed 40.000 rpm detachable,
10 pcs, 15.0 mm saw blade ,single use, sterile
10 pcs, 20.0 mm saw blade ,single use, sterile
10 pcs, 30.0 mm saw blade ,single use, sterile
OR EQUIVALENT
COUNTRY OF ORIGIN: USA/UK/EUROPE/JAPAN

20. MICRO OSCILLATING SAW
Micro saws with excellent performance
Integrated and adjustable irrigation
Drill should have minimal vibration
High cutting efficiency
Clean low pressure cutting
Fully detachable for optimized cleaning
Should be lightweight
oscillating saw attachment
operating speed 40.000 rpm detachable
10 pcs., 8.0 mm saw blade, single use, sterile
10 pcs., 15.0 mm saw blade, single use, sterile
Unit should be complete with all accessories
OR EQUIVALENT
COUNTRY OF ORIGIN: USA/UK/EUROPE/JAPAN

21. OPERATING MICROSCOPE
Optical head having swayable and tillable suspension for effortless positioning in all directions via programmable ergonomic hand grips for control of functions and release / locking of magnetic brakes
Apochromatic optics
Motorized zoom magnification ratio 1:6
Motorized internal focusing from 200 to 400mm via front lens
Coaxial fiber optic illumination
Laser compatible
Dust cover

Tiltable and retractable binocular tube with IPD adjustment
Wide field oculars 10X with focusing
OR EQUIVALENT
COUNTRY OF ORIGIN: USA/UK/EUROPE/JAPAN
22. DERMATOME
Electric dermatome
Hand-piece completely serializable (excludes the power pack)
Graft width of 2.54, 5.08, 7.62 and 10.16 cm assures optimum performance in combination or better.
Standard cutting width 101.60mm
Cutting width using clamps 2.54, 5.08, 7.62 and 10.16 cm or better.
Stainless steel disposable blade
Width Clip, 1" (2.54 cm)
Width Clip, 2" (5.08 cm)
Width Clip, 3" (7.62 cm)
Width Clip, 4" (10.16 cm)
Width Clip Screw
Guard Plate
Dermatome Screwdriver
Pin Position Guide
Carrying Case, Plastic
Sterile blade single use (Box of 10) 3 Box
Sterilization Container
OR EQUIVALENT
COUNTRY OF ORIGIN: USA/UK/EUROPE/JAPAN

23. C- ARM WITH FPD
Height & Angle adjustable of 21 inch or more HD display
Full touch user interface
Extended C-arm free space
Image free of distortion
Double pedals
Removable grid
Motorized vertical stroke: 430 mm (speed 1cm/s) or better
Horizontal stroke: 190 mm or more
Wig-wag: +/-10° or better
Arc rotation around horizontal axis: +/- 200° or better
C-Arm sliding: 150° or more
SID (FPD/focal spot): 1050 mm or more
Flat panel detector/mono-block distance: 800 mm or more
Arc depth: 700 mm or more
X-Ray Generator Max Power: 5 kW or better
High Frequency: 40 kHz or better
Max Voltage: 120 kVp or better
Max mA in continuous fluoroscopy: 10 mA or better
Max mA in pulsed fluoroscopy: 40 mA or more
Max mA in digital radiography: 100 mA or better
Rotating Anode X-Ray Tube
Focus: Small focus: 0.3 mm / Large focus: 0.6 mm or better
Anode thermal capacity: 225 kJ (300 KHU) or better
Flat Panel Detector
Technology: CSI coupled to TFT matrix aSi
21 x 21cm fluoroscopy flat panel detector
Pixel pitch: 160µm or better
DQE@ RQA5: 0 lp/mm : 75%; 2 lp/mm : 45%
MTF: 1 lp/mm : 55%; 2 lp/mm : 22%
A/D conversion: 16 bits
Matrix: 1024 x 1024 pixels or better
Max frame rate: 20 FPS @ full resolution
Useful area: 210 mm x 210 mm
Anti-scattered x-ray grid:
Removable grid without use of tools
Dimensions: 215 x 215 mm or better
Materiel Aluminum
Line rate: 80 Lines/cm ratio 8:1
Focus distance: 100 cm or better
Operator control panel only touch operation
Technology: multi-touch, color LCD 12" panel or more
Application: image live and full operator interface control
Console positioning: +/- 300° rotation or more
OS: Windows 10
Displays brightness: 400 Cd/m ² typical or better
Displays useful area: 260 mm x 150 mm or better
OR EQUIVALENT
COUNTRY OF ORIGIN: USA/UK/EUROPE/JAPAN

24. COLOR DOPPLER
17 inch or more Widescreen High-Resolution anti-flickering LED can be vertically or horizontally swiveled.
8” Touch screen or better for machine control.
Four active probe sockets or more.
S-Video connection.
Multiple USB ports for data transfer.
500GB Hard disk.
DICOM 3.0 compatibility.
Review software for stored images and information of patients for reporting, printing and analyzing for later.
IMAGING TECHNIQUES AS STANDARD
Tissue Harmonic Imagine Mode.
Pulse Inversion Tissue harmonic imaging Mode.
High Pulse Repetition Frequency technology
Multi-beam processing technology
Frequency and Spatial compound imaging
Color Mode and B-Mode panoramic imaging
Trapezoidal imaging for Linear probe
Advanced speckle and artifacts reduction technology.
Auto IMT calculation, Auto EF, Auto Trace for PW Spectrum calculations.
Single button image optimization for B-Mode, Color Mode and PW Mode
Advanced Doppler detection technology for Low blood flow detection in small vessels.
Stress Echo function.
Tissue Doppler Imaging.
M Mode, Color M Mode and Anatomical M Mode (Multiple sample lines)
Needle enhancement function for enhanced needle visualization for Biopsies and Interventional cases.
Dual Live Mode.
Biopsy guidance on image with multiple angle selection.
IMAGING MODES AND PARAMETERS AS STANDARD
B/2B/4B Mode.
M Mode.
Anatomic M Mode.
Color M Mode.
Color Flow Mode.
Power Doppler Mode.
Directional Power Doppler Mode.
Pulsed Wave Doppler.
Continuous Wave Doppler.
Real Time Panoramic Imaging (B mode and Color mode).
Duplex and Triplex Mode.
Dual Split Mode.
Dual Live Mode.
MEASUREMENT PACKAGE AS STANDARD
Basic B mode measurement.
Basic M mode measurement.
Basic spectral Doppler mode measurement.
Color flow volume measurement.
Cardiac measurement package.
Patient Data Management System (in-built).
TECHNICAL FEATURES AS STANDARD
Dynamic Range: 40dB – 260dB or better
Digital Channels: 35,000 or more
Frame Rate in B-Mode: 800 fps or more
Image Zoom: 2x to 8x or better.

TRANSDUCERS AS STANDARD
Multi frequency Convex Probe (2.0 – 6.0 MHz or better).
Multi frequency Linear Probe (4.0 – 15.0 MHz or better).
Multi frequency Endo-cavity Probe (3.0 – 14.0 MHz or better).
ACCESSORIES
B&W Thermal Printer.
Compatible Online UPS.
SAFETY & QUALITY STANDARDS:
The medical equipment must comply with 510(k) FDA (Food & Drug Administration), and European CE Marked for specific quoted model.
COUNTRY OF ORIGIN: USA/UK/EUROPE/JAPAN Manufacturers from other countries of origin having US FDA 510(k) and CE (MDD) Certifications will also be eligible.

25. HIGH END COLOR DOPPLER ULTRASOUND SYSTEM
21-Inches Minimum TFT / LED Color Monitor with anti-flickering technology.
Screen should move vertically and horizontally
Control panel height should be adjustable and rotatable.
Touch Command Screen Control at least 12-inches LCD / TFT
Full screen image zoom.
4 or more active universal transducer connectors.
Alphanumeric keyboard.
500 Gb hard drive or more.
USB ports DVD writer for data transfer.
Video/HDMI ports for external monitor connectivity.
Built-in DICOM Compatibility (3.0 with all components).
Voltage: 220V – 240V, 50 – 60 HZ
STANDARD OPERATING MODES
B mode, M mode, THI mode, CDI mode, PDI mode, Directional PDI mode, TDI mode, PW mode, CW mode, Spatial Compound imaging mode, Frequency compound imaging mode, Trapezoid imaging mode, Noise reduction technology, HPRF, Anatomical M Mode, Color M mode, Steer M mode, Stress Echo, Needle enhancement mode, Real Time panoramic mode in B-Mode and CDI, Biopsy guidance software, grid biopsy guidance software for Endo-cavity biopsy procedures.
B-MODE SPECIFICATIONS
Digital image zoom of 1-10 times or more.
Dynamic range: 250db or better.
B-Mode Frame rate: 1500fps or more.
Grayscale level: 256 or better.
Grayscale level: 256 or better.
Focus points: 10 or more, focus span should be adjustable.
Cine loop: 1000 frames or better.
Scanning Depth: 30cm or better.
Frequency: 5 bands or more. Should be adjustable.
Line Density: 3 levels or more. Should be adjustable
Needle Enhancement feature.
Needle/Biopsy Guide Function: (a) Needle/Biopsy lines angle adjustable (b) Needle/Biopsy lines offset adjustable.
Grayscale Curve: 5 or more selectable.
Trapezoid Imaging (Linear probe).
B steer mode (linear probe).
Auto image enhancement function.
M MODE SPECIFICATIONS
Sweep Speed: Slow, Medium and Fast.
Color Display of M -Mode.
Steer M: 3 sample lines or more with adjustable angle
Video Inversion
COLOR DOPPLER MODE SPECIFICATIONS
Color Flow Invert.
PW/CW Spectrum Invert.
Frequency Range: 5 steps or more. Should be adjustable.
Wall Filter: 20-700Hz or better.
CDI- Frame rate: 180fps or more.
PRF: 1-10 kHz or better (CDI).
Line Density: 4 levels or more.
Color baseline adjustment: ±10 steps or better.
Auto image enhancement function: (a) Auto Adjusting Baseline, (b) Auto Adjusting PRF.
Triplex Mode.

Sample Volume and Position for PW Doppler: 1-20mm or better.
Real-time Automatic Trace of PW/CW Spectrum.
MEASUREMENTS AND CALCULATIONS
To provide Comprehensive Software Package for Measurement of Distance, Circumference, Area, Time, Depth, ANGLE, IMT, Velocity, Frequency, Heart Rate, Volumes.
Auto-calculation: Auto IMT, Real-time Auto PW/CW Trace, Auto EF.
All measurement Software to be provided as a Standard
STANDARD PROBES
2-6 MHz or better Multi-Frequency Convex Probe.
5-17 MHz or better Multi-Frequency Linear Probe.
3-9 MHz or better Multi-Frequency Endo-cavity Probe.
ACCESSORIES:
Upgradable system software.
ECG cables.
COUNTRY OF ORIGIN: USA/UK/EUROPE/JAPAN Manufacturers from other countries of origin having US FDA 510(k) and CE (MDD) Certifications will also be eligible

26. ENDOSCOPE WITH GASTROSCOPE, DUODENOSCOPE WITH SNARE
VIDEO GASTROSCOPE WITH CAMERA SYSTEM
FULL HD GASTROINTESTINAL VIDEOSCOPE
Color CCD compatible with HD video processor
Narrow Band Imaging/ Multi Band Imaging
Fully immersible to avoid accidental damage to scope without any gadget
Field of view 140° or better
Direction of view Forward viewing
Depth of field 2-100 mm
Distal end outer diameter 9.2 mm or less
Insertion tube outer diameter 9.2 mm or less
Working length 1030 mm or more
Channel inner diameter 2.8 mm or more
Angulations Range Up 210°, Down 90°, Right 100°, Left 100°
Ergonomically designed grip which enhances scope maneuverability.
Scope ID function to facilitate endoscopy suite management.
At least 2 x light guide lens built in OEM Standard Functional Devices
Sclerotherapy needles 21,23 Gauge
Hemostasis clip fixator with clips
Mucosal Washing/medicine spray catheter
Biopsy forceps for small tissue samples
Surgical scissors to endoscopically incise tissue
Esophageal Balloon Dilator
Variceal Band Ligation Device
Foreign body Grasping forceps for sharp objects
Foreign body forceps for Coins, Rat Tooth Type
Biopsy Forceps swing jaw alligator type
FULL HD VIDEO PROCESSOR
Full HD 1920 x 1080 p resolution
Power supply voltage : 100-240 V AC
Frequency : 50 / 60 Hz
Contains the electronics to operate the Dual Focus
Compatible with High Definition video endoscopes.
Pre-freeze function automatically
16:9 and 16:10 output for a HDTV monitor
Compatible with analog, HD-SDI, and DVI output
Link connection to peripheral devices
Picture-in-picture and index function effectively enhance your observation
Portable memory is compatible for data management
DV output to compatible documentation devices
White balance adjustment is using the white balance button on the front panel
Color tone adjustment • Red: ±8 steps • Blue: ±8 steps • Chroma: ±8 steps
Electronic amplification of the light
Three contrast modes Low/ Normal/ High
Enhancement of contrast of the fine patterns in the image
Edges enhancement of the endoscopic image
The image with the least blur is selected from the images captured
Fog free function for clear images Electronic magnification, controlled either from scope or from keyboard and Up to 50 patient data can be registered
Scope ID function for easier Endoscopy suite management and for next generation system expansion.
A single compatible keyboard to control Video processor / system center and EUS both
LIGHT SOURCE 300W XENON
Power supply voltage : 100-240 V AC: with ±10%

Frequency : 50 / 60 Hz: with ± 3 Hz
Examination lamp: Xenon short-arc lamp (ozone-free) 300 W
Average lamp life: Approximately 500 hours of continuous use Ignition method Switching regulator
Brightness adjustment: Light-path diaphragm control
Cooling: Forced-air cooling
Intensity mode: Normal or high intensity
Color conversion: using special-purpose filter
Emergency lamp: Halogen lamp (within mirror) 12 V 35 W
Average emergency lamp life: Approximately 500 hours
Automatic brightness adjustment method: Servo-diaphragm method
Automatic exposure: 17 steps
Pump: Diaphragm type pump
Pressure switching: 4-level available (OFF, low, medium, high)
Method: Feeds water by pressurizing the detachable water container with air
Emergency lamp: Indicates absence of emergency lamp, disconnection and use of emergency lamp.
PDD When the PDD observation mode is enabled, the PDD indicator lights up
FULL HD LED MONITOR 21" OR MORE MEDICAL GRADE
21" or more Full HD LCD Panel with LED backlight
Flip function to rotate the image 180 degree
Picture-in-Picture & Picture-out-Picture function and cloning function
Advance Image Multiple Enhancer Technology
Resolution 1920 x 1080p Full HD
Aspect Ratio 16:9 or better
Number colors 1 billion or more
Viewing angle 178 degree Horizontal and Vertical
Inputs: HD-SDI (2), Video (1), Y/C (1), HD15 (1), DVI (2)
Output: HD-SDI (2), Video (1), Y/C (1), HD15 (1), DVI (2)
MOBILE WORK STATION WITH ARM & CABLING SYSTEM
Trolley accommodates a wide range of electro-medical devices advanced endoscopic procedures
LCD Monitor Arm allows the operator to optimize the viewing position with ease, due to the integral gas spring and tensioned joints providing excellent balance in use
Optimized cable management through a range of cable channels integral to the workstation hoop
Isolation transformer should be fitted as standard to meet electrical safety requirements.
Output from the transformer is controlled by a central switch, allowing all connected.
Complete with following:
Sliding Keyboard Tray
LCD Monitor Arm
IV Pole
Drawer Unit
Equipotential Strip
Monitor Power Supply Holder
Footswitch Holder
Keyboard Arm - Side Mounted
Universal Storage Container
Equipotential Support Rail
Cable Retaining Hook
Nurses Control Arm
OR equivalent
Certificates: ISO 13485, CE or FDA
COUNTRY OF ORIGIN: USA/UK/EUROPE/JAPAN

<u>VIDEO DUODENOSCOPE ADULT SIZE</u>
DEUDENO VIDEOSCOPE FLEXIBLE
Color CCD compatible with HD video processor
Dual guidewire locking mechanism
Narrow Band Imaging/ Multi Band Imaging
Wide view angle/Ultra slim design
Fully immersible to avoid accidental damage to scope
Field of view 100° or better
Direction of view Backward side viewing 5°
Depth of field 5-60 mm
Distal end outer diameter 13.7 mm or less
Insertion tube outer diameter 11.3 mm or less
Working length 1240 mm or more
Channel inner diameter 4.2 mm or more
Angulations Range Up 120°, Down 90°, Right 110°, Left 90°
Ergonomically designed grip which enhances scope maneuverability.
Scope ID function to facilitate endoscopy suite management
OEM Standard Functional Devices
Complete with:
ERCP Cannula standard, ball tip, short and long tapered
with V-Marking
Guide Wire hydrophilic coated Straight/ Angled
Sprinctrotomes Claver Cut & Flow Cut Type
Balloon Extractor Multi 3-V triple lumen
Basket retriever V- Flower basket
Mechanical Lithotripter Re-usable Handle litho-crush V
Along with Basket with sheath
Retrieval Basket with V-marking of assorted types
Biliary Balloon Dilator with inflation device
Biliary Stents double layer of assorted types
Grasping Forceps rat toothed
Cytology Brush guide wire compatible
Biopsy Forceps swing jaw alligator type
Stent Insertion Kits
Video Cable for Duodeno Video
OR EQUIVALENT
COUNTRY OF ORIGIN:
USA/EUROPE/JAPAN
<u>GI CAMERA CONTROL UNIT WITH VIDEO & IMAGE CAPTURE & RECORDING.</u>
<u>IMAGE MANAGEMENT HUB</u>
Full HD for Vivid images seamless recording, management, and editing
Two-channel simultaneous recording
Vivid full HD images, still or video
Synchronized voice recording
Video recording formatMPEG-4 AVC/H.264
Still recording format BMP, TIFF, JPEG
Compatible media HDD, Blu-ray, DVD, USB device
Internal HDD capacity500GB
Touch-panel display7-in. LCD Touch panel
Video input/output jacks
HD/SD-SDIINPUT: 2, OUTPUT: 1
DVI: 2, OUTPUT: 1
Y/C: 2, OUTPUT: 1

Composite: 2, OUTPUT: 1
Serial remoteRS232C, stereo mini pin jack
Weight Approx. 10.7 kg
OR EQUIVALENT
COUNTRY OF ORIGIN: USA/UK/EUROPE/JAPAN

27. ENDOSCOPE WITH COLONO SCOPE & SIGMOID SCOPE
<u>VIDEO COLONOSCOPE ADULT SIZE</u>
FULL HD VIDEO COLONOSCOPE ADULT SIZE
Color CCD of Full HD 1920 x 1080 p resolution
Separate water jet function
Fully immersible to avoid accidental damage to scope without any gadget
Narrow Band Imaging/ Multi Band Imaging
Reflexive bending feature
User adjustable stiffness controller / variable stiffness
Waterproof One-touch Connector
Field of view 170° or better
Direction of view Forward viewing
Depth of field 2-100 mm
Distal end outer diameter 13.2 mm or less
Insertion tube outer diameter 12.8 mm or less
Working length 1680 mm or more
Channel inner diameter 3.7 mm or more
Angulations Range Up 180°, Down 180°, Right 160°, Left 160°
Ergonomically designed grip which enhances scope maneuverability.
Scope ID function to facilitate endoscopy suite management.
At least 3 x light guide lens built in
OEM Standard Functional Devices
1) Endoscope Mucosal Resection Kit
2) Polyp retrieval forceps
3) Hot biopsy forceps
4) Electrosurgical snares
5) Biopsy forceps
OR EQUIVALENT
COUNTRY OF ORIGIN: USA/UK/EUROPE/JAPAN

28. HARMONIC SCALPEL
Ultrasonic cutting and coagulation with limited thermal influence on tissue.
Application in Gynecology, Liver, Visceral, ENT, Urology Etc.
Working frequencies 25 and 55 kHz
Automatic instrument detection for power settings.
Adjustable ultrasonic power through control panel.
Automatically detection of right working frequency.
Simultaneous cutting and coagulation.
Minimal thermal tissue damage and blood loss.
Main voltage 220V, 50 Hz.
Ultrasonic Scissors:
Working length: 325 mm
Scissor jaws: Curved, Rotatable, 360°
Outer sheath 0 5.5 mm
Total length: 472 mm
Complete with:
Trolley S
Footswitch
Connective cable for Instrument
Ultrasonic Scissors
OR EQUIVALENT
COUNTRY OF ORIGIN: USA/UK/EUROPE/JAPAN

29. LAPROSCOPE
Laparoscope Instruments Set With High Definition Camera System Consisting of:
1 x Straight Forward Telescope 0°, enlarged view, diameter 10 mm, length 31 cm, autoclavable, fiber optic light transmission incorporated
1 x Forward-Oblique Telescope 30°, enlarged view, diameter 10 mm, length 31 cm, autoclavable, fiber optic light transmission incorporated
Straight Forward Telescope 0°, enlarged view, diameter 5 mm, length 29 cm, autoclavable, fiber optic light transmission incorporated
Forward-Oblique Telescope 30°, diameter 5 mm, length 29 cm, autoclavable, fiber optic transmission light incorporated
2 x Trocar, size 11 mm
Consisting of: Trocar only, with pyramidal tip
Cannula without valve, with insufflation stop- cock length 10.5 cm,
Multifunctional Valve
1 x Reducer, 11/5mm
Trocar only, with pyramidal tip
1 x MANHES Grasping Forceps, rotating, size 5 mm, length 36 cm, with connector pin for unipolar coagulation, duckbill jaws length 15 mm, blunt, single action jaws
Consisting of: Plastic Handle, with ratchet, with larger contact area Outer Tube, insulated Forceps Insert
1 x Dissecting- and Grasping Forceps, rotating, with connector pin for unipolar coagulation, size 5 mm, length 36 cm, alligator jaws, double action jaws
Consisting of: Plastic Handle, with hemostat style ratchet, with larger contact area Outer Tube, insulated Forceps Insert
1 x BABCOCK Grasping Forceps, rotating, with connector pin for unipolar coagulation, size 5 mm, length 36 cm, atraumatic jaws with multiple teeth, fenestrated long single action jaws,
Consisting of: Plastic Handle, with hemostat style ratchet, with larger contact area
Outer Tube, insulated Forceps Insert
1 x Claw Grasping Forceps, rotating, with connector pin for unipolar coagulation, size 5 mm, length 36 cm, 2 x 3 teeth, single action jaws
Consisting of: Plastic Handle, with hemostat style ratchet, with larger contact area
Outer Tube, insulated Forceps Insert
1 x Grasping Forceps, rotating, with connector pin for unipolar coagulation, size 5 mm, length 36 cm, Atraumatic, fenestrated, double action jaws
Consisting of: Plastic Handle, with hemostat style ratchet, with larger contact area
Outer Tube, insulated Forceps Insert
1 x KELLY Dissecting and Grasping Forceps, rotating, with connector pin for unipolar coagulation, size 5 mm, length 36 cm, double action jaws
Consisting of: Plastic Handle, without ratchet, with larger contact area Outer Tube, insulated Forceps Insert
1 x REDDICK-OLSEN Dissecting and Grasping Forceps, rotating, with connector pin for unipolar coagulation, size 5 mm, length 36 cm, heavy, double action jaws
Consisting of: Plastic Handle, without ratchet, with larger contact area Outer Tube, insulated Forceps Insert
1 x Grasping Forceps, rotating, with connector pin for unipolar coagulation, size 5 mm, length 36 cm, atraumatic, fenestrated, single action jaws
Consisting of:
Plastic Handle, without ratchet, with larger contact area
Outer Tube, insulated Forceps Insert
1 x 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
Consisting of Plastic Handle, without ratchet, with larger contact area at the finger ring Metal Outer Sheath, insulated Forceps Insert
1 x KELLY Grasping Forceps, CLERMONT-FERRAND model, rotating, dismantling, with connector pin for bipolar coagulation, double action jaws, especially suitable

for dissection, size 5 mm, length 36 cm
Consisting of Plastic Handle, without Ratchet
Outer Sheath
Forceps Insert
2 x Coagulating and Dissecting Electrode, L-shaped, with connector pin for unipolar coagulation, size 5 mm, working Length 36cm
4 x Unipolar High Frequency Cord, with 4 mm plug, length 300 cm
4 x Bipolar High Frequency Cord, length 300 cm
1 x Suction and Irrigation Tube, with lateral holes, anti-reflex surface, with two-way stopcock for single-hand control, size 5 mm, length 36 cm
1 x Clip Applicator, for use with Ethicon Titanium-Clips LT-300 (medium large), dismantling, rotating, with ratchet to lock the jaw part holding the clip, size 10 mm, length 36 cm
Consisting of: Metal Handle, with ratchet Metal Outer Tube Insert
1 x Injection Needle, LUER-lock, diameter 1.2 mm, size 5 mm, length 36 cm
1 x Dismantling needle holder, ergonomic axial handle with disengageable ratchet, ratchet release on top, left curved jaws, with tungsten carbide insert \varnothing 5 mm, length 33 cm
Consisting of: insert , outer tube & Handle
1 x Insufflator 40 liters, Set with integrated module, power supply 100 - 240 VAC, 50/60 Hz
Consisting of: Insufflator 40 Liters Unit
Connecting Cable, length 100 cm
Universal Wrench
Insufflation Tubing Set, with gas filter, sterile, for single use, package of 5
Trocar, size 11 mm
1 x Full HD module, for use with up to 3 link modules, resolution 1920 x 1080 pixels, with integrated and digital Image Processing Module
power supply 100 - 120 VAC/200 - 240 VAC, 50/60 Hz,
Consisting of: Mains Cord, length 300 cm
DVI-D Connecting Cable, length 300 cm
Connecting Cable, length 100 cm
USB Flash Drive,
USB Silicone Keyboard, with touchpad, US
1 x Full HD LINK module, for use with FULL HD three chip camera heads,
power supply 100 - 120 VAC/200 - 240 VAC, 50/60 Hz
consisting of: Mains Cord
1 x Three-Chip FULL HD Camera Head, S-technologies available, progressive scan, soakable, gas- and plasma-sterilizable, with integrated Parfocal Zoom Lens
focal length $f = 15 - 31$ mm (2x), 2 freely programmable camera head buttons
1 x 27" FULL HD Monitor, wall-mounted with VESA 100 adaption, color systems PAL/NTSC, max. screen resolution 1920 x 1080, image format 16:9, Interface: RS 232, power supply 85 - 264 VAC, 50/60 Hz, Video inputs: DVI, VGA, S-Video, Composite, Video outputs: DVI, S-Video, Composite including: External 24 VDC Power Supply Mains Cor
1 x LED 150 Light Source, High-Performance LED with one light outlet, power supply 100 - 240 VAC, 50/60 Hz
Including Mains cord
1 x Fiber Optic Light Cable, with straight connector, extremely heat-resistant, enhanced light transmission, diameter 4.8 mm, length 250 cm
1 x Equipment Cart, wide, high, rides on 4 antistatic dual wheels equipped with locking brakes, mains switch on cover, central beam with integrated electrical sub distributors with 12 sockets, grounding plugs, Dimensions in mm (w x h x d): Equipment cart: 830x1474x730, Shelf: 630 x 25 x 510, Caster diameter: 150 mm
Consisting of: Base Module, equipment cart wide Cover, equipment cart wide
Beam Package, equipment cart high Shelf, wide
Drawer Unit with Lock, wide

Equipment Rail, long
Camera Holder
1 x Isolation Transformer 100V-120V ;2000VA, with 3 special mains socket expulsion fuses, 3 grounding plugs, dimensions: 330 x 90 x 495 mm (w x h x d) For usage with equipment carts
1 x Earth leakage monitor 100V - 120V, for mounting at equipment cart, control panel dimensions: 44 x 80 x 29 (w x h x d), For usage with isolation transformer
1 x Monitor Holder, height adjustable, swiveling and tilting, central mount, swivel range approx. 360°, loading capacity max. 18 kg, with monitor mount VESA 75/100, for use with Equipment Carts
1 x High Pressure Hose Pipe
OR EQUIVALENT
COUNTRY OF ORIGIN: USA/UK/EUROPE/JAPAN

30. RF ABLATION
Automatic and Manual modes available for RF Lesioning procedures
Compatible with Disc TRODETM and Spine CATHTM for annuloplasty/intradiscal procedures
Both bipolar and Monopolar RF capability
Intelligent probe recognition allows the cable to detect which probe and procedure is being
Performed and proceeds to relevant mode.
Multiple user capability - password protected
Capability to save preferred settings for each mode for multiple users
Ability to save data to USB and print/upload to any PC
Maximum RF Power up to 50 watts
Maximum RF Timer up to 30 minutes
Numerous built-in safety features to inform operator
Safety "shut offs" abort procedure if parameters are outside those set by the operator.
Built-in electrode/probe tester
Sterilizable output control knob
Easy to use footswitch to control RF process
Light and easy to transport
Multi-Lesion Adaptor MLA-4
Safe, Effective, and Easy Multiple Lesioning
Ability to create up to 4 Lesions Simultaneously
User Friendly true plug and play system
Simplified Probe ID and Probe Management System
Real-Time Graphical Display for all 4 Channels.
Continuous Impedance Monitoring for all 4 Channels.
Auto/Manual Extended Ramp available for all Lesions
Unique Probe Test Adaptor for all 4 Channels
Should be supplied with:
1 Intermediate Extension Cables
2 Re-useable RF Probe Sets (RF Probe, Protector Tube, and Autoclave case)
3. Disposable RF Cannula
4. Intermediate Cable with clip for GD-pads non-corded GD-pads non-corded
Certifications: ISO13485, CE/ USA FDA(510) K
Country of origin: USA, European Union, Japan or Equivalent, Manufacturer from other countries are acceptable, if they have FDA 510 (k)/CE/JIS(MHWL)

31. ULTRASONIC SURGICAL ASPIRATOR

For use in different brain and spinal operations
Piezoelectric Technology
Ultrasonic Surgical Aspirator (console) with foot switch control system
System capable of dual frequencies, 25 KHz and 35 KHz.
Electric ultrasonic aspirating system 100 Watt output power or better.
Irrigation flow maximum 0 ml to 100 ml/min or better
Suction pressure 0-0.8 bar or better
Fully Auto-clavable hand pieces.
Ultrasonic surgical aspirator system on mobile trolley with 4-wheel castors
Variable dual energy / frequencies and control aspiration
Auto Tissue selection
Built-in irrigation pump in the unit. Irrigation output The irrigation rate display shows digits 1 – 10 or more
One Hand Piece straight with resonance frequency 35 kHz
One Hand Piece angled with resonance frequency 35 kHz with hard covers (10pcs)
One Hand Piece angled with tips for Transssphenoidal (10 tips)
Sterilization case for each hand piece
Bone Instrument hand piece
Knife sonotrode long and short (10 each)
Rasp sonotrode long and short (10 each)
Biopsy collection Trap
Suction and Irrigation Tubing kit (50 pcs)
Or Equivalent. USA, EU, Japan.

32. ELECTRONIC TOURNIQUET
Compact unit with a built in compressor
Eliminates the need for an external gas supply from cylinder or pipeline
Touch Screen Control for simple to use operation
Independent pressure control for 2 Channels
Microprocessor controlled to guarantee safety , precision and traceability
IVRA function
Self-Compensates working pressure and maintains pressure when power is off
Self-error inspection function, light and sound alarm
Digital timers with selectable audible alarm
Data entry for traceability: date, time patient, hospital name information can be used through built in printer and/or USB connection(optional extra)
Built in Battery for back-up supply
Complete with mobile stand and basket
Voltage: 100-240VAC, Frequency: 50-60HZ, Battery autonomy: 10h-12h, Pressure control range: 0-600mmHg, Alarm: Programmable audible and visual.
Tourniquet Cuff Details
1) Reusable Single Bladder with Single Tube Tourniquet Cuff, New born-White 3.5 x 29cm
2) Reusable Single Bladder with Single Tube Tourniquet Cuff, Child-Pink 4.5x 35cm
3) Reusable Single Bladder with Single Tube Tourniquet Cuff, Small Adult-Violet 6x 46cm
4) Reusable Single Bladder with Single Tube Tourniquet Cuff, Adult-Sky blue 8x 46cm
5) Reusable Single Bladder with Single Tube Tourniquet Cuff, Adult L-Turquoise 10x47cm
6) Reusable Single Bladder with Single Tube Tourniquet Cuff, Leg –Yellow 8 x 76cm
7) Reusable Single Bladder with Single Tube Tourniquet Cuff, Leg-purple 10x 62 cm
8) Reusable Single Bladder with Single Tube Tourniquet Cuff, Leg L-Green 10x 76 cm
9) Reusable Single Bladder with Single Tube Tourniquet Cuff, Leg XL-Grey 10 x 82cm
10) Reusable Single Bladder with Single Tube Tourniquet Cuff, Leg XXL-Red 10 x 107cm
OR equivalent
COUNTRY OF ORIGIN: USA/UK/EUROPE/JAPAN

33. ARTHROSCOPE
Multiview Multidirectional Telescope, diameter 4 mm, length 18 mm, autoclavable, variable
Direction of view from 15° - goo. adjustment knob for selecting the desired direction of view fiber optic light transmission incorporated
Arthroscope Sheath , with snap-in coupling mechanism, diameter 6 mm, working length 13.5 cm, distal tapered, with irrigation holes, two stopcocks, rotatable, for use with
Telescope and Obturator with cannulated handle or Obturators.
Obturator, blunt, for use with Arthroscope Sheaths
Punch, through-cutting, cutting width 3.4 mm, straight jaws, sheath diameter 3 mm, straight handle with cleaning connector, working length 12 cm
Punch, through-cutting, cutting width 3.4 mm, curved jaws, 15° upwards, sheath diameter 3 mm, straight, handle with cleaning connector, working length 12 cm
Punch, through-cutting, cross-toothed, cutting width 3.4 mm, straight jaws, sheath diameter 3 mm, 30° curved to left, handle with cleaning connector, working length 12 cm
Punch, through-cutting, cross-toothed, cutting width 3.4 mm, straight jaws, sheath diameter 3 mm, 30° curved to right, handle with cleaning connector, working length 12 cm
Punch, through-cutting, cross-toothed, cutting width 3.4 mm, curved jaws, goo left, sheath diameter 3 mm, straight, handle with cleaning connector, working length 12 cm
Punch, through-cutting, cross-toothed, cutting width 3.4 mm, curved jaws, goo right, sheath diameter 3 mm, straight, handle with cleaning connector, working length 12 cm
Alligator Grasping Forceps, straight jaws, serrated, sheath diameter 3 mm, straight, handle with cleaning connector and ratchet, working length 12 cm
Punch, through-cutting, cutting width 0.5 mm, straight jaws, sheath diameter 3 mm, straight, handle with cleaning connector, working length 12 cm
Oval Up biter, through-cutting, cross-toothed, cutting width 4.1 mm, jaws curved, 15° upwards sheath diameter 3 mm, straight, handle with cleaning connector, working length 12 cm
Punch, through-cutting, cross-toothed, cutting width 2.7 mm, jaws curved, 15° upwards, sheath diameter 3 mm, straight, handle with cleaning connector, working length 12 cm
Punch, through-cutting, cross-toothed, cutting width 1.5 mm, jaws curved, 15° upwards, sheath diameter 3 mm, straight, handle with cleaning connector, working length 12 cm
Probe graduated, length of hook 4 mm, diameter 1.5 mm, working length 12 cm
Stainless steel tray for sterilization, storage and transport of up to 12 SiiCut- or Rhino forceps. Tray with lid, latches and handles. Removable rack with double silicone holders for
Max.12 instruments.
Arthroscopic Shaver System with color display, touch screen, hand piece&
Foot pedal operatable, two motor outputs, with integrated module, power supply 100 - 120/230 - 240 VAC 50/60 Hz .
Consisting of:
Arthroscopic Shaver Unit
Connecting Cable, length 100 cm
Mains Cord
Instruction Manual
Shaver Hand piece, up to 8000 rpm, for use with all sizes of blades /burrs 2.5 - 6.5 mm.
Two-Pedal Footswitch, one-stage, for use with console.
Arthroscopic Suction & Irrigation Set, Dual pump that can regulate pressure inside joint.
Consisting of:
Arthroscopic Suction & Irrigation Unit
Power supply 100 -240 VAC, 50/60Hz
Pressure range 0-200 mmgh.
Connecting Cable
Connecting Cable, length 100 cm
Four-Pedal Footswitch
Tubing Set Irrigation, sterile, for single use, package of 3

Tubing Set Suction, sterile, for single use, pack of 3
Tubing Set IRRIGATION, with two puncture needles, for single use, sterile, package of 10
Single-use SUCTION tubing set with two suction tubes
Tendon Stripper graduated, diameter 7 mm, length 30 cm
Open Tendon Stripper graduated, diameter 7.5 mm, length 30 cm
Tendon Hook
Tendon Board,
Consisting of:
1 x Tendon Board
1 X retainer
1 X Working Board, white
1 X Measuring Cradle
1 X Tension Cradle
2x Clamp
Tendon Thickness Tester for determination of tendon thickness size 6- 10.5 mm at intervals of 0.5 mm
Undercut Drill, cannulated, diameter 4.5 mm, for use with Drilling Wire and Larding Wire
Undercut Drill, cannulated, diameter 7 mm, for use with Drilling Wire and Larding Wire
Undercut Drill, cannulated, diameter 8 mm, for use with Drilling Wire and Larding Wire
Undercut Drill, cannulated, diameter 9 mm, for use with Drilling Wire and Larding Wire
Undercut Drill, cannulated, diameter 10 mm, for use with Drilling Wire and Larding Wire
Undercut Drill, cannulated, diameter 11 mm, for use with Drilling Wire and Larding Wire
Drill cannulated, diameter 8 mm for use with Drilling Wire and Larding Wire
Drill cannulated, diameter 9 mm for use with Drilling Wire and Larding Wire
Drill cannulated, diameter 10 mm for use with Handle and Drilling Wires
Length Gauge for cruciate ligament reconstruction, graduated, working length 23 cm
Drilling Wire, spiral shape, with eyelet, diameter 2.4 mm, length 38 cm, unsterile, for single use, package of 6, for use with Undercut Drills
Larding Wire, pyramidal tip, diameter 2.4 mm, length 32 cm, unsterile, for single use package of 10, for use with Undercut Drills
Tibial Target Guide for ACL reconstruction, tunnel angle between 40° and 55°, adjustable in 5 increments
Nitinol Guide Wire, diameter 1.1 mm, length 38.5 cm, unsterile, for single use, package of 6,
Femoral target guide handle with 3 attachment 6,7 & 8mm offset
Stainless steel tray for sterilization, storage and transport of up to 12 Punches or forceps. Tray with lid, latches and handles. Removable rack with double silicone holders for max. 12 instruments.
FULL HD Camera Control Unit
-Camera control unit with special image enhancement modes
Resolution 1920 x 1080 pixels progressive scan
-Integrated patient data, image and video recording system
Power supply 100-240 VAC 50 Hz
Special Feature Required:
Automatic White Balance
Powerful video signal processing
Image enhancement modes upto 5 or better with suitable camera heads
Picture in picture mode control via camera head button
-Control of peripheral i.e. light source, recording system parameter via camera head button
Still image capturing in full HD quality (JPEG) format via camera head buttons
-Video capturing in full HD quality (MPEG 4 format) via camera head buttons
-Grid & pointer mode for teaching and training f:>Urpose
20 individual preset or better
20 patient data backup or better
-Should have compatibility with upgrades like 3-Chip Camera heads, flexible scopes, 3-D,
4K or better or equivalent
Technical Features:

DVI output (2x) or better or equivalent
3G-SDI output (1x) or better or equivalent
USB connections (4x) pr better or equivalent
Consisting of:
DVI Cable
Power Cord
Silicon Keyboard with touchpad
USB flash drive 32 GB or better
Digital CMOS camera head for full HD with 2x digital zoom and freely programmable camera head buttons
Technical data:
-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 = 16mm or better.
Display of 50 or 60 frames per second. Lens:
Minimum light sensitivity: 1.4 Lux (f = 1.4 mm).
Control buttons: 3 (2 of them freely programmable).
Special features:
-Chip Technology for brilliant image
The CCD sensing chip.
-Suitable light sources are controllable by camera head buttons via communication bus.
-Suitable insufflators are controllable by camera head buttons via communication bus. Suitable camera control units can store FULL HD images and FULL HD video clips to USB mass storage devices in conjunction with the camera head
Suitable camera control units can print FULL HD images in conjunction with the camera head and a compatible USB printer.
The camera head is rated CF-Defibrillation according to EN 60601 allowing cardiac surgery
LED 150 Watt Light source High-Performance LED Light with one light outlet,1 power supply 100 - 240 VAC, 50/60 Hz
Including: Mains cord
Fiber Optic Light Cable, with straight connector, diameter 3.5 mm, length 180 cm
26" FULL HD Monitor
color systems PAL/NTSC,
max. screen resolution 1920 x 1080, image format 16:9,
video inputs: DVI, 3G-SDI, VGA, S-Video, Composite, video outputs: DVI, 3G-SDI, Composite,
power supply 100 - 240 VAC, 50/60 Hz,
5 V DC output (1 A), wall-mounted with VESA 100 adaption,
Including:
External 24 VDC Power Supply Mains Cord
Equipment Cart Rides On 4 Antistatic dual castor wheels
COUNTRY OF ORIGIN: USA/UK/EUROPE/JAPAN

34. FUNCTIONAL ENDOSCOPIC SINUS SURGERY (FESS)
Straight Forward Telescope 0°, enlarged view, diameter 4 mm, length 18 cm, autoclavable, fiber optic light transmission incorporated,
Forward-Oblique Telescope 30°, enlarged view, diameter 4 mm, length 18 cm, autoclavable, fiber optic light transmission incorporated,
Lateral Telescope 70°, enlarged view, diameter 4 mm, length 18 cm, autoclavable. Fiber optic light transmission incorporated.
Forward- Oblique Telescope 45°, enlarged view, diameter 4 mm, length 18 cm, autoclavable. Fiber optic light transmission incorporated.
Straight Forward Telescope 0°, enlarged view, diameter 2.7 mm, length 18 cm, autoclavable, fiber optic light transmission incorporated,
Forward-Oblique Telescope 30°, enlarged view, diameter 2.7 mm, length 18 cm, autoclavable, fiber optic light transmission incorporated,
ENT Telescope, diameter 4 mm, length 18 cm, autoclavable, variable direction of view from 15° - 90°, adjustment knob with Finne for selecting the desired direction of view, fiber optic light transmission incorporated,
ENT motor control unit with touch screen color display, power supply 100-240 VAC,
50/60 Hz,
consisting of:
ENT motor control unit
Mains Cord
Two-Pedal Foot switch
Single Use Tubing Set, sterile, package of 3
<u>Special Features:</u>
Can be used as ENT Shaver, ENT Drill, with attachments
Automated motor recognition
Continuously adjustable sped Range
Integrated irrigation pump,
Two motor connections
Shaver Handpiece,with Suction and Irrigation Ports Compatibale with
ENT Motor control unit, Shaver speed Range 900 - 10000 rpm rotation mode Oscillations, Sinus burr speed range 34000 Rpm or more rotation mode: Rotations
Suction Shaver Blade, with integrated irrigation for Handpiece, straight, sterilizable, double serrated cutting edge, rectangular cutting window, diameter 4 mm, length 12 cm,
Suction Shaver Blade with integrated irrigation for Hand piece straight, sterilizable, concave cutting edge, oval cutting window, diameter 4 mm, length 12 cm,
Shaver Blade, with integrated irrigation for, curved 40°, sterilizable, cutting edge serrated backwards, double serrated, rectangular cutting window, diameter 4 mm, length 12 cm,
Suction Shaver Blade, with integrated irrigation, curved 40°, sterilizable, cutting edge serrated backwards, double serrated, rectangular cutting window, diameter 4 mm, length 12 cm
sinus burr, with integrated irrigation length 12 cm Sterile, for single use package of 5 Curved 40 degree cylindrical burr 3mm, shaft diameter 4mm
sinus burr, with integrated irrigation length 12 cm Sterile, for single use package of 5 Curved 40 degree diamond shape cutting burr diameter4 mm, shaft diameter 4mm
Nasal Forceps, straight, size 1, with cleaning connector, working length 13 cm or better
Nasal Forceps, 45° upturned, size 1, with cleaning connector, working length 13 cm or better
Nasal Forceps, straight, through-cutting, tissue-sparing, BLAKESLEY shape, size 0, width 3 mm, with cleaning connector, working length 13 cm or better
Nasal Forceps, 45° upturned, through-cutting, tissue-sparing, BLAKESLEY shape, size 0, width 3 mm, with cleaning connector, working length 13 cm or better
Antrum Punch, backward cutting, sheath 360° rotatable, with fixing screw, working length 10 cm, take apart

sheath, for use with cleaning adaptor
Nasal Forceps, 45° upturned, through-cutting, tissue-sparing, BLAKESLEY shape, size 0, width 3 mm, with cleaning connector, working length 13 cm or better
Antrum Punch, backward cutting, sheath 360° rotatable, with fixing screw, working length 10 cm, take apart sheath, for use with cleaning adaptor
Cleaning Adaptor for rotatable Antrum Punch
Antrum Grasping Forceps, jaws curved downwards, fixed jaw curved 90°, movable jaw backward opening 120°, with cleaning connector, working length 10 cm or better
Antrum Grasping Forceps, jaws curved upwards, fixed jaw curved 90°, movable jaw backward opening 120°, with cleaning connector, working length 10 cm or better
Antrum Grasping Forceps, jaws curved to right, fixed jaw curved 90°, movable jaw backward opening 120°, with cleaning connector, working length 10 cm or better
Nasal Scissors, straight, with cleaning connector, working length 13 cm or better
Bipolar Suction Forceps, 45° upturned, with suction channel, for bipolar coagulation in paranasal areas, working length 12.5 cm or better, for use with Bipolar High Frequency Cords
Bipolar High Frequency Cords
Punch, circular cutting, for sphenoid, ethmoid and choanal atresia, diameter 4.5 mm, with cleaning connector, working length 18 cm, or better
Frontal Ostium Seeker, double ended, both sides curved 90°, tips bent right and left, length 22 cm or better
Sickle Knife, pointed, length 19 cm or better
Elevator, double-ended, semisharp and blunt, length 20 cm or better
Suction Elevator, with stylet, length 19 cm or better
Probe, double-ended, maxillary sinus ostium seeker, ball-shaped ends diameter 1.2 and 2 mm, length 19 cm
Antrum Curette, oblong, small size, length 19 cm
Antrum Cannula, LUER-Lock, long curved, outer diameter 2.5 mm, length 12.5 cm
Antrum Cannula, LUER-Lock, with cut-off hole, short curve, outer diameter 2.5 mm, length 12.5 cm
Suction Tube, with mandrel and cut-off hole, with distance marking at 5 - 9 cm, 7 Fr., working length 10 cm
Punch, detachable, rigid, upbiting 40° forward, size 2 mm, working length 17 cm
Antrum Curette, right, length 16.5 cm
Antrum Cannula, LUER-Lock, long curved, outer diameter 3 mm, length 15 cm
Spray for cleaning of shaver hand piece
Sterilization Container
Container for shaver hand Piece and blades
Full HD Camera Control Unit for use with camera heads and video endoscopes for imaging and documentation for endoscopic applications
Connections 2x DVI-D outputs
Max Resolution: 1920xx1080 pixels
4 or more USB slots
Storage Format: Pictures: JPEG, Videos: MPEG-4
Internal Memory: 50Gb or better
Ports: 2 or more camera connecting ports
Certified according to DIN 60601-1
Type of protection against electric shocks: Class I
Protection for camera applied part against electric shock: CF, Defib.
OR Type BF, depending on connected camera head or video endoscope.
Special Features:
Compatible with large variety of camera heads and video endoscopes
supports camera heads in combination with rigid and flexible endoscopes as well as reusable and single use flexible endoscopes
Rotatable image (180 degree) as well as mirroring, Picture in picture function (freeze), electronic zoom(2x) filter for fiberscopes,

configuration of camera brightness
circle mask for training and educational purpose
Complete documentation of the procedure:
Patient date input
Possibility to store images and videos on USB stick, buffer of data on internal storage
Print of pictures with separate USB printer
FULL HD CMOS Camera Head
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
Technical data:
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).
Special features:
CMOS-chip technology for brilliant images.
Image acquisition in format 16:9, with 1920 x 1080 pixels and progressive scan 50 Hz or 60Hz.
Digital through and through: Conversion of optical images to digital signals at the earliest possible site: The CMOS sensing chip.
Zoom : Digital Zoom Through The Monitor In 5 Levels
27" Medical Grade Monitor
27" Medical Grade Monitor from the same manufacturer and should have recommendation for endoscopic MIS surgery with following technical data. Max. screen resolution 1920 x 1080, image format 16:9, Interface: RS 232,
Video Inputs: 2xDVI, 1x3G-SDI, 1xRGB, 1x S-Video, 1x Composite
Video Outputs: 1x DVI, 1x 3G-SDI, 1x Comp, 1x S-Video, 1x RS232.
CE label, class I.
Certified to: ANSI/AAMI ES60601-1, CAN/CSA C22.2 NO.60601-1:14 und EN 60601-1, EN60601-1-2, FCC part 15. Subpart B Class A, MDD 93/42/EEC. FDA Class I Medical Device.
Including Following Accessories:
1 x DVI cable
1 x External 24 VDC power supply.
1 x Mains cord.
1 x Cable cover.
4 x Mounting screws M4.
Equipment Cart with monitor Stand (LOCAL Supply),
rides on 4 antistatic dual wheels equipped with locking brakes, centralbeam with integrated electrical subdistributors with 6 sockets, grounding plugs
Equipment cart:
Shelf:
Including:
Base Module, equipment cart LC
Cover, equipment cart LC
Beam Package, equipment cart LC
Shelf, wide
Drawer Unit with Lock, wide

Cameraholder
LED light source 150 with one light port
Technical data:
Lamp type: High performance LED.
Color temperature: approx. 6200 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.
Natural color rendition.
Light adaptor with glare shield protection sleeve.
Fiber optic light cable 3.5 mm diameter, 230cm length extremely heat
Resistant
Recording system (same Manufacturer)
Technical Data:
Input Voltage: 100-240VAC
Input Frequency: 50-60 Hz
CPU: Intel® Core™ i7-6700 @ 3.4GHz.
Internal storage: SSD (70 GB) HDD (2 TB).
Memory RAM: 16 GB.
Connections: 2 x 1 GB Ethernet (RJ 45), 9 x USB 2.0 & 3.0
Image formats: BMP, JPG, PNG
Video format: MPEG-4, MPEG-2, MOV.
Video signal inputs: 1 x DP 1.2A, 1 x HDMI 2.0
Video outputs: 1 x DP 1.2A, 1 x HDMI 2.0
Resolution images: up to 3840x2160p(native resolution and aspect ratio)
Resolution video clips: up to 3840x2160p@60Hz.
Type approval: IEC 60601-1-1, EN60601-1, EN60601-2.
Classification: CE, MDD, CSA.
Special Features:
11" or better touch screen
Screen technology: LED/AHVA
Aspect ratio: 16:9.
Record of two image sources (parallel or individually).
Stills and video sequences (with optional audio) in 2D, 3D, and 4 k.
Intelligent, Adaptive memory management.
Easy management and overview of open/automatic memory operations.
Patient data import via keyboard, query HL7 or DICOM worklist.
Save USB storage media through 2.0 and 3.0, network drives, FTP,
via DICOM or HL7 ORU/MDM. Possible on internal memory (2 TB, FIFO)
Network transfer via SMB3 security encrypted DICOM Protocol or sFTP possible
COUNTRY OF ORIGIN: USA/UK/EUROPE/JAPAN

35. 4K ENDOCAM SYSTEM
HIGH DEFINITION VIDEO ENDOSCOPY SYSTEM WITH FULL HD 19-21 INCH MONITOR
FULL HD VIDEO PROCESSOR
Power supply voltage : 100-240V AC
Frequency : 50 / 60 Hz
Contains the electronics to operate the Dual Focus
Compatible with High Definition video endoscopes.
Pre-freeze function automatically
16:9 and 16:10 output for a HDTV monitor
Compatible with analog, HD-SDI, and DVI output
Link connection to peripheral devices
Picture-in-picture and index function effectively enhance your observation
Portable memory is compatible for data management
DV output to compatible documentation devices
White balance adjustment is using the white balance button on the front panel
Color tone adjustment
Red: ± 8 steps
Blue: ± 8 steps
Chroma: ± 8 steps
Electronic amplification of the light
Three contrast modes Low/ Normal/ High
Enhancement of contrast of the fine patterns in the image
Edges enhancement of the endoscopic image
The image with the least blur is selected from the images captured
Fog free function for clear images Electronic magnification, controlled either from scope or from keyboard and Up to 50 patient data can be registered
Scope ID function for easier Endoscopy suite management and for next generation system expansion.
A single compatible keyboard to control Video processor / system center and EUS both
LIGHT SOURCE 300W XENON
Power supply voltage: 100-240 V AC: with $\pm 10\%$
Frequency: 50 / 60 Hz: with $\pm 3\text{Hz}$
Examination lamp: Xenon short-arc lamp (ozone-free) 300 W
Average lamp life: Approximately 500 hours of continuous use Ignition method Switching regulator
Brightness adjustment: Light-path diaphragm control
Cooling: Forced-air cooling
Intensity mode: Normal or high intensity
Color conversion: using special-purpose filter
Emergency lamp: Halogen lamp (within mirror) 12 V 35 W
Average emergency lamp life: Approximately 500 hours
Automatic brightness adjustment method: Servo-diaphragm method
Automatic exposure: 17 steps
Pump: Diaphragm type pump
Pressure switching: 4-level available (OFF, low, medium, high)
Method: Feeds water by pressurizing the detachable water container with air
Emergency lamp: Indicates absence of emergency lamp, disconnection and use of emergency lamp.
PDD When the PDD observation mode is enabled, the PDD indicator lights up
FULL HD LED MONITOR 19-21" MEDICAL GRADE
19-21" Full HD LCD Panel with LED backlight
Flip function to rotate the image 180 degree
Picture-in-Picture & Picture-out-Picture function and cloning function
Advance Image Multiple Enhancer Technology
Resolution 1920 x 1080p Full HD
Aspect Ratio 16:9 or better

Number colors 1 billion or more
Viewing angle 178 degree Horizontal and Vertical
Inputs: HD-SDI (2), Video (1), Y/C (1), HD15 (1), DVI (2)
Output: HD-SDI (2), Video (1), Y/C (1), HD15 (1), DVI (2)
MOBILE WORK STATION WITH ARM & CABLING SYSTEM
Trolley accommodates a wide range of electro-medical devices advanced endoscopic procedures
LCD Monitor Arm allows the operator to optimize the viewing position with ease, due to the integral gas spring and tensioned joints providing excellent balance in use
Optimized cable management through a range of cable channels integral to the workstation hoop
Isolation transformer should be fitted as standard to meet electrical safety requirements.
Output from the transformer is controlled by a central switch, allowing all connected.
Complete with following:
Sliding Keyboard Tray
LCD Monitor Arm
IV Pole
Drawer Unit
Equipotential Strip
Monitor Power Supply Holder
Footswitch Holder
Keyboard Arm - Side Mounted
Universal Storage Container
Equipotential Support Rail
Cable Retaining Hook
Nurses Control Arm
OR equivalent
Certificates: ISO 13485, CE or FDA
COUNTRY OF ORIGIN: USA/UK/EUROPE/JAPAN

36. BIPOLAR TURP
HD Cystoscope Ø 4.0mm, 30° viewing angle, autoclavable, 302mm
SALINE working element used for resectoscopes, passive cutting, handle closed
Inner sheath 26 Fr. with ceramic isolation, rotatable
Outer sheath 26 Fr. with perforation, rotatable
Standard obturator, 24 Fr.
Cutting loop electrode 30° angled, 24 Fr
Rollerball electrode Ø 3mm, 24 Fr
Rollerball electrode Ø 5mm, 24 Fr
Bipolar connecting cable for Martin Maximum, length 4.5m
RECORD syringe, 100 ml
Ellik evacuator, complete
Biopsy forceps, double action
Grasping forceps, double action
Adaptor for use with resectoscope sheaths
Protection sleeve for sterilization and storage of electrodes
COUNTRY OF ORIGIN: USA/UK/EUROPE/JAPAN

37. INFUSION PUMP
Microprocessor controlled with back lit graphic LCD display.
Audible and visible alarms for occlusion (upper & lower), complete, low battery, door open, malfunction bubble.
Volumatic infusion pump.
Flow rate 0.1 to 1000 ml/h (im/h step increments) or above.
Infused Volume 0.1 to 999.9 ml
Bolus rate 1 to 1000 ml/h or above.
K.V.O 0.1 to 9 ml/h
Occlusion Level 9 Level (70-800 mmHg) or better.
Battery operating time at least 5 hour or more.
Or equivalent
COUNTRY OF ORIGIN: USA/UK/EUROPE/JAPAN

38. SYRINGE PUMP
Large LED display
Volume Range 0-999.9ml with flow rate increments 0.1ml/h
Bolus Function
Selectable Occlusion limit
KVO
Syringe Size: 10ml, 20ml, 30ml, 50/60ml
Highest Infusion Rate: 400ml/h
Infusion Rates: 0.1 – 400ml/h (50ml/60ml); 0.1 – 200ml/h (20ml/30ml); 0.1 – 99.9ml/h (10ml)
KVO: 0.1ml/h \pm 0.02 ml/h
Purge / Bolus: 400 ml/h (50ml/60ml); 200 ml/h (20ml/30ml); 99.9ml/h 10ml
Occlusion Pressure High
10ml syringe Spec: 100Kpa \pm 30Kpa
20, 30, 50/60ml syringe Spec: 90Kpa \pm 30Kpa
Occlusion Pressure Low
10ml syringe Spec: 70Kpa \pm 30Kpa
20, 30, 50/60ml syringe Spec: 50Kpa \pm 30Kpa
Controls: On/Off, Start/Stop, Bolus, Select, Clear
Alarms: Audible & Visual Syringe Installation Failure, Occlusion, Near End, Pause Overtime, Low-Battery, Completion, Power Interruption, Motor Failure, Incorrect Syringe Specification, Electrical Circuit Jam
Main Power: AC 100-240VAC 50/60Hz
Battery Ni-MH: DC 12V, Chargeable, Life: about 7 hours at the rate of 5ml/h
Or equivalent
COUNTRY OF ORIGIN: USA/UK/EUROPE/JAPAN

39. CRASH CART WITH DEFIBRILLATOR
ABS structure, resistant to erosion
Five (5) drawers: 2 small and 3 big.
Each inner with partitions can be organized freely into different size units for placement of medicine
With handles to move the emergency cart
Defibrillator tray
Telescopic I.V. pole and CPR board
Sliding side shelf
Bumper protector on corners
Oxygen tank holder at the back
High strength ABS material, with side rails around
All drawers should with central locker
Defibrillator with Monitor & Recorder
Biphasic & truncated wave form
8" or more screen size
Synchronized output with ECG
Control of energy charges / delivering on main panel and apex paddle.
Charging indicators
Manual and AED mode energy up to 360J .
Charging time for full energy should be less than 5 sec.
Display of heart rate, ECG through paddles and lead I, II& III patient cables.
Built-in recorder for printing
Alarm for high and low heart rate, low battery warning.
Built in rechargeable battery with charges for more than 100 shocks
Auto test/self-check
With pediatric and adult external paddles.
ECG cable
AC 220V/50Hz operated
Or equivalent
COUNTRY OF ORIGIN: USA/UK/EUROPE/JAPAN

40. VIDEO LARYNGOSCOPE	
<u>Flexible Video Intubation Endoscope</u>	
C-MAC Monitor for CMOS Endoscopes, kit, screen size 7" with 1280 x 800-pixel resolution, two camera inputs, a USB and a HDMI port, optimized user interface, video and image capturing in real time on SD card, playback of recorded video clips and still images, data transfer from SD card to USB flash drive possible, splash-proof according to IP54, suitable for wipe disinfection, shock-resistant ABS plastic housing, intelligent power management with rechargeable Li-Ion batteries, VESA 75 mounting option, power adaptor for EU, UK, USA and Australia,	
Power supply 110-24 VAC, 50/60 Hz,	
Consisting of:	
8403 ZX	C-MAC Monitor
8403 YSD	SD Card, 16 GB
8403 YZ	Protection Cap
8401 YCA	VESA 75 Quick Clip
ET27-30-0004695	Power Supply
ET-27-30-0004697	Plug Adaptor EU
ET27-30-0004701	IEC (ROW) Plug
ET-27-30-0004370	Adapter Cable USA/JP
Flexible intubation video Endoscope 4 x 65, Set, CMOS technology,	
With suction valve,	
Deflection up/down: 140 Degree/140 Degree	
Direction of view: 0 Degree	
Angel of view: 100 Degree	
Working length: 65cm	
Total length: 93 cm	
Working channel inner diameter: 1.50 mm	
Distal tip outer diameter: 4 mm,	
Special Features:	
Compatible with the new C-MAC III Monitor 8403 ZX and the new C-HUB II 22309 01	
Compact design; acoustic and tactile zero position control	
Ergonomically designed handle	
Extremely lightweight (approx. 385g)	
High image resolution with 120.000 pixels	
Video imaging in 4:3 format	
Outer diameter 4mm	
Working channel diameter 1.5 mm	
Integrated LED light source	
Suitable and validated for the following low-temperature reprocessing methods up to max. 60 C: Manual/machine cleaning and disinfection, sterilization with Sterrad (100S, NX, 100NX) and EtO gas; High-Level	
Consisting of:	
11302 BDX: Flexible intubation video Endoscope 4 x 65	
13242 XL: Leakage Tester	
11301 CFX: Tube Holder	
11301 CD1: Irrigation Adaptor (2x)	
11301 CE1: Suction Valve	
10309: Bronchoscope Insertion Tube, size 4, sterile	
10310: Bronchoscope Insertion Tube, size 2, sterile	
29100: Plug, back, package of 10	
8403 YZ: Protection Cap, for use with C-MAC Monitor 8403 ZX and C-HUB II 20290301	
C-MAC Connecting Cable, with C-MAC system interface, for	

C-MAC Monitor 8403 ZX or C-HUB II 20290301, length 200 cm, for use with C-MAC Video Laryngoscopes 8403 xxx
C-MAC Video Laryngoscopes MAC #4, CMOS technology, with MACINTOSH laryngoscopes blade, size 4, with C-MAC system interface, documentation of images and video sequences via BlueButton, for use with C-MAC Connecting Cable 8403 X for
C-MAC Monitor 8403 ZX or C-HUB II 20290301 as well as
C-MAC PM 8403 XD
COUNTRY OF ORIGIN: USA/UK/EUROPE/JAPAN

41. TRANSPORT VENTILATORS
Dynamic Lung Real Time Visualization of the Lungs with Representations of Tidal Volume, Lung Compliance, Resistance and Patient Activity
Vent Status: Visual Representation of Ventilator Dependency, Grouped into Oxygenation, Patient Activity.
ASV Target Graphics : Graphic Display of Target and Actual Parameters for Tidal Volume, Frequency, Pressure, Patient Activity, and Minute Ventilation
Monitoring: 60 Monitoring Parameters display or more
Real-Time Waveforms: Paw, Flow, Volume Controls
Ventilation Modes: ASV, (S)CMV+/APVcmv, SIMV+/APVsimv, PCV+, SPONT, PSIMV+
Manual Breath, O2 Enrichment, Standby, Sigh, Screen-Lock, Apnea Backup Ventilation, Inspiratory Hold, Screen-Shot, Suctioning Tool, Dimmable Screen, Configurable Quickstart-Settings, Start-Up Over Body Height and IBW, Nebulizer
Patient Types: Adult, Pediatric & Neonatal
Patient Height: Adjustable
(S)CMV+/APVcmv, PCV+ 4 to 80 b/min
SIMV+/APVsimv, DuoPAP 1 to 80 b/min
PSIMV+, NIV-ST 5 to 80 b/min
Tidal Volume 20 to 2000 ml
PEEP/CPAP and P Low 0 to 35 cmH2O
Oxygen 21 to 100 %
I:E Ratio
%MinVol (ASV)
I:E Ratio
%MinVol (ASV)
Inspiratory Time
Flow Trigger
Pressure Control
Pressure Support
Pressure Ramp
P High (APRV/ DuoPAP)
P Low (APRV)
T High (APRV/ DuoPAP)
T Low (APRV)
ETS
Peak Flow
Operator Adjustable Alarms: Low/High Minute Volume, Low/High Pressure, Low/High Tidal Volume, Low/High Rate, Apnea Time, Low/High Oxygen, Oxygen Concentration, Disconnection, Loss of PEEP, Exhalation Obstruction, Flow Sensor, Power Supply, Battery, Gas Supply
Storage and Display of up to 1000 Events with Date and Time Stamp
Standards
Backup Battery Time
Oxygen Supply
Low Pressure Oxygen
Air Supply
Degree of Protection
Should complete with
1. Oxygen hose
2.Disposable breathing circuit (adults & peads)
3.Operating Manual
4.Power Cord
Or equivalent
COUNTRY OF ORIGIN: USA/UK/EUROPE/JAPAN

42. ECG MACHINE
Portable 6 channel ECG for adult and pediatric patients with Auto, manual and user-defined profiles.
Alphanumeric key board, LCD graphic display 3 inch or more and pace maker detection facility.
Unit should operate on mains and Battery backup 1 hour or more
Printer: Paper width (mm): 58, Roll Paper type.
Paper speed (mm/s): 5, 10, 25, 50.
Number of leads:06
Real time, synchronic transmission in automatic mode. PC Interface
Digital Filters Averaging of ECG cur.
Analysis. Interpretation in words.
Complete with: Set of electrodes, patient cable, power cord, gel, paper roll 58mm / 25m 5 nos. dust cover.
Should be interference of RS232, USB reduction.
Power supply should be 230 V, 50–60 Hz.
Or equivalent
COUNTRY OF ORIGIN: USA/UK/EUROPE/JAPAN

43. SUCTION MACHINE
Should be ABS (RAL 9002) high strength.
4 extra strong wheels (2 with brakes)
Pump: piston type, oil free maintenance.
Collection Jar: 02 Polycarbonate collection jar (4 liters-Scales up to 3500 ml) with safety valve to prevent overfilling
01 bacterial filter with each collection jar should be Hydrophobic PTFE filter.
3m PVC Suction Tube.
Maximum Pump Flow: 40 L/min or more
Maximum Vacuum: 0-86kPa -866mbar -650mmHg
Noise Level: 45db (A)/1 m
Power: 250 W
Or equivalent
COUNTRY OF ORIGIN: USA/UK/EUROPE/JAPAN

44. MOBILE X-RAY MACHINE WITH DR
Mobile X-ray machine for general purpose mobile x-ray unit for radiography.
Microprocessor controlled system
High frequency 25KHz or better
15" or more Touch screen display , with 300cd/m ² brightness
Integrated workstation with 64bit OS.
Processor Intel Core™ i7, 8GB DDR3
Input voltage 220v, 50Hz
X-Ray Generator
KV Range: 40 kV to 150 kV in 01 kV Steps.
mA Range: Max. 300mA or better
mAs range : 0.1 mAs to 500 mAs or better
KW : 20 kW or more
X-Ray Tube Unit
Stationary anode : Double focus
Focus Size : 0.6 & 1.2 mm or better on either side
Anode heat storage capacity : 300 KHU or better
3 point, operating mode, anatomical program
Emergency stop
Integrated battery with battery charger
Capacity of 15 or more exposures per hours
Virtual grid
130cm or better retractable column
System should have anti-collision sensors
Wifi portable wireless detector , 35 x 43cm
Caesium Iodide scintillator (CsI)
Matrix 2800 x 3408 pixels
Pixel size: size 125µm; 16bit converter
Image Preview: 1 second or better
Strong wheel, electromagnetic breaks.
Standard power supply cable, standard x-ray exposure switch cable
Vertical movement of the arm to lower or raise the tube collimator assembly,
Rotation of the Collimator.
Or equivalent
COUNTRY OF ORIGIN: USA/UK/EUROPE/JAPAN

45. MOBILE COLOR DOPPLER
Specifications:
15" or more high resolution LED.
Ergonomic design with anti-glare, 160 degree opening angle screen or more
One Button automatic image optimization
Large image display region
Anti-reflective screen and auto brightness adjustment
User-defined Operations
Compact design and light weight 5 kg or less including battery.
Standard Connection Interface: DICOM 3.0, 2 USB ports, HDMI S-Video and Extender port.
Built-in Battery for 90mins of scanning or better.
Wi-Fi and Bluetooth wireless connection
1 Active Probe connector extendable to 3 or better with pin-less probe technology.
Quick boot up: 25s or less.
Enhanced accuracy due to high sensitive Doppler detection for low flow vessels.
Needle enhancement feature for easy biopsy procedures.
Multi-beam probe for optimized image resolution.
Frequency Compound Imaging.
Spatial Compound Imaging.
Noise reduction image processing technology.
Tissue Harmonic Imaging (THI, PIHI).
High Pulse Repetition Frequency.
B-Mode Panoramic imaging.
Auto calculation (Auto Trace)
Triplex or Simultaneous mode
B Mode Panoramic
Power Doppler Imaging.
Storage media: 500 GB or better standard image storage capacity.
Application fields: Abdomen, Vascular, Cardiology, Gynaecological/Obstetrical, Urology, Musculoskeletal, Interventional ultrasound, Small parts, Anaesthesiology, Paediatrics etc.
Modes: B mode, Color mode, PW mode, THI mode, DPI mode, DDPI mode, IMT measurement, TEI index, Spectral Doppler auto-trace, Color flow volume measurement, Multi-beam processing technology, Speckle/Noise reduction function.
1) Convex Probe 2MHz to 6 MHz or better.
2) Phase Array Probe 2MHz to 6MHz or better.
3) Linear Probe 5-14MHz or better.
4) Compatible Trolley
Or equivalent
Certification: CE and FDA 510(k)
Country of Origin: USA, UK, EU or Japan
[Manufacturers from other countries of origin having US FDA 510(k) and CE (MDD) Certifications will also be eligible.]

46. FLOOR MOUNTED AIR CLEANERS
Highly frequented rooms, high visitor frequency, physical activity and long periods of stay often prevent the necessary supply of clean air.
The mere swirling of the air only results in an even greater distribution. The same often applies to many air conditioning and ventilation systems, clogged filters and contaminated exhaust air pipes.
Apart from natural air exchange, only air-cleansing or air-disinfection offers solutions. The latter uses either the technology of “UVC air disinfection” or “highly effective Plasma-Disinfection and Air-Disinfection“.
In the “High-Intensity Plasma Air Disinfection” the room air is drawn in by a fan.
Airflow: max. 500 m3/h.
Particulate filter
Designation: HEPA / ULPA
Filter monitoring with LED display
Material: Sheet steel 1,0 mm
Complete with:
1 no. Stainless steel, polished Air purification unit
2 nos. HEPA14 filter cartridge (consists of pre-filter F9 + activated carbon + HEPA14)
Or equivalent
COUNTRY OF ORIGIN: USA/UK/EUROPE/JAPAN

47. X- RAY ILLUMINATOR
Latest Technology
Good quality
Standard Size
State of the art manufacturing
Brochure must be provided
2 in 1 Horizontally or more
Must be Digital latest LED lights.
To View 2 nos. 14x17” film.
Country of Origin:
Turkey, Korea, China.

48. MICRO SURGICAL SYSTEM FOR ENT SURGERY
Swivable and tiltable suspension
Mobile floor stand with lock-in provision equipped with electromagnetic brakes, rotatable joint arms, overhead clearance
Effortless positioning in all directions via gross focus handle for all movements in neurosurgery and spine surgery with multi-function hand controls for all functions
Automatic balancing for all relevant system axis by touch of a button
Active vibration damping reinforced by robotic movements
Motorized lateral movement in x & y directions with adjustable speed
Apochromatic optics
Motorized fine focusing and continuously variable focal length adjustment from 200 to 625 mm via front lens with adjustable speed
Automatic focusing
Motorized zoom 1:6 with adjustable speed
Automatic draping with thirty drapes
Fibre optic illumination system with automatic adjustment of light intensity for the selected working distance and magnification and automatic adjustment of luminous field
Provision of enhanced visualization with increased depth of field
Tiltable and retractable binocular tube 0 to 180° with IPD adjustment, integrated switching mechanism for magnification/field of view and integrated 360° rotation
Wide angle eyepieces 10X with dioptric adjustment
Integrated Xenon light source 300 W with integrated back-up 300 W Xenon lamp and automatic changeover in case of failure
One set of sterilizable caps
Dust cover
Operable on 220 V AC, 50 Hz
Integrated port for attachment of accessories for co-observation
Stereo co-observation with three axis inclination and image erection, tiltable binocular 0 to 180°, eyepieces 10X with dioptric adjustment
Three chip high definition video camera originally integrated in the optical head.
Fully integrated recorder with integrated 1 TB Hard Drive and USB port for recording on external USB media
Integrated monitor 24". Provision to connect with external high definition signal for display on integrated monitor
Wireless multiple function water proof foot control panel with backup cable
<u>Optional (to be quoted separately):</u>
DICOM compatibility upgrade
COUNTRY OF ORIGIN: USA/UK/EUROPE/JAPAN

49. CAPNOGRAPH
5" or more touch screen TFT display
2 trace waveform
Unit must be capable for measurement of ETCO ₂ for neonatal, paediatric and adult patient.
Method of sampling : side stream or main stream
Sampling rate should be 100Hz or better
CO ₂ measurement Range: 1 to 140 mmHg or better
CO ₂ Resolution: 0.1mmHg (0-69mmHg),
CO ₂ Accuracy: 0 ~ 40 mmHg
Respiration Rate: 3 ~ 145 bpm or better
Built-in lithium Ion rechargeable battery
Operating Time: 2 hours or better
Unit complete with
Sample Line
Filter
T Adaptor
Nasal cannula
Adult Airway Adapter 10 nos.
Neonatal Airway Adapter 10 nos.
Trolley
OR equivalent
Make: USA/UK/Europe/Japan