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## Thromboelastometry

No.	Specifications	Fill Your Specification
<b>1</b>	<b>Operational Requirements</b>	
1.1	All parameters of coagulation including platelet, fibrinogen and clotting function analysis facility	
1.2	Technique can be thromboelastography or thromboelastometry or coaguloviscometry	
1.3	Coagulation real time haemostasis and end points in whole blood, citrated whole blood and plasma samples	
1.4	Automated Process, without the use of pipettes to run samples.	
1.5	Should be able to do ACT testing for anticoagulant Management	
1.6	Should be able to work effectively on extremely hemodiluted blood, anticoagulated blood or blood with very low fibrinogen levels.	
1.7	Should be able to give real time analysis of the test both qualitatively & quantitatively	
1.8	Should have two independent measuring channels per analyser	
1.9	Cable should be included	
1.10	Temperature Control: Should have individual temperature control for each channel	
1.11	Demonstration is a must	
1.12	Should connect to computers via USB port. Computer hardware / software requirement: should be compatible with computers based on windows operating system and should be possible to be installed by the CD-ROM drive of the computer	
1.13	Consumables- Test kits have to be supplied along with the machine for one hundred tests for each tests.	
<b>2</b>	<b>Accessories, spares and consumables</b>	
2.1	All standard accessories, consumables and parts required to operate the equipment, including all standard tools and cleaning and lubrication materials, to be included in the offer.	
<b>3</b>	<b>Operating Environment</b>	
3.1	The product offered shall be designed to be stored and to operate normally under Power Supply, Climate, Temperature, Humidity, etc. for Sudan.	
3.2	Power supply: 220 – 240 VAC, 50Hz fitted with appropriate plug. The power cable must be at least 3 metre in length.	
<b>4</b>	<b>Standards and Safety Requirements</b>	
4.1	Must submit ISO13485:2003/AC:2007 for Medical Devices <b>AND</b>	
4.2	CE (93/42 EEC Directives) or USFDA or TUV approved product certificate.	
4.3	Electrical safety conforms to standards for electrical safety IEC 60601-1 General requirement for Electrical safety of Medical Equipment.	
<b>5</b>	<b>User Training</b>	
5.1	Must provide user training (including how to use and maintain the equipment).	
<b>6</b>	<b>Warranty</b>	
6.1	Comprehensive warranty for 2 years after acceptance.	
<b>7</b>	<b>Maintenance Service during Warranty Period</b>	
7.1	During warranty period supplier must ensure corrective/breakdown maintenance whenever required.	
<b>8</b>	<b>Documentation</b>	
8.1	User (Operating) manual in English.	
8.2	Service (Technical / Maintenance) manual in English.	
8.3	List of important spare parts and accessories with their part number and costing.	
8.4	Certificate of calibration and inspection from factory.	

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## Vascular Liver Transplantation Set

No.	Description	Qty	Fill Your Specification
<b>1</b>	<b>Contents of the Set :</b>		
1.1	JACOBSON MICRO SCISSORS CVD 185MM	1	
1.2	MICRO SCISSORS FINE 45° ANG. 165MM	1	
1.3	MAYO-HARRINGTON SCISSORS STR 230MM	1	
1.4	NOIR METZENBAUM SCISSORS DEL CVD 200MM	3	
1.5	NOIR METZENBAUM SCISSORS CVD 180MM	3	
1.6	TC NELSON-METZ SCISS CVD 260MM	1	
1.7	TC TOENNIS-ADSON SCISS DEL CVD 175MM	2	
1.8	DIETRICH VESSEL SCISSORS 45DG 180MM	1	
1.9	DE'BAKEY ATR.FCPS 1.5MM STR150MM	4	
1.10	DE'BAKEY ATR.FCPS 1.5MM STR200MM	4	
1.11	DE'BAKEY STRAIGHT FCPS 1MM TIP195MM	1	
1.12	DE'BAKEY STRAIGHT FCPS 1MM TIP240MM	1	
1.13	MICRO ATR.BULLDOGCLAMP CVD.20/60MM	2	
1.14	BULLDOGCLAMP DE'BAKEY-HESS ANG.20MM	3	
1.15	MICRO ATR.BULLDOGCLAMP STR.10/50MM	2	
1.16	HALSTED-MOSQUITO FORCEPS DELSTR125MM	6	
1.17	HALSTED-MOSQUITO FORCEPS DEL CVD125MM	16	
1.18	MICRO-ADSON SUTURE FORCEPS CVD 140MM	6	
1.19	GEMINI CLAMP RT-ANG 180MM	12	
1.20	GEMINI CLAMP RT-ANG 230MM	24	
1.21	GEMINI CLAMP RT-ANG 280MM	6	
1.22	KIEBACK HYSTERECTOMY FORCEPS 250MM	3	
1.23	KNIFE ELECT.STRLG.SHAFT 100MM D:2.4MM	6	
1.24	MICRO NEEDLE HOLDER 150MM STR.W/RATCHET	3	
1.25	DUROGRIP MIC.NEEDLE HOLDER RD.HDL.200MM	6	
1.26	TC MAYO-HEGAR NDL HOLDERHVYSERR205MM	6	
1.27	TC HEGAR-MAYO NDL HOLDERHVYSERR 265MM	3	
1.28	TC NEEDLE HOLDER X-DEL SERR200MM	6	
1.29	DIADJUST NEEDLEHOLDER STR220MM	6	
1.30	CUSHING VEIN RETRACTOR 10X13MM 205MM	3	

1.31	TC DE'BAKEY CV DUCT SCISS 220MM	3	
1.32	DE'BAKEY BULLDOG CLMPRING-HDLSTR130MM	2	
1.33	DE'BAKEY BULLDOG CLMPRING-HDLCVD125MM	2	
1.34	CASTANEDA NEONATAL CLAMP CVD15MM155MM	2	
1.35	CASTANEDA NEONATAL CLAMP CVD23MM155MM	2	
1.36	CASTANEDA NEONATAL CLAMP 30DG48/120MM	2	
1.37	COOLEY PEDIATRIC FORCEPS 24MM160MM	2	
1.38	DERRA PEDIATRIC FORCEPS 20MM170MM	4	
1.39	DE'BAKEY ATR.MOSQUITO FCPS STR125MM	4	
1.40	DE'BAKEY ATR.MOSQUITO FCPS CVD 125MM	4	
1.41	DE'BAKEY-BAINBRIDGE ATRFCPS CVD 180MM	2	
1.42	DE'BAKEY-BECK VENA-CAVA CLAMP3065205MM	2	
1.43	DE'BAKEY TANGENTIAL CLMP1.38MM-WD220MM	2	
1.44	DBAKY TNGENTAL CLMP 2.48MM-WIDE 265MM	2	
1.45	COOLEY ATR.CLMP JAW LGTH 21MM L:140MM	2	
1.46	COOLEY BULLDOG CLAMP RING-HDL 15DG125MM	2	
1.47	POOL SUCTION CANNULA CHARR.30	2	
1.48	YANKAUER SUCTION CANNULA 2.0MM 285MM	2	
1.49	GERALD FORCEPS DEL STR 175MM	3	
1.50	GERALD FORCEPS DEL STR 230MM	3	
1.51	DE'BAKEY AORTA ANEURYSM CLMPCVD270MM	2	
1.52	ZENKER DISSECTING FORCEPS CURVED 300MM	2	
1.53	BABY-MIXTER DISSECTING FORCEPS CURVED140MM 5½"	2	
1.54	BABY-MIXTER DISSECTING FORCEPS CURVED180MM 7"	2	
1.55	BABY-MIXTER DISSECTING FORCEPS CURVED140MM 5½"	2	
1.56	BABY-MIXTER DISSECTING FORCEPS CURVED180MM 7"	2	
1.57	NISSEN ARTERY FORCEPS CURDED 185MM	4	
1.58	NEEDLE HOLDER 275MM	2	
1.59	NEEDLE HOLDER STRAIGHT 230MM	2	
1.60	WIKSTEAM DISSECTING FORCEPS CURVED 205MM	2	
1.61	AIRAUMATIC BUILDDOG CLAMP STRAIGHT , JAW LENGTH 25MM , 80MM	3	
1.62	AIRAUMATIC BUILDDOG CLAMP STRAIGHT , LENGTH 33MM , 68MM	4	
1.63	AIRAUMATIC VASCULAR CLAMP CURVED , LENGTH 60MM , 220MM	4	
1.64	APBAKY AIRAUMATIC VASCULAR CLAMP CURVED , 58MM , 270MM	2	
1.65	MICROBUJOG CLAMP STRAIGHT JAW LENGTH 13MM , 55MM	6	
1.66	MICRO FORCEPS 1MM DEAKY TIP , STRAIGHT 180MM	2	
1.67	DIADUST FORCEPS STRAIGHT 180MM	2	
1.68	MICRO FORCEPS 1MM DEAKY TIP , STRAIGHT 250MM	2	
1.69	FORCEPS STRAIGHT 1MM CROSSSERATED 250MM	2	
1.70	DUROGRIP NEEDLE HOLDER 230MM	4	
1.71	DUROGRIP NEEDLE HOLDER 305MM	4	
1.72	AUTOMATIC FORCEPS ULTRA LIGHT STRAIGHT 150MM 12MM JAW	4	
1.73	DIADUST MICRO NEEDLE HOLDER 185MM	1	
1.74	DIADUST MICRO NEEDLE HOLDER 210MM	2	
1.75	DIADUST MICRO NEEDLE HOLDER 230MM	2	
1.76	MICRO FORCEPS WITH COUNTER BALANCE 210MM	2	
1.77	MICRO FORCEPS WITH COUNTER BALANCE 250MM	2	
1.78	MICRO SISSORS STRAIGHT DEULATE BLADE 165MM	2	
<b>2 Operating Environment</b>			
2.1	The system offered shall be designed to store and to operate normally under the conditions include Climate, Temperature, Humidity, etc. for Sudan		
<b>3 Standards and Safety Requirements</b>			
3.1	Must submit ISO 9001 or ISO 13485:2003/AC:2007 <b>AND</b>		
3.2	CE (93/42 EEC Directives) or USFDA approved product certificate.		
<b>4 Warranty</b>			
4.1	Warranty for 2 years.		

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## Liver Surgery &amp; Transplantation Retractor Set

No.	Description	Qty	Fill Your Specification
<b>1 Contents of the Set :</b>			
1.1	S-LOCK LIVER TRANSPLANT/RESECTION SYSTEM	2	
1.2	Elite II Rail Clamp w/2 Cam Joints 18"	4	
1.3	34" Bilateral Crossbar Hinged 11 ½ x 8 ½ x 11 ½	2	
1.4	Bilateral Crossbar 7 ½" x 13 ½" x 7 ½"	2	
1.5	Cam I Joint Serrated ½" x ½"	4	
1.6	S-Lock Cam II Angling Handle 8"	12	
1.7	S-Lock Micro-Adj II Clip-on Angling 15"	4	
1.8	S-Lock Micro-Adj II Clip-On Angling 10"	4	
1.9	Angling Head Wrench	4	
1.10	18" Angled Arm 8" x 10" @45°	2	
1.11	24" Angled Arm 11" x 13" @45°	4	
1.12	24" Angled Arm 8" x 16" @45°	2	
1.13	Malleable 13mm x 64mm - SL	4	
1.14	Malleable 13mm x 152mm - SL	4	
1.15	Malleable 13mm x 203mm - SL	4	
1.16	Malleable 25mm x 203mm - SL	2	
1.17	Malleable 25mm x 102mm - SL	2	
1.18	Malleable 51mm x 203mm - SL	2	
1.19	Malleable 64mm x 254mm - SL	4	
1.20	Malleable 76mm x 254mm - SL	2	
1.21	Malleable 102mm x 254mm - SL	2	
1.22	Kelly 64mm x 76mm - SL	2	

1.23	Kelly 76mm x 89mm - SL	4	
1.24	Balfour 70mm x76mm small lip- SL	2	
1.25	Balfour 83mm x 76mm (3¼" x 3")-SL	4	
1.26	Balfour 83mm x 76mm small lip- SL	4	
1.27	Balfour 83mm x 127mm (3¼" x 5")-SL	4	
1.28	Balfour 32mm x 32mm (1¼" x 1¼")-SL	8	
1.29	Richardson 51mm x178mm - SL	2	
1.30	Harrington 64mm x 152mm - SL	2	
1.31	St Marks 64mm x 178mm w/lip-SI	2	
1.32	Malleable Finger 6" - SL	4	
1.33	Balfour 83mm x 57mm (3¼" x 2¼")-SL	2	
1.34	Balfour 102mm x 57mm (4" x 2¼")-SL	2	
1.35	Balfour 114mm x 57mm (4¼" x 2¼")-SL	2	
1.36	Instrument Case w/Pin Mat 22 x 11 x 3½"	4	
1.37	Instrument Case 26" x 10" x 5"	2	
<b>2 Operating Environment</b>			
2.1	The system offered shall be designed to store and to operate normally under the conditions include Climate, Temperature, Humidity, etc. for Sudan		
<b>3 Standards and Safety Requirements</b>			
3.1	Must submit ISO 9001 or ISO 13485:2003/AC:2007 AND		
3.2	CE (93/42 EEC Directives) or USFDA approved product certificate.		
<b>4 Warranty</b>			
4.1	Warranty for 2 years.		

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**Hot Air Warming Blanket**

No.	Specifications	Fill Your Specification
<b>1</b>	<b>Operational Requirements</b>	
	air warming device is a medical electrical device used to keep patients warm during anaesthesia and surgery. Forced air warming devices are used mostly in the operating theatre and the recovery room or critical care environment. They are also used in other clinical areas where patients are at risk of hypothermia. The clinical staff that use forced air warming devices are those who care for patients in these settings, including nurses, operating department practitioners, anaesthetic assistants and anaesthetists.	
1.1	Should be specifically designed for required to suit clinical needs.	
1.2	Should be convenient to be used in any position of the patient including lithotomy position.	
1.3	Warming mattress should consist of the following for easy applications:	
	a. Arm-cum-shoulder section - (170-175 cms) x (28-32cms)	
	b. Pair of leg segments - (40-45) cm X (85-90) cm	
	c. Abdominal segment to cover the entire body - (40-45) cm x (85-90)	
1.4	Control unit should be capable of warming minimum four segments at a time.	
1.5	Should be based on semiconductor polymer foil for precise warming of entire patient body	
1.6	Control display unit should have:	
	a. Selected parameters	
	b. Colour LCD	
	c. Display temperature of different segment at a time	
1.7	Control unit should automatically detect the number of segments which are connected to the unit and display the same on the screen.	
1.8	Adjustable Operating Temperature: High: 43° ± 1.5°C (109.4° ± 2.7°F) Med: 38° ± 1.5°C (100.4° ± 2.7°F) Low: 32° ± 1.5°C (89.6° ± 2.7°F)	
1.9	Arm cum shoulder segment should be divided in two sections capable of being switched ON or OFF independently depending upon the nature of surgery and condition of patient.	
1.10	Should have facility to measure & display the real time core body temperature of the patient continuously on the screen.	
1.11	Should also have on screen graphical display of patient body temperature for the entire duration of surgery.	
1.12	Should have facility to independently adjust the temperature of individual segment.	
1.13	Should have safety features such as Automatic check, Precise temperature control between warming system and patient, Autostop on detecting any problem	
1.14	Should have non latex anti-bacterially coated, blood and fluid Resistant covers	
1.15	Mattress covers should be washable and replaceable.	
1.16	made of plastic or non-woven polypropylene or polyethylene	
1.17	latex free	
1.18	designed to meet flammability standards	
1.19	transparent to X-ray and other imaging systems	
1.2	The control unit should be light weight.	
1.21	Should have noiseless operation	
<b>2</b>	<b>Accessories, spares and consumables</b>	
2.1	All standard accessories, consumables and parts required to operate the equipment, including all standard tools and cleaning and lubrication materials, to be included in the offer.	
<b>3</b>	<b>Operating Environment</b>	
3.1	The product offered shall be designed to be stored and to operate normally under Power Supply, Climate, Temperature, Humidity, etc. for Sudan.	
3.2	Power supply: 220 – 240 VAC, 50Hz fitted with appropriate plug. The power cable must be at least 3 metre in length.	
<b>4</b>	<b>Standards and Safety Requirements</b>	
4.1	Must submit ISO13485:2003/AC:2007 for Medical Devices AND	
4.2	CE (93/42 EEC Directives) or USFDA or TUV approved product certificate.	
4.3	Electrical safety conforms to standards for electrical safety IEC 60601-1 General requirement for Electrical safety of Medical Equipment.	
<b>5</b>	<b>User Training</b>	
5.1	Must provide user training (including how to use and maintain the equipment).	
<b>6</b>	<b>Warranty</b>	

