

**RAJENDRA INSTITUTE OF MEDICAL SCIENCES, RANCHI**

**Final Tender paper for equipment of various department on turnkey basis at RIMS, Ranchi and preparation of DPR for handling Bio-Medical waste under Ranchi Municipal Corporation, Ranchi.**

Tender Notice No. RIMS/Store/ME(4) 145 dated 09.01.2016  
corrigendum notice no. 261 dated 15.01.2016  
& pre-bid discussion meeting held on dated 25.01.2016

Issued to

M/s \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Against money receipt number ...../RIMS, dated : .....

Cashier  
RIMS, Ranchi

**Invitation of tender notice for Equipment of (i) Mechanized Laundry system (ii) Blood Bank (iii) Central Emergency (iv) Orthopaedic equipment (v) DPR for disposal of bio-waste under Ranchi Municipal Corporation (vi) Skin & STD (vii) Dental Equipment (viii) Neurosurgical equipment (ix) Refrigerator (x) Lead Apron, on turnkey basis at RIMS, Ranchi**

To,

M/s \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Dear Sir,

Director, Rajendra Institute of Medical Sciences, Ranchi invites you to tender for Equipments (i) Mechanized Laundry system (ii) Blood Bank (iii) Central Emergency (iv) Orthopaedic equipment (v) DPR for disposal of bio-waste under Ranchi Municipal Corporation (vi) Skin & STD (vii) Dental Equipment (viii) Neurosurgical equipment (ix) Refrigerator (x) Lead Apron etc, on turnkey basis at RIMS, Ranchi.

If you are in a position to quote for supply & installation in accordance with requirements stated in short tender notice & tender form, you must also furnish all the information, called for, along with your tender.

This tender is non transferable.

All legal matter in respect to this tender will be subjected to jurisdiction of Hon'ble Jharkhand High Court, Ranchi.

The last date of submission of tender -- 18.02.2016 (upto 4:30 p.m).  
by registered posts / speed post only,

Date for opening technical bid - 19.02.2016 at 12:30 p.m.

**Note** : The department wise separate list & specification sheets are enclosed with this tender document. The bidders have to pay separate tender document fee Rs. 5,000.00 for Sl.No. (i) to (viii) each department tender (i.e. for one department Rs. 5,000.00 for 2 departments Rs. 5,000.00+Rs. 5,000.00 = Rs. 10,000.00 and so on) and Rs. 2500.00 for Sl. No. (ix) & (x) separately for each tender.

Yours faithfully

Sd/-  
Director  
Rajendra Institute of Medical Sciences  
Ranchi

**OFFICE OF THE DIRECTOR  
RAJENDRA INSTITUTE OF MEDICAL SCIENCES, RANCHI  
Bariatu, Ranchi – 834009 (Jharkhand)**

**General Terms & Conditions**

The terms and conditions mentioned in tender notice no. RIMS/Store/ME(4) 145 dated 09.01.2016 and corrigendum notice no. 261 dated 15.01.2016.

1. The tender should be submitted in duplicate complete with specification, literature, leaflet along with catalogues etc. leaving no room for back references.
2. Bids are to be submitted in two parts viz. (A) Technical Bid containing complete technical aspects including original EMD, Affidavit etc., except price bid & (B) Price Bid containing price elements only.

**Note : The tenderers have to submit separate sealed technical & price bids for each department. The envelops must be superscribed as technical bid for tender no. .... dated ..... for department of ..... & similarly price bid envelops should be superscribed. All the envelops of one department should be sealed within one envelop.**

3. Technical Specification should be in the proforma / format given below :

**A. Technical Specification Proforma for department of ..... (for Major Equipments)**

Sl. No.	Required technical specification as mentioned in tender form	Tenderer's detail technical specification of the equipment for which they are quoting	Remarks or any other extra advantages of the quoted model or attachments (if any)

**B. Tenderers Technical Details of turn key works**

- i. **Civil /Electrical/Mechanical / furnishing etc works to be done (if any) by the bidders under turnkey project.**

Sl. No.	Tenderer's detailed item list/work list	Quantity offered by the tenderer

**ii. Electrical works : (If any required under turnkey)**

Sl. No.	Tenderer's detailed item list/work list	Quantity offered by the tenderer



Note :

1. All the electrical items including Air conditioning & earthing will have to be supplied & installed by the tenderer

**iii. Furnitures works : (If any required to run the machines under turnkey)**

Sl. No.	Tenderer's item list	Quantity offered by the tenderer

1. Before quoting the tender & before participating in the meeting the tenderers must have to visit the sites & they have to discuss with authority for location & confirmation of site.
2. Before finalization of the tender, the tenderers have to arrange on site practical demonstration of their quoted machines (major equipment) to the members of technical committee on any of their pre installed sites on tenderer's own cost.

Full signature of the  
tenderer with seal

Designation : .....

Dated : .....

5. **Price Bid Proforma : (Price of every item must be in separate sealed envelopes)**

A.

Sl. No.	Technical specification of the main machine	Unit Price in Indian Rs.	Mention clearly the excise duty charges, or any other charges, sales tax etc. in Indian Rs.	Price FOR destination with installation charges, training to staff/ Doctors on turn key basis with all taxes. (INR)

**B. Essential accessories supplied by the firm free of cost with main machine to run the machine smoothly.**

Sl. No.	Name of accessories	Technical specification in details with manufacturer name.	Quantity	Remarks (if any)



**C. Optional accessories (if any for major equipments)**

Sl. No.	Name of accessories	Detail technical specification with make & model	Qty	Unit price in India Rs.	Mention clearly the excise duty charges, or any other charges, sales tax etc. in Indian Rs.	Price FOR Destination with installation charges, training to staff on turn key basis with all taxes.

**D. Essential consumables required to run the machine such as papers, cartridges, chemicals etc. supplied by the firm free of cost with main machine to run the machine smoothly.**

Sl. No.	Name of consumables	Technical specification in details with manufacturer name.	Quantity	Unit Rate	Remarks (if any)

E. Rate for essential civil, electrical works & furnitures for smooth running & installation of the machine. (Tenderers have to give details of civil (including furnitures) & electrical works to be done for smooth running of machine). Rs. .... (in words Rs.....)

(Total amount of the complete equipment set on turn key basis i.e. A+B+C+D+E = Rs. ....)

(in words Rs ..... ) with five years comprehensive guarantee/warranty with all accessories, spares, manpower & turnkey maintenance works.

6. Price of Comprehensive maintenance contract with all spares after expiry of guarantee period for five years :-

Year	C.M.C. Rate in Indian Rs. (per year)
1 <sup>st</sup> Year	
2 <sup>nd</sup> Year	
3 <sup>rd</sup> Year	
4 <sup>th</sup> Year	
5 <sup>th</sup> Year	

Note :

(1) Price of C.M.C. for five years will also be considered during price comparative evaluation.

- (2) Warranty as well as CMC will cover (inclusive of) all spares, accessories & turnkey works and it will also cover :-
- i. X-ray & C.T. tubes & high tension cables
  - ii. Helium replacement
  - iii. Any kind of motor
  - iv. Plastic & glass parts
  - v. All kind of sensors
  - vi. All kind of coils, magnets, probes, transducers, cuffs, paddles, cables, chart recorders, patient circuits, tube, bulbs, electrodes, humidifiers, sensors, cassettes, printers & images, UPS including the replacement of batteries, Air-conditioners, compressors, fuses, transformers, monitors, cameras, stabilizers, furnitures, aprons, badges, radiation accessories, software & Hardware, chambers, phantoms, pipes, boiler, electrical switches, lights & other accessories (if any) will be supplied & installed by the bidders without charging any extra cost under warranty & C.M.C.
- (3) For radiological equipment, it will be complete responsibility of the bidder to have N.O.C from AERB and after installation the bidder shall arrange the license from AERB to run the machine at RIMS. The RIMS shall provide all the required data to the bidder for getting the license. Final payment will be released after getting license to run the machine.
- (4) For the bidders of Mechanised Laundry System, it is mandatory to provide operational man power for running/ operation of the complete equipment under the project for a period of 10 (ten) years. That is upto warranty and CMC period of the complete system i.e. for lifetime of the system. The bidder have to quote accordingly.

Full signature of the  
tenderer with seal

-----  
Name  
(in capital letters)

-----  
Designation

Sd/-  
Director  
Rajendra Institute of Medical Sciences  
Ranchi

7. List & specifications of equipments :- Department wise separate list is enclosed herewith this tender documents. All the bidders have to get it confirmed at the time of purchase of tender documents.
8. The tenderers have to mention clearly the names and technical specifications of the relevant accessories which they will supply along with the main equipment, free of cost in their price bid.
9. The price should be inclusive packing, carriage & installation cost.
10. The total cost of each equipments should be quoted in figures and words.
11. The price quoted should be valid for at least two years from the date of opening of tender.
12. The intending tenderers should produce the copy of manufacturing registration certificate. In case of authorization – original authorization certificate issued by the manufacturer in the name of Director, RIMS, Ranchi. The authorization must be valid at the time of tender opening.
13. The tenderer must enclose registration certificate of Jharkhand Sales tax/JVAT along with update respective clearance certificate or If the bidding agency is not registered under Jharkhand Sales tax department then they must give an undertaking through notary affidavit that "They will supply & install the equipment/items at fixed destination after payment of JVAT/Jharkhand Sales tax on their own & they will make their own arrangements for customs clearance in case of imported equipments. They shall not



demand any document from Director, RIMS for clearance or duty exemption/waiver/relief in this regard.”

14. The tenderer should furnish the warranty / guarantee period of the complete system.
15. The tender without EMD will be ignored straightway.
16. Incomplete tender will be summarily rejected.
17. The EMD will be refunded in full to the unsuccessful tenderers after finalization of tender and in case of successful tender, the EMD will be refunded only after expiry of warranty / guarantee period.
18. The full EMD shall be forfeited in case of backing out of the offer after acceptance.
19. The successful tenderer have to supply the items in accordance with the specification as finalized and approved by the purchase committee.  
In case of late supply of materials, penalty will be charged on the bidder as per norms mentioned hereunder :-
  - i. After 07 days (one week) from stipulated date of supply completion - @0.5% (point five percent) per week of total contract value upto 04 weeks
  - ii. After 04 weeks @1% (One percent) of contract value per week upto 08 weeks
  - iii. After 08 weeks @2.0% (Two percent) of contract value per week upto 12 weeks.
  - iv. After 12 weeks the security money & EMD will be forfeited by RIMS and the bidder will be debarred / black listed for further participations

Above mentioned same penalty will be charged during warranty as well as comprehensive maintenance contract period if there will be delay for more than 07 days from the date of information of breakdown.

**Note:** The bidders for preparation of DPR for Bio-Medical Waste handling system under Ranchi Municipal Corporation, Ranchi have to prepare the DPR within 90 (Ninety) days from the date of issue of work order. Failing which the above penalty clause shall be implemented on them also.

20. The bidders have to do the essential construction works by their own including all mechanical & electrical works as per requirement of their quoted equipments for fully functioning of the complete project including all the equipments, generators, deep hole boring, separate water tank, drainage from the site to the main drainage system, water & electrical distribution system for all the machines under the project. They have to quote accordingly. No consideration regarding extension of work or escalation of rates will be made after finalization of tender.

Full signature of the tenderer  
With seal and date  
Designation.

21. Contractor Form 'A'  
Telegraph Address :- .....  
Telephone No. : .....  
Telex No. : .....  
Fax No. ....

From

\_\_\_\_\_  
\_\_\_\_\_  
(Full name and address of the tenderer)



To

The Director  
Rajendra Institute of Medical Sciences,  
Ranchi.

Sir,

1. I / We hereby offer to supply the stores detailed in the schedule here to such position thereof as you may specify in the supply order at the price given in the said schedule and agree to hold the order (offer) open till it is opened. I/We shall be bound by communication of acceptance within the prescribed time.
2. I / We have understood the instructions to tenderers and terms conditions of contract for contract concluded by Director, RIMS as contained in schedule & tender notice. We have thoroughly examined specification drawing or pattern quoted in the schedule here to and am/are fully aware of the nature of the stores required.
3. The following pages have been enclosed to and from part of this tender's technical bid  
.....

Yours faithfully

Signature of tenderer

Address .....

Dated .....

Seal.....

22. All documents duly completed, signed and sealed should be enclosed with your tender offer failing which your quotation will be treated as incomplete.

**Technical compliance report duly filled and signed with seal of the bidder.**

The bidders must fill all the rows/columns of this compliance report. This report will be inspected & evaluated by purchase committee and accordingly documents will be verified on the concerned page numbers.

Sl. No.	Enclosures required	Have you enclosed it? write clearly Yes or No	If yes then on page no. of this bid.
	In case of lack of any essential required documents the tenders will be rejected - The list of essential required documents which must be submitted with technical bid of the bidders :		
1.	Photocopy of JVAT (Sales tax) Registration certificate in Jharkhand State	Yes/No	Page No. ....
2.	Photocopy of JVAT/Sates tax clearance certificate of Jharkhand State, valid at the time of opening of technical bid <b>OR</b> If the bidding agency is not registered under Jharkhand sales tax department, then they must give an undertaking through notary affidavit that "They will supply the equipment/items at RIMS, Ranchi after payment of JVAT/Jharkhand Sales tax on their own & they will make their own arrangements for custom clearance in case of imported equipments. They shall not demand any document from RIMS for JVAT/custom clearance/duty exemption/waiver/relief in this regard".	Yes/No	Page No. ....
3.	Copy of Manufacturing certificate or original copy of authorization from original equipment manufacturer in the		

	name of authorized bidder for bidding on their behalf. (Photocopy or fax copy will not be valid). <b>Not mandatory for the bidders for preparation of DPR.</b>		
	(i) Whether manufacturer or authorized dealer	Write clearly manufacturer or authorized dealer	If manufacturer then valid manufacturing licence on Page No.....
	(ii) If authorized dealer then write names of the original manufacturers and enclose the authorizations issued to you. e.g.		
	a. Authorization letter of M/s .....	Yes or No	On Page No. ....
	b. Authorization letter of M/s ..... and so on	Yes or No	On Page No. ....
4.	I.T. PAN no. of the bidder.	Yes or No	On Page No. ....
5.	Earnest money in form of Demand Draft issued by any nationalized bank only in favour of <b>Director, Rajendra Institute of Medical Sciences, Ranchi –</b> (1) for Mechanized Laundry – Rs. 5,00,000.00 (2) For Blood Bank – Rs. 1,00,000.00 (3) For Central Emergency – Rs. 1,00,000.00 (4) For Ortho Equpts – Rs. 2,00,000.00 (5) For DPR Preparation of Bio-waste – Rs. 2,00,000.00 (6) For Skin & STD – Rs. 1,00,000.00 (7) For Dental Equpts – Rs. 2,00,000.00 (8) For Neuro Surgical Equpts – Rs. 3,00,000.00 (9) For Refrigerator – Rs. 20,000.00 (10) For Lead Apron – Rs. 50,000.00	Yes or No	On Page No. ....
6.	Affidavits through first class magistrate / Notary Public, mentioning that – (a) "Our company has not been black listed or convicted in the past by any Hospital Organization or by any Government / Semi government organization / P.S.U.s / C.B.I / C.C.I & free from all kind of litigation/allegations, (b) That the firm has no vigilance case/CBI/FEMA/CCI case pending against him/supplier (Principal) (c) That the firm is not supplying the same item / doing the similar job at lower rate quoted in this tender to any government organization or any other institute". (d) That the firm shall supply the consumables & accessories required to run the machine uninterruptedly during warranty & CMC period.	Yes or No	On Page No. ....
7.	Technical specifications with catalogue & dimensions of equipment, accessories & details of turnkey works. The bidders have to provide complete layout plan of the constructions & electrical works (if any) required and to be done by the bidder within their offer for installation & functioning of the complete system.	Yes or No	On Page No. ....
8.	I.T. return certificate & balance sheet of the bidders for last three financial year having minimum turn over as follows :- for SI No. 1 to 8 minimum turnover of Rs. One crore per year in last three years & for Item no. 9 & 10 the bidders have to submit only balance sheet for last three years.	Yes or No	On Page No. ....



9.	Acceptance letter/undertaking that they shall provide five years comprehensive warranty for all the equipments and turnkey works. Then further five years comprehensive maintenance contract with all spares, accessories & labour charges for all the equipments as well as turnkey works. For Lead apron only warranty will be considered it does not require CMC. For DPR Preparation no guarantee or CMC is required.	Yes or No	On Page No. ...
10.	For Radiological equipments bidders must have to enclose the license or NOC issued from Indian Atomic Energy Regulatory Board, Government of India for the same model of equipment which they have / are quoted / quoting in this tender and they have to give an undertaking that they shall provide full support for getting functional license of their quoted items .	Yes or No	On Page No. ...
11.	The bidders of Biomedical waste disposal DPR have to give an undertaking that they shall follow all the CPCB norms and guidelines in preparation of the DPR.	Yes or No	On Page No. ...

Note :

1. Sales tax form JVAT-504 G / Road permit / Entry tax etc. of Govt. of Jharkhand will not be issued by RIMS authority. It will be responsibility of the bidders to arrange JVAT form 504-G or any other documents related to sales tax / entry tax on their own.
2. If any of the above enclosures are of more than one page then in the page number columns write clearly on page no. .... to page no. ....
3. Without filling the compliance report the offer will be rejected directly at the time of technical evaluation.
4. All the bidders have to provide soft copy of their technical bid including specification (same as they have submitted in hard copy of technical bid) in PEN drive also. PEN drive must be submitted by all the bidders at the time of opening of technical bid in front of purchase committee/technical committee.
5. If there will be contradiction/Confusion regarding affidavit clauses of the tender, the matter will be finalized by legal procedure through legal opinion.

#### Certificate of Compliance

I Mr. / Mrs. / Miss ..... on behalf of M/s (Name of firm / company) ..... do hereby confirm that I have verified the above compliance report, it is duly filled. Our technical bid consists of total (No. of pages) ..... (in words .....)

Signature of the Bidder  
with date & seal of the firm / company

23. Please enclose photocopies of your complete registration certificate with DGS&D / NSIC ./ DGQA, (if any) as applicable, which should be valid on the date of tender opening.
24. Price bid of technically acceptable offers would only be opened for which either the respective firm would be invited through telephone / fax or the same may be opened with display in the notice board in case telephone message can not be passed on.
25. The following information should be given in the offer by tenderers :-
  - a. Complete configuration of the main equipments.
  - b. Relevant (must) accessories should be supplied with the equipment, if it is required for running the complete system.
  - c. Optional accessories, if any.



26. Liquidated damages shall be levied for delay in supplies as per tender rules.
27. The successful tenderer shall have to submit security deposit equal to 10% of the value of the contract in form of Bank guarantee pledged to Director, RIMS, Ranchi. The bank guarantee shall be valid for minimum period of 60 months.
28. Tenders / Quotations are to be submitted in duplicate. Number of pages, leaflets / pamphlets, catalogue drawings etc. should be tied separately and marked original / duplicate. However, the tender inquiry document issued by RIMS should be attached with original copy of tender / quotation.
29. Technical bids & Price bids should be kept sealed separately super scribing the envelope "**Technical Bid**" & "**Price Bid**" and Tender Notice No. & Tenderers name with full address & telephone numbers.
30. The tenderers shall give a clear and guaranteed delivery period for completion of supply & installation and functioning of the complete system in their bid and they have to maintain the time frame.
31. Tenderers are required to answer all the question mentioned in the schedule & should return the same duly signed and filled along with form "A"
32. The tendering firms shall note that the supplies will be made in accordance with the specification mentioned in the tender.
33. Nevertheless, the purchaser shall be liable for price variation after final approval by purchase committee. The overseas bidders also have to quote their rates in Indian rupees. They shall calculate the exchange rate of foreign currencies in Indian rupees & quote accordingly in Indian rupees.
34. The tenderer has to mention clearly the quality, specification, names of companies for consumables like films & others to be used in the machines for optimum quality results. The tenderer has to assure in written about the local availability of consumables in their tender.
35. If the supplier, having been called upon by the purchaser to furnish security deposit (S.D.), failed to furnish the same within the period provided it shall be lawful for the purchaser to forfeit the E.M.D. and to cancel the contract.
36. The purchaser shall be entitled and it shall be lawful on his part to forfeit the amount of security deposit in whole or in part in the event of any default, failure or neglect on the part of the supplier in the fulfillment of performance in all respect of the contract under references or any other contract with the purchaser or any part thereof to the satisfaction of the purchaser.
37. The security deposit shall remain in full force and effect during the period that would be taken for satisfactory performance and fulfillment of in all respects of the contract i.e. since final acceptance of the goods/equipments or any other by the consignee and be valid upto guarantee period of the equipments to be purchased.
38. After complete installation of the equipment the supplier shall inform the technical committee or the concerned authority in writing for inspection & functioning of the equipments. If the inspecting officer finds that pre-inspection of the consignment is not as required then the consignment is liable for rejection.
39. Contractor / Seller hereby declare that the goods / stores / articles sold / supplied / installed to the purchaser under this contract shall be of the best quality and workmanship and new in all respects and shall be strictly in accordance with the specification & particulars mentioned in the contract.

The contractor / seller hereby guarantees that the said goods / articles would continue to confirm to the description and quality aforesaid for a period of Five years from the date of final installation.

- a. Warranty to the effect that before joining out of production for the spare parts they will give in adequate advance notice to the purchaser of the equipment so that the later may undertake the balance of the life time requirements.
  - b. Warranty to the effect that they will make available the blue prints of drawings of the spares if & when required in connection with the main equipment.
40. The following clauses are required to be confirmed :-
- a. Free routine servicing (at least 2 visits of their engineers at site in one year) will be carried out by the firm till guarantee period.
  - b. The firms will make available full engineer support package (ESP) including essential maintenance and recommended spares for maintenance of the equipment for further 05 years after the guarantee period.
  - c. The following set of documents in respect of the equipments are also required to be supplied by the firm :-
 

Literature	Distributions	Quantity
(i) Operation instructions	With each equipment	sets each
(ii) Wiring diagram	Inspecting authority (Concerned authority)	2 sets
(iii) Maintenance service manual	Inspecting authority	2 sets
(iv) Spare parts lists indicating cost	(Concerned authority)	2 sets
  - d. The tenderers should quote the latest models. Quotations for out dated models of equipments will not be entertained.

41. Payment terms as follows :
- 100% after installation and completion of training. If needed, the L.C. account in nationalized bank may be opened for assurance of payment. The payment clauses in L.C. will be after job completion.
42. Price bids and technical bids should be separately sealed, covers duly super scribed. Both the bids should be in duplicate. Both these sealed bids should be put in another main envelope duly sealed & mentioning following informations.
- Tender notice no. RIMS/Stores/ME(4) / 145 dated 09.01.2016 & corrigendum notice no. 261 dated 15.01.2016 for the department of .....
- Date & time of opening : 19.02.2016 at 12.30 P.M.

Director  
Rajendra Institute of Medical Sciences,  
Ranchi

Signature of Tenderer  
Name (in block letters) : \_\_\_\_\_  
Capacity in which tenderer is signed : \_\_\_\_\_  
Address in full : \_\_\_\_\_  
Dated : \_\_\_\_\_ Seal \_\_\_\_\_





Tender notice no. RIMS/Stores/ME(4)/ 145 Dated 09.01.2016

**NOTICE INVITING TENDER**

Due to unavoidable circumstances the previously invited tender for Mechanized Laundry system and equipments for department of Blood Bank, under tender notice no. 8371 dated 22.07.2014 is being cancelled. Fresh tenders are being invited through sealed offers in two bid system (Technical bid & Price Bid) by speed post / Registered post only, from original equipment manufacturer or authorized dealer for supply & installation of equipments on turnkey basis for under mentioned department / unit at RIMS, Ranchi (1) Complete mechanized Laundry system (2) Equipment of Blood Bank (3) Equipments of Central Emergency (4) Refrigerators with voltage stabilizers & stand (5) Lead Apron, Lead Collar, Lead goggles, Lead gloves etc. (6) Equipment of Skin & STD (7) Dental equipments which were not approved under tender notice no. 3422 dated 02.06.2015 (8) Equipments for Neurosurgery department (9) Equipments for orthopaedics department (10) Due to non participation of any bidder against our tender notice no.7297 dated 27.10.2015 for preparation of DPR for Biomedical Waste Disposal system of Ranchi Municipal Corporation area, the said tender is also being cancelled and fresh tender is being invited. Tenders will not be accepted by hand or any other agency.

<b>A. Important dates for Tenders</b>		
1.	Pre bid meeting for discussion on various technical issues	On 18.01.2016 at 12:30 P.M at RIMS. All the intending bidders must attend the pre-bid discussion meeting for clarification of their queries & requirements of RIMS. No claims will be considered after finalization of tender paper.
2.	Date of issue of tender documents	From : 22.01.2016 to 11.02.2016 (The intended bidders may purchase tender document on any working day upon payment of each tender paper in cash to the RIMS Cashier or those who want to bid by downloading the tender document, they have to submit separate demand drafts for each tender paper with their technical bid. (1) For Mechanized Laundry – Rs. 5000.00 (2) For Blood Bank – Rs. 5000.00 (3) For Central Emergency – Rs. 5000.00 (4) For Refrigerator - Rs. 2000.00 (5) For Lead aprons – Rs. 2000.00 (6) For Skin & STD – Rs. 5000.00 (7) For Dental equipment – Rs. 5000.00 (8) For Neurosurgery equipment – Rs. 5000.00 (9) For Orthopaedics equipments – Rs. 5000.00 (10) For Preparation of DPR for Biomedical waste disposal plant of Ranchi Municipal Corporation – Rs. 5000.00
3.	Last date of submission of sealed tender documents (Only by speed post / Registered post)	On 13.02.2016 till 04.30 P.M
4.	Opening of technical bid & discussion on technical issues.	On 14.02.2016 at 12:30 P.M in RIMS administrative conference hall, in front of purchase committee. All the bidders or their duly authorized representative must represent the tender opening for discussion & queries of purchase committee.

- Note :1. For details of tender terms, conditions & specification please visit RIMS website : [www.rimsranchi.org](http://www.rimsranchi.org) from 13.01.2016 for sample tender paper to attend the pre-bid meeting.  
2. Final Tender paper will be uploaded on 22.01.2016 after pre bid meeting. All the bidders have to submit their tenders as per final tender paper (Not as per sample tender paper).  
3. Before participating the meetings the bidders may physically visit the site and they may discuss with the concerned H.O.Ds / Officer Incharge, RIMS, Ranchi regarding requirements or queries.

Sd/-  
Director  
Rajendra Institute of Medical Sciences  
Ranchi





RIMS/Stores/ME(4)/Corrigendum notice no. 261 Dated 15.01.2016

**Date extension of tender notice no. 145 dated 09.01.2016 & Tender notice no. 8147 dated 02.12.2015 in accordance with previous corrigendum notice no. 8648 dated 18.12.2015**

In reference to the frequent requests made by the intended bidders the date of NIT no. 145 dated 09.01.2016 and NIT No. 8147 dated 02.12.2015 are being extended as here under

**For NIT No. 8147 dated 02.12.2015 & previous corrigendum no. 8648 dated 18.12.2015**

.A	<b>Important dates for Tenders</b>	<b>Previous date</b>	<b>New extended dates</b>
1.	Second pre bid meeting for discussion/ amendment in final tender paper.	-	20.01.2016 at 12:30 PM, The intended bidders must participate the meeting.
2.	Date of issue of corrected / amended tender documents	28.12.2015 to 27.01.2016	22.01.2016 to 05.02.2016
3.	Last date of submission of sealed tender documents (Only by speed post / Registered post)	On 28.01.2016	06.02.2016 till 04.30 P.M
4.	Opening of technical bid & discussion on technical issues.	On 29.01.2016	On 08.02.2016 at 12:30 P.M in RIMS administrative conference hall, in front of purchase committee. All the bidders or their duly authorized representative must represent the tender opening for discussion & queries of purchase committee.

Note : The bidders who have previously downloaded or purchased the tender documents, must go through the amended tender papers and they have to bid in accordance to amended tender paper, the bidders may visit RIMS website : [www.rimsranchi.org](http://www.rimsranchi.org) from 22.01.2016.

**For NIT No. 145 dated 09.01.2016**

.A	<b>Important dates for Tenders</b>	<b>Previous date</b>	<b>New extended dates</b>
1.	Pre bid meeting	18.01.2016	25.01.2016 at 12:30 PM in RIMS administrative conference hall.
2.	Date of issue of final tender documents	22.01.2016 to 11.02.2016	28.01.2016 to 17.02.2016
3.	Last date of submission of sealed tender documents (Only by speed post / Registered post)	13.02.2016	18.02.2016 till 04:30 P.M
4.	Opening of technical bid & discussion on technical issues.	On 14.02.2016	On 19.02.2016 at 12:30 P.M in RIMS administrative conference hall, in front of purchase committee. All the bidders or their duly authorized representative must represent the tender opening for discussion & queries of purchase committee.

Note : For **sample tender paper** the bidders may visit RIMS website [www.rimsranchi.org](http://www.rimsranchi.org) from 21.01.2016 before participating the pre-bid discussion.

Sd/-  
Director  
Rajendra Institute of Medical Sciences  
Ranchi

In case of lack of any essential required documents the tenders will be rejected - The list of essential required documents which must be submitted with technical bid of the bidders :

- (i) Photocopy of JVAT (Sales tax) Registration certificate in Jharkhand State

- (ii) Photocopy of JVAT/Sates tax clearance certificate of Jharkhand State, valid at the time of opening of technical bid  
**OR**  
 If the bidding agency is not registered under Jharkhand sales tax department, then they must give an undertaking through notary affidavit that "They will supply the equipment/items at RIMS, Ranchi after payment of JVAT/Jharkhand Sales tax on their own & they will make their own arrangements for custom clearance in case of imported equipments. They shall not demand any document from RIMS for JVAT/custom clearance/duty exemption/waiver/relief in this regard".
- (iii) Copy of Manufacturing certificate or original copy of authorization from original equipment manufacturer in the name of authorized bidder for bidding on their behalf. (Photocopy or fax copy will not be valid).
- (iv) I.T. PAN no. of the bidder.
- (v) Earnest money in form of Demand Draft issued by any nationalized bank only in favour of **Director, Rajendra Institute of Medical Sciences, Ranchi –**
- (1) For Mechanized Laundry – Rs. 5,00,000.00
  - (2) For Blood Bank – Rs. 1,00,000.00
  - (3) For Central Emergency – Rs. 1,00,000.00
  - (4) For Ortho Equpts – Rs. 2,00,000.00
  - (5) For DPR Preparation of Bio-waste – Rs. 2,00,000.00
  - (6) For Skin & STD – Rs. 1,00,000.00
  - (7) For Dental Equpts – Rs. 2,00,000.00
  - (8) For Neuro Surgical Equpts – Rs. 3,00,000.00
  - (9) For Refrigerator – Rs. 20,000.00
  - (10) For Lead Apron – Rs. 50,000.00
- (vi) Affidavits through first class magistrate / Notary Public, mentioning that –
- (a) "Our company has not been black listed or convicted in the past by any Hospital Organization or by any Government / Semi government organization / P.S.U.s / C.B.I / C.C.I & free from all kind of litigation/allegations,
  - (b) That the firm has no vigilance case/CBI/FEMA/CCI case pending against him/supplier (Principal)
  - (c) That the firm is not supplying the same item at lower rate quoted in this tender to any government organization or any other institute".
  - (d) That the firm shall supply the consumables & accessories required to run the machine uninterruptedly during warranty & CMC period.
- (vii) Technical specifications with catalogue & dimensions of equipment, accessories & details of turnkey works (if any required for installation of equipments). The bidders have to provide complete layout plan of the constructions & electrical works (if any) required and to be done by the bidder within their offer for installation & functioning of the complete system.
- (viii) I.T. return certificate & balance sheet of the bidders for last three financial year having minimum turn over as follows :- for SI No. 1 to 8 minimum turnover of Rs. One crore per year in last three years & for Item no. 9 & 10 the bidder have to submit only balance sheet for last three years
- (ix) Acceptance letter/undertaking that they shall provide five years comprehensive warranty for all the equipments and turnkey works. Then further five years comprehensive maintenance contract with all spares, accessories & labour charges for all the equipments as well as turnkey works.
- (x) For Radiological equipments bidders must have to enclose the license or NOC issued from Indian Atomic Energy Regulatory Board, Government of India for the same model of equipment which they have / are quoted / quoting in this tender.
- (xi) The bidders of Biomedical waste disposal DPR have to give an undertaking that they shall follow all the CPCB norms and guidelines in preparation of the DPR.
- (C) Other terms & conditions of tender :
- (1) Technical part should contain the documents & request for proposal and all such details as mentioned in the term of reference or tender paper.



- (2) Financial part should contain the financial bid inclusive of equipment, accessories, all admissible turnkey works, warranty, guarantee, C.M.C., taxes etc.  
 Note :  
 (i) The offered price will be valid for minimum period of two years.  
 (ii) No price escalation for hardware's/accessories/equipment/turnkey etc will be acceptable during warranty/guarantee or CMC period, whatever circumstances may be.  
 (iii) Price escalation will be considered only for consumable / chemicals etc. but only atleast after two years from the date of handover of the complete project
- (3) Details with respect to terms and conditions & list of items and submission of such proposal can be obtained from "Term of Reference" i.e. tender document/paper & on RIMS **website - [www.rimsranchi.org](http://www.rimsranchi.org)**
- (4) If required by the technical committee, all the tenderers have to organize practical demonstrations of the same model machine at their nearest installation site to the nominated technical team of RIMS, Ranchi on tenderer's own cost before finalization of technical evaluation report.

Note :- Technical evaluation will be based on marks (score) basis. The technical committee will evaluate and compare the specifications & performance of the quoted equipment & they will provide marks as per performance. In finalization of prices the technical specification part will have weightage of 60% and price part will have weightage of 40%. Final approval will be done on overall marks basis. The bidder who scores the overall maximum marks, will be awarded. Price of only those bidders will be opened who will score at least 80% marks in the technical specification evaluation by the technical committee

For Example :-

Technical component	Price Component
(1) Party 'X' has scored 90 marks in technical evaluation	1. If party 'X' quoted 30% above rates than L-1 then he will get 70 marks in price evaluation
(2) Party 'Y' has scored 80 marks in technical evaluation	2. If party 'Y' quoted 20% above rates than L-1 then he will get 80 marks in price evaluation.
(3) Party 'Z' has scored 85 marks in technical evaluation	3. If party 'Z' become L-1 then he will be get 100 marks

Now for award of work calculation will be made on this basis :-

Sl. No	Party	Technical Score	Technical weightage	Price Score	Price weightage	Total score
1	Party 'X'	90 marks	54	70	28.4	82.40
2	Party 'Y'	80 marks	48	80	32	80.00
3	Party 'Z'	85 marks	51	100	40	91.00

Here in such case party 'Z' will be the winner of the tender.

5. The undersigned reserves the right to accept or reject in part or as a whole any of the proposal received without assigning any reason thereof.
6. Any legal matter related to this tender shall be under jurisdiction of Hon'ble Jharkhand High Court, Ranchi.
7. Before participating the bid, the bidders may visit the site at RIMS, Ranchi and may have discussion with the concerned faculty H.O.Ds regarding their requirements & queries.
8. Price Bid of only those bidders will be considered / opened who will qualify the technical documents parts as well as technical specification parts.
9. For major equipment the bidders have to quote separate, sealed price for each & every equipment, so that price of only specific technically qualified items of the bidders may be opened.
10. No payment shall be made in advance, whatever circumstances may be.
11. The bidding prices will be valid at least for two years or the next tender whichever is earlier. If there will be government holiday on any last day of the above schedule, the tender process will continue on the just next working day.

Sd/-  
 Director  
 Rajendra Institute of Medical Sciences  
 Ranchi.



## Department wise List of equipment & specification for sample tender paper to attend pre-bid meeting.

### (1) For Mechanized Laundry –

#### **TURNKEY PROJECT OF MECHANISED LAUNDRY SYSTEM**

##### **1. SPEC FOR WASHER EXTRACTOR (50kg to 60kg)- atleast 06 in nos to handle full load of approx 1500 bedded hospital.**

- Fully Automatic
- Computer controlled & programmable
- Variable speed drive
- Soft Mount with shock absorption up to 95%. Noiseless Operation
- Fault Diagnostic System inbuilt
- High Extract rate, economy for dryer cost
- Large Diameter Loading door, easy for loading and unloading.
- Safety Door Interlock
- Provision for Liquid as well as Solid chemical Injection
- 300 G Force maximum drying capacity
- Outer Drum - Made of Stainless steel AISI-304 with 2mm thickness
- Inner Drum - Made of Stainless steel AISI-304 with 2 mm thickness of basket, CNC Perforated
- Outer Cabinet Made of Stainless steel.
- Door - Made of die pressed Stainless steel AISI 304 quality, 2 mm thickness, Toughened glass window , SS door latch/handle and interlock for safety
- Level Sensor - Highly sensitive auto water level sensor with PLC
- Bearing Housing- Roller bearings of reputed brand duly packed with grease & Lubricants

##### **TECHNICAL SPEC**

Rated Capacity	:	50kg to 60kg
Heating Mode	:	Electric
Basket Volume	:	545 L
Washing/uniform (r/min)		
Moderate / fast (r/min)	:	375/750
Cycle Time (min)	:	45
Motor Power(kw)	:	5.5
Electric Heater (kw)	:	36 kw(Electric)
Steam tube (DN)mm	:	25 (Steam)
Hot/cold water tube	:	40 (DN) mm
Water consumption-	:	750 Ltrs
Power consumption about (kwh)	:	7 (Electric)
Steam pressure (mpa)	:	0.4-0.6 (Steam)
Compressed air (Mpa)	:	0.4-0.5
External Dimension (D x W x H) mm	:	1600 x 1650x1950
Machines Weight	:	2400 kgs

##### **Note:-**

- Company should have valid CE certified.
- Company should have valid ISO (9001-2008 & 2003-13485) certificate.
- Company should have manufacturing experience more than 10 years.

**2. SPEC FOR DRYING TRUMBLER (50KG to 60KG)- atleast 03 in nos to handle full load of 1500 bedded hospital**

- Fully Automatic Computer controlled
- Suitable for all kind of material
- Optional way of heat - electric heated, steam heated, gas heated.
- Large Diameter loading door, easy for input & output
- Safety Door Interlock

Rated Capacity	:	50 kg to 60 kg
Drum volume (L):	:	1000
Power supply V/P/Hz	:	380/3/50Hz
Main motor (kw))	:	2.2
Blower rated power(kw)	:	1.5
Drum rotation (r/min)	:	32
Steam Inlet (DN mm)	:	DN 25
Drain outlet (DN mm)	:	DN 20
Power consumption about (kwh) :	:	1.5
Steam consumption – Kgs :	:	70-80
Power consumption (kwh) :	:	29
Exhaust size(mm)	:	230
External Dimension	:	1330 x 1760 x 2210
(W x D x H) mm	:	
Machines Weight	:	620

**Note:-**

- Company should have valid CE certified.
- Company should have valid ISO (9001-2008 & 2003-13485) certificate.
- Company should have manufacturing experience more than 10 years

**3. SPEC OF FLATWORK IRONER-01 in No.**

- Simple chain drive mechanism with single motor.
- Heating roll made of high quality stainless steel
- Large contact area of 300 degree to maximize heat exchange
- Patented automatic belt tensioning system eliminates manual adjustment
- Variable speed frequency inverter control
- Gradual speed increment between rolls to improve ironing quality by stretching effect
- Heat isolation panel on feeding side
- Simple control with ON/OFF button and speed adjustment
- Heating roll and guide shaft drive simultaneously

Number of Roll	:	1 roll
Maximum Ironing Width	:	3000mm
Diameter of Roll	:	800mm
Ironing Speed	:	6-8M/min
Steam	:	0.4-0.6Mpa
Main motor	:	1.5kw
Steam Consumption (Kg/Hrs):	:	80 Kgs/ Hrs (Steam)
Width	:	4240mm
Depth	:	1400mm
Height	:	1260 mm
Net weight	:	1100 kg

**Note:-**

- Company should have valid CE certified.
- Company should have valid ISO (9001-2008 & 2003-13485) certificate.
- Company should have manufacturing experience more than 10 years



**4. FLAT BED PRESS:-02 in Nos.** This is ment for small to medium requirement to finish flat linens and is offered in many sizes, the lifting is pneumatic. Steam heating is offered. Auto head opening; auto temperature control is also offered. We recommend the size 1500mmX750 mm.

Size of Buck	: 1500mmX750mm
Size of Head	: 1500mm X750mm
Electric Heater	: 9KW
Electric Supply	: 230 V, Single Phase & N 50 C/S, A.C
<u>Air</u>	
Inlet	: 1/4 B.S.P
Pressure	: 6kg/CM.SQ.
Consumption	: 3CFM
Overall Dimension	
Length	: 1710 mm
Width	: 1300mm
Height	: 1825mm

**Note:-**

- Company should have valid CE certified.
- Company should have valid ISO (9001-2008 & 2003-13485) certificate.
- Company should have manufacturing experience more than 10 years

#### **5. VACUUM IRONING TABLE**

Vacuum ironing table is used for easy ironing operation. The steam generated in the boiler is used in the iron for sprinkling on the linen to remove the crease/folds while pressing the cloth. This helps for speedy operation. "Pedal press" which is provided at the bottom to evacuate the bed in case it is wet.

#### **Technical Specification**

<b>Equipment</b>	: - Vacuum ironing table with steam iron
<b>Working Table Size</b>	: 765 IX1220 w mm
<b>Electrical Load</b>	: -7.3KW
<b>Electric supply</b>	: 230 volts, single phase,50htz.A.C

**Note:-**

- Company should have valid CE certified.
- Company should have valid ISO (9001-2008 & 2003-13485) certificate.
- Company should have manufacturing experience more than 10 years

#### **6. DRY CLEANING MACHINE- 01 in No.**

- 3 tank version.
- 99.7 % recovery therefore no chemical smell
- Continuous distillation facility
- No requirement of cooling tower.
- Fully automatic.
- Specially designed for Indian Market.
- Easy and friendly software for ease of operation.
- Low maintenance cost.
- Minimal Colour bleeding.

#### **TECHNICAL SPEC**

Rated Capacity	:	8KG
Heating mode	:	Electric
Basket volume	:	165L
Basket diameter	:	690 mm
Basket depth	:	440 mm

Wash speed	:	40 RPM
Extract speed	:	400 RPM
Tank 1 capacity	:	80 L
Tank 2 capacity	:	80 L
Tank 3 capacity	:	110 L
Distillation Tank Capacity	:	130 L
Spin filter motor	:	25 L
Drive system	:	Inverter
Drive motor	:	1.5 KW
Solvent Pump	:	0.75 KW
Fan motor	:	0.37 KW
Spin filter motor	:	0.25 KW
Distillation heater	:	7.20 KW
Drying heater	:	5.40 KW
Installation power	:	12 KW
Power supply	:	415 / 3 / 50 V/H/P
Width	:	1550 MM
Depth	:	1080 MM
Height	:	1820 MM
Weight	:	850 KG
Air Compressor	:	Not included
Chiller	:	Not included

**Note:-**

- Company should have valid CE certified.
- Company should have valid ISO (9001-2008 & 2003-13485) certificate.
- Company should have manufacturing experience more than 10 years

**7. Shorting Trolley-5nos.**

**8. Wash Room Trolley:-5nos.**

**9. Linen Trolley-5nos.**

**10. Finish Linen Rack with 5 Shelves-8nos.**

**11. 5 H.P Air Compressor-1no.**

**12. TECHNICAL SPECIFICATION FOR 600 KG/HR CAPACITY NON-IBR STEAM BOILER-1no.**

1. Boiler Type:- Vertical, One through coil type, Reverse flue, three pass steam boiler.
2. Steam Output:-600kg/hr from & at 100 deg C.
3. Design/Working pressure:-10.5 kg/cm<sup>2</sup>
4. Saturated steam temp :-183 deg C.
5. Feed water inlet temp:-40 deg C maximum
6. Thermal efficiency on LCV:88 2%
7. Fuel for combustion: Light oil (HSD),LCV-10,300 kcal/kg.
8. Rated fuel consumption:36kg/hr
9. Burner output control: On-Off
10. Burner motor:-1.5kw
11. Feed water pump motor:-1.5 kw.
12. Total connected electric load:-3.0kw
13. Electric power supply:415V,3 Phase,50Hz,4 wire
14. Ambient temp & site attitude:5 to 40 deg C max 500m above MSL.
15. Pressure part tube grade:BS 3059,Part 1,ERW tubes.
16. Heating surface area:-8.13 m<sup>2</sup>
17. Overall dimension:-W-1800 D-2200,H-2600 MM
18. Dry weight of boiler-1050 kg



Note:-for consumption is based on stated LCV of fuel & boiler thermal efficiency. Thermal efficiency is subject to clean & external heating surfaces. Specifications are subjects to reasonable change without prior notice.

### **Design features**

- Reverse fuel three pass combustion system.
- Combustion air pre-heating outer jacket for enhanced efficiency.
- Water tube once through steam boiler design for quick stem output.
- Designed for maximum efficiency, ease of operation and maintenance.
- Fully automatic burner suitable for pre-heated combustion air.
- Skid mounted fully assembled & packaged boiler for easy installation.
- Use of standardized parts ensures easy availability of spare as parts.

### **Scope of Supply**

- Pressure part assembly consisting of coil in air-jacketed shell, refractory.
- Standard boiler mounting as per given list.
- Combustion air fan with drive motor & fuel pump mounted on drive motor shaft extension and air damper, all assembled on boiler shell.
- Water pump motor assembly with feed water inlet piping to pressure part, not-return valve and blow-down valve.
- Pressure jet oil burner integrally assembled in boiler with fuel piping fitted from fuel pump to burner.
- Control panel with sequence controller switchgears & boiler controls.
- Base frame for the steam boiler, forming & packed unit.
- Instruction manual and laminated wiring diagram for the boiler.

### **BOILER MOUNTING**

- Safety valve, spring loaded-One number
- Main stream stop valve:-One Number
- Auxiliary steam valve:-One Number
- Pressure Gauge with siphon & bib-coak-one number
- Pressure switch on steam header-one Number.

### **CONTROLS INSTRUMENTATION AND SAFETYS:**

- PRESSURE INDICATOR TO INDICATE FUEL PRESSURE.
- Flame sensor to supervise flame & initiate alarm on unsafe operation.
- Thermostat on fuel gas side as safety against high stack temperature.
- Pressure indicator to indicate steam pressure.
- TIC to indicate steam temp & for safety against steam superheat.
- Steam safety valve mounted on steam outlet header of boiler.
- PR switch to regulate steam pressure through burner on-off operation.

### **BATTERY LIMITS**

- **BOILER FEED WATER**                      **INLET FEED WATER PUMP**
- **STEAM**    **OUTLET OF STEAM STOP VALVES**
- **WATER & CONDENSATE DRAINS**      **OUTLER OF BLOW DOWN VALVE**





- \* Single manual multiport valve with built in ejector
- \* Brine Tank
- .. First fill of resin.
- .. Water hardness testing kit.
- \* Piping between raw water pump & softener
- Brine suction tube with NRV and suction filter at the bottom
- Set of internal distribution system comprising of top & bottom strainers with riser tube
- .. Operation & instruction manual
- .. Spares and chemicals for installation. Operation & maintenance.
- .. All electrical up to water pump
- \* Erection and commissioning of the unit at site.
- .. All civil and structural works for installing the softener
- .. Piping up to inlet of water pump & outlet of vessel
- .. Raw water, soft water storage & service tanks

**Note :** The bidders have to provide adequate operational man power for operation of their installed complete system for a period of 10 (ten) years (i.e. for life period of the system). The tenders without turnkey & man power will not be considered during evaluation.

**(2) For Blood Bank –**

1. Deep Freezer -40 deg. C.
2. Deep Freezer -80 deg. C
3. Blood Bank Refrigerator
4. Donor couch
5. Plasma thawing bath
6. Dielectric Tube sealer
7. Blood Mixer and Collector
8. Refrigerated water bath (Cryobath)
9. Automated Elisa
10. Semi Automated Reader and centrifuge for ID Gel cards
11. Balance for use of blood bank. (Double pan balance)
12. Auto component-Extractor machine
13. pH meter
14. Laboratory Refrigerator-for kit/reagent-500 ltrs.
15. Centrifuge Machine 10000rcf for TTI test
16. Automated Hemoglobin meter for Hb Estimation (Digital)



Technical Specification for Blood Bank  
Equipment to be purchased

Agenda Item No. 1

Review of Technical Specification of Deep Freezer -40°C

The committee approved the technical specifications of Deep Freezer -<sup>40°C</sup>~~30°C~~ follows:

1. Purpose of Equipment: To freeze and store Plasma
2. Type of Equipment: Compression freezer with CFC- free refrigerant
3. Capacity: As required by the blood bank (e.g. 200/400/600/900 Plasma bags of 200mL. each)
4. **Construction;**
  - Internal: stainless steel(min 22g) (S.S.V2 A-1.4301)
  - External: solid outer cabinet corrosion Resistant ( at least 1mm thickness)
  - CFC-free insulation
  - Design: Upright Type
  - Door: Solid door, Automatic closing of the front door below opening angle of 90°C and opening angle limited to 110°
  - Insulation and gasket should be silicone.
  - Separate inner doors to prevent cold loss
  - Drawers: Roll out type
  - Heating device on frame to avoid condensation.
5. **Electrical Characteristics:**
  - Input voltage: 220/240V 50Hz
  - A line voltage corrector of appropriate rating should form part of configuration.
6. Minimum Compressor Starting Voltage: 22% below nominal voltage
7. **Internal Temperature control:**
  - Electronic temperature control
  - Operating temperature reachable lowest up to -45°C with setting accuracy of 1°C whatever the load
  - Fan air cooling
  - Automatic defrost within safe temperature range
  - Casing & door should have insulation panel with polyurethane foam > 80mm thickness.
8. **Refrigeration:**
  - Heavy duty hermetically sealed compressor air cooled cascade refrigeration system maintains inner temperature below -40°C



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Receiver

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Faculty of Medical

- Option for duct from equipments to connect to common main duct to throw hot air out of the room.
  - Refrigerant CFC free/green gas
  - Optional: Access port for CO<sub>2</sub> backup system for refrigeration.
9. External Ambient Temperature : performs in an ambient temperature of +10 to +40°C

10. Hold over time : 2hrs at ambient temperature

#### 11. Cooling Down Time

- A full load of plasma packs at +25°C takes a maximum of 5 hrs for all the packs to reach below -5°C
- A full load of plasma packs at +25°C takes a maximum of 30 hrs for all the packs to reach below -20°C

#### 12. Temperature Monitoring;

- Digital temperature (LED) display with 0.1 °C graduation
- Temperature recording device.
- Microprocessor control for operation with integrated audio visual temperature alarm function with digital monitoring display. There should be a method to check alarm system.
- Seven days inkless graphic temperature recorder with range of 0°C to -50°C with data logger, with supply of free charts for a period of warranty.
- Battery backup for alarm and temperature recording device.
- Provision to connect with central (temperature) monitoring system
- Mounted on Lockable Castor wheels
- Alarm history: Temperature maximum and minimum, average temperature during alarm period, time of duration of alarm.

Desirable:

- Noise factor should not exceed 60 decibels.
- Should have compressor running time <60 to 70%

#### 13 Additional Requirements

- All equipments should specify design qualification Installation qualifications, Operational Qualifications and Performance qualifications. Validation and calibration reports should have traceability towards applicable national/international standards.
- Complete with comprehensive set of spare parts including a spare compressor, refrigerant gas cylinder etc. and a suitable capacity voltage stabilizer. The make rating, model, description, specifications, price quantity of each item shall be furnished separately.
- Necessary catalogues, technical write up in English shall be attached with the offer both in hard and soft copies.

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- Performance, efficiency, other factors such as distortion <sup>etc</sup> etc, As applicable be also furnished.
- Complete construction details in respect of material specification, thickness, finish etc. are to be furnished.
- Certifications:
  - Product certification CE class II A or US FDA certified
  - Quality certification : ISO certified
  - Electrical safety: Equipment meets electrical safety specifications such as that of IEC (Class I)

**Agenda Item No. 2:**

(13)

Review of Technical Specifications of Deep Freezer -80°C

The committee approved the technical specifications of Deep Freezer -80°C as follows:

1. Purpose of Equipment: to freeze and store plasma
2. Type of Equipment: Compression freezer with CFC-free refrigerant
3. Capacity: As required by the blood bank (e.g. 200/400/600/900 plasma bags of 200 ML. each)
4. **Construction:**
  - Internal: Stainless steel (min,22g) (s.s. V2A- 1.4301)
  - External: solid Outer cabinet corrosion Resistant (at least 1mm thickness)
  - CFC- free insulation
  - Design: Upright Type
  - Door: Solid door, Automatic closing of the front door blow opening angle of 90° and opening angle limited to 110°
  - Insulation and gasket should be silicone.
  - Separate inner doors to prevent cold loss.
  - Drawers: Roll out type
  - Heating device on frame to avoid condensation.
5. **Electrical Characteristics:**
  - Input voltage; 220/240V50Hz
  - A line voltage corrector of appropriate rating should form part of configuration.

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6. Minimum Compressor Starting Voltage: 22% below nominal voltage

7. Internal Temperature Control:

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- Electronic temperature control
- Operating temperature reachable lowest up to  $-86^{\circ}\text{C}$  with setting accuracy of  $\pm 1^{\circ}\text{C}$  whatever the load
- Fan air cooling
- Automatic defrost within safe temperature range
- Casing & door should have insulation panel with polyurethane foam  $> 80$  mm thickness.

8. Refrigeration:

- Heavy duty hermetically sealed compressor air cooled cascade refrigeration system, maintains inner temperature below  $-80^{\circ}\text{C}$
- Refrigerant CFC free/green gas
- Option for duct from equipment to connect to common main duct to throw hot air out of the room.

9. External Ambient Temperature: Performs in an ambient temperature of  $+10$  to  $+40^{\circ}\text{C}$

10. Hold over time : 2 hrs at ambient temperature

11. Cooling Down Time:

A full load of plasma packs at  $+25^{\circ}\text{C}$  takes a maximum of 30 hrs for all the packs to reach below  $-20^{\circ}\text{C}$

*Systems  
19/02/14*



Agenda-Item No: 3

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Review of Technical Specifications of Blood Bank Refrigerator

The committee approved the technical specifications of Blood Bank Refrigerator as follows:

1. Purpose of Equipment: A refrigerator for storing whole blood or red cell packs in a blood bank.
2. Type of Equipment: compression type refrigerator that uses CFC- free refrigerant gas/ green gas
3. capacity: As required by the blood bank ( e.g. <sup>see bags</sup> 200/400/600/900 blood gags of about 350/450ml. each)
4. Construction:
  - Internal: Stainless steel (min. 22g)
  - External: Corrosion Resistant (CR at least 1mm thickness)
  - CFC- free insulation
  - Drawer: Roll out type, Stainless steel scratch resistant material, perforated on the bottom for perfect and homogeneous distribution of cold air. The separators, if provided in the drawers, should be such that blood bags are held in a vertical position with the label side visible.
  - Door
    - Glass door, Automatic closing of the front door below opening angle of 90° and opening angle limited to 110°
    - Insulation and gasket should be silicone.
    - Polyurethane Insulation should be minimum 80mm
    - Door opening audio and visual display alarm.
5. Temperature range:
  - 2°C to 6°C and adjustable with setting accuracy of  $\pm 0.1^\circ\text{C}$  with set temperature of 4°C.
  - User Parameter settings: set point, high alarm point, low alarm point buzzer off time, C/F Temperature choice
6. Electrical Characteristics: Input voltage: 220/240V 50Hz.
  - Equipment meets electrical safety specifications such as that of IEC ( Class I).
  - A line voltage corrector of appropriate rating will form part of standard configuration
7. Minimum Compressor Starting voltage: 22% below nominal voltage
8. Internal Temperature Control:

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- Electronic temperature control, range +2 °C to +6 °C with setting accuracy of  $\pm 1$  °C whatever the load
- 
9. Fan air cooling
  9. External Ambient Temperature: Performs in an ambient temperature of +10 to +40°C
  10. Hold- Over Time: A full load of blood packs at +4 °C ( $\pm 1$  °C) takes at least 30 minutes to rise to above +6°C
  11. Internal temperature hold over time in case of power failure should be at least 1.5 hours.
  12. Cooling Down Time: A full load of blood packs at +25°C takes a maximum of 13 hrs for all the packs to reach below +6 °C
  13. **Temperature Monitoring:**
    - Digital temperature (LED) display with 0.1 °C graduation
    - Microprocessor based temperature controller with Integrated audiovisual temperature and power alarm function with digital monitoring display.
    - Independent safety thermostat to avoid negative temperatures.
    - At least 2 Temperature Sensors: Sensor for temperature monitoring shown on front display, Sensor for managing use of compressor.
  14. **Temperature recording device**
    - Visual and audible alarm system indicating unsafe temperatures
    - Battery backup for alarm and temperature recording device
    - Facility for remote alarm contact
    - Seven days graphic temperature recorder with range of - 10°C to + 20°C with data logger, with supply of free charts for a period of warranty.
    - Ideal compressor running time of 27% at room temperature.
    - Interior lighting
    - External ambient temperature +10 °C to +40°C
    - Auto defrosting
    - Cooling time – Maximum 13 hours for all the packs to reach below +6°C
  15. **Certifications:**
    - Product certification: CE Class II A or US FDA certified
    - Quality Certification: ISO certified
    - Electrical Safety: Equipment meets electrical safety specifications such as that of IEC (Class I)

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Agenda Item No. 9

3

Review of Technical Specifications of Donor couch  
The committee approved the technical specifications of Donor Couch as follows:

1. Blood Donor Couch is a completely automatic enveloping, variable tilt chair and specially designed to make blood withdrawals easier, safe and functional, and also for other diagnostic and therapeutic areas
2. Variable positioning for either arm with comfortably wide arm-rests with swinging out as well as up and down moving facility.
4. Both sides should have supporting brackets for material required for blood collection.
5. Ergonomically designed comfortable chair type for donor comfort. Mattress should be comfortably cushioned with elegantly thick washable upholstery.
6. Seat, back rest and leg rest size designed for donor comfort. It should have step less electric remote controlled height adjustment.
7. Easily tilted to head low position, electrically operated.
8. Should be mobile with lockable wheels.
9. Comfortable working level for the operator. Lifting capacity – Approx 200 kg.

**8. Certifications:**

- Product certification: CE Class II A or US FDA certified
- Quality Certification: ISO certified
- Electrical safety: Equipment meets electrical safety specifications such as that of IEC (Class I)

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## Agenda Item No. 11

### Review of technical specifications of plasma Thawing Bath

The committee approved the technical specifications of Plasma Thawing Bath as follows:

1. Bath is designed to safely quickly and optimally and reliably thaw fresh frozen plasma (FFP) and cryoprecipitate for the recovery of coagulation factors and cryoprecipitated antihemophilic factor (AHF). For thawing of Plasma and cryoprecipitate at required temperatures.
2. Table top with top opening
3. capacity of minimum 10 to 15 plasma bags with rack holders
4. Internal Body Material: Stainless steel (Non corrosive, Non Magnetic)
5. Having a deep thawing chamber with a stirrer and with water maintained at +37°C with pumping mechanism and in-line heating system to ensure uniform thawing.
6. Quick thawing(>20 minutes)
7. Should be able to thaw 48 plasma bags (FFP/ cryoprecipitate/ Aphaeresis or plasma gaffs of any size).
8. Should be a water bath based system operating at a preset and precise temperature of  $37^{\circ}\text{C} \pm 0.2^{\circ}\text{C}$
9. Should have two separate basket assemblies with built-in fingers for securely holding the plasma bags of all sizes.
10. trays with individual compartment to ensure that parts of bags may be kept above water level during the procedure.
11. Tray : Removable type stainless steel trays with partitions for holding plasma gags
12. Should give an alarm when the plasma bags are thawed.
13. Provision for programmable time setting for length of thawing.
14. Should have digital timer clearly displaying the programmed set time or remaining cycle in minutes.
15. Should have audio visual over-temperature alarm system.
16. Should have a system to drain the chamber easily.
17. Should be supplied with a cover to keep the unit covered when not in use
18. Simple to operate, easy to read LED display
19. Drain Line with shut off valve can be connected to existing plumbing.
20. power supply: 220- 240 volts at 50Hz, single phase

#### 21. Accessories:

1. Reusable wrap bag- 8 numbers

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2. Frozen plasma bag holder
  3. Compression rack holder
  4. Reference thermometer
- 

## 22. Certifications:

Product certification: CE Class II A or US FDA certified

Quality certification ISO certified

Electrical Safety: Equipment meets electrical safety specifications such as that of IEC (Class I)

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## Agenda Item No. 12.

### Review of Technical specifications of Dielectric Tube Sealer.

The committee approved the technical specifications of Dielectric Tube sealer as follows:

1. Blood Bag tube Sealer is a compact equipment to seal the Blood bag pilot tubing.
2. The system should be heavy duty and be able to seal the blood bag etc quickly and effectively.
3. Should be simple to handle
4. System should gently seal the tubing with no hemolysis using radio frequency.
5. Should be capable of making wide seal of 2 mm thickness.
6. Should be for bench-top use.
7. The sealing time should not be more than 2 seconds.
8. Sealing trigger should be automatic
9. Should also have extended portable hand unit sealing hand should be with coaxial cable of 1.5-2.0 meter.
10. Should have indication lamps for sealing "process" on handle as well as main unit.
11. No warm-up time should be required.
12. Should ensure easy separation of tube segments after the sealing
13. System should run on both mains and battery (more than 10 hrs. back up and charger).
14. Back-up battery should seal more than 500 seals on PVC - tubes in continuous mode.

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15. The unit shall be capable of operating continuously in ambient temperature of 10-40°C and relative humidity of 15-90%

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16. Power input 220-240V/50Hz AC single phase or 380-400VAC 50Hz Three phase fitted with appropriate Indian plugs and sockets.
17. Suitable Auto voltage corrector with spike protector should be available.
18. Electrodes should be well protected by a cover
19. Certifications  
Product certification: CE Class II A or US FDA certified  
Quality certification: ISO certified  
Electrical safety: Equipment meets electrical safety specifications such as that of IEC (Class I) or Class II type- B device to protect against electric shock.  
Shall meet IEC-60601-1-2-2001 (or Equivalent BIS) General Requirements of safety for Electromagnetic Compatibility

**Agenda Item No. 13.**

(2)

Review of Technical Specifications of blood Mixer and Collector

The committee approved the technical specifications of Blood Mixer and collector as follows:

1. The system is used to collect donated blood from the donor at the same time mixing the blood for quality collection of blood.
2. It is meant for stationary and mobile use. Gentle end to end mixing and control of collection time to give high quality Blood suitable for all blood bags.
3. Volume setting: pre-selection of volume to be collected. Tarring of bag volume before collection. Tarring range: 0 -600 g. Automatic storage and recall of set volume. Measure volume with best accuracy.
4. LED indication on commencement of collection.
5. LED indication and audible alarm at the end of collection.
6. Indication of time taken for collection.
7. Indication of blood flow with audio alarm when blood flow is higher or lower than desired.
8. Continuous display of collected volume, flow and time during collection
9. Automatic clamping at termination of preset volume collection.

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10. Automatic release of bag when lifted.
11. Continuous agitation of blood bags during collection: 12-16 rpm

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12. Equipments carry case for BCM should be provided for portability.
13. Should operate on mains as well as rechargeable battery. On battery it should operate for a minimum of 5-8 hours.
14. The unit shall be capable of operating continuously in ambient temperature of 10-40°C and relative humidity of 10-90%
15. Power input to be 220-240 VAC, 50Hz/ 440V3 phase as appropriate fitted with Indian plug.
16. Resettable over current breaker shall be fitted for protection
17. Suitable Automatic Voltage regulator/stabilizer meeting ISI specifications should be supplied. Broad specifications are: Automatic Type Input 150-280V output 220V+/-7%, 50Hz. single phase, AC with automatic 2-4 sec Cut Off and 6-9 minutes restart delay. Quick start arrangements for by passing the start delay. Suitable MCB on input voltmeter and indicators on front panel.  
Input pore cable with 15 A plug and six way output terminal strip for two outlets.

**18. Certifications:**

Product certification: CE Class II A or US FDA Certified

Quality Certification: ISO certified

Electrical safety; Equipment ,meets electrical safety specifications as that of IEC (Class I ) or Class II type-B device to protect against electric shock.

Shall meet IEC-60601-1-2; 2001 9 Or Equivalent BIS) General Requirements of safety for Electromagnetic Compatibility

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17. Review of Technical Specifications of Refrigerated water bath (Cryobath)

The committee approved the technical specification of Refrigerated water bath (Cryobath) as follows:

1. For uniform thawing of plasma bags at preset temperature of  $4 \pm 0.2^{\circ}\text{C}$
2. High capacity pump to facilitate optimum and uniform thawing of plasma.
3. Capacity: 10-12 bags per run or per one cycle.
4. System to prevent contamination of individual ports during thawing.
5. Microprocessor based controller for precise monitoring and controlling of temperature at  $4 \pm 0.2^{\circ}\text{C}$
6. Other requirements:
  - a) Input Power supply:  $230 \pm 10\% \text{V}$ , 50Hz, 15A Single phase AC
  - b) Power consumption: Maximum 1600w
  - c) Operating temperature:  $3.5^{\circ}\text{C} - 4.5^{\circ}\text{C}$
  - d) Programmable temp. range:  $3^{\circ}\text{C} - 50^{\circ}\text{C}$
  - e) Display resolution:  $0.1^{\circ}\text{C}$
  - f) Temp. controller: Microprocessor based digital controller
  - g) Stainless steel tank of 22 guage & stainless steel lid of at least 20 guage.
  - h) Time taken for one process: Not more than 2 hours for plasma bags store at  $-40^{\circ}\text{C}$ .
  - i) Tray: Stainless steel, removable tray of individual compartments for holding plasma bags.
  - j) External dimension (WxDxH): should be less than  $850 \times 500 \times 800 \text{ mm}$  ( $\pm 10\%$ ).
  - k) Castor wheels: Mounted on lockable castor wheels.
  - l) Temp. sensing method: sealed sensor dipped directly in the water.
  - m) weight: Less than 70 Kg
  - n) Drain line with shut off valve can be connected to existing plumbing.
7. **Certifications:**
  - Product certification: CE Class II A or US FDA certified
  - Quality Certification: ISO certified
  - Protection against electric mechanical hazards: Preferably having imitational safety requirements of EN6 1010-1.

The representations/ complaints received from the manufactures during the pre-bid meetings for past 5 years have also been examined while finalizing these technical specifications and wherever found necessary suitable modifications have been incorporated.

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~~ELISA~~ - Specifications For Automated ELISA

1. CE & US FDA Approved Fully Automated Walk away Micro plate ELISA System
2. CAP( College of American Pathology) listed system

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3. Sample capacity- 190/ Batch
4. Independent racks for sample loading( 12 Racks) which can accommodate different type of sample tubes varying from 1.5 ml Eppendorf tubes to sample tubes of 10 to 16 mm in diameter
5. Multi tasking modular system ( simultaneous functioning of different processing steps)\* like Sample pipetting, Incubating, washing, and Reading
6. Assay Optimization to reduce the total turnaround time for faster throughput.
7. Triple technology liquid detection system ( capacitance, Air pressure & Colorimetric )
8. QC software inbuilt with Westgard Rules.
9. Original kit vial loading facility( direct loading of reagent vials irrespective of the manufacturer)
10. Should be a Single probe system to avoid repeated breakdowns
11. Dual Robotic arm- one for Sample/reagent dispensing and the other for Micro plate transporter
12. Carbonized disposable tips for reagent dispensing & sample dispensing
13. Should have Primary Tube sampling facility
14. Parallel Sample dispensing
15. Aspiration Pressure monitoring facility
16. Sample dilutions - 1 to 1:10000
17. Should have option for Plate dilution, in tip dilution as well as tube dilution
18. Should be able to process up to 7 micro plates at a time with minimum of 4 plates with any assay protocol (4 incubators at RT and 4 with temp options from RT to 47°C)
19. Should have Clot detector
20. On board capacity of 480 Sample/ Reagent Tips
21. Should have at least 24 position for reagents and 20 positions for control.
22. Automatic sample, Reagent, and Micro plate bar-code reader.
23. 8 Channel washer manifold with spot light and Cross well aspiration.
24. 8 filter positions (pre installed 6 filters with a range of 405-690 nm and 2 optional).
25. Bi-directional interface.
26. Start up time – less than 10 minutes.
27. Option for performing Individual modular functions (Washing, reading, incubation and sample addition.)
28. 24 Hrs service support with toll free Number.
29. ~~Manufacturer should have more than 100 installations worldwide.~~
30. Installation references from reputed Govt. Institution.
31. Should have more than 15 Installations in India at Blood Banks, Laboratories and Clinical research Organizations
32. Reagent lot Tracking
33. Should have Software for Multiple system configurations Software should have option for generating different type of patient report

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## Specifications for Semi-Automated Raeder and Centrifuge for ID Gel cards (~~Auto~~ ID Reader)

Semi-automated Immunohematology analyser able to perform centrifugation, reading and interpretation of all the tests based on Sephadex Gel Technology for Cross Matching on coombs and enzyme phase I pick both IgG & IgM Antibodies, Blood Grouping, partial D typing, Antibody screening & Identification.

1. Equipment should Centrifuge, Read and Interprets ID Gel Cards in one working step.
2. Equipment must centrifuge cards for the test require incubation at 4°C or 37°C at one run.
3. Capacity for 24 ID-Cards with 6 "V" bottom shaped tubes based on Gel technology.
4. Centrifugation time should be 10 minutes with 85g force.
5. The rpm of instrument should be 910± 5.
6. The instrument should read 24 cards within 4 minutes.
7. The total cycle time for centrifugation and reading of the cards should be less than 15 minutes.
8. It should be able to do full positive identification of the Cards.
9. It should give easy interpretation with clear colour images of the test results with CCD camera
10. The instrument should be able to validate, store, print and sent the results to host computer.
11. There should be complete traceability of tests, results and operator.
12. All operations are monitored by Maestro Master Software.
13. Instrument should be able to perform more than 50 different kind of test including specialised tests like Partial RhD testing, D<sup>weak</sup>, Single Rare antigens, PNH, Heparin/PF4 Ab Test (HIT) etc.
14. Exhibit different gradation of reaction (4+, 3+, 2+, 1+ & -ve).
15. Dimensions (w/h/d): 53.2 cm / 38.8 cm / 52.4 cm (AMmp)
16. Weight: 25 kg (AMmp)
17. Power requirements: 100 V - 230 VAC
18. Frequency: 50 Hz - 60 Hz
19. CE compliant according to IVD Directive 98/79/EC.

### The company should have the following combinations of cards/Reagents:

1) Sephadex Gel based LISS/Coombs cards with 6 "V" bottom shaped micro tubes containing polyspecific AHG (rabbit anti-IgG, monoclonal anti-C3d, clone no C139-9) For Coomb's Cross-match, IAT, DAT.

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2) Sephadex Gel based PNH Test with Anti-DAT & Anti-MIRL Antigens.

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3) Sephadex Gel based Heparin /PF4 Ab test (HIT)

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4) Gel based Anti-IgA antibody test.

5) Gel based Forward/Reverse Blood grouping cards with 6 'V' shaped bottom tubes.

6) The company should offer complete panel of ready to use liquid red cell reagents for antibody screening & identification, including the Anti-D prophylaxis panel for Rh negatives.

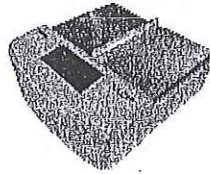
7) The satisfactory user list of at least 200 customers using Sephadex Gel technique based System.

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## OUR PRODUCTS

# ⑪ Double Pan Balance, Specification

M-DP is a micro controller based system which equally balances the blood bags after donation & before centrifugation for getting good quality of blood products.



### CAPD

- » An Introduction To CAPD
- » Why CAPD
- » Exchange Diagram
- » Weight & Fluid Balance
- » Diet Chart
- » 4 GYP
- » Tri-Choice Bag

### BLOOD BAG

- » Specifications

### FILTER BAG

- » M1 Bedside Filter
- » M1 Labside Filter
- » M1 Inline Filters
  - » M1 TAB
  - » M1 TIB

### BLOOD BANK EQUIPMENTS

- » M BCM
- » M & Seal
- » M Striper
- » M SP
- » M DP

### NON CARDIAC STENT

## SPECIFICATIONS

✓ Range of weight measurement	0-2000 grams
✓ Maximum weight difference to be displayed	2000 grams ✓
✓ Weight sensor	Load cell
Weight display panel	Back light 4 line alphanumeric LCD display for better visibility
Indication Lamp	LCD display massage after equal balance
Weight Difference display	LCD display with each pan weight difference
Calibration	Auto calibration
Accuracy	Weight calibration tolerance : ±1 gm.
Power source weight	Total accuracy of display : ±1 gm.
Temperature characteristics	220-240V AC 50Hz
	Approx 3 kg
	Operating : 0~30°C
	Storage : 0~40°C ✓

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## SPECIFICATION FOR AUTOMATIC COMPONENT MACHINE

### Auto component machine should

- Standardized blood components through automated procedures
- Increased process control – consistent recovery of components
- Better quality of blood components
- High quality platelet.
- Higher yield of components.
- Leuko-reduced red cell and Platelet.
- Promote component preparation through buffy- coat method
- Compatible for Top & Bottom and Top and Top bags
- Platelets are prepared from buffy coat with light spin.
  
- Double press system for separation of plasma and transfer of SAGM
- Third press for automatic pressing of air out of the plasma bag
- Press movement by motor drive (No compressor required)
- Red cells, buffy coat and plasma balances
- Transparent press plates for clear follow-up of the separation process
- Having 6 sensor for Red Cell and 4 sensor in sealing heads
- HAVING COLORMETRIC SENSOR (Can sense color density of Fluid accordingly control the flow of Blood Components)
- Control of optimum flow regulation for low hemolysis rates
- Self-adjustable sealing heads for each-tube material
- Processing of most complex filtration processes
- Rotatable sealing heads and sensor heads
- High platelet recovery from Buffy Coat and PRP.

### Automatic component extractor Machine should

- Ensuring Highest Quality of Components
- Red cells should be treated carefully and smoothly
- Plasma should be cell free
- Platelets should be high recovered
- Plasma filtration at the machine possible
- Platelet count should be higher than  $5.5 \times 10^{10}$
- Less activation of platelet during preparation
- Less red cell contamination in Platelet.
- Leukocyte reduced Platelet.
- Compatible to both Top & Top and Top & Bottom Bags

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- Storage of up to 20 user programs possible
- Color touch screen with intuitive user navigation
- Visual simulation of the user programs for shortest period of user training
- Conversion of Gram to Milliliter
- Barcode reader can be connected
- Easy connection to the local PC network
- LAN data transfer, network capability, integrated data storage and management, data connection
- Distance diagnosis possible
- Smart label technology / RFID (optional)

### Technical Specifications

- Power supply Should 85-260V; 50/60Hz single phase AC
- Dimensions should be 551 x 357 x 415 mm
- Weight should 25 kg(Approx.)
- Balances Should be 2 (Two) in nos
- Number of sealing heads should be 5(five) in nos
- Sealing time should be 0.5 - 5 sec
- Flow regulation - From 0 to maximum
- Data transfer - LAN/WLAN
- Sensor system:
  - Reading performance for red cells in mother bag - 6 sensors for red cells in mother bag in a row
  - Sensors in sealing head - 4 pieces

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## Technical Specification for PH Meter

Combined logging with GLP pH/mV/EC/TDS/NaCl/Temp; pH range: -2.00 to 16.00pH and -2.000 to 16.000 pH;  
ORP range:  $\pm 699,9$  to  $\pm 2000$  mV;  
EC range: 0.00 to 29.99  $\mu\text{S/cm}$ ; 30.0 to 299.0  $\mu\text{S/cm}$ ; 30.0 to 299.0  $\mu\text{S/cm}$ ; 3.00 to 29.99 mS/cm, 30.0 to 200.0 mS/cm; till 500.0 mS/cm without cat;  
TDS range: 0.00 to 14.99 mg/L(ppm); 15.0 to 149.9 mg/L; 150 to 1499 g/L (ppt); 1.50 to 14.99 g/L (ppt); 15.0 to 100.0 g/L; till 400.0 g/L.  
Supplied with a pH refillable electrode MA917B/1,  
temperature probe MA831R and MA814DB/1  
conductivity probe,  
electrode holder MA9315,  
software Mi5200, RS232 connection with 2 meter cable, 12 VDC adapter and calibration solutions.

*18/2/2011*

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## TECHNICAL SPECIFICATIONS

1.

### LABORATORY / MEDICAL REFRIGERATOR (4°C) -

#### **Capacities -500 Litre**

- Temperature range 2 to 8 Deg C
- Inner Cabinet made up of Pre-coated steel
- Outer Cabinet made up powder coated sheet
- Using Refrigerant R134a
- Ventilation cooling system, no frost ventilation cooling system and fan-assisted cooling system
- Ultra fast pull down times
- Auto defrost with self-evaporating drip tray
- Front-to-rear hot air anti-condensation
- Digital temperature controller
- Double glazed safety glass doors
- Full length illumination
- Fitted with castor wheels, front two with brakes
- Heavy duty adjustable shelves
- Self closing hinge doors, self stopping sliding doors
- Low noise and green technology
- Energy saving technology
- Brand compressor and main parts
- Lock as standard
- Automatic Voltage Stabilizer with time delay restart
- Port Holes - access ports on either side of the chamber
- Power socket: 2 Nos of 5 Amps & 2 nos of 15 Amps power sockets with switch inside the chamber
- Circular 7-day Chart Recorder, Microprocessor based
- Data logger with display for continuous logging of temperature through external USB
- IQ/PQ/OQ/DQ documentation

CE & ISO certified by TUV-SUD


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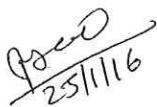
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Technical Specification for Centrifuge Machine for TTI Test Lab

- Table top Non Refrigerated Centrifuge for conical bottom and round bottom tubes
- Instrument should have a maximum speed of 20,800 x g (14000rpm)
- Brushless maintenance free drive
- Fast Temp function for pre-cooling of the centrifuge
- It should be possible to adjust the acceleration and deceleration ramps from 0-9
- Should have an "at set rpm" function which enables timer countdown to be started only after the set speed is reached
- Should be possible to set the speeds in rpm/rcf, radius correction values must be user changeable
- There should be a separate short spin key for brief spin
- Instrument should have a built –in condensation drain to eliminate water accumulation and prevent corrosion
- It should be also possible to use the centrifuge for various tubes formats by buying additional rotors/adapters when required
- It should also be possible to use micro titre plates with dedicated rotors
- Rotors and lid should be made of aluminum only
- Rotors and lid should be autoclavable at 121°C for 20 mins
- Automatic rotor recognition should be available
- Instrument should possess an automatic imbalance detection for safety
- Instrument should be CE certified and should possess an IVD conformity
- Maximum weight of centrifuge without rotor – 55 kg
- Maximum power consumption – 900 w
- Maximum height ( with open lid ) – 74 cm
- Rotor – 6 x 85ml with Adaptor for 10 to 15ml tube can run at a time minimum 12 tubes

  
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## Hemoglobin Meter

### Technical Specification

- Hb Hemoglobin Meter with optical system
- Quantitative determination of hemoglobin and calculated haematocrit
- Sample volume 10 ul
- Test with whole blood , EDTA or heparin anticoagulants can be used
- Measuring Time < 15 Seconds
- Battery life 1000 test
- Patient Memory record should be 1000 test result
- Auto Calibration by code chip
- Measuring range 5-25 gm/dl

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**(3) List of equipment for Central Emergency & Others :—**

1. Emergency cum recovery trolley hydraulic
2. Resuscitation kit set for adult and child. (Silicon)
3. Intubation complete set- for Adult and child
4. Fiber optic laryngoscope set - for Adult and child
5. Defibrillator with facility for ECG, SPO2, NIBP, Upgradable to EtCO2 and with external pacing system.
6. Ventilator machine- child and adult.
7. Oxygen concentrator
8. Pulse oxymeter
9. Nebulizer
10. Multi-para meter monitor
11. Digital Diathermy
12. MRI compatible Multi Para Monitor
13. Cobalator
14. ABR with ASSR
15. Impedance audiometer
16. OAE
17. Video stroboscope
18. Temporal Bone lab
19. ENT workstation
20. Ultra Sonic cleaner
21. LED X-Ray viewer
22. Modular OPD
23. Advance anaesthesia work station with inbuilt ventilator monitor and defibrillator.
24. Airway management system (Complete set (Adult/Paedia.)
25. Non invasive cardiac support pump with sync. defibrillator.
26. Infant weighing machine Electronics (Not manual)
27. Adult weighing machine Electronics (Not manual)

Item No. ①

Emergency & Recovery Trolley (Hydraulic)

- Strong and precise steel tubular frame work mounted on four 150 mm. dia non rusting swiveling castors – two with brakes.
- Foot pedal operated hydraulic height adjustment.
- Trendelenberg/Reverse Trendelenberg positions achieved through gas spring.
- Two section removable Radio-translucent stretcher top with Backrest adjustment on ratchet.
- X-ray cassette holder with full length channel.
- Provided with swing away type SS side Railings, Oxygen Cylinder Cage, Rubber Buffers, Utility Tray and SS telescopic Saline Rod.
- Dimension: 2100L X 650W X 650 to 950H mm (approx.).
- Pretreated and Epoxy Powder Coated.



5) Technical Specifications of defibrillator cum monitor with external pacing

1. The machine should have facility for ECG Monitoring, defibrillation, external pacing (transcutaneous) & recorder.
2. The Defibrillator should be Biphasic technology, having energy selection up to maximum 200 joules in AED as well as in manual mode.
3. It must be capable of monitoring ECG through ECG cables, Multi function electrodes and paddles through multifunction single cable.
4. The machine should be able to defibrillate Adult, Pediatric patients.
5. The machine should have ECG waveform display on bright high resolution display.
6. The machine should be compact, portable with inbuilt rechargeable battery. The machine should not be more than 7 Kgs with battery and paddles.
7. The machine should have in built recorder printing ECG trace & stored information.
8. The machine should have a facility of External non-invasive pacing with 40 ms pulse width
9. It should have ability to measure chest compression rate and depth in real time with visual feedback on screen with rate and depth indicator.
10. The machine should have user selectable alarm settings.
11. The machine should work on mains as well as on rechargeable battery
12. The unit should be supplied with Adult and inbuilt pediatric external paddles The machine should have facility to increase/decrease energy selection on paddles as well as on unit .The unit should also have facility to give print out of ECG and shock instantly from paddles.
13. The charging time should be less than 7 secs at maximum energy
14. The unit should be supplied with following accessories /items unit
  - a) Battery -1 nos
  - b) 3-Lead ECG cable - 1 nos
  - c) External defibrillator paddles (pediatric inbuilt in adult)- 1 nos
  - d) Multi Function Defibrillator & Monitoring padz/gel sheets - 100 nos
  - e) Must supply Reusable CPR feedback sensor/or similar product reused at least on 90 patients – 2 nos
15. The unit should have facility to upgrade to monitor
  - A) ETCO<sub>2</sub>,
  - B) NIBP ,
  - C) SPO<sub>2</sub>
  - d) 12 lead ECG & Internal defibrillation
16. The unit should be U.S FDA approved.

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## Specification for Intensive Care Ventilator

1. Advanced Microprocessor Controlled ICU Ventilator –Useful for Pediatric to adult with invasive and non-invasive ventilation with external air source based on external compressor Technology (No turbine or blower or piston) & color touch screen display of 12”.
2. Integrated Multicolor Touch Screen Display for  
Pressure-Time, Flow-Time, Volume-Time waveform display, any two waveforms display on one screen. Loops of Volume pressure, flow volume, facility to display two loops on one screen.
3. Ventilator should have following patient selection: Infant , Paediatric, Adult
  - Breath Type: Volume control (VC), Pressure Control (PC)
  - Modes (in each type): Assist/ Control Mandatory Ventilation
  - SIMV, Spontaneous (SPONT), PSV, CPAP
  - Should have Back up Ventilation : All Modes
  - Frequency : 1 – 150 breath / Mnt
  - Tidal Volume : 20ml to 3000 ml with an option to upgrade it to 5ml on site.
  - PEEP/ CPAP: 0 to 45 cm H<sub>2</sub>O
  - Pressure Support: 0 –60 cm H<sub>2</sub>O
  - PRESSURE CONTROL : 0- 80 cm H<sub>2</sub>O
  - Inspiratory Flow : 1 to 180 LPM
  - I:E Ratio : Max. inverse: 4:1 to 1:9
  - FIO<sub>2</sub> setting : 21% to 100%
  - Inspiratory Time : 0.1 sec to 5 sec
  - Should have Triggering : Both pressure Triggering – 0.1 to – 05 cm / Flow Triggering 0.1 LPM to 2.0 LPM .
  - Insp. Hold and Exp. Hold.
  - Dual mode / VTTC/PRVC
  - Dual mode in pressure support ( VTPS )
  - BPRV or Bilevel or BiVent
4. Ventilator should monitor and display following real time data parameters:  
Ppeak , Pplat , Pmean , Pbase , Total PEEP , Cdyn effective, Cstat , Insp VT , Exp . VT , Exp. VT variation , Insp. MV , Exp . MV Exp. MV Spont ., Insp. Flow , Exp. Flow , RSBI, WOBim, I:E Ratio , Insp. Time , RR Total , RR Spont , FiO<sub>2</sub>
5. Ventilator should have following Alarms -- High / Low Expiratory Minute volume, High/low air way pressure, High RR , Settings out of range , P limit below PEEP , Sustained high baseline pressure, Check vent fan, Apnea, High/low Baseline Pressure, Gas supply, Power Fail, Alarm silence, I:E Ratio Inverse violation , Low / High FiO<sub>2</sub> , Low Paw below PEEP , VOL Target not met , Device Alert ,Alarm reset, Back up ventilation, Insp Time Too Short , Insp Time Too Long , Back up ventilation , O<sub>2</sub> Sensor error / O<sub>2</sub> Sensor Disconnection, Flow sensor error , Suction disconnect function.
6. Power Supply : 100-240 CAC, 250 VA max., 50/60 Hz/ battery back up for 60 min.

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*Central Emergency*

7. Gas Supply Requirement: Air and O2 supply, Inlet Pressure should be between 30 to 90 psig.
8. Ventilator should have facility to measure NIF and P0.1.
9. Should have Slope / Rise (Manual and Automatic) setting as in-built facility.
10. Flex cycle / expiratory threshold setting (Manual and Automatic) for pressure supported breaths as in-built facility.
11. VGA , USB ,RS 232 C , External Battery
12. Automatic Leak Compensation,
13. Should record upto 1000 episodes of alarms .
14. Automatic Compliance Compensation , Auto altitude compensation , Humidification System compensation , Circuit check for leak & compliance & resistance.
15. 100 % O2 for 3 min , Automatic Bias flow , 24 HOUR TRENDS OF 8 parameters.
16. Ventilator should be US FDA. US FDA approved External Medical air compressor of the same make as of Ventilator to be provided with ventilator.
17. Heated Humidifier to be provided with the ventilator.
18. Ultrasonic nebulizer which can break < 3 micron particle size to be provided with the ventilator.
19. System configuration, scope of supply:
  - a) Ventilator with Compressor – 1
  - b) Adult and Paediatric Reusable Circuit – 1 each
  - c) Heated humidifier with chamber – 1
  - d) Nebulizer – 1
  - e) Reusable Masks(Small, Medium and Large) – 1 each
  - f) Reusable Bacteria filter – 2
  - g) Test Lung



## 11- SPECIFICATIONS OF DIATHERMY UNIT FOR MULTI-DISCIPLINARY USE

### The unit should have the following features:

- The unit should have a large LCD display to show the various settings.
- The unit should have an optical support quickstep control knob to achieve and make the settings of the unit quickly.
- It should have a memory of minimal 99 individual programmes for various types of surgeries and with preference for various surgeons.
- It should have a possibility to give names (procedures/surgeons name) to the individual programmes.
- Should have a special output for vessel sealing upto 7mm of vessel in both open surgery mode and endoscopic surgery mode.
- The vessel sealing clamp forceps should be 100 % reusable and both straight & curved of different lengths.
- Should have both monopolar and bipolar cut and coagulation outputs.
- The unit should have four individual outputs 2 for monopolar and 2 for bipolar.
- The unit should have 11 different monopolar cutting currents with different cutting qualities and capabilities.
- The Monopolar coagulation should be with Auto-Start and Auto-Stop.
- The Bipolar should have a special cutting current with simultaneous coagulation during the use of bipolar scissors.
- The following different current modes should be available:
  - **MONOPOLAR CUT MODES (Minimum 8 types)**
  - **CARE CUT (FOR PRECISE CUTTING IN MICRO SURGERY)**
  - **ARGON CUT MODE (SPECIAL CUTTING MODE FOR USE WITH ARGON BEAM GAS)**
  - **MONOPOLAR COAGULATION MODES (Minimum 15 types)**
  - **BIPOLAR CUTTING MODE (Minimum 3 types)**
  - **BIPOLAR COAGULATION (Minimum 6 types)**
  - **SEAL SAFE MODE**
  - **ENDO SEAL MODE**
  - **SHOULD HAVE BIPOLAR TUR MODE FOR RESECTION UNDER SALINE**

### The following accessories should be supplied with the unit:

- **FOOTSWITCH DOUBLE PEDAL**
- **TWIN PATIENT PLATE**
- **CLAMPS FOR OPEN SURGERY SEAL SAFE TECHNIQUE**
- **BIPOLAR SCISSORS FOR OPEN SURGERY**
- **BIPOLAR FORCEPS FOR OPEN SURGERY**
- **BIPOLAR ACCORIES**
  - Footswitch with Reed Contact
  - Bipolar Cable
- **MONOPOLAR DIATHERMY ACCESSORIES FOR OPEN SURGERY**
- The unit should be an Argon Gas delivery device fully controllable through the main unit only.

THE SYSTEM SHOULD BE USFDA APPROVED

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### Technical specification of Coblation system for ENT Surgery

- Controlled ablation of tissues based on low temperature bipolar radiofrequency technology in electrolytic solution like normal saline. The machine should have no need for secondary patient earthing pad.
- FDA approved
- Operating temperature –between 40-70 degree .There should integrated saline pump for continuous irrigation .
- The Generator should have facility for foot switch.
- There should be facility for coblation and coagulation.
- The generator should be able to take old different probes for open and minimal invasive ENT procedure probes like ; probes for tonsillectomy turbinate reduction, adenoid , soft palate, laryngeal , tongue and related applications.
- The coblation probe should have multiple electrode technology to allow uniform production of plasma. The probe should have integrated cable.
- Should have tungsten electrode.
- Probe should have malleable shaft. Bending tool should be available for bending the probe.
- Suction probe should have integrated IV tubing.
- Probes with dual function of coblation and shrinkage should have depth identification marks on the shaft.
- Laryngeal probes should have at least six inches of working length and the tip diameter less than 4mm.
- Articulating instruments (forceps) for ENT
  - Can be used for surgical procedure for examination and treatment of nasal , paranasal, ear, nose and throat tissues.
  - Articulating though cutting forceps vertical jaws and articulating grasping forceps vertical jaws should have more than 200 degrees of articulation with many distinct locking positions should have multiple tip configurations.

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## Brainstem Evoked Response Audiometer with ASSR

### Special key features of BERA

CE CHIRP

Fmp- incorporating multiple point of recorded wave form

Bayesian Weighting (More significant to responses received with less noise.)

### Features

2 channels.

Windows based.

Bone Conduction.

Integrated database.

Pre-programmed auto tests.

Waveform reproducibility indication.

Split left/right recordings.

Simultaneous recording of condensation rarefaction stimuli.

Normative data indication.

Soft attenuator.

Wave editing during testing

Digital filter application (during and after test).

Add, subtract curves

Low noise amplifier

### Upgraded with OAE, ASSR and VNG, NCT

Medical CE-mark

Easy portability

EcochG recordings with markers

Middle Latency

Late Latency (P300, MMN etc.)

Cochlear Implant Stimulator Control

### ASSR:

#### PreAmplifier

2 channels

Gain 80 dB

Frequency Response upto 8000Hz

Noise 6.0 nV Hz

CMR Ratio > 115 dB at any frequency between  
0.1Hz & 10Hz.

Input Impedance > 10M

Accepted electrode offset > 300mV.

Power from main unit.

Impedance Check

Measuring Current 25uA.

Ranges 0.5k – 25k.

CE/FDA approved

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15) Impedance Audiometer / Tympanometer

Audiometer impedance with contra ear testing facilities

- Multifrequency
- Probe Frequency- 226Hz, 678Hz, 800Hz, 1000Hz
- Pressure Range- +200 to - 400 dapa
- Volume Range - 0.1 ml to 6.0 ml
- Accuracy -  $\pm 5\%$  to  $\pm 10$  dapa
- Test Time- < 3 Seconds
- Reflex Mode
- Test Frequencies- 500, 1000, 2000, 4000 Hz  $\pm 2\%$
- Test Method- IPSI Lateral, Contralateral
- Noise (Band) - WN/HP/LP
- Intensities IPSI Lateral-70 to 110 dbHz
- Intensities Contra Lateral- 70 to 120 dbHz (with TDH39 )
- Intensity Setting- Automatic or Manual
- Eustachian Tube Function - Intact and Perforated mode
- ETF Pressure Range-+ 300 to - 400 dapa
- Test -IPSI Lateral Reflex Test with AGC, Reflex Delay
- Test Programme- Reflex Test selectable
- Memory- Test Result of both ears
- Probe - Light weight, adjustable, Hand Held , With Built in control light & switch
- Printer- Silent Thermal Printer , (with paper printer facility)
- Display-Graphic LCD with adjustable contrast
- Power Supply- Mains 100-240 Volts, 50/60 Hz 25 VA
- PC Interface- USB Cable· Automatic self calibration

CE/FDA approved

  
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**Oto Acoustic Emission (Screening unit) OAE (DP and TE)**

**TEOAE**

1.5 to 4 kHz  
Sample Rate - 16 kHz  
Stimulus Level- ca. 80 dB SPL peak  
Stimulus Type- Nonlinear click  
Statistical stop criterion (TE Quick) or user defined  
stop criterion (SNR: 3, 6 or 9 dB) in 3, 4, or 5 out of  
5 frequency bands (1, 1.5, 2, 3, 4 kHz) (TE Diag)  
Window of analysis- 5-13 ms post stimulus

**DPOAE**

DP 2 to 5 kHz  
Sample Rate - 24kHz  
Frequency Ratio  $f_2/f_1$ - 1.2  
Level Ratio L12/L1- Scissor Paradigm  
Measurement Interval- 512 samples  
Frequencies  $f_2$ - 1.5, 2, 3, 4, 6, 8, kHz (single & multiple selections possible)  
Stimulus Levels L2- 35 to 65 dB HL (in steps of 5dB)  
Also battery operated  
Multiple test methods  
Database for at least 1000 tests  
Data transfer to PC via USB or wireless  
Printing via PC/ Printer  
Stimulus intensity: 40 to 70 dB SPL (DPOAE). 83 dB

**SPL (TEOAE).**

Maximum output (Protection): 90 dB SPL.  
Microphone system noise: -20 dB SPL @ 2 kHz (1 Hz  
bandwidth).  
-13 dB SPL @ 1 kHz (1 Hz bandwidth).  
Power supply: (4) AA/UM-3/R6 - alkaline (6V total)  
Battery life: Approximately 300 tests.  
Display: LCD-display 4 line x 10 character.

CE/FDA approved

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## ①7 VIDEO STROBOSCOPE SET

The Integrated system should be compact and portable suitable for a variety of endoscopic applications from physician's offices to operating rooms in a variety of specialties. The powerful all-in-one unit should consist of everything needed for endoscopic imaging, Video recording, and viewing of saved Videos, the monitor, camera, and light source. IT should have USB ports and a SD card slot for documentation purpose. Stroboscope for larynx examination a modern device that generates light with a high performance LED

- For stroboscopic examination (stroboscope-mode)
- For normal viewing (continuous light-mode = pulsating light with high frequency)

Suitable for larynx examination, Consisting of:

Mains Cord

Microphone set

One USB pedal footswitch with integrated activation for Stroboscopy function

### **DISPLAY:**

Crystal clear display

15" LCD display

LED backlight display technology for extended service life, enhanced image brightness and reduced power consumption

Image rotation

24 bit color depth for lifelike color display

DVI video output for brilliant transmission quality

### **LED Light Source:**

High-performance LED light source: Light output similar to Power LED

Color temperature of 6000 K - similar to daylight - guarantees color fidelity

Long lamp life - with an average lamp life of 30,000 hours - Cost Effective

### **Flexible storage options:**

SD slot for high storage capacity

USB ports for external hard drives and USB sticks

### **Easy, extremely reliable control:**

Membrane keyboard included, suitable for wipe-down disinfection

Hot keys for rapid and direct manipulation

Arrow buttons for intuitive control

Connection socket for pedal control without lag time

Stroboscopy mode can be activated via a special footswitch

### **Technical Specification of Camera Head:**

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Image sensor:	1/4" CCD-Chip.
Resolution:	> 450 lines (horizontal).
Pixels	752(H) x 582(V)
Signal-to-noise ratio:	>= 60 dB.
AGC:	Microprocessor controlled
LENSE	Integrated optical zoom lens system 25-50mm
Min. sensitivity:	3 Lux (f 1.4).

### Tele Laryngoscope

Tele-Laryngo- Pharyngoscope with integrated lateral telescope 90 deg, 4 X magnification focusing device diameter 10 mm, length 15 cm, autoclavable, fiber optic light transmission incorporated.

Strobo-Laryngoscope with integrated lateral telescope 70 deg, oval sheath, 7.2 x 9.3mm diameter, length 17 cm, autoclavable, fiber optic light transmission incorporated.

### Following items are optional

- Compatible System for easy recording of images and videos in HD digital formats. Easily transferable to External hard drives and USB pendrives/storage cards without losing resolution.
- Fibreoptic Otoscope with all size speculums including Seigel's pneumatic Speculum.
- Otoscope with fibreoptic illumination
- 3.5, volts Halogen bulb with 5 spare bulbs.
- Magnification, 3 or 4 times.
- Pneumatic bag for Sieglisation of tympanic membrane
- 8Reusable and autoclavable speculum set of 4 or 5—2 sets for each Otoscope
- Heavy duty handles with charger and chargeable long life battery with spare battery.

**ALL MAJOR EQUIPMENTS SHOULD BE EUROPEAN CE/FDA APPROVED.**

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## TEMPORAL BONE DISSECTION UNIT

### **Consisting:**

- **Microscope ( LED) with Beam Splitter & Camera**
- **Suction**
- **Micromotor ( 35000rpm) with Straight & Contra Angled Hand Piece**
- **Temporal Bone Holder**
- **Basin**
- **Medical Grade Monitor ( 19")**
- **Instrument Tray**
- **Set of Instrument for dissection**
- **Cutting Burrs (10 nos.)**
- **Polishing Burrs (3 Nos.)**
- **LED Light Source (120watt) with Fibre Optic Cable**
- **Refrigerator ( for storing dissecting bones)**
- **Saline Stand**

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## SPECIFICATIONS OF EQUIPMENTS MENTIONED IN SCHEDULE OF REQUIREMENTS

### TECHNICAL SPECIFICATIONS E.N.T. WORKSTATION (ENT TREATMENT UNIT)

#### Main Unit

- Durable steel casing, non rusting, long lasting
- Large instrument surface made of stainless steel with dividers and heating system to heat the instruments, laryngeal mirrors and endoscopes.
- Device to Heat the laryngeal mirrors
- Compressed air system continuously adjustable from 0.1 to 4 bars for spray and politzing, spray liquid with autoclavable nozzle for cleaning
- Handle for compressed air should be having a regulation valve
- Medication reservoir be made of stainless steel, should be detachable and suitable for all type of medications.
- Stainless steel tank for compressed air of capacity of 1.5 or more
- Compressor unit should be completely separate from suction unit
- Inbuilt motor suction unit with capacity of 35 liters per minute with maximum 92% vacuum.
- Should have a vacuum gauge, bacterial filters, 1.5 liters liquid container and effective device to prevent overflow.
- Suction tube should have automatic on off switch and small ear rinse funnel
- Warm water rinsing Device with autoclavable stainless steel handle with snap closure system and fine spray regulation valve
- Separate stainless steel tank to prevent mineral build up and heat up to 38 degree temp
- Cold water irrigation through existing water connection
- Automatic liquid container discharge system should be provided
- Suction tube cleaner with exchangeable re-usable adapter.
- X-ray viewer integrated in a writing draw with automatic on /off switch(Optional)
- Dispenser for cotton and paper
- provision for attachment of microscope
- Equip with waste container
- Endoscopy centre with cold light source with two outlets with 300 LED/XENON/HALOGEN light bulb
- Head light with fibro-optic cable to be used with above light source for examination
- Head light rest made of stainless steel
- Two warming quivers for rigid endoscope- should be removable for autoclaving and cleaning
- automatic on/off switch for single light outlet with light barrier
- Large writing surface
- Draw for computer key board along with swivel support for computer monitor(Optional)
- Power supply 220-240 volts/50 Hz
- Integrated Mono and Bipolar cautery system with all cables & probes/forceps.

#### ENT EXAMINATION MICROSCOPE:

The ENT examination microscope with integrated, fanless high transmission, high performance LED illumination in the microscope head.

- Integrated, fanless high performance white-light-LED Luminescence: min. 120 klux (200 mm), 30 klux (400 mm)

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- Color temperature: 5.500 K
  - Optimized stereo effect by 24 mm stereo basis
  - In built LED light source with SD camera OR HD camera with a facility to take images, video & transfer the same to any smart phone via the wi fi card.
  - Mechanical support arm for the microscope
  - Expandable with scale projection at the image plane with a option of green filter
  - Objective: 200 mm, (fine focusing)
  - Objectives with manual fine focusing Visualization:
  - HD-camera with facility to record, take images and transmit the same through the wi-fi card to smart phone/ PC/ Laptop.
- wide-field eyepiece 16x magnification
- Colour filter green, with pivot mechanism
  - The ENT microscope should be on castors with locking system-
  - Monitor holder, HD monitor, lateral double hand grip

#### **ENT PATIENT EXAMINATION CHAIR**

- Should be motorized and ergonomically designed examination and treatment chair facilitating the posture of both doctor and patient
- Heavy base casing
- All elements of chair should be anatomically shaped
- Seat should have motorized lifting device
- Seat should have height adjustment for children
- Integrated foot switch for easy adjustment of height
- Should have complete rotation 360 degree with locking device
- Should be comfortably padded and folded back for enabling easy sitting of overweight and handicapped patient
- Head rest-15cm with adjustable height.
- Backrest adjustable and can be made to incline 10 degree forward to vertical position and backward completely to a horizontal position and can be rolled back
- Movement of armrest and footrest should be synchronized with backrest movement
- Chair should confirm to CE mark
- Power supply: 220-240Volts/ 50Hz

#### **DOCTORS EXAMINATION CHAIR**

- Wide base, should have rolling casters for easy movement
- Should have back rest
- Easy height adjustment of hydraulic nature
- Comfortably cushioned seat

#### **RIGID ENDOSCOPES**

- 4mm/0 & 30 degree nasal endoscope-1 in number
- 2.7mm/0 & 30 degree nasal endoscope-1 in number
- Magnifying 90 degree Laryngoscope with facility to focus manually - 1 in number
- Ear telescope [aural endoscope]: 3mm-diameter/ 6cm length/ 0 degree-1 in number
- Ear telescope [aural endoscope]: 3mm-diameter/ 6cm length/ 30 degree-1 in number
- All above endoscopes should be wide angle & autoclavable
- Co-axial fibro-optic light cable/2.5mm diameter-1 in number.

#### **STROBOSCOPY (INTEGRATED)**

- The LED stroboscope should be noiseless with flash light & pilot light for vocal cord diagnostics based on LED technology
- The LED stroboscope should have the variable phasing & slow motion mode, adjustable with the footswitch.
- Should display voice frequency, sound pressure level, audio output for archiving the voice signal including attachable laryngoscope microphone also should have a body sound adapter for voice asthenic patient ( stethoscope adapter for clip microphone for a better connection of the microphone signal to the stroboscope control .
- The flash frequency should be 70 -1000 Hz, without reduction, sound level metering range 70-125 dB + / - 1 dB, operating modes , continuous light, slow motion 0.5 – 2 Hz, frozen image 0 degree – 400 degree, hunting over the footswitch adjustable, light durable approx., 50,000 hrs.
- The system should have a integrated LED light source, light durable approx., 50,000 hrs, brightness 220 kLux / 175 Lumen, length of the cable 1.9m
- The system should indicate the status of light- pilot light, flicker & slow motion.

#### **Display and recording system**

- High resolving 1/3" CCD camera with high light sensitivity with HD-LED monitor (min. 32").

#### **Following items are optional**

- Compatible System for easy recording of images and videos in HD digital formats. Easily transferable to External hard drives and USB pendrives/storage cards without losing resolution.
- Fibreoptic Otoscope with all size speculums including Seigel's pneumatic Speculum.
- Otoscope with fibreoptic illumination
- 3.5, volts Halogen bulb with 5 spare bulbs.
- Magnification, 3 or 4 times.
- Pneumatic bag for Sieglisation of tympanic membrane
- 8 Reusable and autoclavable speculum set of 4 or 5—2 sets for each Otoscope
- Heavy duty handles with charger and chargeable long life battery with spare battery.

#### **SOFTWARE:**

- 1 no. Acoustic analysis/Recording of the voice signal (Multi Dimensional Voice Profile (MDVP) voice software, archiving and recording the voice, and taking report.
- 1 no. P.C.(Personal Computer) should consist of a CPU, Keyboard and Mouse for installation for software.
- **The item should have CE/ FDA approval**

  
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22 SPECIFICATIONS OF MODULAR OPD WITHENT WORKSTATION AND OTHER EQUIPMENTS

ENT Medical Control Center Finish in HPL compact board 13 mm, black with white coating; Lockable cover with rounded corners in hinge-back design for inspection purposes; Holder for camera head; Fixed bling on the left with mounted standard rail with adaptor and quiver set for flexible scopes; Lockable lower front door on the left for inspection purposes; Right body half with adjustable shelf; 6 leveling pedestal feet; Plinth h = 150 mm, ventilation holes as required; Open back, fittings for attachment to the OF1 back wall; Power and water connections, power supply 220 - 240V/50-60 Hz, power consumption max. 1.500 W; Connecting cable U = 24 V for instrument heating; Integrated water separation unit with free outlet (DIN/EN 1717:2000), booster pump, outside mounted stainless steel case with autoclavable water tank; Integrated suction system, finely adjustable from 0 to -0.8 bar via manometer, suction capacity 70 l/min, automatic on/off switching via handpiece, automatic retracting hose with snap-in lock, secretion glass 1,5 l with automatic draining and rinsing, automatic suction tube rinsing; Integrated water system, electronic temperature control of rinsing water (37 °C), finely adjustable via handpiece with detachable cannula and splash guard, ear rinsing funnel with automatic suction of rinsing water, silicon tube lip for irrigation of maxillary sinus; Integrated compressed air system, pressure adjustable between 0 and 2.5 bar via manometer, finely adjustable via handpiece, automatic retracting hose, 3 medical vaporizers (2 x liquid, 1 x powder), basic supply of Politzer olives; Technology package with 4 integrated cold light sources with KARL STORZ connector on the front, automatic on/off switching, illumination 3700 - 5000 K, luminosity adjustable, free from maintenance and wear; 3 holders for rigid scopes with adjustable heating, 3 tubes for antiseptic solution, 1 tube for neutralizing solution; Socket 3,6 V for Nystagmus lenses, socket 6 V for headlight warmlight; Holder with automatic on/off switching for 1 lightsource, mounted in the cover; Should have Installation Kit , Camera Holder, Adaptor for standard equipment rails, Quiver for flexible

Instrument Rack ; Finish in HPL compact board 13 mm, black with white coating; Roller shutter with white laminated surface; 6 leveling pedestal feet; Plinth h = 150 mm; Rear open, fittings for attachment to the back wall; 1 fixed upper instrument tray with heating, different banded instrument pans; 1 extendable lower instrument tray, different banded instrument pans; 2 extendable instrument shelves with end-locking; 1 pull damped drawer h = 120 mm for taking of celluloses through the front panel with associated inlay; 3 pull damped drawers h = 120 mm; 1 pull damped drawer with tray inside for the deposit of used instruments; 1 foot operated pull damped drawer h = 243 mm with separated bin for the deposit of packing materials etc.; Dimensions (H x W x D) 1001 x 720 x 571 mm

Computer Cabinet Finish in HPL compact board 13 mm, black with white coating; upper open rack, adjustable shelf with upstand; Lower closed compartment, front door, adjustable shelf; Vents according to requirement; 4 leveling pedestal feet; Plinth h = 150 mm, ventilation holes as required; Open back, fittings for attachment to the back wall; Dimensions (H x W x D) 1001 x 360 x 571 mm



Back Wall Finish in HPL compact board 13 mm, black with white coating, faced on both sides; Support frame in aluminium profiles; Built-in system rails; Built-in LED edge-lit in blue colour; For mounting to Medical Center and Instrument Rack; Dimensions

Back Wall ; Finish in HPL compact board 13 mm, black with white coating, faced on both sides; Support frame in aluminum profiles; Prepared for mounting of a monitor support arm off center left, built in additional aluminum stiffener; 1 built-in cable outlet d = 60 mm; Built-in LED edge-lit in blue color; Free-standing;

Hang-on Tray KK; Finish in compact HPL board 13 mm, black with white coating; To hook in the system rail in the Back Wall

ENT-Examination microscope , Wall mounting plate; Swivel and suspension arm; Integrated light source; Microscope carrier; Magnification unit with 3-step changer; Straight binocular tube, f = 125 mm; Stationary pistol grip; Dust cover –

Module Patient Chair, ENT examination chair with legrest and headrest, about approx. 270° swivable, electrical height adjustment, electrical synchronous adjustment of the laying size, operated by integrated function control, up to 36 presets for 9 different users, headrest with pneumatic system height adjustment, single key for Trendelenburg Position, backrest with automatic height adjustment during change of inclination Connection 110 - 240 V / 50 - 60 Hz Seat height 53 - 91 cm

#### DOCTORS EXAMINATION CHAIR

Wide base, should have rolling casters for easy movement  
Should have back rest  
Easy height adjustment of hydraulic nature  
Comfortably cushioned seat

#### RIGID ENDOSCOPES

4mm/0 & 30 degree nasal endoscope-1 in number

2.7mm/0 & 30 degree nasal endoscope-1 in number

Magnifying 90 degree Laryngoscope with facility to focus manually - 1 in number

Ear telescope [aural endoscope]: 3mm-diameter/ 6cm length/ 0 degree-1 in number

Ear telescope [aural endoscope]: 3mm-diameter/ 6cm length/ 30 degree-1 in number

All above endoscopes should be autoclavable

#### FULL HD IMAGE /VIDEO RECORDING & DATA ARCHIVING SYSTEM & PATIENT SAFETY CHECKLISTS

- User friendly software designed specifically for medical purposes
- Captures still Full HD (1080P) Video sequences (from 3 sources), and audio files
- Resolution of both still images & videos should be 1920x1080 p
- Writes multi-session and multi-patient CDs/DVDs

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- Controllable via Touch Screen, camera head buttons, footswitch mouse and keyboard
- Fully controllable from inside and outside the sterile field
- Supports network storage on file servers
- Supports FTP storage
- USB support for storage on USB drives
- Customizable print-outs for the documented information
- Prints to any connected printer (local or network)
- HIPAA complaint
- Buffer system to insure reliability
- Medical grade unit with CE mark
- Chipset : Intel® 855GME + Intel® 6300ESB Embedded Chipset
- Processor: Intel® Pentium® M735
- Graphic: Intel® Extreme Graphics 2 Controller onboard
- Grabber-card DVI-D, SDI, S-Video, Composite
- Audio: AC97/DD5 onboard
- RAM: 2 GB
- Harddisk: 500 GB SATA 3.5"
- Drive: Multifor Slim line DVD RW
- PCI Slots: 3 x PCI
- LAN: 3 x 10/100/1000 Mbps onboard
- I/O Ports: 2 x PS/2, 2 x Serial, 3 x RJ45 (LAN), 4 x USB 2.0 (1 x Front), 3 x Audio (Line In, Line Out and Microphone), VGA;
- DICOM and HL7 interface

The HL7 interface system shall be connected to the Image and Data Archiving system to allow the patients demographics to be downloaded directly to the patients data file.

#### **26" FULL HD FLAT LED SCREEN (Spring arm / Wall mounted)**

The surgical display screens shall be medical grade 26" FULL HD (1080P) LED Screens with the following video inputs :

- DVI-D (digital)
- SDI (digital)
- VGA, RGBS
- S-Video
- Composite
- SOG input

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The display screens should comply the highest safety standards:

- Fanless cooling prevents the introduction of contaminants into the sterile field.
- Low voltage (24 VDC) external power supply may be located 30 m away from the screen, removing any electrical concern.
- Front sealed, anti-glare overlay guarantees the highest level of defence against liquid ingress.



25 Non Invasive Cardiac Support Pump with synchronized defibrillation.

1. The Cardiac Support Pump should be able to generate chest compression & provide consistent compression with no interruptions.
2. It should be easy to use in both Hospital and Emergency set up mainly during transportation.
3. It should have facility to provide chest compression to patient while carrying to staircase and even on 45° elevation.
4. It should be battery operated and extremely simple user interface.
5. It should be able to achieve uniform load distribution by squeezing entire chest.
6. The Chest compression band should have an ability to do the high quality compression.
7. It should have small LCD backlit screen to show compression modes.
8. It should have ability to automatically size the patient by calculating size, shape and compliance of every patient.
9. The system should be capable to provide both 30:2 (30 compressions and 2 ventilation pause) and continuous compression just by pressing buttons.
10. The system should come with 3 batteries, 1 Battery Charger and 3 load distributing band capable of doing compressions
11. The battery should be made of Li-Ion technology which enable to provide continuous compression of minimum 20 minutes in full charge
12. The quoted Unit should be US FDA approved.
13. The Unit should have facility to work in Synchronization with Defibrillator.
  
15. The defibrillator should be rugged and should have easy to read three mode displays to be readable in any environment.
  
16. The Defibrillator should have facility for ECG Monitoring, defibrillation, rectilinear external pacing (transcutaneous) & recorder.
  
17. It's easy to apply AED pads when whole system is operational.
  
18. The Defibrillator should be Rectilinear biphasic technology, having energy selection of 1 - 200 joules.
  
19. The Defibrillator should have charging time of unit should be less than 7 Seconds of maximum energy.
  
20. The Defibrillator should have ability to measure chest compression rate and depth in real time and both visual and optional audible feedback is provided.
  
21. It should have ability that all CPR data can be recorded and reviewed by using software specially designed for doing this (if needed).
  
22. It should have ability to filter out CPR artifacts and allowing person to see organized rhythms without interrupting chest compression.
  
23. It should have voice and visual prompts
  
24. The defibrillator should have option to Upgrade to EtCO2, SpO2, NIBP and 12 leads
  
25. It should be US FDA approved.

**(4) For Ortho Equpts –**

**1. C-Arm System compatible for orthopedic surgeries**

**C-Arm Specification**

**A X RAY Generator:**

Frequency: 40KHz or better

Power Out put: 20 KW or more

KV Range: 40-110 KV or better

mA in radiography: 20mA or more

mA in fluoroscopy: 0.1 to 4mA or more in normal fluoroscopy and 12mA or more in High level Fluro.

Should have facility for continuous fluoroscopy and pulse fluoroscopy.(Pulse rate upto 8 pulse per second)

Should have digital spot for high quality single image, 16mA or more.

Housing heat capacity minimum 700 KHU and cooling rate of more than 12,000HU/Per minute.

**B X Ray Tube Head:**

Must have anode heat capacity of min 70,000 HU & cooling rate of minimum 35,000 HU/Min.

Should have dual focal spot.

Collimation: Motorized iris & motorized rotating blades.

Tube assembly filtration of 3.0 mm or higher.

**C C-Arm Mechanism and control panel (Digital work station)**

Locks for stabilization on desired position.

It should have the following range of movements:

Motorized vertical movements more than 400 mm.

Horizontal Travel: 200mm or more

Orbital Movement: (-) 30 deg to (+) 90 deg, (120 Deg or more)

Swing or panning movement: +/- 12 Degrees or more.

Source Image distance: 900 mm or more.

Depth of C-Arm : 650 mm or more.

**D Control Panel (Digital Work Station)**

It Should have the following facilities

System should have capabilities of pulse fluoroscopy option to reduce the radiation exposure with 1,2,4,8, pulse per second, which should be easily user selectable.

Fluoroscopy & radiography exposure on switching.

Image rotation from control panel.

Image Intensification, Mode selection (Normal & Zoom).

Automatic brightness stabilizer.

Auto dose rate control.

Collimation for radiography.

**E Integrated Image Processing, Recording & memory System :**

a. Image Intensifier Tube

Input diameter 9" with triple field (9/6/4)

Minimum Central resolution (at monitor): 2lp/mm or better at 9" FOV.

b. CCD Camera

CCD camera with 1K \* 1K resolution for high resolution image acquisition.

c. Integrated Image processing, memory & recording system should have.

Medical grade monitors (two numbers).

Minimum 18" or more , black & white, flicker free, high resolution (1280 x 1024 pixel or better) medical grade flat screen TFT, automatic & manual control of brightness & contrast, mounted on mobile trolley with looking device.

**F Digital Image processor:**

Provision to record multiple images on CD ,DVD & USB with embedded DICOM viewer.

Image processing at 1K x 1K matrix.

Contrast enhancement, Edge Enhancement & Zoom facility.

Recursive Filter or detecting motion.

Last Image Hold.

Image Rotation, Vertical and horizontal reversal.

Medical Imaging software's with ability to store 70,000 Images or more in Hard disk at Dicom option.

**G Additional features:**

The equipment should work on a power supply of 220-240 volts, 50-60 Hz, 15 amp.

Built in UPS to protect & save patient data.

**H Regulatory and Safety Requirements:**

Equipment should have AERB type approval for radiation safety.

Equipment should have CE or FDA for full product

5 yr Warranty & 5yr CMC should be included with provision of supply of spare parts of model supplied for next 10 years.



## 2. Orthopedic instruments sets

Mini External Fixator - EXTENDED HAND FRAME		
DESCRIPTION		QTY.
<b>DISTRACTORS</b>		
	Double Distractor hole 100mm	2
<b>LINK JOINTS</b>		
	Alpha Mini Clamp (Upto 2mm Wire, 3mm rod)	10
	Beta Small Clamp (Upto 3mm wire, 4mm rod)	20
	Beta Small Clamp - Add on (Upto 3mm wire, 4mm rod)	6
	Beta Small Clamp 4 x 4 - Upto 4mm wires / rods	4
<b>HINGES</b>		
	Bi-axial hinge joint	2
<b>STRAIGHT RODS - knurled</b>		
	Straight Rods 2mm x 100mm	2
	Straight Rods 3.0mm x 100mm	2
	Straight Rods 3.0mm x 200mm	2
	Straight Rods 3.0mm x 250mm	2
<b>TRACTION DEVICES - STIRRUPS</b>		
	Mini Traction bow (Half Stirrup)	4
<b>INSTRUMENTS</b>		
	Allen Key 2.0mm A/F disposable	1
	Allen Key 3.0mm A/F disposable	1
	Spanner 6mm/8mm	2
<b>IMPLANTS &amp; MISC.COMPONENTS</b>		
<b>K-wires -</b>		
	"K" wires 1.5mm x 150mm	10
	"K" wires 2.0mm x 150mm	10

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20/11/16

Mini External Fixator - COMPREHENSIVE SET	
DESCRIPTION	QTY.
Distractor Single hole - 50mm (for finger)	2
Distractor Double hole 75mm	2
Distractor Double hole 100mm	4
Distractor Double hole 150mm	2
Distractor Double hole 200mm	2
Distractor Fishmouth 150mm	2
Distractor Fishmouth 200mm	2
Distractor Fishmouth 300mm	2
Distraction-Compression Distractor Assembly - for 25mm distraction	1
Alpha Mini Clamp (Upto 2mm Wire, 3mm rod)	30
Beta Small Clamp (Upto 3mm wire, 4mm rod)	130
Beta Small Clamp - Add on (Upto 3mm wire, 4mm rod)	26
Beta Small Clamp 4 x 4 - Upto 4mm wires / rods	24
Bi-axial hinge joint	2
Hinge distractor 75mm	2
Hinge distractor 100mm	4
For Deformity Correction	2
Straight Rods 2mm x 75mm	4
Straight Rods 2mm x 100mm	14
Straight Rods 3.0mm x 100mm	10
Straight Rods 3.0mm x 150mm	8
Straight Rods 3.0mm x 200mm	6
Straight Rods 3.0mm x 250mm	2
Straight Rods 4.0mm x 100mm	6
Straight Rods 4.0mm x 150mm	2
Straight Rods 4.0mm x 450mm	2
Small 'L' rod - 2.5mm	2
Large 'L' rod - 2.5mm	2
Z' rod - 2.5mm	2
Small 'L' rod - 3.0mm	2
Large 'L' rod - 3.0mm	2
"Z" rod - 3.0mm	2
Small "L" rod - 4.0mm	2
Large "L" rod - 4.0mm	2
"Z" rod - 4.0mm	4
Mini Traction bow (Half Stirrup)	

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	DESCRIPTION	QTY.
	Bender tube pair	1
	Spanner 6mm/8mm	2
	Spanner 10mm/11mm	2
	Quick lock handle for Allen Keys	1
	Allen Key 2.0mm A/F, disposable	3
	Allen Key 3.0mm A/F, disposable	3
	Clamp forceps	1
	Rod and wire gauge	1
	"K" wires 1.2mm x 150mm	5
	"K" wires 1.5mm x 150mm	25
	"K" wires 1.8mm x 150mm	25
	"K" wires 2.0mm x 150mm	30
	S.S Case for Comprehensive Set	1
	S.S Tray 1 for Clamps	1
	S.S Tray 2 for Instruments / K-wires	1
	S.S Tray 3 for Bent Rods	1
	S.S Tray 4 for Distractors	1
	S.S Tray 5 for Rods / Special Clamps	1

~~SECRET~~