



**GOVERNMENT OF SINDH
CIVIL HOSPITAL, KARACHI**

TENDER NO. (CHK)/2014-2015/3163

**TENDER FOR THE PURCHASE OF MEDICAL EQUIPMENT FOR WELFARE
SOCIETY FOR PATIENT CARE UNDER ADP SCHEME # 787/2014-15
THROUGH CIVIL HOSPITAL, KARACHI DUE ON 25-05-2015**

COST OF TENDER DOCUMENTS:	Rs. 1000/= Rupees One Thousand Only (Non-Refundable)
TENDER SELLING DATE :	From the date of publishing to day before opening
TENDER SUBMISSION DATE AND TIME:	On 25-05-2015 from 9.00 a.m. to 11:00 a.m.
TENDER SUBMISSION PLACE :	Office of the A.M.S (Procurement) 1st Floor Admin Block, Civil Hospital, Karachi
TENDER OPENING DATE AND TIME :	On 25-05-2012 at 12.00 Noon.
TENDER OPENING PLACE :	Board Room 2nd Floor Administration Block Civil Hospital, Karachi

Note: Any bid submitted late due to any reason, whatsoever shall not be considered by the Hospital Procurement Committee.

INSTRUCTIONS

Bidders are required to comply all the clauses mentioned in the terms and conditions of the tender and any deviation/breach will forbid them from competing in the tender.

In this tender **TWO ENVELOPS PROCEDURE** as per SPPRA 2010 Rules (Amended 2013/14) will be followed (single stage two envelopes procedure Rule 46 (2) SPPRA 2010) i.e. TECHNICAL and FINANCIAL bids will be submitted in a separated sealed envelope.

- a) In the Technical Bid, the bidder **must attach** copy of Security Deposit's Pay order / Bank Grantee without amount the same may be deleted with Black Marker or White Fluid, detailed technical quotation, original technical brochures and all other required certificates. The technical evaluation will be done on the basis of documents submitted along with technical bid as per given criteria in tender documents.
- b) In Financial bid, the vendor should submit rate of the equipment/items and Bid Security in shape of pay order / bank guarantee / call deposit receipt 2.5% of total bid value (In Original) in favor of Medical Superintendent, Civil Hospital, Karachi.

TERMS AND CONDITIONS:

- i. Free installation along with all accessories including labor charges/Demonstration at consignee's end must be confirmed by the bidder.
- ii. One year free service from the date of installation and undertaking regarding availability of spare parts for at least 05 years may also be confirmed by the bidder.
- iii. Manufacturer/ Sole Agent are eligible to participate in the tender. Sole agency certificate of the quoted item from the Manufacturer must be attached by the bidder. Agency certificate must be valid for 3 years.
- iv. Bidders must have at least one year past experience of representation of Manufacture for quoted items.
- v. The service manual with circuit diagram must be provided with quoted mentioned item.
- vi. The supplier will be bound to train nominated technical personnel to operate the supplied equipment.
- vii. Profile of the technical staff and address of the Bio-Medical workshop as well as list of hospitals in which the quoted equipment are working must be attached.

Delivery period: _____

Validity: 90 Days As per SPPRA

- 1.1 In this tender two envelopes procedure as per SPPRA 2010 Rules (Amended 2013/14) will be followed i.e. Technical and Financial proposal separately, i.e. single stage two envelopes system. The envelope must contain tender enquiry no. on the top and TECHNICAL /FINANCIAL PROPOSAL clearly in order to avoid any confusion.
- 1.2. Tender, which does not fulfill the prescribed conditions of the tender is liable to be rejected.
- 1.3. In financial bid, the vendor should mentioned financial offer along with 2.5% deposit at call/Pay order/Demand draft in favor of Medical Superintendent, Civil Hospital, Karachi.
- 1.4 However the bidders are required to enclose the copy of call deposit/pay order/demand draft without showing any amount along with the technical offer else the bid will be rejected.
- 1.5 Initially only envelopes marked as "TECHNICAL PROPOSAL" shall be opened.
- 1.6 The envelop marked as "FINANCIAL PROPOSAL" shall be retained in the custody of the procuring agency (PA) without being opened.
- 1.7 The disclosure of firm's equipment quoted rate at any manner at the time of opening of technical proposal will result in to rejection of the bid.
- 1.8. Tenders must be filled in with Blue or black ink in the column provided and on separate letterhead duly signed.
- 1.9. The tenders must be free from erasing, cutting and over writing. In case of erasing, cutting and over writing, authorized person should be initial it duly stamped.

- 1.10. The rates of each item should be written in figures as well as in words. In case of discrepancy the price in words will be taken as authentic and final.
- 1.11. Conditional tenders will be ignored and will not be considered /entertained /accepted.
- 1.12. The offered on D.D.P basis (In Currency of Pak Rupees) should be inclusive of all applicable taxes, income and sales tax etc payable to federal and provincial Govt. or local bodies and no claims on these account shall be entertained.
- 1.13. The bidder shall furnish General Sales Tax (GST) Registration certificate of the firm failing which the offer will be ignored. In case the item is exempted from GST either documentary evident or certificate from competent authority shall be attached with the offer.
- 1.14. Supply order (s)** will be placed on D.D.P basis in Pak Rupees to the Contractors/Suppliers, as the current financial year is near to end. To avoid lapse of funds the bills will be claimed from office of the Accountant General Sindh after getting necessary guarantee from the Contractors / Suppliers in shape of pay order, demand draft, call deposit receipt Bank Guarantee in favor of procuring agency (PA) equivalent of the claimed amount the same will be refunded to the Contractors/Suppliers after receiving the equipment as per the required specification.
- 1.15. The bidder shall furnish copy of valid professional tax certificate and Income tax certificate. GST and Sindh Sales Tax (If applicable). Else the offer will not be considered.
- 1.16. In case of x-ray equipment, bidder must have valid PNRA registration as an importer. Copy of PNRA certificate must be attached along with technical proposal.
- 1.17. The original catalogue must accompany with offer and the equipment should comply/certified at CE/FDA standards.

2. SPECIAL CONDITION:

- 2.1 Bidders are required to specify make, country of origin and furnish detailed technical description literature/catalogue along with their technical offer, else offer will not be entertained.
- 2.2 Choice to select/ignore any their alternate offers shall rest with the purchaser.
- 2.3 No Manufacturer shall authorize their distributor/agent/any firm or person to quote the same item which manufacturer is quote it-self in any tender. Failing that offer of both the manufacturer as well as other bidder shall be ignored.

3. Purchaser's right to vary quantities at time of award.

The purchaser reserves the right to increase/decrease or drop the quantity of goods etc at the time of award of contract and also reserves the right to enhance the quantity by 15% of goods and services originally specified in the schedule of requirements without any change in unit price of other terms and conditions of goods at any time during contract period.

4. Notification of Award/Advance contract:

- 4.1.1 Prior to the expiration of the period of bid validity , the purchaser will notify the successful bidder in writing, delivery by hand or by register letter by cable to be confirmed in writing by register letter that is bid has been accepted.
- 4.1.2 The notification of award will constitute the formation of the contract.

5. Award of contract and contract agreement

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

6. Performance Security

The successful bidders will have to deposit with the purchase security deposit as under in shape of call deposit/pay order at the rate of **2.5%** of the value of contract.

7.	Criteria for evaluation of bids	YES	NO
a.	Specification compliance/preferred function		
b.	After sale service facility (in case of equipment)		
c.	Sole agency from Manufacturer		
d.	Operational cost (in case of equipment)		
e.	Delivery schedule – As per Bid Document		
f.	Bid Security 2.5 % of the quoted amount.		

8. Award of Contract:

Stamp duty on Non Judicial Stamp paper @ 0.30% paisa at Rs.100/- basis of the value of the contract.

9 Undertaking

- 9.1 That I/We agree whether our tender accepted for total, partial or enhanced quantity for all or any single item. I/We also agreed to supply and accept the said item at the rates for the supply of contracted quantity within the stipulated period shown in the contract.
- 9.2 I/We undertake that; if any of the information submitted in accordance to this tender enquiry found incorrect our contract may be cancelled at any stage on our cost and risk.

CERTIFICATE

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

Signature of Bidders: _____

Name & Designation: _____

Address: _____

Rubber Stamp Of Firm. _____

Annexure "B"

QUESTIONNAIRE / PERFORMA

(To be filled in by the vendor all the quoted item.)

Equipment _____

Model _____

Manufacturer _____

Supplier _____

1- Year of Introduction of the offered model: _____

Version (if same model revised): _____

2- Number of equipment installed (Please provide names of institution for Pakistan/ Karachi)

- World wide. _____

- In Pakistan. _____

- In Karachi _____

3- Manuals to be provided:

Yes

No

- Service. _____

- Parts List _____

- Electrical Drawing/ Schematics _____

- Operational/ Application _____

4- Spare parts Availability Guarantee (No of years): _____

5- Source of spares availability

Lead time

- Local _____

Overseas _____

6- Equipment life period (number of years) _____

7- Do you hold specialized tools/test equipment required for:

- Maintenance

Yes

No

N/A

- Calibration _____

Please provide list of tools/test equipment including their calibration status on a separate sheet.

8- Annual Maintenance contract Price:

- Parts and Labor: _____

- Labor without parts: _____

9- On call service charges:

- Minimum: _____

- Per day: _____

10- In case of in house maintenance by CHK engineers are you willing to provide following during post warranty period.

- Back up engineer support whenever requested: Yes No
- Prompt supply of spares/ consumables: _____

11- Are you authorized representative of manufacturer: _____

12- No of Factory trained engineers available locally on offered equipment (provide training Certificate & years of experience): _____

13- Total number of years in business: _____

14- Warranty period (please provide following details:

- Uptime Guarantee: _____%
- Response time to maintenance requested: _____ Hrs
- No of PPM/Year: _____
- Any other: _____

15- Do you have any objection/ concerns to use similar specification spares of alternate/ other manufacturer during warranty of maintenance contract (if available) Yes No

16- Comprehensive CHK Engineer Training If yes state what included: Yes No

- Training Fees _____
- Airfare _____
- Boarding/Lodging _____
- Free of charge _____
- None of the above _____

17- Up-gradation possibility:

- Hardware YES / NO Software YES / NO

- If above has any cost please provide the details of up-gradation with estimated price:

Please state safety standard conformance (e.g. IEC 601, FDA, AAMI etc):

18- Pre-Installation services requirements:

Power: _____ KW Voltage: _____ Single/Three phase

Gas: _____ Cu.ft/ hr Water: _____ Gallons/ Liter Hour

_____ PSI (pascal)

(If pre-treated water required, please provide details)

Air _____ PSI

Vacuum _____ mmgh

Other: _____

(e.g. Drain, Exhaust, Physical facility change etc)

Installation time: _____

Installation/ commissioning by whom: _____

19- Environmental Parameters Limits:

- Temperature _____ to _____ centigrade/ Fahrenheit

- Humidity _____ to _____ % RH.

IEC 601- International Electro Technical commission (Code 601)

AAMI - American Association for medical instrumentation.

20- Any other specific requirement (e.g. UPS, Voltage Stabilizer etc, provide details):

21- Briefly state facilities and benefits provided during warranty period:

22- Please give the rates of consumable, Disposable items and parts required for proper functioning of Machine /equipment life period of each item (in days /months).

Note: (The said Performa should be filled by the vendor to provide information of all the quoted item.)

Supplier's Name: _____

Authorized Signature: _____ Designation _____

Annexure- “ C ”

Contract Form

THIS AGREEMENT made the _____ day of _____ 2015_____ between [name of Procuring Agency] of [country of Procuring agency] (here in after called “the Procuring agency”) of the one part and [name of Supplier] of [city and country of Supplier] (here in after called “the Supplier”) of the other part:

WHEREAS the Procuring agency invited bids for certain goods and ancillary services, viz. [brief description of goods and services] and has accepted a bid by the Supplier for the supply of those goods and services in the sum of [contract price in words and figures] (here in after called “the Contract Price”).

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract referred to.
2. The following documents shall be deemed to form and be read and construed as part of this Agreement, viz.:
 - (a) the Bid Form and the Price Schedule submitted by the Bidder;
 - (b) the Schedule of Requirements;
 - (c) the Technical Specifications;
 - (d) the General Conditions of Contract;
 - (e) the Special Conditions of Contract; and
 - (f) the Procuring agency’s Notification of Award.
3. In consideration of the payments to be made by the Procuring agency to the Supplier as hereinafter mentioned, the Supplier hereby covenants with the Procuring agency to provide the goods and services and to remedy defects therein in conformity in all respects with the provisions of the Contract
4. The Procuring agency hereby covenants to pay the Supplier in consideration of the provision of the goods and services and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the contract at the times and in the manner prescribed by the contract.

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

Signed, sealed, delivered _____ by _____ the (for the Procuring Agency)

Signed, sealed, delivered _____ by _____ the (for the Supplier)

Annexure- “ E ”

**SCHEDULE FOR INVITATION TENDER FOR EQUIPMENT FOR PURCHASE OF MEDICAL
EQUIPMENT FOR WELFARE SOCIETY FOR PATIENT CARE
UNDER ADP SCHEME # 787/2014-15 THROUGH CIVIL HOSPITAL KARACHI**

Items #	Description	Quantity	Quoted		Remarks
			Yes	No	
1	Hemodialysis Machine	10 Nos.			
2	Reprocessing Unit	01 No.			
3	OT Light	01 No.			
4	OT Table	01 No.			
5	Surgical Beds (Dialysis Chair)	03 No.			
6	Surgical Beds (Dialysis Recliners)	03 No.			
7	Crash Trolley	03 No.			
8	Stretcher	13 Nos.			
9	Autoclave	01 No.			
10	Ventilator	04 Nos.			
11	Fluoroscopy with DR System 500mA	01 No.			
12	ABG Machine System	01 No.			
13	Syringe Pump	10 Nos.			
14	Echo Color Doppler	01 Nos.			
15	Patient Monitor	11 Nos.			
16	Defibrillator	01 No.			
17	Diathermy	01 No.			

Items	Description	Qty	Rates on D.D.P Basis In words and Figure		
1	Hemodialysis Machine with all Standard Accessories	10 Nos.			
	Model:	Make:	Country of Origin:		
	Specifications:-		Confirmed		Difference / Deviation
			Yes	No	
	Dialysis machine complete with battery backup				
	Dialysis Machine Capable of Acetate Dialysis, Bicarbonate Dialysis and Isolated Ultra-filtration				
	LCD Touch control Panel, 8" or more screen.				
	Dialysis treatment parameters such as UF Goal, UF Rate, Blood Flow and Syringe Flow 2 or more Selectable Concentrate				
	Double Chamber System to precise UF Volumetric control				
	CPU System for Control				
	Driving and Monitoring Functions. Sensors for Syringe check for Syringe fitting and speed				
	Machine should perform self check of the closed circuit, capable to monitor reverse rotation of blood pump				
	Supply Water Flow 600 ml/min or more				
	Dialysis Flow 400-600 ml / min				
	UF rate 0.00 – 3.00 L / h or better				
	UF volume 0.00 – 35L or more Dialysate type Bicarbonate / Acetate				
	Dialysis Conductivity 12.0 – 16.0mS/cm or better				
	Dialysis step 1 – 6 (0.3Ms/ cm per one step)				
	Blood Pump Flow Rate 20-600ml/min or better				
	Heparin infusion rate 10ml-20ml/h.				
	Detector				
	Air bubble detector Ultrasonic detection system				
	Blood leak detector Photoelectric detection system				

	Monitor Section				
	Dialysate temperature indicator				
	Dialysate flow indicator				
	Dialysate conductivity indicator				
	Dialysate pressure indicator				
	Arterial pressure indicator				
	Venous pressure indicator				
	Transmembrane pressure indicator				
	UF volume indicator				
	Blood pump flow indicator				
	Heparin pump flow indicator				
	Disinfection and Rinsing				
	Chemicals Sodium hypochlori				
	Audio/visual alarms for conductivity , pressures, water shortage, concentrate shortage, air bubble, blood leak etc.				
	Or Equivalent				
	Country of Origin : USA / Europe / Japan				
	Delivery Period:				
	Warranty:				
	Catalogue / Brochure should be attached duly flagged.				

Items	Description	Qty	Rates on D.D.P Basis In words and Figure		
2	Reprocessing Unit with all Standard Accessories	01 No.			
	Model:	Make:	Country of Origin:		
	Specifications:-		Confirmed		Difference / Deviation
			Yes	No	
	Self-diagnosis and user programmable dialyzer re-processing system.				
	Dialyzer rinse process with check connection				
	2.5% concentrate preparation /clearing and rinsing				
	Dialyzer test process with TCV test and pressure test				
	Dialyzer sanitization processes rising 3.5% concentrate preparation				
	Rising and filling 3.5% concentration				
	Or Equivalent				
	Country of Origin : USA / Europe / Japan				
	Delivery Period:				
	Warranty:				
	Catalogue / Brochure should be attached duly flagged.				

Items	Description	Qty	Rates on D.D.P Basis In words and Figure		
3	OT Light with all Standard Accessories	01 No.			
	Model:	Make:	Country of Origin:		
	Specifications:-		Confirmed		Difference / Deviation
			Yes	No	
	Single cupola Ceiling OT Light				
	Halogen lamp				
	Color temperature 4300k or better				
	Lamp dia. (Single head) : 62cm				
	Polygon Reflector				
	110,000LUX or more intensity				
	Cri: 93± 3				
	Action radius: 170cm or better				
	CE or FDA Approved				
	Or Equivalent				
	Country of Origin : Korea / Taiwan / Turkey				
	Delivery Period:				
	Warranty:				
	Catalogue / Brochure should be attached duly flagged.				

Items	Description	Qty	Rates on D.D.P Basis In words and Figure		
4	OT Table with all Standard Accessories	01 No.			
	Model:	Make:	Country of Origin:		
	Specifications:-		Confirmed		Difference / Deviation
			Yes	No	
	Multipurpose hydraulic Operation Table				
	360° Tabletop rotation				
	Stainless steel side rail , accessories and clamps				
	Built-in kidney lifter				
	Table Top : 180 cm or more				
	Table Top Width: 50 cm or more				
	Table Top Elevation: 70-100 cm or more				
	Lateral Tilt: 25°/25° or more				
	Trendelenburg / Reverse: 20°/25° or more				
	Head Section Up/Down: +30° /- 90°				
	Leg Section Up/Down: +20° /- 90°				
	Table should complete with:				
	1 x Screen Frame				
	1 x Shoulder Supporter				
	1 x Body Support				
	1 x Arm Rest				
	1 x Knee Crutches				
	1 x Mattress				
	1 x Kidney Elevator				
	CE or FDA Approved				
	Or Equivalent				
	Country of Origin : Korea / Taiwan / Turkey				
	Delivery Period:				
	Warranty:				
	Catalogue / Brochure should be attached duly flagged.				

Items	Description		Qty	Rates on D.D.P Basis In words and Figure		
5	Surgical Beds (Dialysis Chair) with all Standard Accessories		03 Nos.			
	Model:	Make:		Country of Origin:		
	Specifications:-			Confirmed		Difference / Deviation
				Yes	No	
	Width 600mm					
	Length 1900mm					
	Seat Width including arms 880					
	Height Adjust 560mm ~ 820 mm					
	Frame Q235 Steel					
	Cushion PU Leather					
	Castor 100mm					
	Back Adjust 12° ~ 75°					
	Leg Adjust 80° ~ 12°					
	Tendelenburg 12°					
	Covering ABS					
	Motors 3					
	Power Supply AC 110~240 V 50/60 Hz					
	Total Weight 90 Kg					
	Country of Origin : LOCAL (Export Quality)					
	Delivery Period:					
	Warranty:					

Items	Description	Qty	Rates on D.D.P Basis In words and Figure		
6	Surgical Beds (Dialysis Recliners) with all Standard Accessories	03 Nos.			
	Model:	Make:	Country of Origin:		
	Specifications:-		Confirmed		Difference / Deviation
			Yes	No	
	Total Length 1920mm				
	Width 700mm				
	Height 520mm ~ 840mm				
	Back Segment Angle 0° ~ 80° ±5				
	Leg Segment Angle 45° ~ 25° ±5				
	Castor 125mm				
	Upholstery P.U				
	NW 90 Kg				
	Safe maximum load 240 Kg				
	Motors 3				
	Power Supply AC 110~240 V 50/60 Hz 100 VA				
	Digital Weighing Range 0-240 kg				
	Country of Origin : LOCAL (Export Quality)				
	Delivery Period:				
	Warranty:				

Items	Description	Qty	Rates on D.D.P Basis In words and Figure		
7	Crash Trolley with all Standard Accessories	03 Nos.			
	Model:	Make:	Country of Origin:		
	Specifications:-		Confirmed		Difference / Deviation
			Yes	No	
	Crash trolley with 4 swivel castors with brakes				
	Having 4 drawers or more				
	Top tray for defibrillator				
	Side tray for instrument				
	Complete with adult and child resuscitator with face mask.				
	Venture suction with collection jar				
	Container for waste				
	Drip stand support				
	Cardiac board				
	Oxygen regulator				
	Flow meter with humidifier				
	Or Equivalent				
	Country of Origin : UK / USA / EEC / Japan				
	Delivery Period:				
	Warranty:				
	Catalogue / Brochure should be attached duly flagged.				

Items	Description	Qty	Rates on D.D.P Basis In words and Figure		
8	Stretcher with all Standard Accessories	13 Nos.			
	Model:	Make:	Country of Origin:		
	Specifications:-		Confirmed		Difference / Deviation
			Yes	No	
	Stainless steel				
	With swivel castors				
	Country of Origin : LOCAL (Export Quality)				
	Delivery Period:				
	Warranty:				

Items	Description	Qty	Rates on D.D.P Basis In words and Figure		
9	Autoclave with all Standard Accessories	01 No.			
	Model:	Make:		Country of Origin:	
	Specifications:-		Confirmed		Difference / Deviation
			Yes	No	
	Chamber capacity: 143 liters				
	Sterilization temperature 121 c				
	Design temperature 138 c				
	Dry function				
	Re-dry function				
	Heater power consumption 6 kw				
	Frequency 50/60Hz				
	Over temperature protection				
	Over Pressure protection				
	Electric overload protection				
	Emergency exhaust switch				
	Low water buzzer				
	Over heat/temp. Indication light				
	Adjustable Sterilize drying time from 0~60 minutes on timer				
	Automatic air venting device				
	With air filter to prevent contaminated air entrance into the chamber				
	Or Equivalent				
	Country of Origin : Korea / Taiwan / Turkey				
	Delivery Period:				
	Warranty:				
	Catalogue / Brochure should be attached duly flagged.				

Items	Description	Qty	Rates on D.D.P Basis In words and Figure		
10	Ventilator with all Standard Accessories	04 Nos.			
	Model:	Make:	Country of Origin:		
	Specifications:-		Confirmed		Difference / Deviation
			Yes	No	
	<u>Modes:</u> Assisted Control Mandatory Ventilation (CMV), Synchronized Intermittent Mandatory Ventilation (SIMV), Spontaneous Ventilation (CPAP + PS, CPAP + VS, SPAP)				
	Auto Control : Apnea Backup Ventilation				
	SPAP Philosophy Options: Time, Cycle + Time, Cycle + I:E				
	IBW Calculator				
	NIV On/Off in all Modes				
	Active Exhalation Valve				
	Automatic Leak Compensation (up to 60 lpm)				
	User defined flow sensor position				
	Proximally at the circuit Wye				
	Distally at the Expiratory Port				
	<u>Breath Types</u>				
	Volume-controlled (V-CMV; V-SIMV)				
	Pressure-controlled (P-CMV; P-SIMV, PS)				
	Volume Targeted Pressure-controlled (PRVC-CMV; PRVC-SIMV, VS)				
	Dual Level PEEP (SPAP)				
	Equivalent to APRV (CareFusion) & BiLevel (Covidien)				
	<u>Breath Triggering</u>				
	Pressure triggering 0.5 - 20 cmH2O				
	Flow triggering 0.1 - 25 lpm				
	Respiratory rate 0 - 150 bpm				
	Tidal volume 2 - 2000 ml				
	PEEP / CPAP 0 - 50 cmH2O				

	Psupport 0 - 90 cmH2O				
	I-Times 0.1 - 10 sec				
	Oxygen concentration 21 - 100%				
	Rise time settings 1 - 20				
	Exhalation sensitivity % 10 - 80% (spontaneous peak flow)				
	Base Flow (with leak comp off) 2.5 - 25 lpm				
	Plateau (insp. pause) 0 - 42 sec (0 - 70%)				
	Manual inspiration. Inspiratory and expiratory				
	Alarm silence breath holds				
	100% Oxygen (+20% Oxygen (Neonate) .Standby				
	Multiple Easy View Tabs				
	Main, Settings, Monitoring, Alarms, Configuration				
	Manual & Automatic Time Based Event Markers				
	Graphics Display (3 - Loops and 3 - Waveforms)				
	Apnea Back-up				
	Smart Nebulizer				
	Smart Sigh				
	Humidification Selection (HME, Humidifier, and None)				
	Heliox 0 - 80%				
	User Defined Custom Default Settings				
	<u>Data Monitoring</u>				
	Delivered oxygen concentrations: 21 - 100%				
	Trend Data (1-72 hrs.)(34 trend parameters)				
	<u>Alarms</u>				
	Auto set alarm feature & 1000 Event log Complete with Humidifier				
	Or Equivalent				
	Country of Origin : USA / EEC / JAPAN				
	Delivery Period:				
	Warranty:				
	Catalogue / Brochure should be attached duly flagged.				

Items	Description	Qty	Rates on D.D.P Basis In words and Figure		
11	Fluoroscopy with DR System 500mA with all Standard Accessories	01 No.			
	Model:	Make:	Country of Origin:		
	Specifications:-		Confirmed		Difference / Deviation
			Yes	No	
A	500mA Digital Radiography machine				
	500mA/125kV High frequency X-Ray consisting of floating top table				
	Chest bucky stand				
	Floor to ceiling tube stand				
	X-ray tube 200KHU				
	Flat panel detector for table bucky and chest bucky				
	Size 14 x 17, 2,560 x 3,072 pixels				
	complete with work station, CPU, Thermal or laser printer				
	Micro processor controll, Three phase , 40 kW high frequency X-Ray Generator				
	Automatic line compensation				
	Over load tube protection				
	Radiographic kVP 40~125kV in one kV step				
	Radiographic mA 10~500mA or more in 18 steps				
	mAs range: 0.1~500mAs				
	Exposure time: 1 ms ~ 10s				
	2 point kVp and mAs selection. 3 point kVp, mA & time selection. 500 or more Anatomical program.				
	Four way floating top fixed table:				
	Table top dimension				
	Length: 200~220 cm				
	Height 80~90cm				
	Table top weight capacity not less then 250kg				
	Electromegnatic brakes Longtidnal and lateral travel movement				
	Super speed moving potter bucky				
	Longitudnal bucky travel				

	Cassette size : 18 x 24 to 35x43cm				
	Moving grid 10:1				
	Foot switch for electro megnatic brake control.				
	Floor Mounted Tube stand				
	Balancing System with counterweights				
	Electromagnetic brakes				
	Control panel with push button to control vertical, longitudinal and transverse travel				
	Column rotation +/-90deg or better				
	Tube arm rotation : horizontal axis: +/-180deg				
	Goniometer for X-Ray beam incidence angulations indication				
	Collimator				
	Manual collimator with 6 pairs of leafs. LED light indicator for alignment with bucky				
	Field light Lamp with 160LUX. lamp timing. retractable measuring tape				
	Wall Bucky stand				
	Cassettes formats from 18X24 to 35X43 on either orientation				
	Moving Potter Bucky super speed				
	Vertical travel of bucky not less than 150cm				
	Moving grid: 10:1 ratio				
	X-Ray Tube :				
	Focus sizes: Small focus 1.0 mm. Large focus 2.0 mm. Maximum Tube, 125 KVp . Anode Heat capacity 200 KHU. Anode rotation 2.700/3.200 rpm				
	Detector				
	(1) FLAT PANEL DIGITAL X-RAY DETECTOR (FPD) 2 Nos. for Table bucky and Chest bucky stand				
	Easy upgrade to DR system from General Radiography				
	Highest image quality Detector type : TFT - Amorphous selenium or CsI/Amorphous Silicon				
	Detector area: 14 x 17"				
	Pixel resolution: 2500 x 3000 pixels (7.5M) or better				
	Pixel pitch: 140 µm or less				
	Analog to digital conversion 14 bits or better				

	Image Acquisition time: < 10 sec or better for full image				
	Optimum DQE value for low contrast objects				
	(2) Workstation and software				
	Integrated work station with a Medical grade LCD display of 21" or more				
	Software to support: patient registration, image acquisition, image viewing, image archiving and export				
	Image processing for noise reduction, image enhancement & adjustement, windowing, zoom IN/OUT etc				
	Image manipulation: digital marker, customize annotation, crop, angle and length measurement, rotate, image reject, image save				
	Image lay out : 1 x1, 2 x 1, 1x2 & 2x2				
	DICOM 3.0 connectivity for store, media storage, print , work list etc				
	Hard ware based with dual core CPU, image disk storage of 500GB or more and interface capability with touch screen or mouse				
	Operating system: Windows XP.				
B	C-Arm Fluoroscopy				
	Image Intensifier for use in urology and other surgery				
	Compact unit consisting of C-Arm control unit and display unit				
	Generator : high frequency inverter type with the frequency of 50KHz or better				
	Out put3.5Kw or more				
	Stationary or rotating anode x-ray tube				
	Focal sport not more than 0.5 small and 1.5mm large				
	X-ray tube Heat capacity 40KHU or more				
	FluoroKV : 110KV max				
	Fluoro mA : 4~5 mA				
	Boost mode 5-10mA				
	Radiography : 20mA or more				
	Radiography mAs:0.4-100mAs				
	Automatic brightness control (ABC)				
	Collimator beam limiter				

	Wide movement of C-Arm up and down , left and right, forward and backward				
	Sliding rotation. C-Arm rotation : +/- 180°				
	Image Intensifier triple field				
	Input field : 9"/ 6"/4.5"				
	Resolution (Centre): 55LPM/cm				
	Camera : Type Digital CCD Camera				
	Auto Gain control, Brightness				
	TV Monitor : Black 2 x 17" Monitors on trolley				
	Image memory: 100 frame				
	CE or FDA Approved				
	Or Equivalent				
	Country of Origin : USA / EEC / JAPAN				
	Delivery Period:				
	Warranty:				
	Catalogue / Brochure should be attached duly flagged.				

Items	Description	Qty	Rates on D.D.P Basis In words and Figure		
12	ABG Machine System with all Standard Accessories	01 No.			
	Model:	Make:		Country of Origin:	
	Specifications:-		Confirmed		Difference / Deviation
			Yes	No	
	Type	Parameter			
	pH	pH			
	Blood Gas	pCO ² , pO ²			
	Electrolytes	K ⁺ , Na ⁺ , Cl			
	Hemotocrit	Hct			
	Shelve life of solution 3~4 months				
	Pouch volume	-440 ml			
	Fluidic cycles	230			
	Storage temperature	12-12 °C/54-77 °F			
	Automatic: 1 & 2 point calibration every 8 hours				
	Full visual graphic array (VGA)				
	Full active thin Film transistor (TFT)				
	800X600 resolutions				
	Resistive touch screen				
	Or Equivalent				
	Country of Origin : USA / EEC / JAPAN				
	Delivery Period:				
	Warranty:				
	Catalogue / Brochure should be attached duly flagged.				

Items	Description	Qty	Rates on D.D.P Basis In words and Figure		
13	Syringe Pump with all Standard Accessories	10 Nos.			
	Model:	Make:	Country of Origin:		
	Specifications:-		Confirmed		Difference / Deviation
			Yes	No	
	<i>Automatic Syringe- Size Detection</i>				
	K.V.O. (Keep Veine open Function)				
	Flow Rate Range				
	Syringe 10 ml : 0.1~300 ml /h				
	Syringe 20ml : 0.1~ 400 ml /h				
	Syringe 30ml : 0.1~ 500 ml /h				
	Syringe 50ml : 0.1~ 1200 ml /h				
	Volume limit : 0.1~ 999.9 ml (0.1 ml steps)				
	Purge Rate:				
	Syringe 10ml: 300ml/h				
	Syringe 20ml: 400ml/h				
	Syringe 30ml: 500ml/h				
	Syringe 50ml: 1200ml/				
	<i>KVO : 0.1 ml/h</i>				
	Accuracy With Approved Syringes				
	Mechanical accuracy : ±1%				
	Accuracy including syringe: ±3%				
	ALARM:				
	Occlusion, Empty syringe, Low Battery, Syringe Dislocated, Plunger / Clutch Disengaged, Repeat Alarm, Start Reminder Alarm				
	Or Equivalent				
	Country of Origin : Korea / Taiwan / Turkey				
	Delivery Period:				
	Warranty:				
	Catalogue / Brochure should be attached duly flagged.				

Items	Description	Qty	Rates on D.D.P Basis In words and Figure		
14	Echo Color Doppler with all Standard Accessories	01 No.			
	Model:	Make:	Country of Origin:		
	Specifications:-		Confirmed		Difference / Deviation
			Yes	No	
	Echo Cardiography System for Vascular and Cardiology application				
	Original Trolley mounted Fully Digital multi beam former				
	Fast image processor and three active connectors				
	Gray shades 256 gray shades or better				
	Image depth: Image depth: 25 cm or more				
	Monitor: 15" or more high resolution, Non flicker TFT/LCD/LED				
	Imaging modes:				
	B mode, 2B/4B, M mode, THI Mode, Color Mode, DPI Mode, PW Mode, PW Mode, Trapezoidal imaging, compound imaging, etc				
	Measurement Packages:				
	Obestratic Measurement Package				
	Gynecology Measurement Package				
	Cardiology Measurement Package				
	Urology Measurement Package				
	Small parts Measurement Package				
	Vascular Measurement Package				
	Orthopedic Measurement Package				
	High pulse repetition frequency				
	Spectral Doppler				
	DICOM 3.0				
	Complete with the following:				
	Convex probe Multi frequency between 2~6 MHz or better				
	Linear probe Multi frequency between 5~10 MHz or better				

	Sector Probe Multi frequency 2~5 MHz or better				
	Black & White digital Ultrasound printer				
	Sine wave on line UPS				
	Country of origin should be USA/ Western Europe/Japan with their respective standards MDD (CE) compliance / MHLW Japan / FDA 510k. Equipment from other countries which is FDA 510k approved can be considered.				
	Or Equivalent				
	Country of Origin : USA / EEC / JAPAN				
	Delivery Period:				
	Warranty:				
	Catalogue / Brochure should be attached duly flagged.				

Items	Description	Qty	Rates on D.D.P Basis In words and Figure		
15	Patient Monitor with all Standard Accessories	11 Nos.			
	Model:	Make:	Country of Origin:		
	Specifications:-		Confirmed		Difference / Deviation
			Yes	No	
	ECG, NIBP, SpO2, RESP, TEMP				
	Standard 5 lead ECG with ST segment monitoring, respiration, dual temperature monitoring				
	Spo2, non-invasive blood pressure, Auto setting of alarm limits				
	Suitable for adults and pediatric				
	Battery backup for 90 minutes atleast				
	12" or more Touch Screen display				
	Trace 8 Wave forms				
	Audible And Visual Alarms				
	Country of origin should be UK/USA/ EEC/Japan with their respective standards MDD (CE) compliance / MHLW Japan / FDA 510k. In case equipment is from other country FDA 510k approval is mandatory				
	Or Equivalent				
	Country of Origin : USA / EEC / JAPAN				
	Delivery Period:				
	Warranty:				
	Catalogue / Brochure should be attached duly flagged.				

Items	Description	Qty	Rates on D.D.P Basis In words and Figure		
16	Defibrillator with all Standard Accessories	01 No.			
	Model:	Make:	Country of Origin:		
	Specifications:-		Confirmed		Difference / Deviation
			Yes	No	
	Defibrillator with Biphasic technology. Truncated Exponential waveform . Integrated pediatric paddles				
	Monitor:				
	ECG monitoring : 3,5, or 10 lead patient cable , paddles or multifunction disposable electrodes. Heart rate : 0 to 300 ppm				
	Defibrillator				
	Biphasic truncated exponential				
	Manual : 1-2-3-5-7-9-10-15-20-30-50-70-100-125-150-200J				
	Synchronized cardioversion				
	Defibrillator energy : 200 joules				
	Charging time. 6 sec at 200 joules				
	Recorder:				
	Thermal array 50mm				
	10, 25, and 50mm/sec speed				
	Manual and automatic				
	Complete with one hour or more battery back				
	Or Equivalent				
	Country of Origin : USA / EEC / JAPAN				
	Delivery Period:				
	Warranty:				
	Catalogue / Brochure should be attached duly flagged.				

Items	Description	Qty	Rates on D.D.P Basis In words and Figure		
17	Diathermy with all Standard Accessories	01 No.			
	Model:	Make:	Country of Origin:		
	Specifications:-		Confirmed		Difference / Deviation
			Yes	No	
	Electro Surgical Diathermy machine 400W to be used in area of General Surgery, Gynecology, Endoscopy, Vascular Surgical, Neuro surgery, orthopedic, urology, TURP procedure and etc				
	Unit should be capable having max 400W at 500ohms with a continuous wave in the pure cut mode				
	Cut mode should have four different mode: pure, blend I,II& III with respective output power of 230W at 300ohms, 180 W at 300ohms, 120 W at 300ohms				
	Two modes of monopolar coagulation				
	Contact coagulation 100W max power and spray coagulation 80W max power				
	Spray coagulation to be used effectively in TURP and endoscopic procedure in urology				
	The contact coagulation to be used for laparoscope. Two modes of bipolar coagulation				
	Standard 99W and soft 50W for large tissue coagulation and small tissue coagulation				
	Unit must have a memory function to remember its last setting in case of power failure				
	The system should have ability to check safety system and automatically return to the last activated setting				
	For patient safety, unit should have patient return electrode monitoring system				
	Unit should complete with: bipolar forceps				
	Reusable bipolar forceps cable				
	Reusable mono polar handle with cable				
	Reusable twin button handle with cable				
	Electrodes .double foot switch				
	Single foot switch				
	Disposable dual return plate				
	Reusable return plate cable				
	Reusable metal plate with cable				
	Or Equivalent				
	Country of Origin : Korea / Taiwan / Turkey				
	Delivery Period:				
	Warranty:				
	Catalogue / Brochure should be attached duly flagged.				