Bihar Medical Services & Infrastructure Corporation Limited 4th floor State Building Construction Corporation Limited. Hospital Road, Shastri Nagar, Patna 800023, Phone/Fax: +91612 2283287,+ 91612 2283288

Corrigendum-II

Bihar Medical Services and Infrastructure Corporation Limited (BMSICL) had invited E-Bids from the interested parties for the procurement, rate contract and the supply of medical equipment for different Govt. Medical Colleges and Hospitals of Bihar vide Notice Inviting Tender No.- BMSICL/2018-19/ME-117. A Pre-bid meeting was held on 22.01.2019 during and after which various suggestions were received from prospective bidders for amendment in technical specification and accordingly some amendments have been made as per the Annexure-I of this corrigendum. In order to facilitate maximum participation of bidders the tender schedule is being revised as follows:-

Tender Reference No.	**BMSICL/2017-18/ME-117**
Date and time for downloading of bid document	**Up to 20th February 2019 till 15:00 Hrs.**
Last date and time of submission of online bids	**21st February 2019 till 17:00 Hrs.**
Last date and time of submission of original documents of EMD, Tender Fee and Document.	**22nd February 2019 till 14:00 Hrs.**
Date, Time and Place of opening of Technical Bid	**22nd February 2019 (at 15:00 Hrs.) on the website of www.eproc.bihar.gov.inin the office of BMSICL**
Date and time of opening of financial Bids	**To be announced later on www.eproc.bihar.gov.in**

Note:-Please refer to the **Annexure-I (pages-07)** of this corrigendum before submission of bid.

Sd/-

GM (Procurement)

BMSICL

Name of Equipment:-TMT Machine		
Sl no.	**Technical Specification before amendments**	**Technical Specification after Amendments**
1	Should be PC based cardiac workstation simultaneously 12 lead acquisition cambines resting & exercise ECG in one unit.	No change
2	Should have radio frequency based wireless connectivity with Acquisition module to acquire diagnostic quality ECG data.	No change
3	Each wire of patient cable set should be detachable, so that each cable can be changeable in case of one cable faulty.	No change
4	The ECG acquisition sampling rate should be 1,000 Samples/seconds channel or more.	No change
5	System should have 24" display for easy access.	System should have 22" or above display for easy access.
6	Should have facility to Review, edit an add ECG from full discloser storage post-exam.	No change
7	Should have facility to hide Zoom ECG, context ECG view and Trends at any time.	No change
8	System should have 50mm sweep speed selection for ECG display.	No change
9	Should have full disclosure of all 12 leads for beat to beat analysis.	No change
10	The final report should include information on blood pressure, heart rat MET,s treadmill speed/Grade, ST trends relating to stage wise & recovery phase and duke treadmill score etc.	No change
11	Report should be user-definable and can be selectable at final step of reporting.	No change
12	Automatic calculation & display of METs.	No change

13	System should support Time and METs ramped protocol.	No change
14	System should show recovery elapsed time in %.	No change
15	System should support left to right work flow.	No change
16	System should provide online printing of ECG prints on High Quality Thermal printer manually and automatically during stress testing.	No change
17	Treadmill soft stop option for stopping the treadmill after 20 second in recovery mode.	No change
18	Facility to get system generated auto statement report.	No change
19	System should support editing of final report in review phase.	No change
20	System should support user defined ST measurement points.	No change
21	System should have special filters to reduce noise artefacts, motion artefacts, baseline artefacts during stress test.	No change
22	System should be capable to store full disclosure ECG data for later review using page review mode.	No change
23	System should support multi login password protected access.	No change
24	System should be supplied with US-FDA approved stress automatic BP measurement device with interface cable to measure automatically the patient NIBP during stress test per the programming done at stress system.	No change
25	The stress testing system should be US-FDA approved.	Removed
26	The display screen must be 24” or more and it should support. 1900x1200 or 1900 x1080 resolution and it should display following parameters.	The display screen must be 22” or more and it should support. 1900x1200 or 1900 x1080 resolution and it should display following parameters.

	· Exercise time.	No change
	· Target and max HR with % of target achievement.	No change
	· HR & METS trends.	No change
	· NIBP trends.	No change
	· ST level trends.	No change
	· Zoomed ECG with reference trace in background.	No change
	· ST profile with reference level in background.	No change
	· Context view of complete study from pre-exercise in recovery.	No change
	· 3-6-12 lead real time ECG rhythm.	No change
	· 12 lead average display.	No change
	· Speed of treadmill.	No change
27	The following items must be provided along with the above stress testing software and automatic BP system.	No change
28	Should have following performance characteristics.	No change
	· Defibrillation protected.	No change
	· Input impedance :< 100 Mohm.	No change
	· CMRR:>100 dB.	No change
29	should have following Transmission options.	No change
	· Network	No change
	· USB	No change
	· XML	No change
	· PDF	No change
	· DICOM (Bi-Directional)	No change
	PC-	No change

	· Window 7 professional	Latest windows suitable for the system.
	· I3 or better processor	No change
	· 4 GB RAM	No change
	· 500 GB Hard Disk	No change
	· Two serial port.	No change
	· Minimum 4 USB port.	No change
	· 24” LCD Monitor.	No change
	Trolley.	No change
	· Trolley must be of good quality and specially designed for stress testing system.	No change
	· Must be on wheel.	No change
	· Must have facility to fix the LCD Monitor.	No change
	Treadmill-	No change
	· Should be heavy duty medical treadmill.	No change
	· Should have stop/start button for emergency stop.	No change
	· Should have zero start.	No change
	· Should be US-FDA Approved.	Removed
	· Should have running surface of 16 cm x 140cm x 51cm)	No change
	· Should have elevation range of 0% to 25%.	No change
	· Should have speed range of 0.1 to 12.4km/h.	No change
	· Should have user weight capacity of 227kg or higher.	No change
	· Walking surface must be a double sided polished for prolonged product life span.	No change
	· Emergency stop button must have the ability to be located in the location of choice by the end user.	No change

	This ESB must be a standard feature of the treadmill.	
	· Hand rails must be available as a standard feature with optional removable hand-rails, or nuclear handrails for the advancement of a nuclear camera to the front of the patient while still on the treadmill.	No change
	· Remote keypad operation should allow for the following: Treadmill start, Treadmill stop, increase/decrease elevation, increase/decrease speed.	No change
	Should have following safety features.	No change
	Electrical Safety	No change
	· Safety class: I	No change
	· Type protection: CF	No change
	· ANSI/AAMI EC11-1991, Diagnostic Electrocardiograph Devices.	No change
	· IEC 60601-1: 1988, Medical Electrical Equipment. Part1: General Requirements for safety.	No change
	· Including Amendment 1:1991-11 and Amendment 2:1995-03.	No change
	· IEC 60601-2-25:1993, Medical Electrical Equipment. Part 2 particular Requirements of the.	No change
	· Safety of Electrocardiographs, including 1:1999-05.	No change
	· Council directive 93/42/EEC of 14 June 1993 concerning medical devices.(Medical Device)	No change
	· Directive.)	No change
	· IEC 60601-1-22001-09, Medical Electrical Equipment-part 1:General requirements for safety.	No change
	· Subpart 2. Collateral standard: Electromagnetic compatibility –Requirements and tests.	No change

	Standards of compliance	No change
	· CE Marked (Class IIa)	No change
	· CAN/CSA Approved.	No change
	· UL Approved	No change
	· FDA Approved.	Removed
	· IEC 529 IP code IPXO	No change
	Environmental	No change
	· Operating temperature:+10 to + 40 deg. C (+50 to +104 deg.F)	No change
	· Storage temperature:-40 to +70 deg. C (-40 to + 158 deg.F)	No change
	· Operating relative humidity: 10% to 95%, non condensing.	No change
	· Storage relative humidity: 10% to 95%, non-condensing.	No change
	· Operation/ storage atmospheric pressure: 500 hPa to 1060 hPa.	No change
Note: Complete system should be US FDA approved		
Name of Equipment:-Holter Machine		
	The Analyser software should provide beat to beat review and complete presentation of all arrhythmias and ischemic events. Prints 1-2- or 3-channel ECG strips at any point in time as per user's requirement.	The Analyser software should provide beat to beat review and complete presentation of all arrhythmias and ischemic events. Prints 1-2- or 3-channel and 12 Channel ECG strips at any point in time as per user's requirement.
1	1. Software should have Ability to assign user roles and permissions to operations with physician electronic signature for the final report.	No Change

2	2. Software should have facility to identify the test progress by ordered, in progress, acquired edited, reviewed and signed status.	No Change
3	3. Software should schedule/order exams; recorder preparation; recording import; work list by user preference; exam database; and patient demographic database.	No Change
4	4. Download and scan time should be less than 90 seconds.	No Change
5	5. Software should have color coded beat identification for a total of 13 beat types for quick and easy identification.	No Change
6	6. Software should have color coded Event Bars for ST episodes, Atrial fibrillation, Artifact, and other rhythm episodes as well as user-defined events.	No Change
7	7. Software should have clippers which allow measurements of amplitude, time and heart rate with ability to march out for identification of interval regularity.	No Change
8	8. Software should have Histograms for graphical representation of RR interval, VE and SVE runs, and pacer spike relationship to QRS distribution.	No Change
9	9. Software should give the choice to user to choose any combination of leads can be used or excluded for beat detection and labeling.	No Change
10	10. Software should have multiple scanning Modes like prospective, retrospective, page Mode and superimposition with bi-directional multi speed for up to 12 channels.	No Change
11	11. Software should have facility of editing/reviewing of final reports before printing system allows preparation of final reports, including automatic strips, comments, morphology report, full disclosure and ECG strips.	No Change
12	12. Software should have facility of Rhythm Analysis of Ventricular and supraventricular singles, couplets, runs (longest and fastest), bradycardia, tachycardia, supraventricular tachycardia, ventricular tachycardia, bigeminy, trigeminy, artrial fibrillation, Atrial, Dual and Ventricular pacemaker rhythms, pause, longest RR,RR standard deviation and Heart Rate variability. Percent and	No Change

	total beats in summary and each hourly period.	
13	13. Software should have USFDA and CE certification.	No Change
14	PC system specifications.	No Change
15	15 should provide windows 7 professional 32 bit or 64 bit OS plateform with minimal performance equivalent to an intel core i3 processor, 4 GB RAM and 500 GB storage capacity.	No Change
16	16. Should provide the good quality laser printer with at least 14 PPM paper speed.	No Change
17	17. Digital recorder Features.	No Change
	· Compact, efficient design. Light weight, should not more than 30 grams without batteries. Pre-processing of ECG data. 24 hour or 48 hour or 7 days recording time. y and lead quality indication. -in impedance check to ensure signal quality. Shock, vibration and ESD tolerant to avoid interrupted operation. Enter entire patient demographics via PC to minimize inter-patient confusion. Traditional 5 –wire patient cable. -chaneel or 3 channel continuous ECG acquisition.	No Change
	Should USFDA Certified.	No Change
18	18. The bidder should supply with five recorders.	No Change
19	19. The bidder should quote the price of Holter Recorder in option, so that recorder can be purchase in given price later.	No Change
	20. Should provide five years of warranty.	No Change
	1. The Analyser software should provide beat to beat review and complete presentation of all arrhythmias and ischemic events. Prints 1-,2-, or 3-channel ECG strips at any point in time as per user’s requirement.	No Change

	2. Software should have ability to assign user roles and permissions to operations with physician electronic signature for the final report.	No Change
	3. Software should have facility to indentify the test progress by ordered, in progress, acquired,edited, reviewed and Echocardiography	No Change
Name of Equipment:-High End Echo Machine		
1	a. Light weight ECHO machine system should have 21 inch or more flat panal type TFT / LCD or better technology monitor.	a. Light weight ECHO machine system should have 17 inch or more flat panal type TFT / LCD or better technology monitor.
	b. The system should have multiple lines acquisition capable of achieving very high frame rates, atleast 5000 frames per second and system must allow frame by frame review.	The system should have multiple line acquisition capable of achieving high frame rates of 2000 frames or Higher.
2	Should have TEE facility.	No change
3	Probes :-	
	1. Trans-thoracic 3D/4D Adult Probe – 01.	No Change
	2. Trans-thoracic: 2D Paediatric Probe – 01.	No Change
	3. Optional TEE 3D Probe (Prcle to be frozen)	Standard TEE 3D Probe
	Additional probe	Trans-thoracic 2D Adult Probe-01
4	a. Sequential measurement of IA/LV volume and LVEF measurement (Auto mode)	No Change
	b. RV volume and function measurement package.	No Change
	c. Mitral Valve Assessment package	No Change
	d. Offline anatomical M-mode with single cardiac beat acquisition	No Change

5	CD/DVD R/W, USB + Compatible Printer	No Change
6	DICOM format (configuration) facilities	No Change
7	FDA and CE' Approved	US FDA & European CE (issued by notified body)
8	Additional	2D speckle tracking Echo for strain and strain rate calculation and related facility like Tissue Tracking with Bulls eye view format
9	Additional	Dynamic stress echo package

Name of Equipment:- Mid End Echo (2D ECHO MACHINE)

Sl no.	**Technical Specification before amendments**	**Technical Specification after Amendments**
(A)	Trans – thothoracic Probes	NO Change
	1) Adult	NO Change
	2) Paediatric Probe – 01	NO Change
	3) Neonatal Probe – 01	Deleted
	4) Vascular Probe – 01	NO Change
	5) Non – imaging Probe – 01 (Optional price to be frozen)	Deleted
(B)	Trans Eso-phageal Probe:- Adult – 01 (Optional – proce to be frozen)	Delete
©	Dynamic stress echo package	NO Change
(D)	Transesophageal Echocardiography packade with aforesaid probe	Delete
€	Tissue Dopplor Imaging/Tissue Velocity Imaging package with colorflow and PW facility plis advanced and updated Q analisys and related calculations facilities	NO Change

(F)	A.F.I. – Automated Functional Imaging with facility for 2D speckle tracking Echo for strain and strain rate calculation and related facility like Tissue Tracking.	2D speckle tracking Echo for strain and strain rate calculation and related facility like Tissue Tracking with Bulls eye view format
(G)	CD/DVD R/W, USB + Compatible Printer.	NO Change
(H)	FDA and CE' Approved	US FDA & European CE (issued by notified body)
(I)	Additional	System should have 15 inch Display or higher.
Name of Equipment:- Ventilator (Turbine Based)		
1	Should have facility for Invasive and Non-Invasive ventilation.	No Change
2	Microprocessor Control suitable for adult ventilation.	No Change
3	Electromagnetic Compatible Hinged arm holder for holding the circuit.	Hinged arm holder for holding the circuit.
4	Should be able to record and analyse various parameters. Breath to breath/pulmonaryfunctions, loops to be stored in the memory with feasibility of trend analysis on a TFT touch screen.Screen size should be more than 10 to 15" so that be easily seen from distance.Compiled trend analysis at Minimum 48 hoursfor all measured parameters. Monitoring during mechanical ventilation includes measurement of peak and plateau pressures, intrinsic positive end expiratory pressure, and work of breathing.	Should be able to record and analyse various parameters. Breath to breath/pulmonaryfunctions, loops/trends to be stored in the memory with feasibility of /trend analysis on a TFT touch screen.Screen size should be more than 10 to 15" so that be easily seen from distance.Compiled trend analysis at Minimum 48 hoursfor all measured parameters. Monitoring during mechanical ventilation includes measurement of peak and plateau pressures, intrinsic positive end expiratory pressure, and work of breathing.

5	Machine should be turbine driven.	No Change
6	Should have Nebulization assembly facility.	No Change
7	Ventilator, Compressor & Humidifier should be Same Trolley/cart mounting for easy transportation.	Ventilator & Humidifier should be Same Trolley/cart mounting for easy transportation.
8	Should have Internal rechargeable battery at least 05 Hrs. backup.	Should have Internal rechargeable battery at least 02 Hrs. or more backup.
9	Automatic Self-test compliance and leakage compensation for circuit and ET Tube.	Automatic Self-test compliance and leakage compensation for circuit .
10	Should have the following modes:	
	a.Volume Controlled, CMV, PCV or IRV, SIMV (volume cycled & pressure limited), SIMV+PS(volume cycled & pressure limited), CPAP, Bilevel, APRV. IMPRV, PRVC,AUTOMODE, Minimum minute ventilation, Mandatory rate ventilation, Proportional assist, Mandatory minute ventilation.	a.Volume Controlled, CMV, PCV, IRV, SIMV (volume cycled & pressure limited), SIMV+PS(volume cycled & pressure limited), CPAP, Bilevel/APRV/ IMPRV/ PRVC/AUTOMODE/Minimum minute ventilation/ Mandatory rate ventilation/ Proportional assist/ Mandatory minute ventilation.
11	Should have the following setting.	
	a.Tidal Volume: minimum 200 ml maximum of 2000 ml in Volume control is essential.	a.Tidal Volume: minimum 20 ml maximum of 2000 ml in Volume control is essential.
	b. PEEP 0 to 30 cmH20 or more	No Change
	c.Oxygen Concentration 21–100 %	No Change
	d. Inspiratory Pressure 1-80 cmH20).	No Change
	e. Respiratory rate 1 to 80 bpm.	No Change
12	Alarm	
	a.Adjustable Alarm.-Low/high minute volume, low/high	a.Adjustable Alarm-Low/high

	pressure, low/high tidal,volume, low/high rate, apnea time, low/high oxygen, low/high SpO2.	minute volume, low/high pressure, low/high tidal volume, low/high rate, apnea time, low/high oxygen.
	b.Special alarm - O2 cell Failure , flow sensor, battery, power supply, gas supply,oxygen concentration.	No Change
13	Compressor	Deleted
	a.Should be supplied with External Compressor.	
	b.The compressor has been designed to supply the ventilator with dry, filtered compressed air.	
	c. Compressor should be oil-free.	
	d. Portable & fitted with ventilator cart.	
	e.Air filtration 5 microns.	
	f.Noise level dB 40–50.	
	g.Peak flow of 200lpm.	
14	Humidifier	
	a.Servo controlled heated Respiratory Humidifier.	No Change
	b.Display Should be of LED /LCD.	No Change
	c.Temperature control settings & Temperature range: 28-40 deg.	Deleted
	d.Temperature should be adjustable.	Deleted
	e.Jar should be autoclavable	No Change
15	Standard Accessories/spare & Consumable.	
	a.Silicon breathing circuit (Adult reusable)-5 complete set.	No Change
	b.Nebulization assembly compatible circuit 5complete set.	b.Nebulization assembly compatible circuit 02 complete set.
	c.Humidifier-1 No.	No Change

	d.O2 Pressure Regulator with hose-1 No.	Deleted
	e.Hose for O2 connection with connector-5 mts.	No Change
	f.Hose for compressed air withconnector-5 mts.	No Change
	g.Test lung-1 No.	No Change
	h.Non-invasive ventilator mask reusable for adult (3sizes)-each size 5 No.	No Change
	i.ET tube cuff pressure monitor and HME filter–10 no.	HME filter–10 no.
	j.Inbuilt / integrated nebulizer-1 no.	No Change
	k.All sensors and other non-consumable items (other than reusable silicon ventilator circuits)should be free of cost during warranty and CMC.	No Change
16	Ventilator, Humidifier & Compressor Power Supply input to be 200-240VAC, 50 Hz fittedwith Indian conditions plug .	Ventilator & Humidifier Power Supply input to be 200-240VAC, 50 Hz fittedwith Indian conditions plug .
17	Suitable online UPS with commensurate capacity for allventilators including compressor &Humidifier with maintenance free batteries for minimum one-hour back-up should besupplied.	Deleted
18	Ventilator, Humidifier & Compressor Should be US FDA and / European CE ApprovedModel should be offered.	Ventilator and Humidifier Should be US FDA / European CE (with a notified body) ApprovedModel should be offered.
	NOTE:	
1	Reusable consumables (other than reusable silicon ventilator circuits) should last duringthe warranty period.	No Change
2	Ventilator & Humidifier any additional reusable consumables are required during thewarranty period those will be supplied free of charge by the supplier.	No Change
3	The life expectancy of the reusable consumable is expected to be of at least one year fromthe date of installation of the same. The reusable consumables will be procured at the prices	No Change

	accepted as per the contract.	
4	The bidders should submit allreusable consumable items price & their authorised localoffice/ distributor name in the financial bid.	No Change