

Tender No.2

OFFICE OF THE DIRECTOR
JACOBABAD INSTITUTE OF MEDICAL SCIENCES (JIMS)
JACOBABAD, SINDH



BIDDING DOCUMENT
PROCUREMENT OF ELECTRO MEDICAL EQUIPMENT/INSTRUMENTS,
GENERATOR SET & LAUNDRY EQUIPMENT
(2015 -16)

INDEX

1. (a) Invitation for bids and (b) Knockout clauses
2. Name of Equipment Name and Manufacturer (Annex A, B & C)
3. Terms and conditions
4. Purchaser's right to vary Quantities at time of award
5. Notification of award / Advance contract
6. Award of Contract and Contract Agreement
7. Performance Security
8. Payment Term:
9. Fee for Award of Contract
10. Undertaking
11. Certificate
12. Criteria for Evaluation of Bids
13. Assessment Parameters
 - A. (Marks)
 - 13.1 Availability of Technical Staff of the Company/firm in Reference to the Product, manufacturers Local Agent capacity for technical service with reference to the product
 - 13.2 The bidders shall not be under a declaration of ineligibility for corrupt and fraudulent practices, declared by any Government (Federal/Provincial/District), a Local Body or a Public Sector Organization.
 - 13.3 Financial Soundness
 - 13.4 Overall reputation in reference to the Product (Cliental)
 - 13.5 General Overall sales turnover of the Organization
 - 13.6 International sales and country of origin of quoted item
 - 13.7 Product certification
 - 13.8 Exclusive Agency Certificate
 - 13.9 Other
 - B. (Table)
 - 13.1.1 Availability of technical staff of the company/firm in reference to the product:
 - 13.2.1 Manufacturers local agent capacity for the technical service with reference to the product
 - 13.3.1 Financial Soundness
 - 13.4.1 Overall reputation in reference to the Product (Cliental)
 - 13.5.1 Overall Sales turnover of the organization
 - 13.6.1 International sales and country of origin of quoted item
 - 13.7.1 Quality Certification of the quoted products
 - 13.8.1 Details about exclusive rights of the product represented in Pakistan
 - 13.9.1 Submission of documents: Original Brochure
14. Bidders Questionnaire for bid evaluation
15. Bid form and Price Schedule
- 16 Bid Security Form
17. Contract Form
18. Performance security form
19. Manufacturers Authorization Form



**OFFICE OF THE DIRECTOR
JACOBABAD INSTITUTE OF MEDICAL SCIENCES (JIMS)
JACOBABAD (SINDH)**

Tender Inquiry No: 2

Due on 10th May, 2016

INVITATION FOR BIDS

The Director Jacobabad Institute of Medical Sciences (JIMS), Jacobabad invites the bids:

**For Procurement of Electro Medical Equipment/Instruments,
Generator set & Laundry Equipment**

Bidding is open for all eligible bidders. Bidders can obtain bidding / tender documents prescribed from:

Office of the Director Jacobabad Institute of Medical Sciences (JIMS), Jacobabad.

Complete set of tender / bidding Documents may be obtained/ Purchased by the interested bidder on written request to the above office and upon payment of non refundable fee of Rs.2,000/- in shape of Pay order in the name of Director Jacobabad Institute of Medical Sciences (JIMS), Jacobabad.

Tenders/ Bids are to be dropped in the tender box placed / affixed in the office of the Director Jacobabad Institute of Medical Sciences (JIMS), Jacobabad on or before 10th May, 2016 at 11:30 AM

Director JIMS, Jacobabad

1(b) CHECK LIST

The provision of this checklist is essential prerequisite along with submission of tender.

S/NO	DETAIL	YES / NO	PAGE# ANNEX
KNOCK OUT CLAUSES			
1	Original receipt for purchase of tender		
2	The financial envelopes should be separated of each item in each envelop, clearly marked company name and quoted serial item number and name		
3	Copy of earnest money without amount in technical bid		
4	Acceptance of terms and condition, tender documents duly signed and stamped		
5	Sole agency certificate [as per annex: A] Only sole agent are acceptable in Pakistan, sub distributor is not allowed to participate		
6	Proof of past import of quoted items from manufacturers (copy of bill of entry & etc)		
7	Original Literature/ Brochure of product showing complete contact details of the manufacturer (as per annex. B)		
8	Copy of previous installation reports in reputable Govt./Private teaching hospitals/ institutes, etc.		
9	Copy of GST & NTN Certificate		
10	Detailed company profile with detail of technical expertise/skilled staff held		
11	Copy of Last three years paid income tax challan		
12	Copy of registration with chamber of commerce		
13	Bank certificate showing financial capability (Last Six months statements)		
14	Bidders questioner Performa for bid evaluation		
15	No mention of price on technical bid		
16	Certificate / documentary proof to the effect that the Principal is the original manufacturer of the required goods (major components, mainframe, etc) & OEM Certificate		
17	Certificate regarding quality production conformity with international standards. Standards (Copy of certificate FDA, CE, JIS [as per annex .C])		
18	Provision of all data including Technical Compliance Sheet on soft copy on prescribed format in shape of USB, if any failed to comply bid/document will not be considered		

Signature & Seal (bidder):_____

2- Annexure "A"

[illegible]

Signature & seal (bidder):_____

2- Annexure “B”

[illegible]

Signature & seal (bidder):_____

2- Annexure "C"

[illegible]

Signature & seal (bidder):_____

3. TERMS AND CONDITIONS:

- 3.1 In this tender envelope procedure as per SPPRA 2010 rules will be followed i.e. Technical and financial proposal separately, i.e. single stage two envelope separately in Financial Bid. The envelope must contain tender enquiry No. on the top and TECHNICAL/FINANCIAL PROPOSAL clearly in order to avoid any confusion. The tenders shall be submitted with all documents, drawing literature & catalogue (in equipment) in Technical proposal, with sealing wax. The name of manufacturer or supplier should be affixed on the face of envelope at the left side. Moreover, financial envelopes should contain financial bid each item separately. (Commercial offer must be quoted in each item/each envelope).
- 3.2 Initially envelope marked as “**TECHNICAL PROPOSAL**” shall be retained in the custody of the procuring agency without being opened.
- 3.3 Tenders must be filled in with blue or black ink in the column provided and on separated letter head duly signed.
- 3.4 The tenders must be free from erasing, cutting and overwriting. In case of erasing, cutting and overwriting, authorized person should initial it.
- 3.5 Conditional tenders will be ignored and will not be considered / entertained / accepted.
- 3.6 The rates of each item should be written in figures as well as in words. In case of discrepancy the price in words will be taken as authentic and final.
- 3.7 Tender shall be accompanied by Earnest Money @ **2%** of the value of stores quoted by them in form of Pay order/demand draft in the name of **Director Jacobabad Institute of Medical Sciences (JIMS), Jacobabad**.
- 3.8 **Original purchase receipt must be enclosed with the technical offer.**
- 3.9 Copy of earnest money (without amount) must be attached along with the technical bid and the original along with financial bid in case of disclosure of price or amount of Earnest Money in the technical bid, the bid will be rejected.
- 3.10 The bidder shall furnish General Sales Tax (GST) Registration Certificate of the firm failing which the offer will be ignored. In case the item is exempted from GST either documentary evidence or certificate from competent authority shall be attached with the offer.
- 3.11 The bidder shall furnish copy of valid Professional Tax Certificate, Income Tax Certificate; Last three years paid income tax Challan, proof of registration with Chamber of Commerce.
- 3.12 The equipment to be imported comply/certificate at CE / FDA / JIS standards certificate should be attached along with the offer.
- 3.13 Bidder should submit a fresh bank certificate showing strong financial capability of firm.
- 3.14 Tenderer are required to furnish a detail of technical quotation on their letter head and specify the standard and optional items / accessories as required in the tender specification. Bidder should clearly mention make, model and country of origin of the quoted items.
- 3.15 Tenderer shall purchase separate tender document and furnish purchase receipt for each alternate offer in case they intend submit alternate offer without separate purchase receipt (original) are supposed to be rejected.
- 3.16 No manufacturer shall authorize their distributor/ agent/ any firm or person to quote the same item which manufacturer quoted it-self in any tender. Failing which offer of both the manufacturer as well as other bidder shall be ignored.

- 3.17 Bid should remain valid for 90 days from the date of financial opening.
- 3.18 Price should be quoted for both “C.I.F and FOR” basis in Figure and words failing which the offer will be ignored. FOR offer should be inclusive of all duties/Taxes/Octroi/Transportation, etc. and all other expenses on **free delivery to consignee end at Jacobabad Institute of Medical Sciences (JIMS), Jacobabad.**
- 3.19 In case of purchase of C.I.F, the bidder will bear the charges of clearing agent. warehouse Rent, Airline D/O charges and all other charges including transportation to consignee end excluding custom duty and tax. Certificate will be issued by this office to clarify that the import has been made for the hospital in question so as to avail the facility of exemption of duties/taxes as per Government Rules.
- 3.20 Sole agent certificate for the quoted items from the Manufacturer must be attached by the bidder. Certificate should be valid for one year and verifiable by concerned authority.
- 3.21 03 years free service including warranty from the date of installation and further 02 years free service without parts. Additionally assurance for the availability of spare parts for at least 08-10 years may also be confirmed by the bidder.
- 3.22 Bidders are required to submit proof of past import of quoted items & their installation from Manufacturer by submitting copy of bill of entry (Custom Clearance documents). Bill of landing / Airway bill and etc. along with their bid.
- 3.23 Free installation along with all accessories including labor charges/demonstration at consignee end must be borne by the bidder.
- 3.24 The supplier will be bound to train nominated technical personnel (inland/outland) to operate / repair and maintain the supplied equipment.
- 3.25 List of hospitals, name of department, contact numbers of the end users, in which the quoted equipment are working must be attached. Copy of previous installation report in a reputed Government/Private |Teaching Hospitals/ repair certificate if any, of the similar quoted item from the end user should be attached along with the bid.
- 3.26 Bidders should confirm the presence of Manufacturers trained service/installation Engineers/Technicians and provide the detail of their working experience, Manufacturer training Certificate, list of tools and test equipment, approximate area of workshop in the premises of their office and address along with the bid.
- 3.27 The original printed catalogue / technical brochure showing detail technical specification, clear photo/picture of the quoted item, Manufacturers address, Phone number , e-mail address and website must accompany with offer.
- 3.28 Store is required immediately. The tenderer, may however give their short guaranteed delivery period by which the supply will be completed positively.
- 3.29 Choice to select /ignore any alternate offer shall rest with the purchaser. In case of Alternate items bid document must be purchase separately.
- 3.30 In case of any query on product specs which may be intimated in writing to the Chairman Procurement Committee Jacobabad, before 10 days of opening of technical bid.

- 3.31 If the Contractor fails to attain completion of the supply or installation within the time for completion, he shall pay to the purchaser liquidated damages at the rate of 2% per month (0.5% per week) of the Contract Price, or the relevant part thereof. The aggregate amount of such liquidated damages shall in no event exceed 10% of the bid amount. Once the "Maximum Limit" is reached, the purchaser may consider termination of the Contract.
- 3.32 Procuring Agency is not bound to accept the lowest or any bid, which is otherwise sub standard and of low quality.
- 3.33 Under no circumstances the bidder shall provide used/repaired/refurbished or defected medical equipment. If such case happened then, the firm concerned will be black listed and earnest money/security deposit will be forfeited.
- 3.34 If the **uptime percentage** for the measurement period (04 months) shall fall short of 95% the following formula will be applied to determine additional days in the warranty / services contract period.
- | | | |
|----|------------|---|
| a. | 100% - 95% | No Penalty |
| b. | 95% - 90% | The warranty period will be extended by 2.0 times the number of days as extra down time |
| c. | 90% - 80% | The warranty period will be extended by 3.0 times the number of days as extra down time |
| d. | Below 80% | The warranty period will be extended by 4.0 times the number of days as extra down time |
- 3.35 The firm will be bound to make arrangement for availability of qualified technical staff in hospital/site for prompt execution/coordination of after sale service.
- 3.36 Resident / dedicated engineer would be required to be stationed at JIMS for 1 year, where applicable.
- 3.37 **Redressal of grievances by the Procuring Agency**
- The procuring Agency shall constitute a committee comprising of odd number of persons, with proper powers and authorizations, to address the complaints of bidders that may occur prior to the entry into force of the procurement contract.
 - Any bidder feeling aggrieved by any act of the procuring Agency after the submission of his bid may lodge a written complaint concerning his grievances not later than fifteen days after the announcement of the bid evolution report under Rule 35.
 - The committee shall investigate and decide upon the complaint within fifteen days of the receipt of the complaint
 - Mere fact lodging of a complaint shall not warrant suspension of the procurement process
 - Any bidder not satisfied with the decision of the committee of the procuring Agency may lodge an appeal in the relevant court of jurisdiction.
4. **PURCHASER'S RIGHT TO VARY QUANTITIES AT TIME OF AWARD .**
- The purchaser reserve the right to increase/decrease or delete the quantities of goods etc at the time of award of contract and also reserve the right to enhance the quantity goods and services originally specified in the schedule of requirements without any change in unit price of other terms and conditions of goods at any time during contract period.

5. NOTIFICATION OF AWARD/ADVANCE CONTRACT:

5.1 Prior to the expiration of the period of the bid validity, the purchaser will notify the successful bidder in writing, delivery by hand or by register by cable to be confirmed that their bid has been accepted.

5.2 The notification of award will constitute the formation of the contract.

6. AWARD OF CONTRACT & CONTRACT AGREEMENT.

Subject to the fulfillment of all codal formalities, the purchaser will award the contract to the successful bidder whose bid has been determined to be qualified to perform the contract satisfactory.

7. PERFORMANCE OF SECURITY.

The successful tenderer will have to deposit with the purchase security depots as under in shape of call deposit / bank guarantee at the rate of 3% of the value of the contract and certificate of 10% guarantee from reputed insurance company.

8. TERM OF PAYMENT:

8.1 in case of purchase on CIF, this office will establish Letter of credit for 100% of contract value in favor of Manufacturer.

8.2 Terms of payment for F.O.R purchase 100% after supply of equipment at consignee end.

9 FEE FOR AWARD OF CONTRACT:

9.1 Stamp duty @0.3% shall be borne by the suppliers.

10. UNDERTAKING

10.1 That I/We agree whether our tender accepted for total, partial or any single item.

I/We also agreed to supply and accept the said item at the rates for the supply of contracted quantity within the stipulated period shown in the contract.

10.2 I/We understand and confirm the refund of cost different if the same good is/was supplied at lower rates to any other Government / Semi Government Institution in the Province in same fiscal year.

10.3 I/we undertake that: that I 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.

11. CERTIFICATE

We guarantee to supply the stores exactly in accordance with the requirement specified in the invitation to this tender

Signature of Tenderer: _____

Name & Designation _____

Address_____

12. CRITERIA FOR EVALUATION OF BIDS

Quality and the following evaluation factors criteria will be employed on technical proposals. The number of points allocated to each factor shall be specified in the evaluation report. Only bids securing minimum of 70% marks would be considered for further process.

EVALUATION CRITERIA (ELECTRO-MEDICAL EQUIPMENTS)

S/NO	13. ASSESSMENT PARAMETER	Marks
13.1	Availability of technical staff of the company / firm in reference to the product.	15
Following two companies shall be considered ascertain the availability / expertise of technical staff:		
A.	Number of technical staff	
i)	At least two technical staff members	05
ii)	01 additional number for every additional technical member shall be granted with maximum up to	05
B.	Technical staffs academic qualification	05
M.SC, BsC Computer Sciences, BE Engineering from recognized institution shall be granted one additional mark. However, B. Tech shall not be considered for additional mark. M.Sc / Master degree holder from recognized institution shall be 2 additional marks.		
13.2	Manufacturer's local agent capacity for technical services with reference to the product.	15
A.	Repair workshop facility with the diagnostic tools and test equipment as submitted along with the quotation	03
B.	Physical size and facility of workshop attached photo.	03
C.	Test and diagnostic tools list.	03
D.	Service manual and other technical documentation list.	03
E.	Availability of spare parts and accessories at workshop list	03
13.3	FINANCIAL SOUNDNESS	12
A.	Income tax paid challan for last three years	06
B.	Balance sheet, audited for the last financial year	04
C.	OR Bank statement for last 3 years	02
If balance sheet and bank statement both are deposited then only marks of balance sheet (8 Marks) would be counted. Tapering down phenomenon regarding rating of marks shall be applied on competitive firms		
13.4	Overall reputation in reference to the product (cliental)	10
Overall reputation of the product shall be envisaged by following criteria:		
A.	References / certificates provided regarding performance of product from head of the concern institute/ hospital.	
B.	References/ Certificates of the product shall be verified by the department independently	
C.	Attestation of being Category "A"	
D.	Purchaser have right to exercise Market Survey / Internet Exploring Survey give indicator marks.	
E.	Satisfactory Certificate from HoD/End user.	
13.5	General overall sale turnover of the organization	10
A.	60% or more sales proportion of medical equipment (quoted items)	08
B.	40% or more sales proportion of scientific equipment	02
13.6	International Sales and country of origin of quoted item	15
A.	Sale of product in two or more continents	10
B.	Sales of production in single continent	05
13.7	Product Certification	10
Certificate FDA /CE (MDD)/JIS		
A.	Any two certificates	06
B.	Any one certificate	04
13.8	Exclusive Agency Certificate , Attested by Embassy, & Chamber of Commerce from native Country of Manufacturer	08
A.	10 years or more for each products or	04
B.	5 years or more for each products	02
C.	Less than 3 years	02
13.9	Other	05
Submission of original brochures and required certificates as per tender terms and Conditions. 05		

Assessment parameter: 13.1.1

Availability of technical staff of the company/firm in reference to the product:

1. Total Number of Technical Staff: _____
2. No. of B.Sc. degree in Bio-Medical Engineering holder _____
3. No. of B.Tech / Diploma holder _____
4. No. of MSc / Master Degree holder _____
5. Details of Engineers _____

S/NO	Name of Engineer	Qualification	Experience No of Years	Manufacturer's training with name of equipment and duration

Signature: _____

Seal: _____

ASSESSMENT PARAMETER: 13.2.1

Manufacturer's local agent capacity for technical services in reference to the product.

Physical size and facility of workshop_____

(Please attach photograph or picture of your workshop)

Details of test and diagnostic tools:_____

(Please attach a separate sheet describing the test and diagnostic tools)

Details of service manual and other technical documentation:_____

(Please attach a separate sheet describing the detail of manuals and other supporting documents)

Detail of separate parts and accessories available at workshop:_____

(Please attach a separate sheet mentioning the list of spare parts and accessories)

Assessment Parameter:13.3.1

Financial Soundness

Copy of Income Tax Paid Challan for last three years:_____

Copy audited balance sheet by a recognized audit firm:_____

OR

Copy of Bank statement for the last financial year:_____

Assessment Parameter:13.4.1

Overall reputation in reference to the product (Cliental)

No of References_____

(Reference will be verified)

No of Certificates, regarding performance of the product from head of concerned institute/hospital_____

Signature:_____ Seal:_____

Assessment Parameter:13.5.1

Overall sale turnover of the Organization _____

For quoted Medical Equipment: _____

For other scientific equipment: _____

Assessment Parameter: 8.6

International sales and country of origin of quoted item

Tender Item No	Name of Quoted Equipment	Manufacturer's declaration mentioning name of continent where the equipments are soled	Country of Origin

Signature: _____

Seal: _____

Assessment Parameter; 13.7.1

Quality certificate of the quoted products

Tender Item No	Name of Equipment	Make	Model	Certificate (FD/CE (MDD)/JIS)

Assessment Parameter; 13.8.1

Details about Exclusive rights of the product represented in Pakistan:

Tender Item No	Name of Equipment	Manufacturer / Origin	Number of years for exclusive rights

Signature:_____

Seal:_____

Assessment Parameter:13.9.1

**Submission of
documents: Original
Brochure**

Tender Item No	Name of Equipment	Manufacturer / Origin

Copy of NTN Certificate: _____

Copy of Sales Tax Certificate: _____

Copy of Professional Tax Certificate: _____

Copy of Chamber of Commerce Registration Certificate: _____

Copy of PNRA Registration Certificate: _____

Note:

Bidders can provide details information on extra sheets by separating them with the uses of annexure.

Name: _____

Designation: _____

Signature: _____

Name of Firm: _____

Stamp of Firm _____

14. Bidders Questionnaire for Bid

Evaluation Name of Firm: _____

Address: _____

Ph: _____ **Fax:** _____

Email: _____ **Website** _____

Details of Quoted Equipment:

Tender Item No	Name of Equipment	Model	Make	Country/Origin

Signature: _____ **Seal:** _____

15. BID FORM AND PRICE SCHEDULE

Dated _____

Tender No. _____

To:

[name and address of Procuring agency]

Gentlemen and/or Ladies;

Having examined the Bidding Documents including addenda nos: [insert number's], the receipt of which is hereby duly acknowledged, we, the under signed, offer the supply and deliver [description of goods and service] in conformity with the said Bidding Documents for the sum of [total Bid Amount in words and figures], or such other sums as may be ascertained in accordance with the schedule of Price attached herewith and made part of this bid.

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

If our bid is accepted, we will obtain a guarantee of a bank in the sum of equivalent to _____ percent of the Contract Price for the due performance of the Contract, in the form prescribed by the Procuring Agency.

We agree to abide by for a period of [number] days from the date fixed for bid opening as per bid terms and condition, and it shall remain binding upon us and may be accepted at any time before the expiration that period.

Until a formal contract is prepared and executed, this bid, together with your written acceptance thereof and your notification of award shall constitute a binding Contract between us.

Commissions of gratuities, if any, paid or to be paid by us to agents relating to this Bid, and to contract execution if we are awarded to contract, are listed below;

Name and address of agent	Amount and Currency	Purpose of commission or gratuity
---------------------------	---------------------	-----------------------------------

_____	_____	_____
_____	_____	_____

We understand that you are not bound to accept the lowest or any bid you may receive. Dated this _____ day of, 2016.

Signature: _____

In the capacity of: _____

Duly authorized to sign bid for and on behalf of _____

16. BID SECURITY FORM

Whereas, [name of bidder] (hereinafter called the Bidder) has submitted its bid dated [date of submission of bid] for the supply of [name /or description of goods] (hereinafter called the bid).

KNOW ALL PEOPLE by these presents that we [name of bank] of [name of country], having our registered office at [address of bank] (hereinafter called the bank) are bound up to [name of procuring agency] (hereinafter called "The procuring Agency") in the sum of for which payment well and truly to be made to said procuring agency, the bank binds itself, its successors and assigns by these presents. Sealed with the common seal of the said bank this day of _____, 20_____

The conditions of this obligation are:

1. If the bidder withdraws its bid during the period of bid validity specified by the bidder on the bid for:

OR

2. If the bidder, having been notified of the acceptance of its bid by the procuring agency during the period of bid validity:
3. Fails or refuses to excuse the contract form, if required; or
4. Fails or refuses to furnish the performance security, in accordance with the instruction to bidders.

We undertake to pay to the procuring agency up to the above amount upon receipt of its first written demand, without the procuring agency having to substantiate its demand, provided that in its demand the procuring agency will note that the amount claimed by it, owing to the occurrence of one or both of the two conditions, specifying the occurred condition or conditions.

This guarantee will remain in force up to and including twenty eight (28) days after the period of bid validity, and any demand in respect thereof should reach the bank later than the above date.

[Signature of Bank]

17. CONTRACT AGREEMENT

THIS AGREEMENT made at _____ day of 20_____ between [name of procuring agency] of [country of procuring agency] (herein after referred to as the “Procuring Agency”) of the on Part; and [name of supplier] of [city and country of supplier] (herein after called the “Supplier”) of the other Part.

WHERE AS the Procuring Agency invite bids for certain goods and ancillary services, viz [brief description of goods and service] and has accepted the bid by the Supplier for the supply of those goods and service in the sum of [contract price in words and figures] (hereinafter called “the contract price)

Now this Contract Witness as Follows:

1. In this agreement words and expressions shall have the same meanings as are respectively assigned to them in the General Conditions of this Contract hereinafter 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 Price Schedule submitted by the Bidder;
b. The Schedule of requirements;
c. The technical Specification;
d. The General Conditions of Contract;
e. The Special Conditions of Contract;
f. The Procuring Agency’s Notification of award;
3. In consideration of the payments to be made by the Procuring Agency to the Supplier as hereinafter mentioned, the supplier hereby covenants with the Procuring Agency to provide the Goods and Services and to remedy defects therein in conformity in all respects with the provisions of this Contract.
4. The Procuring Agency 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 this contract at the time and the manner prescribed by this Contract.

IN WITNESS whereof the parties here to have caused this agreement to be executed in accordance with their respective laws the day and year first above written.

Signed, sealed, delivered by _____ the _____

(For the procuring agency)

Signed, sealed, delivered by _____ the _____

(For the supplier).

18. PERFORMANCE SECURITY FORM

To,

[Name of the Procuring Agency]

[Whereas name of Supplier] (hereinafter called "the Supplier") 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 by you in the said Contract that the Supplier shall furnish you with a Bank Guarantee by a reputable bank for the sum specified therein as security for compliance with the Suppliers performance obligations in accordance with the Contract.

And whereas we have agreed to give the Supplier a Guarantee.

Therefore we hereby affirm that we are Guarantors and responsible to you on behalf of the Supplier up to a total of [amount of the Guarantee in words and figures] and we undertake to pay upon your first written demand declaring the Supplier to be in default under the Contract and without cavil or argument, any sum or sums within limits of [Amount of Guarantee] as aforesaid, without your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

This guarantee is valid until the _____ day of _____ 20____

Signature and seal of the Guarantors / Bank: _____

[Name of Bank or Financial Institution] _____

[Address] _____

[Date] _____

19. MANUFACTURER' S AUTHORIZATION FORM

To,
[Name of Procuring Agency]
[Tender No]

WHEREAS [name of the Manufacturer] who are established and reputable
Manufacturers of [name and/or description of the goods] having factories at address of factory]
Do hereby authorize [name and address of Supplier/ Agent] to submit a bid, and
subsequently negotiate and sign the Contract with you against IBF No.[Reference of the invitation to
Bid] for the goods manufactured by us.

We hereby extend our full guarantee and warranty as per Clause 15 of the General Conditions of
Contract for the goods offered for supply by the above firm against this Invitation for Bids.

[Signature for and on behalf of manufacturer]

Note:

This letter of authority should be on the letter head of the Manufacturer and Should be
signed by a person competent and having the power of attorney to bind the
Manufacturer. It should be included by the bidder in its bid.

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		<u>CENTRAL STERILE SUPPLIES DEPARTMENT (CSSD)</u>		
1.	<u>CENTRAL STERILE SUPPLIES DEPARTMENT (CSSD)</u>	<p>1. Cleaning & Washing Unit Cleaning & Washing Unit with Ultrasonic Cleaners capacity approx. 20-25 Liters, Dimensions of Unit should be approx. 1700 x 600 x 900 mm (W x D x H), Stainless Steel Table. Understructure consists of a base assembly that is mounted on a 102 mm high sub-base. The base assembly includes a sink cabinet with hinged doors and open-face cabinets with one fixed bottom shelf and two height-adjustable shelves on either side of the sink(s). Complete with</p> <p>a. 02 Nos. Sinks each 610 x 430 x 250 mm (wide x Long x Deep) made of stainless steel with provision of counter top; equipped with drain valve and stand pipe and with siphon trap.</p> <p>b. 02 Nos. of integrated Spray Guns for dematerialized water / air with 08 cleaning nozzles, hose, table lead through.</p> <p>c. Ultrasonic cleaner equipped with digital display control panel that allows the user to check current temperature, program temperature and working time of ultrasounds. Made of AISI304 stainless steel. Including: mesh basket and lid in stainless steel. 220V, 50 Hz.</p>	USA, Europe & Japan FDA/CE/JIS Certified	Complete System on Turn Key Basis (QTY 01)
		<p>2. Washing / Disinfection / Drying Unit Microprocessor controlled automatic powered vertical air tight sliding double tempered glass doors Pass through type. Washing chamber, washing arms, preheating tanks and water filters made of high quality stainless steel AISI 316L. Light inside of chamber, Frame made of stainless steel AISI 304. Touch screen display on loading and display on unloading side with integrated printer. External steam heated for Automatic rinsing, washing, disinfecting and drying including integrated electric element as back up</p>	USA, Europe & Japan FDA/CE/JIS Certified	(QTY 01)

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		<p>heating. Capable of washing internal and external surface of items such as instruments, glassware, tubing, syringes, hollow wares etc.</p> <p>Stainless Steel construction. Floor model chamber size 10 DIN basket Capacity.</p> <p>Three chemical injection pumps included in a standard washer/disinfector</p> <p>The washer/disinfector should designed with five preprogrammed cycles (Instruments, Utensils, Plastic Goods, Gentle Cycle and Ortho.) and one decontamination cycle. 15 open cycles for customized programming to meet specific operating requirements.</p> <p>The unit should be complete with baskets, trays, and stands for washing / disinfection of the items mentioned above. The unit should have complete exhaust air condenser for outgoing air with condensate drain.</p> <p>Operation 380-400V.</p> <p>Key Features:</p> <p>Large capacity up to 10 DIN 1/1 net basket.</p> <ul style="list-style-type: none"> • LCD touch control system with color panel to visualize cycle status. • RS 232 port is provided with printer connection for monitoring and validating washing phases. • Integrated 40 columns thermal printer for cycle validation and traceability • Motorized sliding down glass door made of HST temperate glass. • The drying system should designed four-sided inflow drying pattern to produce a high-flow air curtain. This air-curtain provides broad, efficient, drying while using a combination of recycled and non-recycled air within wash chamber • Water Filtration System includes a unique self-cleaning centrifugal filter. • Ergonomic design of the door level height allows convenient loading and unloading operations with the support of a transport trolley. • An efficient filtered forced air drying system with adjustable time and temperature setting, helps to ensure the complete inside and outside drying of all the surgical instruments and tubes. • Washing and DI disinfection temperature are fully adjustable up to 93°C. Temperature is monitored by two independent sensors. 		

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		<ul style="list-style-type: none"> Heavy washing pump ensure high water flow rate combined with effective spray pressure. Washing/drying injection system on the same circuit. Inner cabinet, washing arms and tank filters entirely made of high quality AISI 316 L stainless steel. Frame and body of machine made of AISI 304L stainless steel. <p>Accessories for 01 Unit</p> <ul style="list-style-type: none"> a. Transport Trolleys 02 b. Anesthesia Wash Cart for Anesthesia Instruments 01 c. 5 Level instruments Wash Cart 01 d. 4 Level instruments Wash Cart 01 e. MIS Wash cart 01 f. Net Basket DIN 1/1 15 g. Rack for shoes 01 <p>The unit must be according to the standards of CE/FDA in compliance with particular MDD.</p>		
		<p>3. Heavy Duty Steam Sterilizer with Steam Generator</p> <p>Microprocessor control system. Fully automatic, programmable, micro processor type.</p> <p>Double door unit, recessed 2 walls.</p> <p>High Pressure Steam Sterilizer with external steam supply and with Steam Generator for as back-up.</p> <p>Compatible Electric Steam Generator. Carbon Steel. 380 Volts</p> <p>Chamber capacity: 8 STU</p> <p>Interior Chamber Dimensions: 660 x 660 x 1245 mm</p> <p>Touch-Sensitive Screen should display 30-line x 40-character graphics display. Wide viewing angle and high-visibility backlighting.</p> <p>With Ink-on-paper impact printer.</p> <p>Should have Automatic motorized two doors Vertical-sliding.</p> <p>Should Automatic check of control program and cycle data maintains process integrity.</p> <p>Working pressure of 3.1 bar (45 psig). Sterilizer should piped, valved and</p>	USA, Europe & Japan FDA/CE/JIS Certified	(QTY 01)

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		<p>trapped to receive building supplied steam delivered at 3.5 to 5.6 bar (50 to 80 psig) dynamic.</p> <p>Should have emergency Stop Button located on the front panel.</p> <p>Should have a key to reset the switch.</p> <p>Should have safety features:-</p> <p>Power Door Safety Feature causes door drive to slip if the door encounters an obstruction during its movement.</p> <p>Temperature & Pressure Recorder. Chamber pressure indicator.</p> <p>Cycle indicator to determine the phase of sterilization cycle.</p> <p>Program/Cycle Selection</p> <p>All processing cycles programmed into the sterilizer control should validated to EN 285.</p> <p>Prevacuum configuration sterilizer programmed with the cycles: 134°C or 121°C Prevacuum Cycles.</p> <p>Sterilize time: 3 minutes, 30 seconds</p> <p>Dry time: 30 minutes.</p> <p>Should have two fabricated Type 316L stainless-steel shells welded one within the other form the sterilizer vessel. Type 316L stainless steel end frame should welded to door end. Back of chamber should fitted with welded 316L stainless-steel dished head.</p> <p>Complete with Atlas Loading Cart / Transfer Carriage set</p> <p>Should capable of taking both packets and containers of all standard sizes.</p> <p>Medical Device Directive (MDD) 93/42/EEC.</p> <p>EN 285, Large Steam Sterilizers.</p> <p>Pressure Equipment Directive (PED) 97/23/EC.</p> <p>4. Accessories for 04 Units</p> <p>a. Loading/Unloading trolleys 02</p> <p>b. Loading carts compatible with system. 01</p> <p>c. DIN Wire Baskets for packs sterilizing , wired basket should be made of stainless steel AISI 304 24</p>		

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		<p>5. Reverse Osmosis System) The reverse osmosis unit including filters, hardness stabilizing unit, activated carbon with pre-filter 5µm, Pre filter 1µm, DS reverses osmosis system. Capacity of 100L/h. Storage tank 1,000L Level control for tank, vent filter, pressure pump, ion exchanger, conductivity meter control, distribution manifold, hose set and installation material. Locally made with imported parts.</p>	USA, Europe & Japan FDA/CE/JIS Certified	(QTY 01)
		<p>6. Low Temperature Sterilizer Chamber Size: 515 width x 520 depth x 520 height Chamber Capacity: 135 Liter or above Low Temperature Sterilization System specifically for process goods using vaporized hydrogen peroxide under vacuum conditions. The chamber and door assembly aluminum equipped with a silicone rubber gasket and a welded backhead. Operating temperature is approximately 122°F (50°C) Fully automated process should compatible with a broad range of materials and should have rapid sterilization cycle times. There should no toxic by-products created by the Sterilization Cycle - only water vapor and oxygen should be produced. Low Temperature Sterilization System should NOT intended to process liquids, linens, powders or any cellulose materials. Disposable multi-use Cartridges containing Hydrogen Peroxide Sterilant. The system control automatically tracks the amount of sterilant used and the sterilant expiration date. Should have an automated control enables the cycle to be started and monitored by the operator. Insulation fitted on the chamber wall exterior, door and back head 1" (25 mm) thick (nominal). Insulation held in place with hook-and-loop closures. Insulation constructed of asbestos- and chloride-free, silicone impregnated, oil and water resistant (silicone impregnated) fiberglass. Automatic door locking mechanism keeps the sterilization system door locked during the entire Sterilization Cycle. After cycle completion, air pressure used to unlock the door.</p>	USA, Europe & Japan FDA/CE/JIS Certified	(QTY 01)

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		<p>The sterilizer door should not be opened if either electrical power or air pressure lost during sterilizer operation.</p> <p>When sterilization system in Standby mode, there should no door opening restrictions.</p> <p>International Standards:</p> <ol style="list-style-type: none"> 1. Underwriters Laboratories (UL) Standard UL 61010-1 Second Edition Governing Directive for the affixing of the CE mark: 2. Medical Device Directive – 2007/47/EC, 93/42/EC Standards applied to demonstrate conformity to the directives: 3. EN 61010-1, EN 60601-1-2, EN14937, IEC 61010-2-040 <p>Supplied with:-</p> <p>05 case of HC 59% H2O2 Sterilant. Hydrogen Peroxide: Case of 3 Cartridges each capable of running 15 cycles each.</p> <p>HPI Vaporized VH202 Process Indicator (01 Box)</p> <p>HPI Vaporized VH202 Adhesive Label (01 box)</p> <p>HPI Vaporized VH202 Record Card with Process Indicator (01 box)</p> <p>V24I Challenge Pack (01 pack)</p> <p>Two Loading Trays and lids</p> <p>Self-Contained Biological Indicator (01 box)</p> <p>Sterilization Trays (01 Kit)</p>		
		<p>7. Oil Free Compressor</p> <p>Oil free air compressor, Rotary Scroll Air compressor</p> <p>Compressor oil free, Noiseless, singe stage, two cylinders with electric motor</p> <p>Pressure bar 8-10 bar, Capacity 175Liter OR as per same manufacturer recommendations.</p>	USA, Europe & Japan FDA/CE/JIS Certified	(Qty 01)

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		<p>8. Operational Accessories The CSSD should be complete with following Operational Accessories:</p> <p>a. Transport And Distribution Trolley Distribution trolley made of stainless steel, equipped with 4 shelves for easy transportation of various its. Stainless steel Shelf size: 457 x 610 mm (WxL) 5 Nos. complete with plastic sleeves and wedges included for installation. Mobile posts Size: Height 1590 mm 4 Nos 5" Ø four swivel casters 4 Nos Overall size: 450 mm (W) x 590 mm (L) x 1200 mm (H)</p> <p>b. Paper Dispensing Trolley Movable paper dispenser trolley made of stainless steel/chrome plated for storage of sterilization paper sheets at packing tables. Front wheels with directional locks and back wheels with brakes.</p> <p>c. Paper Sealing Machine Microprocessor control system. Heat sealer for sealing of sterilization bags and pouches. Multiline Flat Medical sealing Sealing width (mm) 15 mm seam seal Sealing speed 10 mt/min 200°C Max sealing temperature Power supply (VAC) single phase 230/240, 50/60 Hz</p> <p>d. Cutting Device For storage and preparation of Paper/Plastic bags in rolls. The cutting knife is made of tempered stainless steel and is self-grinding, Size 700 – 1000mm.</p> <p>e. Tape Dispenser Tape dispenser for autoclave tape. Main parts of the dispenser are made of metal. Design for two roll of tape.</p>	USA, Europe & Japan FDA/CE/JIS Certified	<p>(QTY 06)</p> <p>(QTY 02)</p> <p>(QTY 02)</p> <p>(QTY 02)</p> <p>(QTY 04)</p>

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		<p>f. Basket Trolley Basket Trolley made of stainless steel for storage / transport of baskets. Size approx. 600 x 1050 x 450mm</p> <p>g. Free Standing Baskets Rack Stainless steel construction posts 4/5 shelf boards with variable height positions Solid shelves made of stainless steel Size approx 1219mm Length x 457mm Width x1895mm (H) Load capacity more than 150 Kg</p> <p>h. Packing Table Made 14 gauge type 304 stainless steel work surface and support structure. Shipped knock down and can be assembled in minutes without tools. Stainless steel bottom shelf. 864 mm high X Length 2439 mm x Width 1118 mm, Stainless steel stationary posts and leveling feet.</p> <p>i. Linen Table Inspection and folding for linen, the table top will be made of Stainless Steel top with inspection window. The frame is made of Stainless Steel.</p> <p>j. Modular Wire Basket Modular wire Basket made of stainless steel for disinfections, loading/unloading equipment,</p> <p>k. Closed Transport Trolley Closed transport trolley made of stainless steel, lockable, front wheels with directional locks and back wheels with brakes. Cabinet 997 mm Wide, 813 mm Height and 724 mm depth</p>		<p>(QTY 02)</p> <p>(QTY 03)</p> <p>(QTY 02)</p> <p>(QTY 01)</p> <p>(QTY 10)</p> <p>(QTY 04)</p>

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
2.		<u>MEDICAL LAUNDRY (NATURAL GAS OPERATED STERILIZER WITH STEAM GENERATOR)</u>		
		<p>WASHER EXTRACTOR (02 Nos.)</p> <p>The Washer Extractor shall be steam heating free standing type, fully automatic with front loading/unloading. Fully programmable, microprocessor control. Stainless steel in all vital parts for high degree of rust protection, Stainless steel front panels and powder painted side panels. Liquid connections/ power compartment.</p> <p>Technical specifications:</p> <ul style="list-style-type: none"> • Capacity/Load: 60-65 Kg. • Drum Volume : 600 Lit. (Approx) • Extraction : 760 rpm (Approx) • Pneumatic drain valve • Cycle Time: Max. 45-60 min. • Frequency controlled motor • G force 350 • Oil lubrication of bearing gaskets <p>1. DRYING TUMBLER (02 Nos)</p> <p>Drying Tumbler with steam heating, fully automatic Microprocessor control having stainless steel drum and 2 full loads per hour. Error codes for easy trouble shooting. Service program for adjustment of parameters, temperature and cool down time. The tumbler to be factory painted with enameled paint and shall have the following specifications:</p> <ul style="list-style-type: none"> • Capacity of drying tumbler: 30-40 Kg. • Drum Volume : 650 Lit. • Cycle Time: 30-40 min. including loading & unloading 	USA, Europe & Japan FDA/CE/JIS Certified	02

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		<p><u>2 HYGIENE/ BARRIER WASHER</u></p> <p>Loading capacity: 20-25 Kg Fully automatic with front loading back unloading. Microprocessor control with Integrated weighing system. Stainless steel in all vital parts for high degree of rust protection, Stainless steel front panels and powder painted side panels, Multi liquid supply connections.</p> <p>3. FLAT WORK DRYER IRONER (01 No.) Flat Work Dryer Ironer shall be steam heated with automatic linen detection, cylindrical type having single roller/cylinder. Automatic speed adjustment. Finger guard protection, Nickel-plated cylinder, Front loading and Front return and shall have following minimum specifications:</p> <ul style="list-style-type: none"> • Speed: 1-8 m/ min (variable speed) • Drive: Electrical Motor • Feeding: Through Belts • Cylinder Dia: 450 - 500 mm Approximately • Working Width: 2500 - 3000 mm Approximately • The Dryer Ironer to be a compact free standing self-contained unit and to be supplied in factory assembled state. <p>4 UTILITY PRESS (01 No.)</p> <ul style="list-style-type: none"> • Utility Press for uniforms, pneumatically controlled. <p>5 WEIGHING SCALE (01 No.)</p> <ul style="list-style-type: none"> • Platform scales with four load cells. The platform in mild steel, • Platform dimensions 1m x 1m. • Digital display with pre-set tares for instant deduction of known container weights • Capacity 500kg. 		

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		<p>6 SEWING MACHINE (01 No.)</p> <ul style="list-style-type: none"> Single needle, two thread unit, electric. Maximum speed of 5,000 stitches per minute with exact stitch formation at this speed, stitch length to be consistent, push button feed regulator, quick differential feed adjustment, self-lubricating system with oil cooling, oil level and speed controller. <p>7. STEAM HAND IRONER (01 No.)</p> <ul style="list-style-type: none"> Heavy duty Ironer, steam operated with stand cum table. <p>8. PACKING/ SORTING TABLE (01 No.)</p> <ul style="list-style-type: none"> Packing / Sorting Table. Stainless steel table top. Dim. approx. 1500 x 650 x 850 mm. <p>9. STORAGE RACKS (03 Nos.)</p> <ul style="list-style-type: none"> Storage Racks Shelving unit comprising 4 shelves. Stainless Steel construction. Approx. size Height 1800mm, Width of shelf 1400mm, Depth of shelf 500mm <p>10. DIRTY/ CLEAN TROLLEY (02 Nos.)</p> <ul style="list-style-type: none"> Aluminum construction. Separate area for Clean and dirty Lenin, large size. Clean area with shelves and door. Four Wheel 150mm size. Dim. approx. 1300 x 600 x 1500 mm. <p>11. DISTRIBUTION TROLLEY (04 Nos.)</p> <ul style="list-style-type: none"> Aluminum construction. 3/4 shelves. Four Wheel 150mm size. Dim. approx. 1000 x 400 x 1200 mm. <p>12. AIR COMPRESSOR (01 No.)</p> <ul style="list-style-type: none"> Suitable capacity with air tank as per requirement of the laundry unit on full load. <p>13 MARKING MACHINE (02 No.)</p>		

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		<p>14 OPERATIONAL ACCESSORIES</p> <p>The Laundry should be complete with following Operational Accessories:</p> <p>1. Packing / Sorting Table (QTY: 01) Packing / Sorting Table. Stainless steel table top. Dim. Approx. 15000 x650 x 850mm</p> <p>2. Storage Racks (QTY: 02) Storage Racks shelving unit comprising 4 shelves. Stainless steel construction. Approx. size Height 1800mm, Width of shelf 1400mm, Depth of shelf 500mm.</p> <p>3. Dirty / Clean Trolley (QTY: 04) Aluminum construction. Separate area for Clean and dirty Linen, large size. Clean area with shelves and door. Four Wheel 150mm size. Dim. Approx. 1300 x 600 x 1500mm</p> <p>4. Distribution Trolley (QTY: 02) Aluminum / SS construction. ¾ shelves. Four Wheel 150mm size. Dim. Approx. 1000 x 400 x 1200mm.</p>		
3		<p>HIGH PRESSURE ELECTRIC/GAS STEAM GENERATOR/ BOILER (Qty 1) Fire tube natural gas high pressure boiler, of specification mentioned below. The boiler shall be complete with burner, burner controls, gas train feed water pumps, feed water tank, safeties, explosion doors, automatic controls, piping to the CSSD and Laundry plants and other accessories required to complete the installation and to bring the unit into operational state with following main components;</p> <p>Gas Fired Boiler & Economizer</p> <ol style="list-style-type: none"> 2TPH @ 10Bars gas fired boiler Burner, single fuel Boiler valves & Control set Economizer, Finned tube Chimney, 6m 2x Feed water pumps Boiler Ladder and platform 	USA, Europe & Japan FDA/CE/JIS Certified	01 Turnkey Basis

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		<div><div><div>h. Electrical Control panel</div><div>i. Insulation, cladding & Painting</div></div><div><div>Feed Water Tank</div><div><div>a. Capacity 2,000L</div><div>b. Deaerator head, SS</div><div>c. Chemical Dosing Pump</div><div>d. Valves and controls set</div><div>e. Insulation, cladding & Painting</div></div></div><div><div>Piping and Electrification</div><div><div>a. Pipes & valves</div><div>b. Instruments and gauges set</div><div>c. Electrical cables and electrical construction work complete</div><div>d. Insulation, cladding & Painting on the installed items</div></div></div><div><div>DETAILED SPECIFICATIONS</div><div><div>Design Code</div><div>Class-1 of ASME/BS/ISO/JIS</div></div><div><div>Boiler Type</div><div>Natural Gas Fired, 3/ 4 pass, Wet Back</div></div><div><div>Technology</div><div></div></div><div><div>Configuration</div><div>Horizontal, Skid mounted</div></div><div><div>Design Pressure</div><div>11.5 bars</div></div><div><div>Working Pressure</div><div>10 bars</div></div><div><div>Feed Water Temp</div><div>85 – 90°C</div></div><div><div>Steam generation</div><div>1,500 kg/hr @ 10bar.</div></div><div><div>Fuel</div><div>Natural gas</div></div><div><div>Boiler efficiency</div><div>95% with economizer</div></div><div><div>Burner</div><div>Single burner, Front end flange</div></div><div><div>mounted, complete</div><div></div></div><div><div>packaged including Control and power panel.</div><div></div></div><div><div>Insulation</div><div>Rock wool</div></div><div><div>Cladding</div><div>Pre painted sheet</div></div><div><div>ND Examination code standard</div><div>Radiography, UT, DPT; as per design</div></div></div></div>		

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		<p>Material Materials used shall be recommended for specific components by ASME/BS/ISO/JIS</p> <p>Power Supply Electric 380/3/50.</p> <p>PRESSURE VESSEL</p> <p>Pressure vessel consisting of primarily of shell fire tubes, tube plates and furnace, made from material as specified by the ASME/BS/ISO/JIS code, duly approved by the internationally renowned agency and stamped for compliance.</p> <ul style="list-style-type: none"> a) Complete manufacturing process is to be inspected by the inspecting agency at various stages of construction; in case of locally fabricated. b) All welds and procedures adopted are to be strictly in accordance with the ASME/BS/ISO/JIS codes. c) All tubes are to be rolled and, 2nd pass entry tubes are to be further welded to the rear and front tube sheets, as provided in the code. All welded joints to be checked by X-Ray and results be recorded as per the provision of the code. <p>Various openings for connecting of services or installation of safety devices are to be provided and reinforced as per the ASME/BS/ISO/JIS code.</p> <p>STRESS RELIEVING (if covered under design code ASME/BS/ISO/JIS)</p> <p>After the construction of the pressure vessel the entire unit is to be hydraulic tested and then relieved of stresses in a properly designed & appropriate facility.</p> <p>Stress relieving is to be witness by the local representative of the inspecting agency; in case of locally fabricated. A certificate to this effect is to be provided.</p> <p>After removal of the Unit from the stress relieving chamber it is to be again hydraulic tested. This test is to be witnessed by the appropriate inspecting agency; in case of locally fabricated. A certificate to this effect is to be also provided.</p> <p>BURNER.</p> <ul style="list-style-type: none"> a) The Burner should be packaged type, fronted end mounted, 		

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		<p>factory tested and easily removable type.</p> <p>b) Complete packaged burner shall be imported from U.S.A. Japan or Europe to be forced draft combustion air system, utilizing a heavy duty backward curved impeller in a fully machined cats housing. Air housing should be of open able type for inspection and service of firing head components without detaching the burner from the boiler front end.</p> <p>c) Complete burner assembly is to be bolted to the front end of the boiler through the use of flange.</p> <p>d) Burner should be suitable to burn natural gas.</p> <p>e) High turn down capability is to assure smooth starts and response to wide load demands. The control switches, should permit selection of fixed rate or fully modulating operation.</p> <p>f) Gas and combustion air are to be intimately mixed in the combustion zone. Flash back is to be avoided as possible.</p> <p>g) The burner is to be listed by Underwriters Laboratory & carry a U.L. certification however other regulatory agency mentioned above may also be acceptable. Burner is to be completely assembled, wired and tested at the factory. Main gas train components like PRV, gas cock etc are to be shipped by the burner manufacturers.</p> <p>VALVES & CONTROLS</p> <ol style="list-style-type: none"> 1. 220/50/1 control circuit. 2. Burner mounted control panel. 3. Steam Stop Valve 4. Blow Down Valve 5. Isolation valve 6. Feed Check valve 7. Non return valve 8. Pressure gauge for Boiler pressure 9. Boiler water level control valve 10. Water gauge glass assembly 11. Pressure switch 12. Safety valves for Boiler and Economizer 		

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		<p>13. Temperature Gauges both Digital and Dial type</p> <p>14. Motor starters for 380/50/3.</p> <p>15. Panel signal lights for, power “ON” ignition, flame fail, manual/auto, Gas operation.</p> <p>16. Full modulation with manual potentiometer.</p> <p>17. Flame safeguard controller with ultraviolet flame detector. Controller to be of the “Self check” design.</p> <p>18. Combustion air interlock (switch).</p> <p>19. Provision for interlock of low water cut off, operating pressure, control and modulating pressure control.</p> <p>20. External alarm bell to sound on main flame failure, low water.</p> <p>Main line circuit breaker, Blower motor circuit breaker. Feed water pump air cut breaker.</p> <p>TRIM SAFETIES AUXILIARIES AND OPERATING CONTROLS.</p> <p>Packaged fire tube boiler shall include following trim, safety, operating controls and auxiliaries. These are to be wired into burner panel which is to provide appropriate interlocks.</p> <p>Following are over & above the controls/auxiliaries/trim to be supplied with burner.</p> <ul style="list-style-type: none"> - Operating ON/OFF type pressure controller (Field adjustable). - Modulating pressure controller (field adjustable). - Ball float type low water cut off with feed water control side and gauge glass set with tri-cocks mounted on one side of boiler. Auxiliary gauge glass set with valves mounted on the other side. - Stack thermometer. - Coded safety relief valve not less than two. - Combustion relief door. - 8 inch dia alarm bell to sound on low water cut off, main flame failure, pilot flame failure, Hi-pressure etc. 		

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		<p>WATER TREATMENT UNIT Water treatment unit have to supply the treated water to the boiler, Medical laundry and CSSD units. Water treatment unit assembled of USA, Europe or Japanese components; locally, will be provided. The capacity, flow and reservoir should be as per requirement of these systems. The reverse osmosis unit including filters, hardness stabilizing unit, activated carbon with pre-filter 5um, Pre-filter 1um, DS reverse osmosis system. Capacity of 100L/h+Boiler requirement. Storage tank 1,000L (for laundry and CSSD). Level control for tank, vent filter, pressure pump, ion exchanger , conductivity meter control, distribution manifold, hose set and installation material</p> <p>Important Notes:</p> <ul style="list-style-type: none"> • The unit must be designed and fabricated as per • ASME/BS/ISO/JIS. • All equipment must be according to international safety standard • as per ASME/BS/ISO/JIS • The bids with drawing marked with piping routes, panels and other • equipment by the manufacturer will determine the completeness of the bid. • The company concerned shall be responsible to arrange license of the Boiler as well and provide to the consignee accordingly. • The installation will be checked and certify by the manufacturer with the effect that the system is as per their design standard and protocols. <p>TRAINING: The training of Doctors, Nurses Operators and Technicians will be arranged by the firm for operationalzation and maintenance of the equipment at recognized institution.</p>		

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		<u>CRITICAL CARE DEPARTMENT</u>		
4	ER MONITORS	<p>Bedside monitor for display of vital sign monitoring of Adult, Neonate, Paeds. Mounted on Original wall Mounting Operating Features and Characteristics: Non fade TFT color display Electro-surgical interference suppression/protection Defibrillator protection Freeze and cascade facility. Waveform traces speed; 25 / 50mm/sec. Screen size: min. 15" TFT/LCD touch color display. Parameters in module form: ECG : Numeric: heart rate. Waveform : Seven Wave forms minimum, real time and freeze ECG trace NON-INVASIVE BLOOD PRESSURE (NIBP): Method: Oscillometric principle Numeric: systolic, diastolic and mean pressure Selectable auto inflate interval settings Rising cuff/continuous pressure display. TEMPERATURE: Numeric: temperature selectable in °C/°F. PULSE OXIMETRY: Numeric: 0-100% oxygen saturation measuring range. Waveform-plethysmograph pulse with pulse strength indication. ARRHYTHMIA ANALYSIS: Arrhythmia analysis and st analysis. RESPIRATION: Breath rate display and settable apnea alarms. Sweep speed; 6.25, 12.5 mm/sec. OTHER FEATURES: Trend data 120 hours; graphical and tabular ALARMS: High & low (settable) on all parameters</p>	USA, Europe & Japan FDA/CE/JIS Certified	22 Complete system

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		<p>Visual and audible indication of alarms.</p> <p>Capnography (EtCO2)</p> <p>Built in Printer Two / Three Channel</p> <p>OPERATING REQUIREMENTS :</p> <p>Ac 220v/50HZ</p> <p>Built-in rechargeable battery for at least 3 hour ac power failure at full parameter.</p> <p>NOTE:</p> <p>The system must be complete with all sensors, probes, cables or any other accessories required for measuring all the above selected</p>		
5	ICU/CCU MONITOR WITH CENTRAL STATION	<p>ICU/CCU MONITOR</p> <ul style="list-style-type: none"> • Modular Bedside monitor for display of Vital Sign monitoring of Adult, Neonate, Paeds. • The Monitor should have plug in modules / pods for measurement, recording and display of different Vital Signs. • Mounted on Original wall Mounting • Monitor should be compatible with Hospital Information System, Laboratory Information System and Radiology Information System for bi-directional flow of data and images. • Monitors should be connected with Central Station wirelessly/wired • Battery Backup for at least 03 hours <p>Operating Features and Characteristics:</p> <ul style="list-style-type: none"> • Non fade TFT color display • Electro-surgical interference suppression/protection • Defibrillator protection • Freeze and cascade facility. • Waveform traces speed; 25 / 50mm/sec. • Screen size: min. 20" TFT/LCD color display Touch Screen Display. • Should be supplied with Key Board and Mouse 	USA, Europe & Japan FDA/CE/JIS Certified	(12 Nos)

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		<p>PARAMETERS</p> <p>ECG:</p> <ul style="list-style-type: none"> Numeric: heart rate. Waveform: Six Wave forms minimum, Real time and freeze ECG trace Measuring Range : 15 to 300 bpm <p>NON-INVASIVE BLOOD PRESSURE (NIBP):</p> <ul style="list-style-type: none"> Method: Oscillometric principle Numeric: systolic, diastolic and mean pressure Selectable auto inflate interval settings Rising cuff/continuous pressure display. <p>TEMPERATURE:</p> <ul style="list-style-type: none"> Numeric: temperature selectable in °C/°F. <p>PULSE OXIMETRY:</p> <ul style="list-style-type: none"> Numeric: 0-100% oxygen saturation measuring range. Waveform-plethysmograph pulse with pulse strength indication. Masimo Technology with motion tolerance <p>ARRHYTHMIA ANALYSIS:</p> <ul style="list-style-type: none"> Arrhythmia analysis and ST analysis. <p>RESPIRATION:</p> <ul style="list-style-type: none"> Breath rate display and settable apnea alarms. Sweep speed; 6.25, 12.5 mm/sec. <p>OTHER FEATURES:</p> <ul style="list-style-type: none"> Trend data; graphical and tabular <p><u>CAPNOGRAPHY (ETCO2)</u></p> <ul style="list-style-type: none"> For measuring of End Tidal CO2 Capability of Main and Side Stream measurements. 		

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		<p><u>Dual Channel IBP (02 X IBP)</u></p> <p>NOTE: The system must be complete with all sensors, probes, cables or any other accessories required for measuring all the above selected parameters for Adult & Pediatric Applications.</p> <p><u>CENTRAL MONITORING SYSTEM</u></p> <p>(01 No.)</p> <ul style="list-style-type: none"> • Multi-Channel Central Station to monitor different patient data centrally. • Central Station should be connected with above mentioned monitors wirelessly/wired • Supplied with Sine Wave UPS for battery backup <p>Operating features and characteristics:</p> <ul style="list-style-type: none"> • Colored monitor with Min 22" Color Touch Screen Display • Laser printer Latest Version HP • Bed Side Connection: 08 Bed Side Monitors and will able to enhance up to 32 patient monitors. • Trend Display of 120 Hours • Event and Full Disclosure for up to 16 waveforms. • HL7 Interface <p>Parameters:</p> <ul style="list-style-type: none"> • Selectable display of all parameters of bedside monitors • As selected. <p>Alarms:</p> <ul style="list-style-type: none"> • All parameters alarms on central station monitor with bed no. • Identification. • All alarms of each bedside monitors selectable from central workstation. <p>Firm is bound to install 02 X 40" or bigger LED Displays and will install at two different places as per users recommendation and both displays will be connected to Central Station for live viewing and Monitoring of each</p>		

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		<p>patients.</p> <p>Installation of Network cables as per International standards will be responsibility of firm.</p>		
6	<u>OR MONITORS</u>	<p>SPECIFICATION</p> <ul style="list-style-type: none"> Modular Bedside monitor for display of Vital Sign monitoring of Adult, Neonate, Paeds. The Monitor should have plug in modules / pods for measurement, recording and display of different Vital Signs. Original Mounting solution from manufacturer should be provided. Battery Backup for at least 03 hours <p>Operating Features and Characteristics:</p> <ul style="list-style-type: none"> Non fade TFT color display Electro-surgical interference suppression/protection Defibrillator protection Freeze and cascade facility. Waveform traces speed; 25 / 50mm/sec. Screen size: min. 15" TFT/LCD color display <p>PARAMETERS</p> <p>ECG:</p> <ul style="list-style-type: none"> Numeric: heart rate. Waveform: Six Wave forms minimum, Real time and freeze ECG trace Measuring Range : 15 to 300 bpm <p>NON-INVASIVE BLOOD PRESSURE (NIBP):</p> <ul style="list-style-type: none"> Method: Oscillometric principle Numeric: systolic, diastolic and mean pressure Selectable auto inflate interval settings Rising cuff/continuous pressure display. 	USA, Europe & Japan FDA/CE/JIS Certified	08 Complete system

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		<p>TEMPERATURE:</p> <ul style="list-style-type: none"> Numeric: temperature selectable in °C/°F. <p>PULSE OXIMETRY:</p> <ul style="list-style-type: none"> Numeric: 0-100% oxygen saturation measuring range. Waveform-plethysmograph pulse with pulse strength indication. Masimo Technology with motion tolerance <p>ARRHYTHMIA ANALYSIS:</p> <ul style="list-style-type: none"> Arrhythmia analysis and ST analysis. <p>RESPIRATION:</p> <ul style="list-style-type: none"> Breath rate display and settable apnea alarms. Sweep speed; 6.25, 12.5 mm/sec. <p>OTHER FEATURES:</p> <ul style="list-style-type: none"> Trend data; graphical and tabular <p><u>CAPNOGRAPHY (ETCO2)</u></p> <ul style="list-style-type: none"> For measuring of End Tidal CO2 Capability of Main and Side Stream measurements. <p><u>Dual Channel IBP (02 X IBP)</u></p> <p>NOTE: The system must be complete with all sensors, probes, cables or any other accessories required for measuring all the above selected parameters for Adult & Pediatric Applications.</p>		
7	<u>CENTRAL STATION</u>	<p>Central Station should be capable of monitoring a minimum of 12 beds expandable to 16 beds.</p> <p>Color display of at least 26" flat type or more LED</p> <p>Shall provide up to 72 hours of patient monitoring data (Full disclosure of waves, Parameters and alarms)</p> <p>Shall provide 72 hours or more trend</p> <p>Alarm review</p> <p>Central Station should be provided with Laser Printer</p>	USA, Europe & Japan FDA/CE/JIS Certified	01

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		FDA Approval CE Marking compulsory.		
8	<u>ANESTHESIA WORKSTATION</u>	<ul style="list-style-type: none"> Comprehensive Latest Trolley Mounted Three gas Anesthesia Machine (O2, N2O and Air). The machine will equip with Vital Sign Monitor which should be properly mount on Anesthesia Machine with Original Manufacturers' mounting solution. Two drawers on sliding channel. Central Gas / Electronically Driven Unit Pin Index Cylinder Yokes for Oxygen and & N2O (One each) as back up. Pipe Line and Cylinder Gauges for O2, N2O and Air. Three Gas electronic flow meters for precise control and monitoring of gases. Electronic Gas Mixing Two Pre-Calibrated Vaporizers of Isoflurane and Sevoflurane vaporizer temperature and flow compensated. CO2 absorber with capacity of 1-2 kg with excess pressure relief valve with exhaust connection with mounting brackets. Circle system should be complete with manometer as an accessory for monitoring device. Anti hypoxic device. AGSS Passive Type Endotracheal Suction facility with complete accessories. Non Interchangeable pipe line inlets Central Gas Hoses for O2, N2O and Air of at least 03 meters. <p>BUILT IN ANESTHESIA VENTILATOR FOR ADULTS &PEDIATRICS (With 12" or more Color LCD DISPLAY)</p> <ul style="list-style-type: none"> Modes of Ventilator: Manual / Spontaneous, PCV, VC, Patient circuit should be easily detachable and autoclavable inspiratory and expiratory time variable 1:4 to 4:1 Tidal volume 20-1400 ml variable Frequency 10-60/minute 		04

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		<ul style="list-style-type: none"> Electrically Driven Ventilator Max inspiratory pressure 60 cm H2O. Built in control and monitoring for tidal volume/ minute volume, airway pressure and inspiratory/expiratory time Built in rechargeable battery operated alarms (electronic) for airway pressure drop (leak), high pressure, disconnection and ventilator failure. Provision for manual ventilation. Anesthesia Gas Agent Monitoring on Ventilator Screen Econometer Vital Sign Monitor Mounted on Machine with parameters (ECG,NIBP, RESP, TEMP & SPO2, 2-IBP) Display Size 20 inch minimum touch screen Display Note: Monitor should be provided with all sensors. Probes, and other accessories for Adult and Pediatric Operations. <p>NOTE: Anesthesia Machine, Agent Monitoring and Vital Sign Monitor and Vaporizers should be from same manufacturer for providing optimal solution.</p> <p>Note: Firms are bound to supply of 01 x 55" LED Display for Slave display of Monitoring Parameters and same will be mounted in wall of each Operating Roo</p>		
9	ICU/CCU Ventilators	<p>Ventilation: Microprocessor based controlled ventilation system on rolling stand</p> <p>TFT – LCD Color Touchscreen 15" Minimum or more</p> <p>All functionalities accessible by Touchscreen</p> <p>Patient Range: adult, child, infant 3kg to 250 kg</p> <p>The unit should be able for automatically measurement of air sacs of the lungs.</p> <p>Configuration of the curves (at least 4 curves) and measurement displays with personalized configuration of ventilation parameters</p> <p>Display of 10 measurements of which 4 are configurable.</p> <p>Fully automated tests to eliminate the risk of error in initializing the machine</p>	USA, Europe & Japan FDA/CE/JIS Certified	12

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		<p>Real time recording waveform for at least 2 days with continuous trends up to 3 hours. The trends should be saved for 13 days.</p> <p>Precise and advanced functional exploration of the lung mechanics for each patient with direct access to the freeze Curve function with institutive cursors.</p> <p>Inspiratory and expiratory pauses.</p> <p>Low Insufflations and exsufflation flow procedures</p> <p>Breathing classification:</p> <p>Pressure control, Volume control and pressure control with set Volume Breath</p> <p>Modes of Ventilation:</p> <p>Volume control</p> <p>Assisted CMV</p> <p>Pressure control PS</p> <p>Assist pressure support</p> <p>CPAP</p> <p>SIMV+ Pressure support</p> <p>Non invasive ventilation</p> <p>Two level pressure Ventilation</p> <p>APRV</p> <p>IMPRV</p> <p>Control:</p> <p>Set & measured parameters simultaneously.</p> <p>Measurement range/specification</p> <p>Inspiratory tidal volume 20-2000 ml or more</p> <p>Respiratory rate: 5-100 bpm</p> <p>SIMV breath frequency 1-60 bpm</p> <p>Inspiratory pressure 10-90 cm H2O</p> <p>Peak Inspiratory flow 3-80 L/min</p> <p>Inspiratory time to expiratory time ratio (I:E):- 1:0.3 1:50.0</p> <p>PEEP 0-40 cmH2O</p> <p>FiO2/ O2 delivery 21-100%</p> <p>Monitoring Parameters for set and measured value simultaneously displayed with Digital Display</p> <p>Total breath rate.</p>		

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		<p>Oxygen concentration FIO2</p> <p>Expired minute volume</p> <p>Peak expiratory flow</p> <p>I:E ratio</p> <p>Peak Pressure</p> <p>Mean Pressure</p> <p>Weaning parameters: P0.1, Rapid Shallow Breathing (RR/Vt)</p> <p>Protective lungs monitoring: Pplat</p> <p>Rstat & Cstat</p> <p>Lung Mechanics with pressure and volume loops</p> <p>Others control and functions</p> <p>Advanced procedures:</p> <p>Low flow inflation procedure</p> <p>Records of these Low Flow inflation</p> <p>Procedure helping in the optimization of the PEEP for ARDS patients.</p> <p>Should be able to calculate and display recruited volumes between different PEEP levels. Based on PV curve measurements.</p> <p>Automatic Measurement of Alveolar Recruitment</p> <p>Back up ventilation</p> <p>Microprocessor gas delivery system</p> <p>Breath circuit Compliance compensation</p> <p>Expiratory hold and Inspiratory hold</p> <p>Pressure and flow trigger sensitivity</p> <p>Trigger sensitivity indication</p> <p>Able to operate on single air / and gas source at 21% Oxygen.</p> <p>Mounted on trolley with lockable wheel</p> <p>Autoclavable reusable patient tubing circuit for peds and adult (O2)</p> <p>Alarms.</p> <p>Apnea</p> <p>AC power failure</p> <p>High and low Expired minute volume</p> <p>High and Low peak air way pressure</p> <p>High and Low breath rate</p> <p>FiO2 variation</p> <p>Low and high base line pressure</p>		

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		Gas supply source failure Low battery Power supply 220 V 50 Hz with internal chargeable battery backup min for 90 min <u>Optional</u> Humidifier Automatic compensation Servo controlled heated humidifier with temperature monitoring at air way and humidification chamber with alarm for low/high limits with water trap in the patient circuit. Compatible Air Compressor		
10	NEBULIZER	For nebulization of respiratory tracts Hospital grade for continuous operation Ultrasonically generated uniform and highly dense particles of 0.5-6 micron size. Nebulizing rate 4.5ml/min Air flow of 30 L/min Quiet operation with noise level of less than 40 db Nebulizing time setting from 0-99 min. Different air flow rate settings Alarm for Low water level Medication cup capacity 625 ml One extra Flexible arm/ delivery pipe/masks (all sizes) Power of 220 volts / 50 Hz Mobile Stand imported same Manufacturer	USA, Europe & Japan FDA/CE/JIS Certified	10
11	DEFIBRILLATOR (With all accessories)	It should be a latest technology, advanced biphasic waveform defibrillator. It should incorporate Manual and AED and synchronous cardio version Mode It should have at least 6.5 inch, high resolution color TFT Display for ECG with three waveform capability Defibrillator should be capable to deliver patient specific shocks based on real time measurement of Patient impedance to reduce post shock dysfunction	USA, Europe & Japan FDA/CE/JIS Certified	04

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		<p>The defibrillator should have AED Mode for Adult, Pediatrics and infants without special accessories</p> <p>It should be light weight, compact, easy to carry and easy to operate preferably with single therapy knob</p> <p>It should have device status indicator for readiness of use.</p> <p>Upgradeable to External Pacing. SpO2 and NIBP</p> <p>It should have in built strip chart recorder (50 mm)</p> <p>It should be capable of storing trends and patient data</p> <p>Should have Arrhythmia alarms.</p> <p>It should have both adult and pediatric external paddles.</p> <p>It should have biphasic mode, with range of 1 to 200 joules, charge time less than 5 seconds.</p> <p>In AED mode the defibrillator should be capable to deliver quick shock (3 seconds) to help minimize interruptions to CPR and speed shock delivery.</p> <p>The defibrillator should be capable to run automated self-tests on hourly, daily and weekly basis with ready to use indicator.</p> <p>Fully charged in-built battery backup with provision for 20 shocks of 200 joules with 3 hours monitoring OR at least 175 shocks of 200 joules without monitoring.</p> <p>Should have battery capacity indicator on Display as well as LEDs on the front of the device that signals power status to quickly see the device readiness</p> <p>It should be capable of transferring data to PC through USB flash memory</p> <p>Operating temperature Standard.</p> <p>Storage temperature Standard.</p> <p>Power Supply: 220 V AC \pm 10%, 50 Hz.</p> <p>FDA Approval CE Marking compulsory.</p>		
12	INFUSION PUMP	<p>Pumping Mechanism: Linear peristaltic pumping system with software adjustments and compensations.</p> <p>Display Blue graphic LCD monochrome.</p> <p>Flow Rate Range: 1-1200 ml/h (1ml/h increment).99.9 ml/h in micro mode (0.1 ml/h increment)</p> <p>Flow Rate Accuracy+ / -5% or better.</p> <p>Volume to Infuse1-9999 ml Normal mode, 0.1-999.9 ml in micro mode.</p> <p>Bolus1200 ml/h, adjustable from 50 ml/h to 1200ml/h by 50 ml/h</p>	USA, Europe & Japan FDA/CE/JIS Certified	20

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		<p>increments.</p> <p>KVO Automatic Keep Vein Open rate of 3ml/h (adjustable from 1 to 20 ml/h) when volume limit is reached.</p> <p>PAUSE Programmable from 1 minute to 24 hours, increments from minute to minute.</p> <p>Data Log Event 1500 data log events in real time.</p> <p>Drug Labeling Display of the drug name based on a list of 50 pre-set drug names.</p> <p>Drug Libraries Customized drug library with Vigilant®, the IV Medication Safety Solution. Up to 4 different drug libraries.</p> <p>DPS The Dynamic Pressure System - DPS - warns of pressure variations.</p> <p>Pressure Monitoring Graphic representation of the pressure in the infusion line and of the pressure limit thanks to the pictograms.</p> <p>Anti-Bolus System Reduces significantly bolus after occlusion release (0.2 ml max).</p> <p>ALARMS / PRE-ALARMS / SECURITY</p> <p>Power Supply 100–240 Vac / 50-60 Hz with standard cable,</p> <p>Battery Li-Ion, battery life at least 8 hours at 100 ml/h, charge level available on the display.</p> <p>Compliance Standard: EN/IEC 60601-1 and EN/IEC 60601-2-24 / CE 0459 marking in compliance with the EEC 93/42 European</p> <p>Line infusion sets are DEHP-free & Latex-free. PVC-free and opaque materials are available on some sets.</p>		
13	SYRINGE PUMP	<p>Graphic LCD monochrome display, size 66 mm x 33 mm 0.1 to 200 ml per hour flow rate range</p> <p>Syringe capacities 5, 10, 20, 30, and 50 cc. with ± accuracy.</p> <p>Rechargeable Battery with capacity of 8-10 hours</p> <p>Power 100-240 Vac / 15 VA.</p> <p>All alarms expressed by means of light indicators, written words, pictograms and sound beep.</p> <p>Infusion mode in volume/time, volume limit 0.1 to 999.99 ml with 0.1 ml increments.</p> <p>3 modes priming. Manual bolus rate 50-1200 ml/hour (50 ml/hour increments)</p> <p>KVO 1 and KVO 2 from 0.1 to 5 ml/hr. adjustable and storable, continuous</p>	USA, Europe & Japan FDA/CE/JIS Certified	20

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		<p>infusion or stop.</p> <p>PAUS: Programmable from 1 minute to 24 hours, increments from minute to minute.</p> <p>1500 data log events in real time.</p> <p>Drug list of 50 agents adjustable with Vigilant.</p> <p>Syringe barrel clasp check, plunger head detection, anti siphon system check, flange detection.</p> <p>Clamp for fixation to a rail or to pole for unit.</p> <p><u>OPTIONAL</u></p> <p>Four syringe pump docking station.</p> <p>Rolling Stand Base with 5 Rollers</p> <p>Power Fix for 4 syringe pumps</p> <p>Main Power Cable</p>		
14	Feeding Pump	<p>Contains complete range of tubing sets and allows connection to most nutrition bags or bottles</p> <p>Accessories:</p> <p>IV pole (01)</p> <p>Performance</p> <p>Flow rate selection range 1 to 600 ml/h. Flow increment 1ml/h.</p> <p>Rate accuracy \pm 10%</p> <p>Display flow rate always displayed.</p> <p>Indicators units (ml/h, ml), confirm signal</p> <p>Volume limit 1 to 5000 ml, Increment in 1 ml increments up to 200 ml or 10 ml increments over 200 ml.</p> <p>Increment 5 ml.</p> <p>Visual and audible alarms</p> <p>Volume limit</p> <p>Motor rotation control anomaly</p> <p>Auto test on startup</p> <p>Pumping system rotary peristaltic</p> <p>Display 4 luminous digits (LED).</p> <p>Supply 230V ~ 50/60 Hz – 11 VA</p> <p>Conformity to International Standards</p>	USA, Europe & Japan FDA/CE/JIS Certified	10
15	HFO VENTILATOR	<ul style="list-style-type: none"> Infant & Paeds Dedicated Ventilator System with High Frequency Oscillation. 	USA, Europe & Japan	02

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		<ul style="list-style-type: none"> Ventilation Microprocessor controlled ventilation system with HFO ventilation. LCD/TFT color monitors 12" or more Touch Screen Patient Range: <ul style="list-style-type: none"> Infant and Peads. Body weight range 0.3 Kg-20 Kg. Modes of Ventilation: <ul style="list-style-type: none"> CMV Pressure control/ PS CPAP SIMV High Frequency Ventilation Built in Suction maneuver Manual Inspiration / Hold Nebulizer <ul style="list-style-type: none"> Integrated nebulizer For Nebulization of patient during Ventilation Control: <ul style="list-style-type: none"> Set & measured parameters simultaneously. Measurement range/ specification <ul style="list-style-type: none"> High frequency ventilation : 5-20Hz Inspiratory tidal volume : 3– 200 ml or more Respiratory frequency : 5- 150 bpm Inspiratory pressure : 5-60 cmH₂O PEEP : 20 cmH₂O I : E ratio : 4:1 FI_{O2}/ O₂ delivery : 21 – 100% Monitoring Parameters for set and measured value simultaneously with Digital Display <ul style="list-style-type: none"> Total breath rate. Oxygen concentration FI_{O2} Expired minute volume Peak expiratory flow I : E ratio Peak Pressure 	FDA/CE/JIS Certified	

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		<ul style="list-style-type: none"> • Mean pressure • Lung Mechanics with pressure and volume loops. <p>Others control and functions</p> <ul style="list-style-type: none"> • Back up ventilation • Microprocessor gas delivery system • Breath circuit Compliance Compensation • Expiratory hold/ Inspiratory hold • Panel lock for safety • Should able to operate on single air/ and gas source at 21% Oxygen. • Mounted on trolley with lockable wheel • Autoclavable reusable patient tubing circuit for peads (02) <p>Alarms.</p> <ul style="list-style-type: none"> • Apnea • AC power failure • High and low Expired minute volume • High and low peak air way pressure • High and low breath rate • FiO2 variation • Low and high base line pressure • Gas supply source failure • Low battery <p>Humidifier.</p> <ul style="list-style-type: none"> • Automatic compensation (Servo) controlled heated humidifier of F&P with temperature monitoring at air way and humidification camber with alarm for low/ high limits with water tarp in the patient circuit. <p>Power supply</p> <ul style="list-style-type: none"> • 220 V 50 Hz with internal chargeable battery backup time for minimum 1 hr. <p>Compressed Air Supply</p> <ul style="list-style-type: none"> • The unit will be driven on the central air and oxygen supply and should have backup driving source in case of failure of central gas system. 		

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		Capnography Integrated Capnography module to monitor CO2 of the patient. The waveforms should be displayed on Ventilator Screen		
16	ECG Machines ECG Twelve-channel digital ECG	Simultaneous 12 leads acquisition Automatic measurement and interpretation of ECG trace Large LCD (320*240 dot) for preview of ECG trace and display operation menu and parameter settings Automatic elimination baseline drift and automatic control of baseline position Powerful filter for AC and EMG interface High-resolution thermal recorder AC and DC power supply, fully charged built-in battery supports over 100 ECG exams 16 exams in memory for recall and duplication Optional RS232 software for further ECG management and review	USA, Europe & Japan FDA/CE/JIS Certified	02
17	CCU/ ICU MOTORIZED BEDS	4-section mattress platform, on 2 telescopic columns Height adjustment from 40 to 77 cm by actuator and External dimensions 223 x 99.5 cm Trendelenburg and reverse Trendelenburg, mattress platform tilt adjustment ± 16 degrees, adjustment of backrest and thighrest by actuator Back rest angle: 70° at least with pressure relieving function in pelvic area Thigh rest 35° at least CPR mechanical unblocking of backrest Battery Backup Bed extension Hand set with safety activation GO button; mattress platform height adjustment backrest and thighrest position adjustment, autocontour adjustment, with LED flashlight and foot controls height adjustment Split plastic side rails X - Ray cassette holder - inserted under back rest from the head end side. 4-casters $\varnothing 150$ mm Tente Motion, central control system from 2 points 4 holders for infusion stand, lifting pole and IV Pole Safe working load 230 to 250 kg	USA, Europe & Japan FDA/CE/JIS Certified	12 Quantity

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		Mattress (Imported same Manufacturer) HR polyurethane foam with vapor permeable sewed cover Bed Side Cabinet (Imported same Manufacturer) Upper drawer, niche, large bottom cupboard, cupboards are accessible, corpus made from zinc plated steel, fronts of the drawers and cupboards from HPL boards four 75 mm double castors, 2 of which can be braked Over Bed Table (Imported same Manufacturer) Height adjustable HPL eating board with protective plastic edges, 4 double castors: 50 mm in diameter, 2 with brakes, Table with tilt able board one side		
		<u>PHYSIOTHERAPY DEPARTMENT</u>		
18	PHYSIOTHERAPY EQUIPMENT TWO CHANNEL LOW AND MEDIUM FREQUENCY THERAPY UNIT	Features: Complete with four-pole Interferential, two-pole Interferential, Russian, EMS, TENS, High Volt, and Micro-current (or DC) Large LCD Screen (320X240 dots) Programmable-up to six programs per mode may be stored Five to seven present programs per mode Constant current/constant volt selectable Connectable to a vacuum unit (the vacuum unit SU-520 is optional) An unbeatable combination of value performance, and versatility This 2-channel vacuum unit, offering the application of up to four vacuum electrodes, greatly enhances the operability of the Low and Medium-frequency therapy unit. Two channels Blowout vacuum system The vacuum electrodes are available in three sizes A continuous and intermittent mode vacuum system Specifications: Power Supply: 220-240 VAC, 50Hz Amplitude: 0-99.5mA (Peak) Number of channels: 2 independently controllable Timer: 0-60 minutes Safety functions: (1) Self-test (2) Output cutoff in the even the output increase abruptly.	USA, Europe & Japan FDA/CE/JIS Certified	01 (turnkey basis)

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		(3) Abnormal pulse output detection (4) Emergency stop button		
19	PULSED & CONTINUOUS SHORT WAVE DIATHERMY UNIT,	<p>Automatic shortwave unit with an automatic tuning device, suitable for “continuous” and “pulsed” therapy.</p> <p>Microprocessor controls the different parameters: adjustable intensity, continuous and pulsed mode, treatment time and patient safety system. The unit should be suitable for thermal and athermal treatments.</p> <p>The continuous mode should have an output of 400 W.</p> <p>The pulsed mode should have a peak power output of 1000 W, the average power much lower.</p> <p>Digital control panel and operation.</p> <p>Should have digital output power setting and indication of the power</p> <p>Indication modes: Continuous, P1 to P5 (pulsed)</p> <p>Timer with memory function - 30 min - adjustable per minute</p> <p>Mounted on mobile castors</p> <p>230 V - 50 Hz</p> <p>consumed power: 650 to 700 VA max</p> <p>Frequency: 27,12 MHz or better</p> <p>Pulse time: 0,4 msec</p> <p>Adjustable pulse frequency from 100 to 300 Hz</p> <p>Class I type BF according to IEC 601-1 and marking: CE</p> <p>Accessories:</p> <p>Supple rubber electrode 12 x 18 cm (2)</p> <p>HF cable (2)</p> <p>Felt 12 x 18 cm (2)</p> <p>Fixation strap (1 meter)</p> <p>And power cable</p> <p>Laminated chart with treatment indications</p> <p>Schliephake electrode dia 130 mm (2)</p> <p>Schliephake electrode dia 85 mm (2)</p> <p>HF arm adjustable (2)</p> <p><u>OPTIONAL</u></p> <p>Dipole large field electrode (1)</p>	USA, Europe & Japan FDA/CE/JIS Certified	01 (turnkey basis)

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
20	ULTRASONIC THERAPY UNIT,	<p>Ultrasound therapy device 1 & 3 MHz Continuous and in pulsed emission modes a maximum of 15 Watts (3W/cm2). One head for both frequencies of 1 and 3 MHz. Large LCD display. 15 memories Norms of reference: EEC Dir. 93/42 - Class IIa - CE 1639 Power supply: 230 V \pm 10% - 50/60 Hz Power consumption: 70 VA Protection class: 1B CEI 62-5 & 62-23 Emission modes: continuous Pulsed: 25%, 50%, 75% Modulation: adjustable from 10 to 200 Hz Frequencies: 1 MHz & 3 MHz Visualization: by large LCD Intensity: max 3W/cm2 Timer: digital, adjustable from 0 to 30 minutes Contact control: visual and acoustic signal Transport bag</p>	USA, Europe & Japan FDA/CE/JIS Certified	01 (turnkey basis)
21	CERVICAL TRACTION	<p>TRACTION MACHINE A very versatile and easy to operate traction machine with both static and intermittent treatment modes. Variable speed control with clear display of all treatment settings. Characteristics: Choice of intermittent or static traction modes variable speed control with quiet operation throughout treatment period minimum and maximum force settings 2.5 to 91 kg Variable hold and rest times from 0 to 99 seconds Treatment timer with end of period alarm 0-99 min Clear display of all set treatment parameters Patient safety switch with adjustable alarm Supplied with spreader bar</p>	USA, Europe & Japan FDA/CE/JIS Certified	01 (turnkey basis)

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		<p>THERAPY TRACTION TABLE ELECTRIC with machine mount Incorporating both an adjustable angle backrest and an adjustable head/foot section with breathing hole and plug, this table is specifically designed for lumbar and cervical traction and features an integral rolling top design to facilitate effective traction procedures.</p> <p>Characteristics: Safe working load and lifting capacity (from minimum height) of 240 kg Integral rolling top design to provide more effective application of traction forces adjustable height mount for traction machine with offset positioning for changing angle of traction application Adjustable angle backrest from horizontal to +80° Adjustable angle head/foot section from -25 to +70° with breathing hole and plug The power assisted backrest and foot sections incorporate anti-trap design gas struts excellent height range from 48 to 99 cm Retractable wheel design and adjustable foot for stability on uneven surfaces fixation point for optional cervical traction accessory foot switch fitted as standard on electric models standard width 70 cm</p>		
22	WAX THERAPY UNIT	<p>Paraffin bath in a one piece case, can hold up to 4 kg of paraffin. Treatment of hands, feet and elbow Constant temperature between 52,22°C and 56,66°C Supplied with 3 kg of paraffin Power: 230V~ 50/60Hz CE 0413 2-gloves and 100 plastic liners 2-socks and 100 plastic liners</p>	USA, Europe & Japan FDA/CE/JIS Certified	01
23	TREADMILL	<p>2.5hp continuous duty internally cooled Baldor motor provides a speed range of 0.5 to 12 mph. Degree of incline is adjustable from 0.0% to 12%. Cateye wireless pulsi meter technology*.</p>	USA, Europe & Japan FDA/CE/JIS Certified	01

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		<p>20" x 60" running surface utilizes a Siegling 2 Ply Belt on our suspension mounted and pre-lubricated double sided deck.</p> <p>Onboard computer provides four different programs and six different readouts though an oversized backlit LCD display with data graphing.</p> <p>LED displays show, speed, distance, incline, and elapsed time.</p> <p>Display can be set to read in English, German, French, Spanish or Japanese.</p> <p>Patented Cateye Data Card system.</p> <p>Three-year institutional warranty.</p> <p>Automatic Heart Rate training program. The T-220 will increase or decrease inclines as needed to hold your heart rate to within three bpm of the target.</p> <p>Interval training programs: Choose from one of three different pre-set intervals training profiles, profiles auto adjust using speed.</p> <p>Manual training program: Adjust incline or speed at any time during your workout using the console mounted control buttons.</p> <p>Polar compatible</p>		
24	TENS UNIT	<p>Portable, programmable, 4-channel electro stimulator for professional use in medical rehabilitative and physiotherapeutic environments.</p> <p>Current types EMS, TENS, MCR, Russian, denervated, interferential, ionophoresis</p> <p>My Trainers shows positioning images of the electrodes on screen.</p> <p>Run Time allows modification of time, frequency and pulse width during treatment.</p> <p>2+2 Mode permits to execute 2 different programs simultaneously.</p> <p>Stim Lock: the patient can only use the programs chosen by the physiotherapist.</p> <p>Work Time shows the effective utilization time of the unit</p> <p>Diagnostics reobase and chronaxy calculation</p> <p>Double power supply rechargeable batteries and mains supply.</p> <p>Tensogel 5 x 5 cm - adhesive electrodes</p> <p>Tensogel 5 x 9 cm - adhesive electrodes</p> <p>4 colored patient cables</p> <p>2 grey patient cables</p>	USA, Europe & Japan FDA/CE/JIS Certified	01 (turnkey basis)

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		transport bag battery charger Manual complete with electrode placement guide. Genesy 1500 has a complete range that includes specific waveforms and 414 programs: 11 Rehabilitation, 33 Pain, 23 MEMS (micro-current), 9 Denervated, 3 Incontinence, 6 Interferential, 1 Ionophoresis, 53 Sport, 29 Fitness, 16 Beauty, 84 Action Now, 54 "3S" Serial Sequential Stimulation,		
25	ELECTRO THERAPY UNIT	<p>The unit provided with a special ergonomic head capable to generate 1 or 3 MHz frequency but can also combine both frequencies allowing penetration into different cellular layers at the same time. Pulsed and continuous emission up to 15 W (3 W/cm²).</p> <p>All the functions are visualized on a large color LCD. it is possible to adjust every parameter on the touchscreen.</p> <p>After a pathology is chosen, the screen will show the body parts to be treated and the unit will suggest the parameter values to set. Free memories for entering customized protocols.</p> <p>Frequency 1 - 3 MHz Modes continuous and pulsed (from 20% to 80%) Modulation from 1 to 200 Hz Multi-frequency head 5 cm² Intensity max.3 W/cm² Color touch screen 400x800 pixels Power supply 115-230 V~ 50/60 Hz Consumed power 80 VA Safety class class I type B according to IEC 601-1 Directive EEC 93/42: IIa Marking CE 1639 multifrequency head 5 cm²</p>	USA, Europe & Japan FDA/CE/JIS Certified	01 (turnkey basis)

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		Sonocol - 250 cc power cable		
26	INTERFERENTIAL THERAPY	<p>→ Combination of 3-band ultrasound and Infinity I electrotherapy with 4 output channels</p> <p>→ 3-band ultrasound is provided with three different frequencies: 1 MHz, 2 MHz and 3 MHz.</p> <p>→ The operator can use them separately or he can make all combinations he needs.</p> <p>→ 3 MHz is usually applied for treating the first layers of the body (skin and fat), 2 MHz is useful for treating muscles,</p> <p>→ 1 MHz is suitable for treating tendons and muscles.</p> <p>→ The ergonomic shape of the multi-frequency head allows easy handling.</p> <p>→ Universal 2 channel electrotherapy device that delivers all the low and medium frequency currents for iontophoresis, stimulation, pain therapy by using Tens and diadynamic currents, High Voltage, Trabert, Kotz and interferential bipolar and quadripolar. Infinity includes a wide range of preset protocols and memories for customised protocols.</p> <p>→ Mobile Trolley compatible with unit</p>	USA, Europe & Japan FDA/CE/JIS Certified	01
27	TABLE FIXED HEIGHT TRACTION + UNIT	<p>TRACTION MACHINE</p> <p>A very versatile and easy to operate traction machine with both static and intermittent treatment modes. Variable speed control with clear display of all treatment settings.</p> <p>Characteristics:</p> <p>Choice of intermittent or static traction modes variable speed control with quiet operation throughout treatment period minimum and maximum force settings 2.5 to 91 kg</p> <p>Variable hold and rest times from 0 to 99 seconds</p> <p>Treatment timer with end of period alarm 0-99 min</p> <p>Clear display of all set treatment parameters</p> <p>Patient safety switch with adjustable alarm</p> <p>Supplied with spreader bar</p> <p>THERAPY TRACTION TABLE ELECTRIC with machine mount</p>	USA, Europe & Japan FDA/CE/JIS Certified	01

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		<p>Incorporating both an adjustable angle backrest and an adjustable head/foot section with breathing hole and plug, this table is specifically designed for lumbar and cervical traction and features an integral rolling top design to facilitate effective traction procedures.</p> <p>Characteristics:</p> <p>Safe working load and lifting capacity (from minimum height) of 240 kg</p> <p>Integral rolling top design to provide more effective application of traction forces</p> <p>adjustable height mount for traction machine with offset positioning for changing angle of traction application</p> <p>Adjustable angle backrest from horizontal to +80°</p> <p>Adjustable angle head/foot section from -25 to +70° with breathing hole and plug</p> <p>The power assisted backrest and foot sections incorporate anti-trap design gas struts</p> <p>excellent height range from 48 to 99 cm</p> <p>Retractable wheel design and adjustable foot for stability on uneven surfaces</p> <p>fixation point for optional cervical traction accessory</p> <p>foot switch fitted as standard on electric models</p> <p>standard width 70 cm</p>		
28	BICYCLE EXERCISE STATIONARY	<p>This robust Cross Trainer has everything you could wish for. The trainer has a good ergonomic design and great training potential. You'll be kept constantly motivated while training thanks to the numerous programs displayed on the clear and user-friendly console.</p> <p>The Platinum-experience:</p> <p>self-generating, so no power needed</p> <p>equipped with many training programs plus a fitness test</p> <p>user-friendly console with a useful selection wheel for fast navigation</p> <p>the console has been programmed in 10 languages</p> <p>outstanding craftsmanship with an eye for ergonomics and design</p> <p>Technical characteristics:</p>	USA, Europe & Japan FDA/CE/JIS Certified	01

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		<p>full color display shows time, distance, speed, RPM, lap, energy consumption, training power, target heart rate, heart rate</p> <p>11 programs with quick start, manual, target HRC, hill program, cardio program, fatburn program, interval program, fitness test, 5 km track, 2 HRC programs</p> <p>7 preset programs and 1 user program T-scale, ergonomic, large saddle, can be adjusted horizontally and vertically</p> <p>Stride length: 50 cm</p> <p>Contact heart rate</p> <p>Induction brake</p> <p>Ergometer</p> <p>Rotating mass: 14 kg</p> <p>Self-generating power supply</p> <p>40 resistance steps</p> <p>Maximum user weight: 150 kg</p> <p>Option: heart rate chest belt</p>		
29	Physiotherapy Equipments	<p>MAT EXERCISE</p> <p>Mat of high density foam, to be highly shock absorbent, covered in washable flame retardant vinyl.</p> <p>Two handles for hanging storage.</p> <p>MIRROR POSTURE</p> <p>Frame of tubular steel and mounted on anti-static castors.</p> <p>Easy to maneuver with an adjustable mirror panel.</p> <p>The optically perfect mirror is toughened glass 15mm (½") thick.</p> <p>Dimensions: Mirror : Approx. 120cm H x 36cm W, Overall : Approx. 160cm H x 50 cm W</p> <p>ROWING MACHINE</p> <p>Fixed rowing machine.</p> <p>Step less and adjustable from 20 to 200 N depending on the pulling speed.</p> <p>Foot support adjustable securing straps and non-slip rubber caps fitted to the feet.</p> <p>The seat unit mounted on smooth running rollers.</p> <p>STEPS REGULATED</p>	USA, Europe & Japan FDA/CE/JIS Certified	01 (turnkey basis)

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		<p>A solidly constructed unit made from hardwood. Each step carpeted to provide a natural feel and appearance. Three 20cm high risers on one side and four 15cm high risers on the other. Uniform step width of 65cm to simulate a domestic environment. Twin handrails adjustable in height from 15cm minimum to 80cm maximum.</p> <p>BARS PARALLEL FOLDAWAY Double bars. Length approximately 700 cm. Height adjustable from 65 to 100 cm.</p> <p>BENCH QUADRICEPS Quadriceps Bench enables exercise in a sitting position as well as exercise in a reclining position. The adjustability of the seat and back, facilitate a comfortable and stable position. Dimensions: Height 125 x60x70 cm Velcro fixation strap for upper leg Additional swinging arm</p> <p>PULLEY SET WESTMINSTER Wall mounted with pulley bracket positions adjustable at all levels. Standard set of accessories for use with the pulley system. Traction height to be selectable between 40 and 180 cm. Supplied with chrome plated tubular frame/ SS stool with a washable flame retardant vinyl upholstered seat.</p> <p>WHEEL SHOULDER For shoulder and hand exercise, made of painted steel frame and chromium plated/ SS sliding parts. The wheel is fully adjustable for height and resistance and be able to accommodate all age groups and various stages of rehabilitation.</p> <p>BATH WAX Paraffin wax bath operates on the Bain Marie principle. The paraffin is heated indirectly by the heat transferred from a (liquid) water. Tank capacity: 30 liters Heat Transfer liquid: 10 liters (water) Main voltage: 220V, 50 Hz</p>		

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		<p>Safety class: 1 type B according to IEC 601-1</p> <p>PARAFFIN WAX Paraffin Wax, Pure form; 25 kg. CE marked.</p> <p>HOT PACK HEATING UNIT Mobile with stainless steel inner tank and cover and outer surface to be epoxy coated. Tank capacity of 60 liters with the water temperature being kept at an accurate level by means of a thermostat. Water filling hole for easy filling and an electric pump for quick emptying into any sink or drain. Thermal safety mechanism, 220V, 50 Hz operated. CE marked.</p> <p>PACKS COLD SET OF 3 Cold packs for cold therapy, easily cooled in a normal refrigerator or deep freezer. Supplied as a set in sizes: 12 x 30 cms. 25 x 30 cms and 60 cm neck pack.</p> <p>PACKS HOT UNIVERSAL SET OF 4 Set of various hot packs for use on all parts of the patient. Set of standard pack 25 x 30 cms, large pack 35 x 60 cms, neck pack, 60 cms long, small pack 12 x 30 cms, with the appropriate terry covers for each pack.</p> <p>BARS WALL MOUNTED Rehabilitation wall bars. Made of polished wood. Height of 250 cm and width of 80 cm approximately. About 15 rungs 1/2 recessed rung at the upper portion. Maximum Electrical Power Consumption not more than 2.0KVA</p>		
30	ERECTILE DYSFUNCTION SHOCK WAVE THERAPY SYSTEM	<p>Low intensity extracorporeal shock wave therapy , focusing on blood vessels and encouraging neovascularisation in the penis shaft crus.</p> <p>The low intensity shock wave therapy to relieve vesicular deficiency.</p>	USA, Europe & Japan FDA/CE/JIS	

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		<p>Light compact and mobile long term effect, Pain free with no side effects. Based on angiogenesis - triggers the body's natural repair mechanism. Suitable for additional urology applications. The non invasive and painless procedure for discernible improvement in the erectile function of the penis.</p>	Certified	
		<u>DIALYSIS DEPARTMENT</u>		
31	Dialysis Unit complete	<p>Universal Machine for to use with any type of Standard Disposables and Disinfectant easily available in open market and not bonding with special brand.</p> <p>Maintenance Assistance for Diagnostic and Calibration Single Needle and Double Needle system with single pump as standard Advance Alarm Display with large touch screen system Automatic Checking of Disinfectant Presence in Hydraulic for patient safety KT/V Maintenance Assistance Digital and graphical monitoring of all parameters Real Time Programmable Bicarbonate/Acetate proportion Real time monitoring of Dialysate temperature and dialysate flow Automatic priming with display Automatic disinfectant mechanism and chemical with Hot water disinfection system Profile for UF, Conductivity, Blood Flow and Heparin Flow Blood pump flow indicator 0 to 600 ml/min UF Volumetric Control System Dialysate temperature regulation range 33°C to 40°C Air bubble detector- Ultrasonic type Blood leak detector- Photoelectric type Automatic Battery back up system for at least 30 minutes Blood Pump Adjustable for BTL size 6.0mm to 8.0mm</p>	USA, Europe & Japan FDA/CE/JIS Certified	08 (turnkey basis)

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		Automatic Battery back up system for at least 30 minutes Blood Pump Adjustable for BTL size 6.0mm to 8.0mm		
32	Reverse Osmosis System (Ring / Loop Base) with Automatic Pretreatment System,	<p>Operating Specification</p> <p>Permeate Capacity : 250 Ltr/H</p> <p>Concentrate Flow : 200 Ltr/H</p> <p>Salt Rejection : 98%</p> <p>Permeate Pressure : 2 ~ 3 Bar</p> <p>Frame : Stainless Steel</p> <p>Tubing : Stainless Steel</p> <p>Membrane Housing : Stainless Steel</p> <p>System Specification</p> <p>Multistage Pump Three Phase 02</p> <p>Pump Throttling Valve</p> <p>R.O. Membrane 01</p> <p>Membrane Pressure Vessel 01</p> <p>5-Micron Sediment Pre-Filter</p> <p>Concentrate Pressure Gauge</p> <p>Loop to Pressure Gauge</p> <p>Loop from Pressure Gauge</p> <p>Low pressure cut-off switch</p> <p>Loop pressure cut-off switch</p> <p>Pump High Pressure cut off switch</p> <p>Permeate Flow Meter</p> <p>Concentrate Flow Meter</p> <p>Concentrate Recycle Flow Meter</p> <p>Loop Return Flow Meter</p> <p>Electric Console</p> <p>System controlling P.C.B.</p> <p>Four Color patrol lamp</p> <p>Loop / Product Water (T.D.S, Conductivity, Temperature) Meter</p> <p>Feed Water (T.D.S, Conductivity, Temperature) Meter</p> <p>Emergency Stop</p> <p>a. Automatic Multimedia Sand Filter 01</p> <p>b. Automatic Activated carbon Filter 01</p> <p>c. Automatic Water Softener 02</p>	USA, Europe & Japan FDA/CE/JIS Certified	01

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		d. Booster Pump with Pressure Kit 01 e. Sediment Filter 02 5" x 2.5"		
33	Dialyzer Re-Processor	<p>Specification</p> <p>Feed Flow Requirement: 2 to 4 liters/minute at 25 psig. Dialyzer Reprocessing Capability for all type of Dialyzers Process: Automatic Cleaning, Volume Measuring, Leak Testing and Chemical Filling Water consumption: Approximately 25 liters/cycle. Dialyzer reprocessing Program LF (Low Flux), MF (Medium Flux), HF (High Flux) Other programs: DF (Disinfection), FR (Force Rinse), ST (Self Test) SC (System Cleaning)</p> <p>Display Type: VFD (Vacuum Fluorescent Display) Automatic Internal Calibration of TCV without any external attachments Self Test Program Separate Input Lines for System Cleaning Chemical and Cold Sterilant for Dialyzer Reprocessing</p> <p>Display Type: VFD (Vacuum Fluorescent Display) Manufacturing standard: ISO 9001:2008, ISO 13485:2003 On site concentrate manufacturing system Concentrate systems mixing tank is designed to accommodate 110 gallon batch size or better. The system is designed to be compatible with either a central delivery system or for use with individual jugs Ergonomic Design With user safety in mind, the mixer features: *Minimum height *Powder addition access conveniently located * On average, case weight is less than 40 pounds In-Line monitors (Crit line) Superior Fluid Management See real-time plasma refilling and achieve ideal dry weights. Comprehensive Access Monitoring Provides fast and easy access blood flow readings with no blood line</p>	USA, Europe & Japan FDA/CE/JIS Certified	01

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		reversal. Anemia Management Non-invasively measures absolute hematocrit (CLIA exempt) and calculates hemoglobin from hematocrit. Continuous Oxygen Saturation Provides continuous, accurate measures of oxygen saturation. Standard Specifications: Instrument Range Hematocrit (Hct):10Hct-60Hct Oxygensaturation:55%-100% (Hct>10) Hematocrit Accuracy 10Hct-60Hct:±1HctSD Oxygen Saturation Accuracy 55%-100%:±2Sat%Hct>18 Access Blood Flow Estimate flow rates 50 ml/min - 2500 ml/min ± 15 % Recirculation Capability Estimate recirculation values>4% Battery Capacity 2 hours continuous on full charge HD Blood Flow Rate Capability 50 ml/min - 1300 ml/min Internal Data Storage Sufficient to store up to 26 hours of data indefinitely Input 12VDC/1Ampere/12watts1.2Amax. Power Supply Unit Universal regulated supply 100 VAC - 240 VAC 12VAC/1.25Ampereoutput Communications Ports 8-positions keyed modular jack(keyedRJ-45)serial port DB female parallel port Electric Shock Protection Class II Internally powered Type BF Water Protection Splash proof Anesthetic Suitability Not suitable Mode of Operation Continuous BatteryType:Rechargeablesealedleadbattery(12V,2A-		

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		<p>h) Battery is replaceable Polarity: \pm (labeled on battery) Mode of insertion: Via 2 pin Molex connector (replaceable)</p> <p>Weighing scale Digital Weighing scale with automatic BMI calculation Battery operated upto 16000 weighing per battery set with transport casters with large easy to read LCD display with HOLD, BMI functions. Capacity up to 250Kg graduation 100g</p>		
34	Electronic Dialysis Recliner with weighing scale	With standard accessories	USA, Europe & Japan FDA/CE/JIS Certified	Quantity 08
		<u>DENTAL DEPARTMENT</u>		
35	Dental Equipment less Dental Chair	SCALAR Fiber optic Ultrasonic Scalar Built in type with autoclave able tips and wrench	USA, Europe & Japan FDA/CE/JIS Certified	01
36	AUTOCLAVE SMALL	<p>Chamber Capacity: 20-25 Liter Loading Capacity: 5kg instruments and 1.8kg textiles or more Table top Standalone Class B-Autoclave Built-in Electric Steam Generator made of stainless steel Fully automatic microprocessor controlled autoclave Digital LCD display 5 Sterilization programs Fast cycle programs Vacuum and Bowie&Dick test program Serial interface for documentation Automatic electrical door lock with safety door lock system Built-in water quality sensor (conductivity sensor) Easy to use by single button start Electro-polished stainless steel chamber</p>	USA, Europe & Japan FDA/CE/JIS Certified	02

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		Internal storage data Built-in monitoring system to check the cycle automatically every 0.5 seconds Tipple-pre and deep post vacuum Temperature control 121°-134°C Two 4.5 liter reservoirs for fresh and waste water Compatible trays with the autoclave One piece of tray holder and Fully compliance according to EN 13060		
37	Establishment of Dental Laboratory	With complete accessories	USA, Europe & Japan FDA/CE/JIS Certified	01 (turnkey basis)
38	Dental Unit	Fiber Optic System Oil hydraulic motor drive system Fully Metallic Body Silicone Tubing for High speed Handpieces Silicone Tubing for Low speed Handpiece Three-way syringe Bracket table: Ergonomically design Bracket table features a wide range of movement to accommodate dentists' various preference on working position. Quick-detachable table handle cover is of silicone and also autoclavable. Aseptic touch control panel, all grouped in one place for easy access. (some functions optional) Selection of chair Auto position: Treatment position (1,2), zero position Mouth rinse position, Soft memory position LCD on control panel shows information related to instrument in use and chair position / movement in symbolized icons Standard size (intraoral) x-ray film viewer attached Assistant's side element includes: High volume evacuator Saliva ejector	USA, Europe & Japan FDA/CE/JIS Certified	01 (turnkey basis)

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		<p>Detachable glass spittoon Assistant's instrument holder Chair Auto position includes: Chair provides three programmable automatic positions: Treatment position 1,Treatment position 2 ,Reset(zero) position Upholstery :Seamless urethane material Included electric main switch Emergency stop function Automatic cup filler Infrared beam sensor type Auto cup filler. Sensor starting cup-filling when cup is placed. Cup filling is made for preset time (filling time can be adjusted) Automatic cup filler works with paper or metal cups. Operating light The light is post-mounted. Long lasting quartz halogen bulb. Auto-light function During chair's movement for Auto position, light OFF automatically In case instruments are taken out from holder, light ON automatically On the moment chair gets to Auto treatment position, light ON automatically Detachable, autoclavable light handle. Light intensity: Max. 26,000 ± 2,000 Lux Low: 18,000 Lux Middle: 21,000 Lux High: 26,000 Lux Color temperature: 4,200 ±2,000 Kelvin Knob for adjusting Light pattern is mounted on rear side of light head. Operating stool Electric Power : AC 220V, 60Hz. (Adjustable to local voltage) Power consumption: 1.5 kVA</p> <p><u>OIL FREE COMPRESSOR:</u> Specification:</p> <p>Capacity for 1 Dental Unit Tank Capacity: 32 liter /min</p>		

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		Power 70 Liter /min Capacity discharge 0.8 Mpa Desiccator System Noise 56-65 db Frequency 550W Air Regulator wich control air According to need Air Filter which purify air from moisture		
39	<u>DIGITAL OPG Machine with Upgraded to 3D:</u>	Specification: MRT (Morphology Recognition Technology automatically secure the recognition of the patient's morphology for a correct X-ray exposure and an optimal image with the aid of MRT, there is no need to plan exposure times or technical factors such as the kV or mA level. Hyperion X9 avoids over- or under-exposed images, thereby preserving the quality of your diagnostics and avoiding useless radiogenic doses to the patient (2 Patent Pending) Evolved image filters PiE (Panoramic image Enhancer) Implant simulation Data sharing with 2D and 3D Viewer Connections LAN / Ethernet Software MyRay iRys Supported protocols DICOM 3.0, TWAIN, VDDS DICOM nodes IHE certification (Print; Storage Commitment; WorkList MPPS; Optimized focal layer Uniform enlargement of all projections Advanced kinematics (3 engines): 2 translations, 1 rotation Fast positioning, Face To Face, 4 Laser traces Lower radiogenic dose 39 2D examinations A single craniostat for all the examinations HD panoramic images QuickPAN	USA, Europe & Japan FDA/CE/JIS Certified	01

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		<p>Bitewing dentition</p> <p>Multi-angle TMJ's</p> <p>Frontal or left/right side view of the maxillary sinuses</p> <p>14 TMJ EXAMINATION with open and close mouth</p> <p>Latero-Lateral projections of both the TMJ's (temporomandibular joints)</p> <p>Postero-Anterior projection of both the TMJ's</p> <p>Latero-Lateral projections from multiple angles (x3) of a single TMJ</p> <p>Postero-Anterior projection from multiple angles (x3) of a single TMJ</p> <p>Detector technology CCD (CSI)</p> <p>Protection from direct X-ray exposure FOP (Fibre Optics Plate)</p> <p>Generator type Constant potential (DC)</p> <p>X-ray emission type pulsed, square shaped pulses</p> <p>Anode voltage 60 – 90 kV (1kV step)</p> <p>Anodic current 1 – 10 Ma</p> <p>Exposure time range 160 ms – 14 s (R10 scale)</p> <p>Focal Spot dimension 0.5 mm (IEC 60336-1993)</p> <p>Exposure Control Method Automatic. MRT (Morphology Recognition Technology)</p> <p>Compensation of Spine absorption Automatic</p> <p>mA and kV configuration modulated in real time during X-ray exposure,</p> <p>automatically or manually selectable in steps of 1, in the whole kV range</p> <p>Duty cycle 1:20 at full power (85 kV, 10 mA)</p> <p>Inherent filtration 3.2 mm eq. Al (at 85kv)</p> <p>Integrated X-ray shielding behind receptor conforming to IEC60601-1-3</p> <p>Pixel size 48 µm</p> <p>Dynamic range 14 bit (16383 Grey levels)</p> <p>Detector resolution 10.4 lp/mm</p> <p>Signal To Noise ratio minimum 74 dB – typical 86 dB</p> <p>Detector height 146 mm 220 mm</p>		

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		Image pixel matrix max: 1528x2797 max: 2291x3125 Maximum size of image file 8 MB 14 MB X-ray exposure time 7.5 s - 13 s 3.4 s Typical effective dose (ICRP 103) 4.3 - 6.7 µSv 1.0 µSv Image resolution from 5 to 7 lp/mm Image format TIFF 16 bit, DICOM Patient Alignment Servo-assisted: 4 laser guides		
40	<u>AIR MOTOR WITH STRAIGHT& CONTRA ANGLE:</u>	Specification: Push Type Autoclaveable Variable speed 22000 Rpm Two hole Midwest system Straight & Contra angle Attachments is separate Slow speed with speed control system Surgical procedure can be use Complete set with EX203 motor, Ex-06 straight attachment , NAC-E Contra head & accessories	USA, Europe & Japan FDA/CE/JIS Certified	01
41	<u>HIGH SPEED TURBINE:</u>	Push Type Fiber Optic Autoclaveable Single Water spray 400,000 Rpm Two Hole Midwest system Simple Bur Exchange Automatic Tension Grip	USA, Europe & Japan FDA/CE/JIS Certified	01
42	Light cure Machine:	Features: Internally mounted super cool fan for cont- duty Automatic timer from 10 to 60 seconds Fibre optic tip Fibre optic tip is Autoclavable Tips size 8, or 10 mm Unit can wall mounted	USA, Europe & Japan FDA/CE/JIS Certified	01
43	Digital Torquing Control Rotary Machine (DTC)	Features: Fully Autoclave able motor/cable assembly, easily detached from console Range of Handpiece ratios supported - 1:1, 1:5, 8:1, 18:1	USA, Europe & Japan FDA/CE/JIS Certified	01

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		<p>Greater range of use with a speed range of 300 –30,000 RPM and a torque range of 0 – 2 ,000 g-cm</p> <p>Brushless motor, micro processor controlled</p> <p>Preset for TF, K3/K3XF, LSX/CSX files and M4 Handpiece, as well as one button for user program</p> <p>Brushless motor</p> <p>Simpler Interface, Expressing Torque in Actual Gram Centimeter instead of Percentage</p>		
44	Element Diagnostic Unit (Apexo locator with Pulp Tester)	<p>Non-glare tilt screen with digital and graphic feedback</p> <p>Autoclavable medical-grade cords and connectors</p> <p>Wide array of gold plated probes</p> <p>Automatic calibration</p> <p>Vitality Scanner</p> <p>Quick, easy reading and unparalleled mounting flexibility - on patient bib, instrument tray, or microscope</p> <p>Conserves battery life</p> <p>Eliminates annoying beeps</p> <p>Large and easy to read</p> <p>Durable and easy to clean</p> <p>Accurate analysis in the presence of EDTA, sodium hypochlorite, blood, saline, water and hydrogen peroxide</p> <p>Pain free electric pulp testing of teeth regardless of shape, size or abnormalities</p> <p>Auto-power off</p>	USA, Europe & Japan FDA/CE/JIS Certified	01
45	<u>Element Obturation System with system B:</u>	<p>Lcd screen for Display</p> <p>Obturation system with system B</p> <p>Efficient, predictable, Accurate</p> <p>Convenient cartridge delivery</p> <p>Choice of speed control</p> <p>Tip temperature continuously maintained and display</p> <p>Easy to read polarized tilting screen eliminates glare and provides placement flexibility</p> <p>One touch control for efficiency and accuracy</p> <p>One touch control for instant heating and cooling with automatic time out</p>	USA, Europe & Japan FDA/CE/JIS Certified	01

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		<u>EYE DEPARTMENT</u>		
46	PHACO MACHINE	<p>consisting of main console with user friendly controls, large LCD touch screen, multi-modular phaco settings, up to six user programs, burst mode, non-invasive vacuum sensing helps maintain sterile fluidics, lightweight, titanium four/Six crystal piezoelectric u/s hand piece, unique "continuous (Two hand pieces) calibration" vent to bottle reflux, programmable foot pedal, gravity fed</p> <p>Irrigation, peristaltic low pulsation aspiration pump, 0 to 50cc/min.</p> <p>Aspiration flow rate, 0 to 500mm/Hg vacuum range, reflux, 40Khz power, I/A with linear flow rate and vacuum control, pneumatic guillotine</p> <p>Vitrectomy cutter with 50 to 700 cuts/min. cut rate, bipolar generator with linear power control, six programmable users presets,</p> <p>along with:</p> <p>I / A tubing. 6</p> <p>Anterior vitrectomy cutter. 1</p> <p>Phaco hand piece. 2</p> <p>Phaco needle 30o, bevel, round. 2</p> <p>Ultrasonic hand piece needle wrench. 1</p> <p>Irrigation sleeve. 10</p> <p>Kit. 1</p> <p>Bipolar forceps with cable. 1</p>	USA, Europe & Japan FDA/CE/JIS Certified	01
47	OPERATING MICROSCOPE	<p>Magnification charges: Drum Type, with 5 changes</p> <p>Objective Lens : F-200mm</p> <p>Eyepiece: Fields of view at 12.5X-17mm diameter</p> <p>Adjusting range of visibility: - 6 D to +5D</p> <p>Filters: Cobalt Filter, blue filter, 1/2 ND</p> <p>Total Magnification : F-200mm 4,6,10,16 and 25X F-175mm 4,6,7,11.5,18.4 and 29X</p> <p>Light Source : Halogen lamp 15v, 150w</p> <p>Range of papillary distance : 5-75mm</p> <p>X-Y Translator : Rage +- 22.5</p> <p>Vertical Fine Control</p>	USA, Europe & Japan FDA/CE/JIS Certified	01

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		Model : Electric type, using a motor Focussing distance : 40mm Focussing speed : 1.3mm per second Microscope inclination : 0 to 30° Foot switch Model : Floor placement type, stepping type		
48	OPHTHALMIC YAG LASER SYSTEM WITH COMPATIBLE SLIT LAMP AND TABLE	Wavelength 1064mm Mode of operation: 1.2 or 3 pulse each burst. Separation b/w pulse is 25 micor-secs Pulse width : 4 Nano seconds (Typical) Energy : Continuousl adjustable from 0.22 to 10mj Spot Size : 8 microns Repetition Rate : Better than 1 pulse per sec (>1 HZ) Yag Laser offset Shift : Continuously adjustabe off upto ± 500 um, both anterior and posterior around aiming focal plane Focal Length : 107mm Cone Angle : 16° Slit Lamp :Lecia Model Xcel 200 Aiming Beam Laser : Dual beam 635mm diode variable intensity to 200 micro-watts Magnification : 6x, 10x, 16x, 25x, 40x (5 step) Cooling : Air convection Power requirments : 230 V A/C, 50/60 Hz Dimensions: 520 mm(H)x340mm(W)x450(D)	USA, Europe & Japan FDA/CE/JIS Certified	01
49	OPHTHALMIC GREEN LASER WITH COMPATIBLE SLIT LAMP AND TABLE	Size 37cmx33cmx13cm weight 7.0Kg(15.4lb) Electrical 9-240 VAC,5-60 HZ Single Phase Laser Characterstics Technology Diod-pumped frequency double YVK Wavelength 532 mm Green True CW Power output 1.5watt max from laser Delivery unit Pulse Duration Adjustable from 0.05 to 2.0 sec Repeat Interval Adjustable from 0.05 to 2.0 sec Aiming beam Diod Laser Red. Adjustable < 1.0mW Wavelength 635nm Cooling Silent fan air cooling	USA, Europe & Japan FDA/CE/JIS Certified	01

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		128-SLICE CT SCANNER FOR WHOLE BODY AND CARDIAC		
50	128-SLICE CT SCANNER FOR WHOLE BODY AND CARDIAC IMAGING COMPLETE	<p>Slice CT scanner capable to perform cardiac, neuro and trauma cases in a busy hospital environment.</p> <p>System specification should be as follows:</p> <p>GANTRY</p> <ul style="list-style-type: none"> • Aperture 70 cm or more • Gantry depth less than 68 cm • Scan field 50 cm – optional greater FoV must be quoted separately (if available) • Tilt range must be $\pm 30^\circ$ or more • Rotation time must be less than 0.5 s • Continuously rotating tube-detector unit with optimized geometry for high-resolution data acquisition across the entire scan field • Patient-friendly display at the back of the gantry for indication of the remaining breath-hold time • Automatic patient positioning - One touch, quick patient positioning for pre-selected clinical protocols – e.g. head, thorax <p>TUBE ASSEMBLY</p> <ul style="list-style-type: none"> • High performance CT X-ray tube • Max. equivalent tube current 800 mA iterative reconstruction application • Tube voltage 80 - 130 kV at least • Tube anode heat storage capacity 6.0 MHU or more • Dual focal spot, Both focal spots should be less than 1 mm • Computer controlled monitoring of anode temperature • Multifan principle with Flying Focal Spot <p>GENERATOR</p> <ul style="list-style-type: none"> • Microprocessor-controlled, low-noise, high-frequency X-ray generator 	USA, Europe & Japan FDA/CE/JIS Certified	01

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		<ul style="list-style-type: none"> Maximum equivalent power more than 100 kW with iterative reconstruction application <p>PATIENT TABLE</p> <ul style="list-style-type: none"> Max. table load at least 200 kgs Table feed speed 1–100 mm/s Vertical table travel range 45–83 cm or more Vertical travel speed ≤ 25 mm/s or better Scannable range 160 cm or more Distance between gantry front and table base not less than 35 cm <p>DATA ACQUISITION SYSTEM</p> <ul style="list-style-type: none"> Max. number of slices/rotation 64 (acquired slices) Max. number of slices/rotation 128 (reconstructed slices) <p>OTHER SW AND APPLICATIONS ON ACQUISITION</p> <ul style="list-style-type: none"> Iterative reconstruction applications Special SW to reduce xray exposure Real-time MPR 3D SSD (Surface Shaded Display) Volume Calculation VRT (Volume Rendering Technique) CT-Angiography Automated Bone Removal Dynamic Evaluation <p>ACQUISITION WORKPLACE</p> <ul style="list-style-type: none"> High-performance computer acquisition workplace must provide an intelligent and reliable workflow for data acquisition, image reconstruction, and routine post-processing at the CT scanner image reconstruction, 3D post-processing, filming and storage at acquisition workplace RAM storage must not be less than 8 GB 		

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		<ul style="list-style-type: none"> Image storage: 828 GB; 750,000 uncompressed images Additional storage: DVD DICOM drive: 4.7 GB DVD media, 8,000 images, Write-RW/+RW/-DL/Read CD-R: 700 MB 1,100 images External USB 2.0 disks for quick and easy raw data storage are supported. External USB memory stick for image data <p>MONITOR</p> <ul style="list-style-type: none"> Flicker-free 19" (48 cm) color flat screen, 1,280 x 1,024 resolutions with 1,024² image display matrix <p>MULTIMODALITY POST PROCESSING WORKSTATION Dedicated and fast post-processing workstation with cardiac SW</p> <ul style="list-style-type: none"> 3D visualization software CT coronary analysis Calcium scoring Cardiac function (reading and diagnosing CT angiography images of the heart for the evaluation of left ventricular function) CT vacular analysis CT stent planning and auto tracing CT neuro DSA <p>OTHER ACCESSORIES</p> <ul style="list-style-type: none"> UPS for the system Dual head Injector Lead glass window (120 x 100 cm) Lead aprons (qty 03) <p>TRAINING</p> <ul style="list-style-type: none"> Application training for end user to learn proper functionality of the system 		

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		WARRANTY <ul style="list-style-type: none"> System shall be quoted with 2 years warranty including parts of the system 		
		<u>PATHOLOGY DEPARTMENT</u>		
51	CRYOFUGE (REFRIGERATED CENTRIFUGE)	Maintenance-fee, quiet, brushless, AC induction motor 4 program storage and recall Display and control RCF Gentle start-up and braking: ten acceleration deceleration profiles RCF/ RPM calculation Rotor recognition Temperature limit input to ensure proper temperature control Swing rotor: This is the only centrifuge adopting windshield rotor to reduce the air resistance that enables to spin at a maximum speed of 4500rpm Display abnormality: imbalance, over-speed, and overtemperature, door-open. Max. RPM: 15000 rpm Max. RCF: 244000 x g Max. Capacity: 4 x 500 ml (4500rpm) Speed preset and display: 1 rpm Temperature Range: - 20'C to +40'C Temperature Limit set range: 0'C to +/-30'C Timer: 1s-99min 59s or continuous and "Hold" for free run Deceleration time : 10 setting Programmability: 4 memory Rotor Recognition: Yes Digital display: RPM, RCF, time, Program brake time, rotor Number, temperature, Temp. limit Power: 220V 50 Hz, single phase.	USA, Europe & Japan FDA/CE/JIS Certified	02
52	PLATLET AGITATOR WITH INCUBATOR	With all accessories	USA, Europe & Japan	01

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
			FDA/CE/JIS Certified	
53	ELECTRONIC BLOOD COLLECTION MONITOR	With standard Accessories	USA, Europe & Japan FDA/CE/JIS Certified	01
54	ULTRA LOW TEMPERATURE UP RIGHT FREEZER	Temperature range -10 degree C to -40 degree C (standard accessories)	USA, Europe & Japan FDA/CE/JIS Certified	01
55	MICRO CENTRIFUGE	Capacity 24x1.5/2ml With standard Accessories	USA, Europe & Japan FDA/CE/JIS Certified	01
56	<u>Integrated Chemistry & Immunoassay Analyzer</u>	<ol style="list-style-type: none"> Throughput of 1000 test per hour with ISE. 60 Reagent positions. 150 sample position. Continuous loading of reagent during operation. ultrasonic mixing of reagents Clot detection Diffraction grating based photometer with 12 wavelength selection. LCD color touch screen user interface. Whole blood HbA1c Application. Modular in design up to three modules of chemistry and immunology The bidders will provide the kits Including consumables for six months & pipetting of various size compatible with the medical equipment supplied 	USA, Europe & Japan FDA/CE/JIS Certified	01
57	<u>Fully Automated Real Time PCR System</u>	<ol style="list-style-type: none"> Fully automated sample preparation, amplification and detection system. Ready to use reagents, stable at room temperature. Total Aspirate and Dispense Monitoring (TADM) Ability to process upto 384 samples per day on a single platform. 	USA, Europe & Japan FDA/CE/JIS Certified	01

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		<p>5. Unique Therma Base Technology for fast and accurate thermal cycling with optimized filter design.</p> <p>6. A broad IVD test menu: Capable of performing Microbiology, Virology and Oncology assays on single platform.</p> <p>7. Accepts multiple primary and secondary vial formats: Liquid-based cytology, EDTA, PPT, SST for plasma and serum.</p> <p>8. Ability to perform HCV, HBV, HCV Genotype, HIV, HPV, CTNG, MRSA/SA, C.diff, HSV1 and 2, EGFR, KRAS, BRAF on single platform.</p> <p>9. Availability of open mode for user defined assays.</p> <p>10. Ability to run three assays simultaneously on single amplification plate.</p> <p>11. Bidirectional LIS compatibility.</p> <p>12. The bidders will provide the kits Including consumables for six months & pipetting of various size compatible with the medical equipment supplied</p>		
58	Water Purification Systems	<p>Combine 24/7 real-time monitoring, remote control, cutting-edge water purification technologies, and an advanced user interface to improve lab productivity.</p> <p>System users benefit from an unprecedented level of service.</p> <p>A pre- installation feed water analysis, combined with our Watercare Pact plans enhanced with remote connection capabilities, will maximize your system's performance and reliability.</p> <p>provides constant-quality water without the need for resin cylinders, softeners, or conditioning cartridges, which means reduced maintenance, less analyzer downtime, low running costs and greater productivity.</p> <p>A large, color touch screen shows relevant and concise information about system operation; an intuitive dashboard displays all important data at a glance.</p> <p>Sampling Valve</p> <p>Automatic Loop Rinsing Valve</p> <p>Back Pressure Regulator</p> <p>Recirculation Loop Valve.</p> <p>TOC Monitor</p> <p>Degassing Unit</p> <p>Sanitary Overflow Sensor</p>	USA, Europe & Japan FDA/CE/JIS Certified	01

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		Automatic Sanitization Module (ASM) Distribution Pump Emergency Back Up – Quick Connector Filter (0.22µm) RO Recirculation Loop Temperature Sensor Flow Sensor 3-Way Automatic Rinsing Valve Resistivity Cell1 UV Lamp (254 nm) Vent Filter Inlet Valve Pretreatment Pack Conductivity Cell RO Pump Pressure Sensor RO Cartridge Twin Motorized Valve RO Recirculation Pressure 2 – 6 bar Flow rate >10 L/Min at 2 bar Tap water connection ¾” Gazm Type Potable Conductivity 10-2000 S/cm at 25 oC Total Hardness (CaCo3) <300ppm 230 VAC (50/60Hz Voltage and Frequency or 120 VAC 10%, 60 Hz Noise level <50db Communication Ports Ethernet, USB 2.0		
59	Immunoassays (ELISA), Machine	Light source Quartz-halogen lamp 6 V/10 W Wavelength range 340–850 nm Filters 8-position filter wheel, Filters 405 nm, 450 nm and 620 nm. Half-bandwidth of filters 3–9 nm Read-out range 0–6 Abs	USA, Europe & Japan FDA/CE/JIS Certified	01

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		<p>Linearity (405 nm) 0–3 Abs, $\pm 2\%$, 96-well plate 0–2.5 Abs, $\pm 2\%$, 384-well plate Resolution 0.001 Abs Accuracy (405 nm) $\pm 1\%$ (0–3 Abs) or ± 0.003 Abs Precision (405 nm) $CV \leq 0.2\%$ (0.3–3 Abs) Measurement speed 6 s, 96-well plate, fast mode 12 s, 96-well plate, normal mode 11 s, 384-well plate, fast mode 33 s, 384-well plate, normal mode Shaking Linear shaking with three modes: slow, medium and fast Robotic compatibility User interface Internal software or PC control Internal memory (standalone) At least up to 99 assay protocols and 100 test results, 96-well plate External printer type HP PCL5, PCL5e or PCL5c Communication USB for computer connection USB memory stick position for data export USB for external printer Power consumption Max. 100 VA, standby 8 VA 8.7 x 11.4 x 15.7 in. Conformity to regulations 2006/95/EC Along with all accessories and filters.</p>		
60	Hematology Analyzer	<p>It should be fully automated 7 Part differential hematology analyzer based on flow Cytometry, Light scattering and Peroxidase staining technology. Instrument should offer automatic start-up, shut down and sample analysis.</p> <p>Should have five discrete analysis modes CBC, CBC+ DIFF, CBC + Retic, CBC+Retic+Diff & Retic only.</p> <p>Should give 33 or more parameters i.e. WBC, RBC, HGB, HCT, MCV, MCH, MCHC, CHCM, RDW, HDW, CH, CHDW, PLT, MPV,PDW, PCT, % RETIC, # RETIC , MCVr, CHCMr, RDWr, HDWr, CHr, CHDWr., Absolute & % values for NEUT, LYMPH, MONO,EOS, BASO, LUC, morphology results (user definable) like WBC : Left Shift , Atypical Lymph , Immature Granulocytes RBC: NRBC, ANISO,MICRO,MACRO, RBC Ghosts.</p>	USA, Europe & Japan FDA/CE/JIS Certified	01

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		<p>Should have the capability to perform veterinary application with minimum of 21 pre programmed species & 30 programmable slots.</p> <p>Should have an Auto Sampler with capacity of 150 sample tubes at a given time. A single sample rack should be able to cater different tube sizes.</p>		
		<u>MEDICAL GASES DEPARTMENT</u>		
61	Oxygen Pipelining	<p><u>Centralized Medical gases supply system</u> <u>Complete with vacuum System</u> <u>ITEM 1.</u></p> <p><u>AUTOMATIC MANIFOLD FOR OXYGEN FOR 2 X 10 CYLINDERS</u> 1 No. <u>WITH CONNECTION TO OXYGEN GENERATION PLANT</u> The Control Panel should handle three sources i.e. Two sided cylinders battery and one VIE Tank / Oxygen Generation System. The Manifold shall be a fully automatic type & shall switch from Tank / Generation System to Cylinders Battery and “Bank in Use” to “Reserve” bank without fluctuation in delivery supply line pressure The system should be able to maintain continuous supply in case of power failure. Capacity: 70-90, M3/h.</p> <p>Function: Fully automatic self-contained shuttle-valve with no electrical power required for switching, Microprocessor based control panel with display. Units of measure (psi/Pa/Bar). LCD /LED display for the left bank, the right bank,& VIE Tank / Oxygen Generation System for the supply pressure. Complete with relief valve, Emergency shut off valve and battery / bank room alarm for left and right cylinder bank, pressure reducers of Tank Panel.</p>	USA, Europe & Japan FDA/CE/JIS Certified	01 (turnkey basis)

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		<p>Service and maintenance works can be carried out without stopping operation.</p> <p>In built VIE Tank / Oxygen Generation System connection controlled by Manifold.</p> <p><u>ITEM 2</u></p> <p><u>AUTOMATIC MANIFOLD FOR NITROUS OXIDE (2 X 5)</u> 1 No,</p> <p>The Manifold shall be a fully automatic type & shall switch from "Bank in Use" to "Reserve" bank with out fluctuation in delivery supply line pressure&with out the need for external power after the switch-over the"Reserve" bank shall then become the "Bank in Use" and the bank in use shall become the reserve bank. The System should be able maintain continuous supply in case of Power failure.</p> <p>Capacity 10 - 50 M3/ h.</p> <p>Function:</p> <p>Fully automatic self-contained shuttle-valve with no electrical power required for switching, Microprocessor based control panel with display.</p> <p>Units of measure (psi/Pa/Bar) LCD / LED display for the left bank, the right bank & for the supply pressure.</p> <p>Complete with relief valve, Emergency shut off valve and battery / bank room alarm for left and right cylinder bank.</p> <p>Service and maintenance works can be carried out without stopping operation.</p> <p><u>ITEM 3</u></p> <p><u>WALL OUTLET.</u></p> <p>Outlet should have double lock quick connect and gas specific. The latch / Locking release mechanism should be incorporated on the gas outlet with Geometrical key indexing and should have a parking facility so that in the Event of release of probe by pressing the spring loaded center, the probe / Flow meter does not fall down.</p> <p>Gas outlets wall mounted, Complete in Box/casing gas Specific, Self sealing</p>		

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		<p>valve, indexed to eliminate interchangeability/erroneous tapping of gas and cover plate.</p> <p>Oxygen Qty.100 Nos.</p> <p>Nitrous Oxide Qty.6 Nos.</p> <p>Compressed Air 4/5 bar Qty.100 Nos.</p> <p><u>ITEM 4(a)</u></p> <p><u>Multiple Zone Valve Box with Monitoring Gauge for three gases 6 No.</u></p> <p>Microprocessor controlled with digital display of pressure.</p> <p>Each wall type zone valve box shall consist of the following Components.</p> <p>A steel valve box which can house two to four shut-off-ball valve with tube extensions.</p> <p><u>ITEM 4(b)</u></p> <p><u>Multiple Zone Valve Box with Monitoring Gauge for three gases 12 Nos.</u></p> <p>Microprocessor controlled with digital display of pressure.</p> <p>Each wall type zone valve box shall consist of the following Components.</p> <p>A steel valve box which can house two to four shut-off-ball valve with tube Extensions.</p> <p><u>ITEM 5</u></p> <p><u>OXYGEN FLOW METER WITH HUMIDIFIER & PROBES: 100 Nos.</u></p> <p>With autoclave able and unbreakable humidifier bottle and probe.</p> <p><u>ITEM 6</u></p> <p><u>COPPER PIPING (IMPORTED FROM UK, GERMANY, USA):</u></p> <p>Supply and installation of seamless copper pipe, deoxidized and for use in piped medical gas systems,</p> <p>Therefore it is guaranteed that the tubes are leak-tight, free of pores, blisters etc, Tube is drawn seamless, according to HMT 2022 (HTM 02-01) Or equivalent.</p> <p>Material :-</p> <p>Copper tubes, including fixing clips for</p>		

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		ceiling and walls, sleeves, reducers, tee's bends and soldering material. 2700Meter Size 22mm. 2600Meter Size 15mm. 1900 Meter Size 12mm. ITEM 7 <u>ANESTHESIA SCAVENGING SYSTEM</u> 6 Nos. Anesthetic gas scavenging systems designed to remove exhaled anesthetic gas mixtures from operating theatres driven by Air/Oxygen at 05 bar or through vacuum plant, anesthetic rooms and recovery area. ITEM 8 <u>Filtration</u> 2 x Pre-Filter – 1200 lit/min (3 Micron) ½” 4 x After-Filter – 1200 lit/min (0.01 Micron) ½” 1.9) By Pass System (Local with Imported Fittings): Isolation Valves, Adaptors, Regulators & Pressure Switches.		
		<u>OPERATION THEATER DEPARTMENT</u>		
62	OT TABLE ELECTRO HYDRAULIC	Electro Hydraulic OT Table Radiolucent table top, X-Ray and C-arm accessible 4-5 sections complete with welded seam mattresses Table should have manually operating modes in case of power failure Base of the table stainless steel cover 4-large double swivel castors, 2 castors steering. Central locking mechanism Table top sliding system up to 250 mm either side or better 0-115mm reversible mechanical kidney elevator or better	USA, Europe & Japan FDA/CE/JIS Certified	03

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		<p>Tabletop length 1030 mm or more with head section and split leg sections 2130 mm or more Tabletop width: 520 mm or more Height adjustment from 600 mm to 950 mm electrically operated or better Lateral tilting either side 20° electrically operated Trendelenburg / reverse trendelenburg +/-30° electrically operated Back rest of the table adjustment +80°/-45° by gas spring mechanism Split leg section adjustment manually operated Standard head rest should be manually operated Patient weight capacity: 150-200 kg Mains: 100-240 VAC, 50 Hz, single phase Protection Class: Class 1 type B Batteries: 2x NP12 – 12 FR, 12 V, 12 Ah. Standard operation: approx. 55 procedures</p> <p>Accessories</p> <p>Rigid anesthesia Screen (01 No) Body strap large width (01 No) X-Ray Cassette Holder (01 No) Simple Arm Board (01 Pair) Patient Fastening Belts (01 pair) Hand set (01 No) Compatible clamps (04 Nos.) I.V. rod (01 No)</p> <p>OPTIONAL</p> <p>Orthopedic Attachment should be quoted separately</p>		
63	OT LIGHT	<p>White LED Shadowless Operating lamp with spring balanced ceiling suspension. Hematically sealed dust proof light head. Light intensity of main light min.160,000 Lux at 1 meter distance Light intensity of satellite min. 160,000 Lux at 1 meter distance Increase/decrease light intensity facility with intensity setting indicators Natural colour rendition 4400° Kelvin Color rendition index of 95 Field Size adjustable Wavelengths Controlled in the sterile field</p>	USA, Europe & Japan FDA/CE/JIS Certified	03

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		Light field diameter 250 - 300mm Average LED life 40,000 hours Complete with sterilizeable handles (02) Power consumption not more than 70W Complete with original battery backup for at least 01 hour or more (from Same manufacturer) 220-240 Volt, 50 Hz		
64	ANESTHESIA MACHINE WITH TWO VAPORIZER	<u>ANESTHESIA WORK STATION MACHINE WITH TWO VAPORIZER</u> 3 Gas anesthesia workstation, O ₂ , N ₂ O and Air Up to 1 x O ₂ , and 1 x N ₂ O cylinder can be connected Pipeline/ Fittings/Gauges for central piping 1 x O ₂ , and 1 x N ₂ O Yokes & Gauges for Cylinders 1 x O ₂ , and 1 x N ₂ O and 1 x Air Pipeline, Pipeline fitting and pressure Gauges Main working surface 1 x Monitoring shelf 1xSide folding shelf Single O ₂ High pressure outlet/ Auxiliary O ₂ / Gases outlet O ₂ Flush Common gas outlet Side rails and centrally braked castors with large brake paddle Common Gas outlet Side rail and castors with braked peddle 3 x Drawers Scavenging System Venturi Suction 1 KG Circle/ O ₂ absorber, fully autoclave, including Bag/ Vent switch, CO ₂ by pass and manometer gauge, complete with mounting bracket, disposable patient circuit, absorber detachable including Y- piece circuit, bag and fresh gas assembly 1 x Bag Arm 2 station selectatec Back bar to accommodate up to two vaporisers 1 x vaporiser, selectatec Type Tec 7 or equivalent, Isoflurane 1 x vaporiser, selectatec Type Tec 7 or equivalent, Sevoflurane 2 Pin Index Cylinder for O ₂		03

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		2 Pin Index Cylinder for N ₂ O Electronic/ Digital Flowmeter Three gas Configurations (O ₂ , N ₂ O and Air) Flow Range O ₂ and Air: 0 to 12LPM N ₂ O:0 to 12 LPM Total Flow meter 0 to 10 LPM Calibrated to O ₂ Permagnetive type Mechanical Hypoxic Guard for minimum of 25% O ₂ / Auxiliary flow meter <u>ANAESTHESIA VENTILATOR</u> Microprocessor Controlled anaesthesia ventilator Full color 12" LCD/TFT Touch screen display Automatic Leak and compliance Test Fresh Gas and Compensation Ventilation modes: Manual/spontaneous Volume control (IPPV) Pressure control (PCV) Pressure Controlled Ventilation Volume Guaranteed(PCV-VG) Synchronized Intermittent Mandatory Ventilation in volume(SIMV-VC) Synchronized Intermittent Mandatory Ventilation in pressure(SIMV-PC) Pressure support (PS) with Apnea backup Oxygen (FiO ₂) inspired & expired volumes, PAW, Pressure Real time wave form for Flow, Volume & Pressure Tidal Volume: 20 – 1500ml IR Ratio: 4:1 -1:8 Frequency: 2-100bpm Minute Volume: 03- 25LPM Pressure limit: 10-70 cmH ₂ O (Adult) & 10 – 50cmH ₂ O (Paeds) PEEP: 3 – 30cmH ₂ O Patient trigger: 1 – 15 LPM Battery backup 120 minutes User/ Alarms: High/ low Pressure: High/ Low minute volume. High/ Low breath per minute (BPM) high/ Low Oxygen Static Alarm: Apnea, settings Error, Low supply Gas		

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		<p>Inspiratory Flow Transducer Error, No Charge, Fresh Gas Too high, Ventilator Inoperative, Under pressure, Peep Error/ Sensor Error, power fail, Battery low</p> <p>Apnea alarm in bag mode</p> <p><u>VITAL SIGNS MONITOR</u></p> <p>Modular Monitoring of vital signs of pediatric and adult patients</p> <p>OPERATING FEATURES AND CHARACTERISTICS</p> <p>Non fade display</p> <p>Modular architecture, Different modules can be added later</p> <p>Screen size 17" LCD/ TFT touch screen color display</p> <p>Electro Surgical interference suppression/ Protection</p> <p>Defibrillator protection</p> <p>Pacemaker detection</p> <p>Freeze and cascade facility</p> <p>Adult & pediatric modes of operation, detection and alarms for all parameters</p> <p>Minimum 12 waveforms for all required parameters</p> <p>Waveform Trace speed: 6.25, 12.5, 25 and 50mm/sec</p> <p>Compatible with central monitoring system through wireless/ hardwire</p> <p>Vital signs monitor have the capacity to measure 2IBP, ETCO₂ at the same time.</p> <p>STANDARD PARAMETERS:</p> <p>ECG, NIBP, SpO₂, 2 – Temperature, Respiration, Trends, Arrhythmia Analysis, 2-IBP, EtCO₂(Capanography)Recorder</p> <p>STANDARD PARAMETERS:</p> <p>ECG:</p> <p>Differential input protected against defibrillator</p> <p>ECG cable with 3-5 Lead wires</p> <p>Lead selection: 6 positions (Lead I, II, III. Avf, avr, avl) and V (chest leads)</p> <p>Selectable Adult and pediatric operation modes</p> <p>Diagnostic ECG Measurement with 10 lead wires patient cable for 10 or more ECG waveform. With 7 lead ECG wave form displayed at same time</p> <p>Ability to detect adult & pediatric heart rate range, QRS widths and amplitudes</p> <p>Numeric: Heart rate range 20-250bpm</p>		

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		<p>Waveform real time</p> <p>Lead off detection alarm on lead failure</p> <p>Variable gain selectable ½, 1, 2 cm.mv</p> <p>Heart beat indication beep/ tone with QRS detection</p> <p>NON INVESIVE BLOOD PRESSURE (NIBP)</p> <p>Method oscillometric principle</p> <p>Numeric: Systolic, Diastolic and mean pressure</p> <p>Rising Cuff/ Continuous pressure display</p> <p>Ability to measure adult & Pressure display</p> <p>Ability to measurement adult & pediatric BP range</p> <p>Cuff for Adults and pediatrics patients</p> <p>Cuff Pressure range 300mmHg</p> <p>Selectable Pediatric and Adult operation mode</p> <p>Selectable Pediatric and Adult initial and maximum cuff pressure and range</p> <p>Selectable auto inflate interval settings</p> <p>TEMPERATURE:</p> <p>Numeric: Temperature selectable in °C/ °F</p> <p>Channel: 2 channel or more</p> <p>Two Temperature channel with probe (External and rectal)</p> <p>Ability to measure adult & pediatric temperature range</p> <p>PULSE OXIMETER:</p> <p>Numeric: % Oxygen Saturation</p> <p>Range : 0-100%</p> <p>Numeric Pluse rate: 20-250 beat per min</p> <p>Waveform: Plethysmograph pulse with strength indication</p> <p>Sensor for Pediatrics & Adult patients</p> <p>RESPIRATION</p> <p>Impedance method using ECG leads for sensing</p> <p>Respiration rate (RR): 1-150bpm</p> <p>Ability to measure pediatric & Adult breathing rate range</p> <p>Sweep speed: 6.25,12.5mm/sec</p> <p>Settable apnea Alarm</p> <p>RECORDER</p> <p>2Channel recorder for printing of ECG waveforms</p>		

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		<p><u>INVASIVE BLOOD PRESSURE MODULE</u> Two Channels Numeric: Systolic, Diastolic and Mean pressure Waveform: blood Pressure Variable scale selectable Adjustment: Zero adjustment for offset compensation <u>ARRITHMIA ANALYSIS</u> View arrhythmia: 128 groups alarms + trends View alarms: 128 groups alarms (audio+visual) Full disclosure waveforms for 3 waves (24 hrs.) <u>TRENDS:</u> Trends for at least 168 hours with graphical tabular representation for all parameters <u>ALARMS</u> Selectable automatic adult and Pediatric mode alarm limits High and Low (settable) on all parameters Visual and Audible indication of alarms Built in rechargeable battery with backup of at least 2 hours in case of AC power failure for full parameters.(02 battery for 2 hours) Mounted with Anaesthesia workstation <u>STANDARD ACCESSORIES OF VITAL SIGNS MONITOR:</u> Adult finger sensor (Reusable) <u>MULTI GAS AGENT MONITORING MODULE</u></p>		
65	LAPROSCOPE Complete System	<p><u>HD LAPAROSCOPE (MINIMAL ACCESS SURGERY) FOR GENERAL SURGERY</u></p> <p><u>HD Telescope</u></p> <p>HD Optimized LAPAROSCOPIC TELESCOPE (Autoclavable) 10 mm dia. 0 degree HD LAPAROSCOPIC TELESCOPE (Autoclavable) 10 mm dia. 30 degree HD LAPAROSCOPIC TELESCOPE (Autoclavable) 5 mm dia. 0 degree HD LAPAROSCOPIC TELESCOPE (Autoclavable) 5 mm dia. 30 degree <u>HD VIDEO CAMERA AND CAMERA CONTROL UNIT WITH BUILT IN RECORDING SYSTEM (PAL SYSTEM)</u> Latest Technology 3chip HD video Camera system with built in recording</p>	USA, Europe & Japan FDA/CE/JIS Certified	01

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		<p>system 164 GB to 300GB data storage capacity. User setting can be store with freezing facility Weight camera head 150g or less Full HD Resolution 1920 x 1080 pixels TV Zoom adapter f 15 to 36mm Waterproof key board and USB Accessories connection cables for operation and documentation</p> <p><u>LED LIGHT SOURCE</u> LED Light source with intensity control to adjustment of desired brightness Unit should be unlocking mechanism safe adaption of the light cable connector and switch to standby function in case of removable light guide cable Lamp type LED with Color Temperature 65000K and life of Lamp 25,000h Noise level max 50 to 55dBA Line voltage 100-240V Unit Complete with Fiber optic cable with optic light cable teste</p> <p><u>MEDICAL GRADE LED MONITOR</u> Medical grade HD 26" LED or more Resolution 1920 x 1080 pixel with Aspect ratio 16:9 Average Brightness 600cd/m²</p> <p><u>45 LITER LAPAROFLATOR</u> Microprocessor controlled automatic preselectable intra-abdominal pressure range 3-30mmHg with Maximum gas flowrate atleast 45 L / min. with external Gas filter Unit integrated CO₂ Heater with heating tube (Heating Tube autoclaveable) Neonatal Mode and smoke evacuation facility Facility to connect CO₂ bottle and Central Gas Pipe line System Pressure gas flow rate and gas consumption display digital External gas filter for test the CO₂ gas Indication for CO₂ reserve pressure Imported Gas cylinder (O₂)</p> <p><u>SUCTION / IRRIGATION UNIT</u></p>		

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity																																																															
		Suction / Irrigation system upto 3Liter/ min and aspiration performance 20l/min System complete with standard Accessories and operating manual <u>TROLLEY</u> Trolley mounted fabricated lockable wheels with dust cover for whole system with transformer same manufacturer <u>VOLTAGE STABILIZER</u> Servo motor type with spike protractor suitable for the above equipment. <u>STORAGE BOX</u> Storage box for instruments and optics of the same manufacturer as that of the instrument and optics <u>BASIC MINIMAL ACCESS REUSABLE INSTRUMENTS SET.</u> <table><tr><th>S#</th><th>Description</th><th>Qty</th></tr><tr><td>01</td><td>5-5.5 mm Trocar and cannula</td><td>02</td></tr><tr><td>02</td><td>10-11 mm Trocar and cannula</td><td>02</td></tr><tr><td>03</td><td>Grasper 10 mm toothed and non-toothed</td><td>01</td></tr><tr><td></td><td></td><td>Each</td></tr><tr><td>04</td><td>Grasper 5 mm toothed and non-toothed</td><td>01</td></tr><tr><td></td><td></td><td>Each</td></tr><tr><td>05</td><td>Dissecting forceps 5 mm straight and curved</td><td>01</td></tr><tr><td></td><td></td><td>Each</td></tr><tr><td>06</td><td>Dissecting forceps 10 mm straight and curved</td><td>01</td></tr><tr><td></td><td></td><td>Each</td></tr><tr><td>07</td><td>Medium large clip applicator</td><td>01</td></tr><tr><td>08</td><td>Reducing sleeves 10-5 mm</td><td>02</td></tr><tr><td>09</td><td>L-hook</td><td>01</td></tr><tr><td>10</td><td>Diathermy electrode L-hook 5 mm</td><td>02</td></tr><tr><td>11</td><td>Spatula electrode Ø 5 mm</td><td>01</td></tr><tr><td>12</td><td>Straight scissors insulated 5 mm</td><td>01</td></tr><tr><td>13</td><td>Hook scissors insulated 5 mm</td><td>01</td></tr><tr><td>14</td><td>Aspiration needle 5 mm</td><td>01</td></tr><tr><td>15</td><td>Needle holder 5 mm</td><td>01</td></tr><tr><td>16</td><td>Suction and irrigation tube with blunt</td><td>01</td></tr></table>	S#	Description	Qty	01	5-5.5 mm Trocar and cannula	02	02	10-11 mm Trocar and cannula	02	03	Grasper 10 mm toothed and non-toothed	01			Each	04	Grasper 5 mm toothed and non-toothed	01			Each	05	Dissecting forceps 5 mm straight and curved	01			Each	06	Dissecting forceps 10 mm straight and curved	01			Each	07	Medium large clip applicator	01	08	Reducing sleeves 10-5 mm	02	09	L-hook	01	10	Diathermy electrode L-hook 5 mm	02	11	Spatula electrode Ø 5 mm	01	12	Straight scissors insulated 5 mm	01	13	Hook scissors insulated 5 mm	01	14	Aspiration needle 5 mm	01	15	Needle holder 5 mm	01	16	Suction and irrigation tube with blunt	01		
S#	Description	Qty																																																																	
01	5-5.5 mm Trocar and cannula	02																																																																	
02	10-11 mm Trocar and cannula	02																																																																	
03	Grasper 10 mm toothed and non-toothed	01																																																																	
		Each																																																																	
04	Grasper 5 mm toothed and non-toothed	01																																																																	
		Each																																																																	
05	Dissecting forceps 5 mm straight and curved	01																																																																	
		Each																																																																	
06	Dissecting forceps 10 mm straight and curved	01																																																																	
		Each																																																																	
07	Medium large clip applicator	01																																																																	
08	Reducing sleeves 10-5 mm	02																																																																	
09	L-hook	01																																																																	
10	Diathermy electrode L-hook 5 mm	02																																																																	
11	Spatula electrode Ø 5 mm	01																																																																	
12	Straight scissors insulated 5 mm	01																																																																	
13	Hook scissors insulated 5 mm	01																																																																	
14	Aspiration needle 5 mm	01																																																																	
15	Needle holder 5 mm	01																																																																	
16	Suction and irrigation tube with blunt	01																																																																	

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		17 Bipolar Grasping Scissors Straight and Curved Jaws 01 18 Biopsy forceps insulated 5mm 01 19 Gallstone scoop forceps 01 20 Endo Retractor Ø 10 mm, fan shape 01 21 Knot pusher 01 22 Bipolar diathermy electrode 01 23 Monopolar and Bipolar Connection Cable 01 24 Cleaning Pistol, Complete with eight adaptor Special oil for Instrument care, Cleaning brush Ø 5mm and Cleaning brush Ø 10mm Each 01		
66	ELECTRIC CAUTRY	<u>ELECTRIC CAUTRY MACHINE</u> Touch Screen Electrosurgical unit 400 Watt Microprocessor based Solid State Electrosurgical unit for normal and under water cutting Separate controls for Monopolar and bipolar coagulation Simultaneous activation of 02 Monopolar sockets RF power for Monopolar cutting not below 400 watts 02 x Monopolar and 02 x Bipolar sockets should be available in the system. Monopolar coagulation 250 Watt or better. At least 3- blend modes Bipolar coagulation 120 watt or better Bipolar Cutting 200 watt or better Spray coagulation Touch screen Display min 7" or better LCD/LED Technology. Earth free patient circuit. Complete with foot switch, Patient plate, Monopolar handle with cord and surgical needles (knives, ball electrode, loop electrode and needle (12). Bipolar forceps straight Bipolar forceps bayonet	USA, Europe & Japan FDA/CE/JIS Certified	02

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		<p>All electrosurgical unit to conform to I.E.C-601-1 standard. Imported Original Trolley with lockable wheels. The system must have Automatic self-test. 220V 50 Hz I Phase. Unit should be up-gradable for Vessel Sealing System.</p> <p>VESSEL SEALING SYSTEM (OPTIONAL TO BE QUOTED SEPARATELY) Permanent Safe Sealing of Vessel on Tissue Bundle: 7mm with Rotatable Shaft 360 degree. Average Sealing Time = 4-7 seconds. Thermal Spread less than 2mm Reusable Ligation Handle with cord and Straight Jaw 200 mm (01 No) Reusable Ligation Handle with cord and angled/curved jaw 200 mm (01 No) Reusable Tissue Sealing Handle 280 mm with Straight jaw (01 No) Reusable Tissue Sealing Handle 280 mm with angled jaw (01 No)</p>		
67	HYPO/HYPERTHERMIA UNIT	<p>Automatic functions and easy readable display. Unit should be used for patient heat reduction in case of cooling down or heat supply in case of warming up. Heat supply through heat conduction in cases of intra-operative or post operative hypothermia. Hygienically closed system with no air turbulence. Maximum heat transfer by water. Distribution of heat over the entire warming mat. No electro smog influencing. No electrically operated mats. The warming mat temperature should be set from 15°C to 39°C. Safety cut-off in case of temperature increased 42°C. X-Ray permeable for bone structure illustration. 5-10 minute cooling time from 20°C. Power failure alarm system. Patient blankets should be operated together and placed under or over the patient. One or two warming mats of different shape and size should be connected at any time with one system unit. Low noise during continuous operation. No risk of burns or causticizations.</p>	USA, Europe & Japan FDA/CE/JIS Certified	02

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		Operating voltage: 230 V, 50 Hz Patient mats carefree and elastic material with size of 170 cm x 50 cm, (2 Nos) for adults, Warming/Cooling blanket 120 cm x 70 cm for adults Warming/Cooling blanket 55 x 70 cm for child etc. Unit on 5 castors mobile stand including bar and supporting plate. Unit CE-mark, manufactured and controlled according to IS) 9001 and IEC 601-1 certify.		
68	PHOTODYNAMIC TUMOR THERAPY LASER THERAPY	PHOTODYNAMIC TUMOR THERAPY LASER THERAPY SYSTEM Photodynamic Tumor Therapy Laser Therapy System to be used for, Lymph metastases, Breast cancer, Lung metastases, potentially all kinds of inner tumors, depending on size and location The unit should be capable for, Selective targeting of tumor cells, Minimal side effects, No resistance after repeated treatments, Tumor vascular shutdown by thrombosis and haemorrhages, Induction of local inflammation, Immune activation through IV blood irradiation	USA, Europe & Japan FDA/CE/JIS Certified	01
69	EMERGENCY BEDS	Universal hospital beds Modern mechanically operated adjustment by 2 cranks and fixed height of mattress plate form 4 section Removable plastic mattress platform covers	USA, Europe & Japan FDA/CE/JIS Certified	10 Quantity
70	PEDIATRIC BEDS with Mattress	Split plastic side rails with color décor Protector for the foot part of bed can be used with ¾ and plastic side rails External dimensions 218 × 99.5 cm Mattress dimensions 200 × 90 cm		10 Quantity
71	OT RECOVERY BEDS with Mattress	Mattress plate form backrest adjustment 70° Mattress platform thigh rest 34° Mattress platform height 55 cm Safe working load (SWL) 200 kg 04 Costar with brake Ø125mm Operation manual crank		08 Quantity
72	MORTUARY REFRIGERATOR FOR 04 BODIES	For 4 Bodies 4 individual doors, with door frame heating, lockable with name tag holder. 4 side windows for inspection UNIT DIMENSIONS	USA, Europe & Japan FDA/CE/JIS Certified	01

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		<p>W/D/H 1910 x 2260 x 1810 mm Height complete with cooling system CONSERVATION TEMPERATURE From 3°C to +5°C available, at an ambient temperature of max.+32°C DESCRIPTION Operation from front side. Unit inside and outside completely in steel sheet (brand-type lacquering) colour white. Insulation polyurethane, hardened foam, 80 mm, CFC-free. Alarm system optical and acoustical, inner lightening. Metal fittings and security locks in brass, chromium plated. Cable remote control. Cooling aggregates mounted on top of the unit. MORTUARY TRAYS 4 Pc. in stainless steel for transport and preservation of bodies. Seamless shaped with carrying handles. ROLLER TRAYS in special steel, mounted inside the unit, for charging the mortuary trays. Each tray with 3 turning rolls and 1 locked roll, Ø 40 mm, covered with special plastic. SIDE WINDOW 4 Pc. Individual side fixed windows with glass for inspection of bodies, W/H 300x300 2 Pc. windows on each side TECHNICAL DATA 1 Pc. self-contained cooling aggregate, mounted on top of the unit. With factory installed sight glass, filter drier and controls requiring. Aggregate Type 07125 N Article-No. Aggregate 02312 Voltage 230 V Phase 50 Hz Cooling Power VT –10°C 1492 W Air consumption 750 m/h Energy consumption 900 W Heat emission 2.08 kW Refrigerant R 404 a</p>		
73	MORTUARY BODY CART (COVERED)	<p>With pneumatic or air elastic wheels Reliable Locks Tray support with lockable rollers on ball bearings height should be adjustable</p>	USA, Europe & Japan FDA/CE/JIS Certified	02

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
74	BABY TRACKING SYSTEM	<p>Baby Tracker and Monitoring System: Prevent the baby being taken wrong: handheld reader carried by nurses, read individually worn by mother and baby in maternal and child identification information, confirm both identity match, preventing babies to be taken wrong person. Ensuring Baby Security in every ICU entrance arrangement of fixed reader, every time nurse and baby through need read the nurse identification cards and maternal recognition of infants, after confirming the correct intensive care unit the door can be opened. At the same time, nurse and baby information and leave time to be stored in data base. Complete Setup and infrastructure for monitoring and surveillance in Hospital MNCH and Ward with tracking and alarming Tags: 12 Sets Covered Area: 220 X 170 sqft</p>	USA, Europe & Japan FDA/CE/JIS Certified	01
75	ETT Machine Latest with accessories	<p>Computerized Stress Test System with Treadmill. OPERATING FEATURES and CHARACTERISTICS. Analysis: of ST levels, ST slopes, and ST – Index etc. Reports: 12 leads, rhythm and full disclosure arrhythmia, and exercise summary MONITOR Size: 19”, high resolution LCD Monitor for simultaneous display of 3/6/12 channels Defibrillator Protection Display of Exercise time Stage no., Stage time, Heart rate Speed etc. TREADMILL (medical grade) Treadmill controllable from main unit Speed adjustable from 0-10 mph approx. Elevation 0-20 degrees approxi. Standard program protocols. Emergency stop button Side and front rail Bearing capacity of 350 Lb User programmable protocols and reports. RECORDER Simultaneous recording for at- least 6 – channels at time</p>	USA, Europe & Japan FDA/CE/JIS Certified	01

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		<p>ECG recording Trace speed : 25 and 50 mm/ sec</p> <p>PARAMETERS:</p> <p>12 lead ECG, through patient cable (Dedicated stress test patient cable)</p> <p>Numeric: Heart Rate updated average</p> <p>Waveform: Real time 3/6/12 lead and freeze of ECG Trace</p> <p>Lead Inputs: Lead 1, II, III, aVR aVL, aVF, VI, V2, V3, V4, V5, & V6</p> <p>Variable gain: ½, 1, 2 cm/mv</p> <p>OTHER FEATURES:</p> <p>Display of Exercise time, Stage no, Stage time, Heart, Speed etc.</p> <p>Display of Trends, Heart Rate ST levels etc.</p> <p>AC Interference filter</p> <p>Automatic baseline drift control filter</p> <p>Complete with standard accessories including patient cable</p> <p>OPERATING REQUIREMENTS:</p> <p>AC 220 V/ 50 Hz</p> <p>Built in rechargeable battery/ UPS (Imported) for at least 30 minutes for CPU, monitor and recorder</p>		
76	STRETCHERS TROLLEY	<p>Trolley hydraulic height adjustment with foot pedal</p> <p>Gas spring assisted back section adjustment</p> <p>Trendelenburg adjustment</p> <p>Height adjustment 585-905mm</p> <p>Back section length 0°-70°</p> <p>Safe working load 230kg</p> <p>4 castors Ø200 mm Tente UAP with plastic cover, central control system from 4 points</p> <p>High quality powder-coated finish, prepared for finishing by abrasive blasting</p> <p>X-ray pocket under the back section</p> <p>Paper roll holder</p> <p>Oxygen bottle holder for 5kg bottle</p> <p>Accessory basket for the lower frame</p> <p>Attachment belts</p> <p>Pair of side rails</p> <p>And places to mount IV Poles</p>	USA, Europe & Japan FDA/CE/JIS Certified	10
77	WHEEL CHAIR	Stainless steel, mobile on two big spiked wheels & 2 double ball bearing	Local Export	10

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		swivel castors 75 dia mm. Hand operated locking/break, seat base made of plastic coated steel, perforated with foam, up hole black artificial leather/rexine, back rest adjustable in three steps manually, foldable foot rest, push handle on the top of back rest covered with plastic grips corners guarded with kick off discs.	Quality	
78	ENT UNIT with standard Accessories	OTORHINOLARYNGOLOGICAL THERAPY SYSTEM Integrated water supply system with warming up function (up to 37° C), Ergonomically designed waste pond, quiet compressor (almost silently), Continuous mechanical pressure setting in the extractor and sprayer, ergonomic operator interface, LCD display with control systems for patient positioning, Water temperature, instrument warm up etc., Comfortable surface for storage of patient data Backrest can be moved up to a horizontal position, which transforms the chair to an operating table, Automatic system shut down after two hours of continuous operation, Halogen light source (up to 3 light sources optional), Ergonomic positioning of the instruments, boxes, drawers and shelves, Adjustable spotlights with side bracket, adjustable in height and angle, automatic armchair positioning in one of the two positions, which are pre-programmed by the user <u>Accessories</u> Light source with reflector 1 pc Medicines sprays (2 straight, curved 1) 3 pc Preheating device for endoscopes, instruments and mirrors 1 pc Compressed air device for the flushing 1 pc Instrument tray 6 pcs Cotton wool holder 1 pc Medical bottle for oily and aqueous substances 6 pcs Integrated waste container 2 pcs Instrument tray with lid 1 pc Integrated inlet for cold light source 1 pc Water-supply system with warming up function (up to 37°C)	USA, Europe & Japan FDA/CE/JIS Certified	01

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		Air compressor 1 pc Suction device 1 pc <u>Optional</u> High quality 1CCD video camera Cold Light Source High quality medical monitor (15") Sinuscope (0°, 175mm, 7.5mm) Sinuscope (30°, 175mm, 7.5mm) Sinuscope (70°, 175mm, 7.5mm) Battery ioperated Head Adjustable surgical head light LED illumination, no bulb maintenance. Battery life 8 hours Low maintenance cost Move freely throughout the e.n.t. theater		
79	Audiology Equipment: (with standard accessories)	Preparation of audiology room with provision of Sound proofing, Sound proof door, electrical work, electronic equipment (AC, Printer, PC, Regulators etc.) 1. Audiometer Diagnostics with special tests (AC,BC,SAL,SISI,Tinnitus, etc.) 2. Tympanometer diagnostic (Immittance, reflexes) 3. ABR diagnostics ABR/BERA Diagnostics 4. Including all accessories ear, tips, electrodes, etc.	USA, Europe & Japan FDA/CE/JIS Certified	01
80	ENT SET (With all accessories)	1 Fiber Optic Central Control Room Quantity 01 2 Naso pharango Lyrango Scope Quantity 01 3 Instrument Trolley Quantity 01 4 Fiber optic ENT Headlight Quantity 01 5 Direct Laryngoscope Set (rigid) Quantity 01 6 Directo Laryngoscope set Fiber Optic with light source Quantity 1 7 OTO Scope Quantity 01 8. OESOPHAGO SCOPY set (Complete rigid with source) Quantity 01 9. Broncho scope (rigid with light source) Quantity 01 10 Headlight Quantity 01	USA, Europe & Japan FDA/CE/JIS Certified	01
81	FETAL DOPPLER	Foldable 5.6" color screen FHR1, TOCO monitoring, fetal movement (MFM / AFM), graphical	USA, Europe & Japan	01

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		parameters, printer Large numeric and graphic display for ease of readability Backup memory for seamless monitoring FHR signal quality indicator Signals Overlap Verification to separate twins FHR Built-in long life thermal printer Fast printing of stored traces Long life Li-ion battery PC management software and central monitoring system supportive Convenient probe rack and compact design USB port enables memory expansion Portable and lightweight 60-hour data storage Built-in CTG analysis system	FDA/CE/JIS Certified	
82	CTG MACHINE	12-inch foldable color screen 12-crystal water-proof ultrasound transducer Data display in a real-time mode, 60-hour waveform playback Sound signals are saved each hour and can be played back Sound and light alarms with adjustable range Transducer for automatic accurate detection Built-in network interface Lightweight, space-saving, easy to fix on the table or wall Built-in battery Software allows data transfer to PC Central monitoring system MFM-CNS is available as option Built-in CTG analysis system Technique Ultrasound pulse doppler with autocorrelation Ultrasound frequency 1,0 MHz FHR range 50 bpm – 240 bpm External TOCO 0 % – 100 %, 135 g correspond to effort 1 Pressure measurement range 100% Fast print (saved lines) Up to 25 mm/sec Data transference interface USB / RS232, local network support	USA, Europe & Japan FDA/CE/JIS Certified	01
83	MOBILE X-RAY MACHINE	Digital Mobile Radiography System Mobile x-ray unit, H.F. microprocessor controlled x-ray generator.	USA, Europe & Japan	01

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		<p>Power 32 kW.</p> <p>Rotating anode x-ray tube focus 0.8-1.3mm.</p> <p>Tube anode heat capacity 107kHU.</p> <p>Max values 300mA, 100kV.</p> <p>22" Touch screen LCD console with full screen image.</p> <p>System Weight: maximum 280 kg.</p> <p>Portable strongly built detector.</p> <p>Portable detector sustains a weight of 7.5kg.</p> <p>The System is a digital mobile x-ray unit equipped with a wireless 36x43cm flat panel detector.</p> <p>The System also features +180°/-180° rotation of the x-ray monoblock arm to facilitate exam execution in narrow spaces.</p> <p>The System is 100% microprocessor controlled and equipped with a large area 22" LCD high contrast touch screen console,</p> <p>The System has been designed with extensive use of light-weight alloys, thus allowing easy system mobility with minimal effort and no need for costly and heavy system motors.</p> <p>The System is characterized with a "dead man" breaking system with a comfortable handle that facilitates the unit movement and positioning.</p> <p>The breaking system blocks the unit in any position, just releasing the handle. An automatic closedown system prevents the unit from remaining in ON mode for prolonged time.</p> <p>The System is 100% DICOM compliant. Once the imaging session is completed, the entire study can be automatically sent to a PACS, a review workstation, or a DICOM printer; a large number of studies can be also maintained locally for temporary storage. And, most importantly, the intuitive Graphical User Interface makes the entire process smooth and easy. Needless to say the System DICOM layer has been thoroughly tested and will seamlessly interface with any DICOM environment.</p> <p>The System is equipped standard with the image enhancement algorithm, which makes it possible to expand the latitude of a single image and see all the relevant clinical details at the same time and without time-consuming Window/Level adjustment.</p>	FDA/CE/JIS Certified	

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		<p>RADIOLOGICAL CHARACTERISTICS</p> <p>Maximum power 32 kW</p> <p>Inverter frequency 40 kHz</p> <p>Max ripple < 1% at max power</p> <p>Exposure times 2-2200 ms</p> <p>kV range 40-100 kV</p> <p>mAs range 40kv - 200 mAs</p> <p>50kv – 180 mAs</p> <p>Max curent 300 mA @ 100kv</p> <p>Operating mode Two-points</p> <p>Anatomical techniques Over 550 ANATOMICA TECHNIQUES can be stored</p> <p>X-ray tube type Rotating anode</p> <p>X-Ray monoblock Colum ± 90 deg.</p> <p>arm rotation</p> <p>Monoblock rotation around X ±180 deg.</p> <p>(X-Y axis) Y +103 deg. / -50 deg.</p> <p>Focus height min 2022 mm</p> <p>Maximum anode heat 80 kJ (107 KHU)</p> <p>content</p> <p>Thermal monoblock 600 kj (800KHU)</p> <p>APR ➤ 1000</p> <p>Maximum continuous 300 W (24 KHU/min)</p> <p>anode heat dissipation</p> <p>Internal Battery for Standard</p> <p>unplugged exams</p> <p>executions</p> <p>OPERATING CHARACTERISTICS</p> <p>Operator interface Rear-lit High-Contrast 1280 x 1024 22" LCD touch screen display for all the operating</p>		

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		<p>DAP camera Automatic closedown</p> <p>X-ray push button</p> <p>parameters and messages for any possible anomalous conditions Optional The unit is fitted with an automatic closedown system minutes of not being used. This features prevent the unit from remaining on by mistake for long periods Manual with double click and 4m extensible cable (standard)</p>		
		<p style="text-align: center;">ACQUISITION SYSTEM</p> <p>Flat panel detector Wire and WIFI Acquisition 3000x2372x16 bit resolution Cesium Iodide (CsI) Scintillator 35x43 cm Detector 139 µm dimensions 3,6lp/mm Pixel pitch Max. spatial resolution IMAGE ACQUITON & STORAGE Max images locally 28000 images archived (no compression) 56000 images (lossless compression) Automatic LUT YES, Linear and Logarithmic Image Enhancement YES, Automatic Anatomic Programs YES, preconfigured and editable DICO 3.0 Print SCU YES, (Optional)</p>		

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		<p>Store SCU/SCP YES</p> <p>Worklist YES</p> <p>Management SCU</p> <p>Media Storage SCU Optional (CD/DVD)</p> <p>MPPS SCU YES</p> <p>Storage YES</p> <p>Commitment SCU</p> <p>Verification YES</p> <p>SCU/SCP</p> <p>Query/Retrieve SCU YES</p> <p>ELECTRICAL DATA</p> <p>Power supply voltage Single phase, 230 Vac (240V – 110Vac optional) +/-10%</p> <p>Frequency 50/60 Hz</p> <p>Maximum Absorbed Current 16 A</p> <p>Line impedance 0.4 Ω</p> <p>ENVIRONMENT CONDITIONS</p> <p>Operating temperature From 15o C to 35o C</p> <p>Operating humidity From 30% to 75%</p>		
84	ULTRASOUND COLOR DOPPLER MACHINE (With standard accessories)	<p>All Digital Broadband Beamformer for multiple scanning modes and wide verity of applications, High definition greyscale imaging, LCD Flat-panel flickerless, Cineloop review, Easy to learn and use control, single button patient optimization, Lightweight, easy to move ergonomic design Ergonomically adjustable control panel and monitor, 2D Focusing with Dynamic Focal Tuning, Digitally Processed Channels, 150dB System Dynamic Range, Integrated CD Drive.</p> <p>Imaging Modes:</p> <p>2D Imaging, Tissue Harmonic Imaging, M-Mode, Pulsed Wave Doppler, Freehand 3D, Dual 2D Image mode with Cine loop, Duplex mode for Simultaneous 2D and Doppler, High Resolution Write Zoom, Trapezoidal Imaging</p> <p>Clinical Application Software</p>	USA, Europe & Japan FDA/CE/JIS Certified	01

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		<p>Including:</p> <p>Obstetrical Analysis: Fetal Biometry Biophysical Profile, Amniotic Fluid Index Early Gestation Fetal Long Bones Fetal Cranium Nuchal Translucency (Nuchal Fold) Multiple Gestations upto 4 Feruses Fetal Heart M-Mode Maternal Uterine Artery Placenta Artery Fetal Echo User's Selectable Tables and Equations User's Defined Tables and Equations Obstetric Tendering</p> <p>Fetal Doppler: Fetal Carotids MCA Umbilical Artery Fetal Aorta Ductus Venosus</p> <p>Gynaecology: Gynaecology/Fertility Uterus Cervix and Endometrial Thickness Left and Right Ovaries Left and Right Ovarian Follicles Ovarian Artery</p> <p>Vascular: Cerebrovascular Peripheral Vascular</p> <p>Cardiac: M-Mode Analysis Doppler Ventricle Analysis Diastolic Function Cardiac Output Valvular Analysis Pulmonary vein Analysis Ejection Fraction Simpson's Biplane and Single Plane Volume by Area/Length Method Peak and Mean Gradients Pressure Half Time Continuity Equation Proximal Isovelocity Surface Area Qp:Qs Ratio LV Mass IVRT</p> <p>Urology: Prostate Volume TZ Prostate Volume Bladder Volume and Residual Volume Kidney Volume, Volume Flow</p> <p>Other: Paediatric Hip Joint</p> <p>Linear Transducer: Broadband Linear Array Transducer with 9 – 5 MHz operating frequency range, Provides high resolution images for Superficial Applications including Vascular, Small Parts, and Musculoskeletal Imaging, Supports 2D, Tissue Harmonic Imaging, Color and Pulsed Wave Doppler, Biopsy Kit Available</p> <p>Curved Transducer: Broadband Curved Array Transducer with 5 – 2 MHz operating frequency range, Provides high resolution images for Abdominal, and OB/Gyn Applications, Supports 2D, Tissue Harmonic Imaging, M-Mode, Color</p>		

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		and Pulsed Wave Doppler, Biopsy Kit Available. Transesophageal Black and White Printer: Internally mounted and remote controlled, medical grade high resolution Black and White thermal printer for image documentation		
85	Portable color doppler ultrasound machine	Laptop style ultrasound system Weight 18.1lbs LCD 15 inch with touch screen Lightweight and durable Mount to cart stand, wall, boom arm or carry it wherever you need Mere seconds from stand-by to start scanning Spectral doppler PWD Color doppler CDI M & B Mode, Advance Dynamic flow ADF Advanced imaging functions including Pulse Subtraction THI Built-in touch screen Individual and programmable key functions One touch QuickScan 8 GB internal flash memory	USA, Europe & Japan FDA/CE/JIS Certified	01
86	HIGH DEFINITION ECHOCARDIOGRAPHY SYSTEM (With all standard accessories)	An all digital 9216 channel system with broadband beamforming 2D images from 1-15 MHz, 17" LCD Display on fully articulated arm, Anatomical M-Mode, Tissue Harmonic Imaging with patented Pulse Inversion Technology, Adaptive Color Doppler, Color Power Angio, Directional Color Power Angio PW/CW Doppler Modes, PW/Color Doppler Imaging, Triplex, Dual and Duplex capabilities also includes realtime compound imaging with upto nine beam steered lines of sight plus image processing for noise and artifact reduction to improve tissue complicity. one button optimization in 2D and Doppler modes, Automatic Doppler Analysis and Intelligent Doppler Capability. On board patient reporting with embedded images. Multi session CD-RW Drive, Free hand 3D with multi-planner reformatting (MPR) capability. Support for upto 3 onboard peripherals. Compatibility with advanced quantification software	USA, Europe & Japan FDA/CE/JIS Certified	01

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		<p>and the following plug-ins/tools. IMT, contrast, strain rate, ROI, IMT and GI, 3D viewer. operates on a PC</p> <p>Clinical Application Software</p> <p>Cardiac Software:</p> <p>Volume by area/Length Method, M-Mode Analysis, Doppler, Peak and Mean Gradients, Pressure, Half Time, Continuity Equation, Systolic Function, Cardiac Output, QP/QS Ratio, Pulmonary Vain Analysis, Valvular Analysis, Proximal Isovelocity Surface Area (PISA), E/A Ratio, Ventricular Analysis, Ejection/Fraction (Via Teichholz or cubed methods), Simpson's biplane and single plane, LV Mass, IVRT</p> <p>Vascular:</p> <p>Carotid, TCD and bilateral lower and upper extremity presets. Also includes physio (ECG), vascular calculations and analysis, configurable reports.</p> <p>Cardiac 2D Quantification:</p> <p>Display of 2D echo images, Overall, vertical and horizontal gain controls, Semi-automated border detection for cardiac chambers and vessel cavities, displaying semiautomated borders over time</p> <p>parametrically, Transparency control to visualize echo greyscale under a semi-transparent image, tool for displaying mitral valve annular motion over time parametrically, Manual user edit able timing over-rides for the onset and duration of the parametric display, Single plane volume measurements based on 5/6 Area-Length method and Simpson's Single plane Method of Disks (MOD), Biplane volume measurements based Simpson's Biplane Method of Disks (MOD)</p> <p>Strain:</p> <p>For evaluation of regional myocardial function, assessment of synchronicity and guidance during bi-ventricular pacing procedures, Tissue Doppler Imaging (TDI) velocity quantification, Measures the myocardial velocity and derives the strain rate and strain along userdefined</p> <p>M-lines, Capable of drawing up to three M-lines at a time, Point of Interest (POI) tool obtains values from any point on the M-mode display, User defined M-line motion to follow the myocardial motion,</p>		

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		<p>Able to present TDI results in two display formats:</p> <ul style="list-style-type: none"> - Anatomical M-mode display - Graph display <p>User-selectable waveforms for optimal sub-region visualization, New curve processing modes, TDI velocity timing measurement, Automatic subdivision of M-line into a customizable number of sub-regions, Averages up to 20 cardiac beat cycles in both M-mode and graph displays, Ability to overlay pulse/phono on TDI waveforms</p> <p>Contrast Package: System optimization for detecting harmonic agent signature, Variable low mechanical index and flash mode, Pulse inversion harmonic imaging for general abdominal applications</p> <p>Stress Echo: Fully integrated Stress Echo Module, 3 Fixed Protocols, Upto 8 Stages capture-and-study protocol, Users defined protocols, Wall motion scoring, Stop/resume</p> <p>ECG Physio One 3-Lead ECG input Selectable between leads I, II, III Gain, sweep rate and display controls Automatic Heart Rate calculation and display Fault condition display Cineloop locator displayed on ECG Rate Paediatric and disposable leads available</p> <p>Quantification Software: Designed for ultrasound clinicians who require sophisticated analysis of image data acquired from ultrasound systems. A number of Plug-ins are available, offering a variety of powerful quantitative capabilities. review and quantification of image files; Graphic imaging creation in BMP, TIF, and AVI; the ability to remove patient information prior to export new files; export of quantification data into Excel-compatible spreadsheet formats; and built-in on-line help in multiple languages. Ultrasound data can be sent to console computer via network connection or MOD/CD/DVD media</p> <p>Transducer Linear 12 to 3 MHz:</p>		

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		<p>High resolution linear array transducer 35mm effective aperture length, 10° Trapezoidal imaging, Steerable pulsed Doppler, color Doppler, Color Power Angio, , Panoramic Imaging and Harmonic Imaging, for superficial imaging including superficial vascular imaging.</p> <p>Transducer Sector 4 to 2 MHz: Steerable CW/PW Doppler, HPRF Doppler, TDI and Harmonic Imaging, Adult Cardiac applications, supports reusable plastic bracket with disposable biopsy guides</p> <p>Transducer Sector 8 to 3 MHz: Steerable CW/PW Doppler, HPRF Doppler, TDI and Harmonic Imaging, Adult Cardiac applications, supports reusable plastic bracket with disposable biopsy guides.</p> <p>Trans Esophageal Transducer DICOM 3.0: Provides DICOM 3.0 network print and store, commit, modality Worklist structured reporting for echo and structured reporting for Vascular</p> <p>Small Black & White Printer: Internally mounted and controlled, medical grade, high resolution Black and White printer for image documentation</p>		
87	Blood CELL SEPARATOR	<p>Multi Component BloodApheresis System) Mobile / Portable. Aphaeresis options to collect Platelets, Red Blood Cells, Plasma & Stem Cells</p> <ol style="list-style-type: none"> Leukodepleted platelets in a fully automated procedure Ease of use & flexibility Data acquisition capability Up Grade able Software Portable Aphaeresis System Only 26 kg weight Single Access <p>Protocols Blood Component Collection Leukodepleted Platelets & Plasma Fresh Frozen Plasma</p>	USA, Europe & Japan FDA/CE/JIS Certified	01

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		Leukodepleted Platelets & Red Blood Cells 5Red Blood Cells & Plasma Therapeutic Collection Peripheral Blood Stem Cells Therapeutic Plasma Exchange Bone Marrow Concentrate Autologous Pre-Operative Collection 1Plasma Erythrocyte Saver (2 Buffy coat depleted RBC units + 2 FFP units) 2. Autologous Erythro-apheresis (3 Buffy coat depleted RBC units)		
88	Vein Detector	Complete all standard accessories	USA, Europe & Japan FDA/CE/JIS Certified	02
89	EEG Machine 32 Channels	<u>Pre-amplifier Noise: Less than two micro volts.</u> <ul style="list-style-type: none"> • Input impedance >100 Mohm • Sensitivity 1, 2, 3, 5, 7, 10, 15, 20, 30, 50, 70, 100, 200 μV/mm. • Calibration 10, 50, 100, 1000 μV/cm. • Visualization and print with 32 polygraphic traces + time marker + stimulus marker + events marker. With annotation and data in real time. • Paper at 7.5, 12.5, 10, 15, 25, 30,50, 60 mm/sec. • Facility of connection with thermal, laser or inkjet printer. • Power requirements: 220V AC, 50Hz, Single phase, • Filters L.P. 15, 30, 70, 100, 150, 300, Hz. • Filters H.P. 50, 16, 1.6, 0.53, 0.26, 0.1, 0.016 Hz (0.003, 0.01, 0.1, 0.3, 0.6, 1.6, 10 sec.). • Until complete with track ball, mouse and standard set of accessories as per manufacturers catalogue. • Digital computerized EEG at 32 channels • Integrated unit based on powerful operating system Windows 2000/XP for acquisition, visualization, recording and reviewing of EEG 	USA, Europe & Japan FDA/CE/JIS Certified	01

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		<p>signals.</p> <ul style="list-style-type: none"> In the basic configuration management of exams traces report, both on the local archive. Visualization on a monitor of all recorded parameters through easy controls from keyboard or mouse <p><u>ACCESSORIES</u></p> <ul style="list-style-type: none"> Photic Stimulator for EEG with LIGHT LED lamp, metallic arm and clamp Kit ECG recording with ECG cable and 50 pcs, ECG disposable electrodes, 3tube adhesive conductive paste. EEG 32 channel with 24 electrodes, operator's manual. PC with Hard disk, CD-ROM Recorder, Laser Printer, Monitor, Key board, Mouse. Trolley (Imported/local made). 		
90	EMG Machine	<p>2 EMG/EP Channels 2 Different Electrical Stimulation Channels Integrated Acoustic Stimulator External Trigger Facility High CMRR and IMRR Values Customizable MS Word Report exportable PDF Format Data Export CD/DVD Portable and Trolley Version Carrying Case Interchangeables electrodes Intensity control Polarity inversion management Single/Repetitive stimulation management Two user-selectable controls with specific functions Two Channel EP Test SEP, AEP, VEP, MEP and Cognitive Evoked Potentials In acoustic nervous system section are available SSR, HRV, RR Interval and Valsalva Test With all standard accessories</p>	USA, Europe & Japan FDA/CE/JIS Certified	01
91	Generator Set	<p>Supply & Installation of 500 KVA GENSET Synchronizing Panel for 2x100 N500 KVA with load table off panel 500 kva-800 AMP 100 KVA</p>	USA, Europe & Japan FDA/CE/JIS Certified	01

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		Frequency 50/60 Hz Voltage (Parallel star above 380 Rated Power class Above 450 Regulation with 1% with any power factor and speed variations between - 5% +30 Execution Brushless Stator winding 12 ends (nameplate data 800V-50Hz Series Star Rotor with damping cage Short Time constants 0.14 Short circuit current capacity >300/>350 Cooling air requirement 54/min Noise level at 7m db 94/82 Room for Generator set (space will be provided by JIMS)		
92	BM & MCC Pannel System	a. Supply & Installation of BMS system for AC units and Generators, comprising of all related accessories, commissioning and testing, complete in all respect b. Supply and Installation of MCC Panel for Quters AC Units.	USA, Europe & Japan FDA/CE/JIS Certified	01 (Turnkey Basis)
93	Drainage system of organic liquids in OT,s and Ward	<div> <div>With antistatic wheels (4)</div> <div>Wheel Diameter 125mm, 2 with brake</div> </div> <div> <div>Internal tank plastic</div> <div>Capacity 5 liters</div> </div> <div> <div>Speed Controller</div> <div>Variable for 8 speed</div> </div> <div> <div>Maximum coverage</div> <div>Dual safty system (electronic and mechanical)</div> </div> <div> <div>Empty weight</div> <div>50kg</div> </div> <div> <div>Suction</div> <div>Continuous intermittent</div> </div> <div> <div>Aspiration capacity</div> <div>From 2 to 11 l/min.power supply</div> </div> <div> <div>Aspiration Channels</div> <div>12V 14 A 1.4bar</div> </div> <div> <div>Discharge capacity</div> <div>1 pump to 3 pump</div> </div> <div> <div>Power Supply</div> <div>25 l/min power supply 220V 0.3A</div> </div> <div> <div>Alarms</div> <div>240/110 Vac, 1-,50/60 Hz. Battery</div> </div> <div> <div></div> <div>12V 10 14A</div> </div> <div> <div></div> <div>End wash, aspiration, drain, clearing, to be carried out and cleaning progress, power switched</div> </div>	USA, Europe & Japan FDA/CE/JIS Certified	02

S. No.	Nomenclature	Description/ Specification	Country of Origin	Quantity
		on, battery charge/discharge, overflow Electromagnetic, Compatibility Class type B CE		
94	Bed Head Unit	Size 6ft 5ft without outlet provision of 3 outlet No.1 Oxygen 1. Compressed Air 2. Suction 3. 15 amp german standard socket 1 4. 20 amp german standard socket 1 5. Provision of Nurse call system 6. Provision of Telephone socket 7. Provision of IT Socket 8. Upper indoor light must be available 9. Heavy duty Ammonium Material with powder coating 10. For pediatric ward graphics of cartoon 11. For female ward pink color 12. For male ward blue color as per user requirement 13. On/off switch of light 14. Provision of Call Bell Note: The cost of tube rads to be replaced by bed head unit shall be borne by the bidder	USA, Europe & Japan FDA/CE/JIS Certified	100
95	<u>DUPLEX MEDICAL VACUUM SYSTEM</u>	The capacity of each Vacuum System is 1650 L/min to 1700 L/min per vacuum pump, vacuum level @ 700-725 mm HG, Flex connectors. Vibration Isolation, Pads, Hour meters, Circuit barkers, Vacuum pump run lights, Tank mounted system / Vertical Tank Capacity 1000 Ltr.	USA, Europe & Japan FDA/CE/JIS Certified	
96	Centrally compressed suction system for Wards, OT, Emergency , ICU/CCU & MNCH	For quoting of Specs in the Bid Document, Bidders are advised to visit the site and quote accordingly.	USA, Europe & Japan FDA/CE/JIS Certified	Complete system on Turnkey Basis