

TECHNICAL EVALUATION MEETING OF EQUIPMENTS IN CPE INSTITUTE OF CARDIOLOGY MULATAN ON 03-02-2016

Comparative Statement For Heart Lung Machine (For Conventional Cardiac Surgical Procedures), Part-A QTY:01


Sr#	Sepecification	M/S Medica Karachi	M/S Mediland Pakistan Lahore
	Model	Stockert S5	HL-20 Vario Twin
	Make	Sorin	Maquet
	Country of Origin: USA / Europe / Japan	Germany	Germany
	Authorization	Yes	Yes
	Certification: (FDA (510K) / CE / JIS)	FDA/CE	FDA/CE
	Warranty: 5 Years Comprehensive with parts & spare including backup services	5 Years	5 Years
1	05 Pump Complete Modular Pumps console With all Modular Parameter	TE Compliance	TE Compliance
2	04 Single roller Pumps + 01 Twin Pump/two small pumps	TE Compliance	TE Compliance
3	Pressure module (Facility to monitor 02 Pressure channels)	TE Compliance	TE Compliance
4	Temperature module (Facility to monitor 04 temperatures)	TE Compliance	TE Compliance
5	Air Emboli Protection system	TE Compliance	TE Compliance
6	Level sensor module	TE Compliance	TE Compliance
7	Ultrasonic Bubble sensor module	TE Compliance	TE Compliance
8	Flexible LED with arm of maximum length	TE Compliance	TE Compliance
9	Electronic Gas Blender	TE Compliance	TE Compliance
10	Cardioplegia Monitoring Unit	TE Compliance	TE Compliance
11	System Control Panel /System Panel which can display all parameters that are required.	TE Compliance	TE Compliance
12	Should be 24 V Power supply for all Pumps	TE Compliance	TE Compliance
13	Should have Dual Drive Belt/Direct Drive.	TE Compliance	TE Compliance
14	Arterial and cardioplegia pressure monitor With Transducer kit and cable with maximum length and all set of accessories.	TE Compliance	Yes But not quoted
15	Pressure monitoring system should be present with at least 2 pressure channels and 4 pressure transducers with at least 20 pressure domes with accurate digital display and alarm facilities audio and visual.	TE Compliance	TE Compliance
16	Pump should be stop by selecting both upper and lower pressure limits	TE Compliance	TE Compliance
17	Facility for at least 3 time displays with stop, reset and start function	TE Compliance	TE Compliance



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18	Temperature Monitor with Temperature Module : 4 temperature displays with digital Display in Celsius with 4 necessary compatible temperature probes for oxygenators (Adult &Peads)	TE Compliance	TE Compliance
19	Level Sensor: 2 Level sensors along with one level sensor holder & pads for oxygenators at least 100 or more .Should be able to warn on upper limits and stop the pump at lower limit of the pads	TE Compliance	TE Compliance
20	Bubble sensor module with 1 bubble sensors should be of 3/8" and interchangeable connector of 1/4" and all other available sizes. It should be detect micro, small, medium and large size bubbles with immediate pump stop	TE Compliance	No Detail Provided
21	The unit should have 5-pump compactly arranged with separate sockets to control flow.	TE Compliance	TE Compliance
22	Modules Should have easy access sockets for Interchanging the pump on console	TE Compliance	TE Compliance
23	Reverse flow capability (clockwise-anti-clockwise)	TE Compliance	TE Compliance
24	Each individual roller pump should be capable of running independently.	TE Compliance	TE Compliance
25	Should have a spill proof base.	TE Compliance	TE Compliance
26	The unit should be supplied with a Battery backup for the complete system including Flexible LED, safety and accessories for a minimum of 60 minutes or better.	TE Compliance	No Backup for LED
27	Switch over from main power to battery backup should be automatic and immediate. HLM System should have a facility to start on battery . The battery unit should be built in to the pump base and it should be rechargeable	TE Compliance	TE Compliance
28	Monitoring flow rates in LPM&RPM should be digitally display on the pump.	TE Compliance	TE Compliance
29	Pump Speed :0-250 rpm	TE Compliance	TE Compliance
30	Each Pump should have easy mechanism for occlusion setting for different thickness of tubes	TE Compliance	TE Compliance
31	Should have 03 hand crank facility as a safety feature.	TE Compliance	TE Compliance
32	The Console should have a compact base place for the entire pump head.	TE Compliance	TE Compliance
33	Continuous Flow operation	TE Compliance	TE Compliance
34	All the pumps should have facility of pulsatile mode with complete accessories.	TE Compliance	TE Compliance
35	The pump should have Master follower /Slave function (with follower adjustable speed functions) and pump to stop link functions.	TE Compliance	TE Compliance
36	The pump to stop link function should be able to stop the cardioplegia pump with the arterial pump.	TE Compliance	TE Compliance
37	Pumps should have all available sizes tubing connectors for single/twin /Cardioplegia along with each pump (Variolock/ tubing clamp Inserts or equivalent).	TE Compliance	TE Compliance
38	Should have two small roller pumps, independent of each other.	TE Compliance	TE Compliance
39	The twin/Small pumps should be suitable for applications where lower flow rates are required, such as pediatric perfusion, cardioplegia delivery etc.	TE Compliance	TE Compliance

40	Continuous and pulsatile operation.	TE Compliance	TE Compliance
41	Pump Speed :0-250 rpm	TE Compliance	TE Compliance
42	Reverse flow capability (clockwise-anti-clockwise)	TE Compliance	TE Compliance
43	Variable ratio cardioplegia delivery controlled with one knob or equivalent	TE Compliance	TE Compliance
44	The pump should have Master follower /Slave function (with follower adjustable speed functions) and pump to stop link functions.	TE Compliance	TE Compliance
45	The master and follower function should have the capability to make at least cardioplegia pump and arterial pump as a master pump and can make any other pump as a slave pump.	TE Compliance	TE Compliance
46	The pump to stop link function should be able to stop the cardioplegia pump with the arterial pump.	TE Compliance	TE Compliance
47	Electronic Gas Blender for all patient range.	TE Compliance	TE Compliance
48	Gas Flow Range: 0.0-10.0 L/Min	TE Compliance	TE Compliance
49	Should work on battery backup	TE Compliance	TE Compliance
50	High and low gas pressure alarm	TE Compliance	TE Compliance
51	Tray /Shelf with power connection.	TE Compliance	TE Compliance
	Optional But Not Mandatory:	TE Compliance	Yes But power connection?
		TE Compliance	TE Compliance
52	AIR BUBBLE SENSOR :Bubble sensor module with 01 bubble sensor should be of 3/8" and interchangeable connector of 1/4" and all other available sizes. It should be detect micro, small, medium, and large size bubbles with immediate pump stop facility.	TE Compliance	TE Compliance
53	One Mast mounted Pump with Variolock/Tubing clamp inserts	TE Compliance	Not Available
54	Mechanical gas blender (Sechrist Gas Blender should be preferable) for all patient range: With air, O2, CO2 measuring facility and complete accessories.	TE Compliance	TE Compliance
55	All available sizes of all Tubing clamp inserts including cardioplegia with tubing clamp block for one single roller pump	TE Compliance	TE Compliance
56	Drawer /shelf	TE Compliance	TE Compliance
57	Electrical Venous line occluder/Mechanical venous line occluder	TE Compliance	Mechanical
58	Pressure module (Facility to monitor O2 Pressure channels)	TE Compliance	TE Compliance
59	Arterial and cardioplegia pressure monitor With Transducer kit and cable with maximum length and all set of accessories.	TE Compliance	Not Quoted
60	Pressure monitoring system should be present with at least 2 pressure channels and 4 pressure transducers with accurate digital display and alarm facilities audio and visual.	TE Compliance	TE Compliance
61	Pump should be stop by selecting both upper and lower pressure limits	TE Compliance	TE Compliance

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62	Online Blood Monitoring System :			
63	With Parameters pH, pCO ₂ , pO ₂ , SO ₂ , VO ₂ , Temp, Hct, Hb, K ⁺ , HCO ₃ , BE.	TE Compliance		Not Quoted
64	With Complete accessories	TE Compliance		Not Quoted
65	Should work on battery back up	TE Compliance		Not Quoted
66	Rates of Disposables used during online blood monitoring	TE Compliance		Not Quoted
67	Sole Agent certificate must be provided	TE Compliance		Not Quoted
68	FDA approved and CE Marked	TE Compliance		TE Compliance
69	05Year warranty with free service and parts after installation and 10 year part available.	TE Compliance		TE Compliance
70	Clinical training of user/technical training from manufacturer.	TE Compliance		TE Compliance
71	User Manuals of Heart Lung Machine along with all components (online Blood Monitoring unit, Electronic Gas Blender etc...)	TE Compliance		TE Compliance
72	Data management software for clinical perfusion data of all patients (F.O.C)	TE Compliance		TE Compliance
	REMARKS	TA		TNA

<p>Dr. Haider Zaman Prof. of Cardiac Surgery CPEIC, Multan (Chairman)</p>	<p>Dr. Rana Altaf Prof. of Anesthesia CPEIC, Multan (Head Criticalcare/ICU)</p>	<p>Dr. Tariq Abbas Associate. Prof. of Cardiology CPEIC, Multan (Member)</p>	<p>Dr. Sohail Ahmad Assist. Prof. Anaesthesia CPEIC, Multan (Member)</p>	<p>Dr. Farhan Khan Director Technical CPEIC, Multan (Member)</p>
<p>Dr. Muhammad Moeen Sr. Cardiac Surgery CPEIC, Multan (Member)</p>	<p>Dr. Sohail Saleemi Sr. Registrar Cardiology CPEIC, Multan (Member)</p>	<p>Dr. Fayyaz Hashmi Sr. Medical Officer CPEIC, Multan (Member)</p>	<p>Abdul Hafeez Sr. Perfusionist CPEIC, Multan (End User)</p>	<p>Engr. Muhammad Kaleem Biomedical Engineer CPEIC, Multan (Member)</p>