



Notice Inviting e-Tender

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Supply and Commissioning of 1 (one) units of TMT Machine for the dept of Cardiology
, RG Kar MCH, Kolkata

(Submission of Bid through *online*)

Bid Reference No.: WBMSCL/NIT-385/2025

Dated-14.05.2025

AMENDMENT-I

REVISED Technical Specification

TMT Machine

Specification	Specification Name	Bid Requirement (Allowed Values)
General Features	Product Description	Cardiac TMT Machine with Monitor and Printer
	Product components	Heavy-duty medical treadmill with online UPS for the whole system, Computer system, printer, Voltage stabilizer and software along with trolley system to mount computer & printer
	Facility, whereby data should be able to be acquired and digitized near the patient, providing better ECG signal	Yes
Treadmill Specifications	Compatible online UPS for the whole system with minimum 30 minutes or more back up time	Yes
	Stop/start button on treadmill for emergency stop	Yes

Specification	Specification Name	Bid Requirement (Allowed Values)
	Emergency stop button (ESB) must have the ability to be located in front of patient & one at system in front of technician	Yes
	Treadmill should have zero start	Yes
	Automatic operation from the main unit as per test protocol	Yes
	Fold down hand rails on treadmill for allowing easy and convenient assemble and installation	Yes/NO
	Length of Treadmill Floor (mm)	1900 to 2000mm
	Width of Treadmill Floor (mm)	700 to 800mm
	Length of walking area on treadmill (mm)	1350 to 1600mm
	Width of walking area on treadmill (mm)	480 to 600mm
	Maximum Patient Load Capacity of Treadmill (Kg)	120 Kg
	Speed range of Treadmill	0.1 to 10 km/Hr or higher range
	Inclination (continuously variable)	22 or more
	Power requirements	220 - 240 V AC @ 50-60 Hz
	Double sided polish on walking surface of treadmill for prolonged product life span	Yes
	Remote keyboard operation to start, stop and increase or decrease elevation and speed of treadmill	Yes/No
	Self-aligning anti skid conveyor belt	Yes
	Communication/Connectivity	USB
	Enhanced tolerance to electrical changes for greater patient safety	Yes
	Self-calibrating system for speed	Yes
	Inbuilt digital control issues, precise speed and grade control in the system	Yes
	Delivers high torque even at low speeds which ensures no lag when the foot strikes the belt	Yes
	Provide smooth power and accuracy even at slow speeds	Yes
	Normal, slow deceleration and emergency stop modes on treadmill	Yes
Computer System Specifications	Type of Monitor	LCD / LED Or higher

Specification	Specification Name	Bid Requirement (Allowed Values)
	Touch Screen Monitor	Yes / No
	Size of Monitor (inch)	17 Or higher (inch)
	RAM size	4 GB Or higher
	Hard disk space	256 GB Or higher
	Processer	Intel core i3
	Operating System	Windows 10 or Higher
	CD ROM Drive	Yes
	Number of serial port	2
	Number of USB Ports	2 or more
	Alphanumeric multimedia PC keyboard with systems dedicated keypad	Yes
	Standard PC mouse	Yes
	In Built / external uninterrupted power supply for minimum of 5 minutes	Yes
	QRS triggered output	Yes
	Parameters Displayed by the system	12 Lead raw ECG, 12 lead ST level & Slops, EnlargedQRS complex with maximum ST level, Exercise time, Target and Max Heart Rate with % of target achievement, Heart Rate & METS trends, NIBP Trends, Speed of treadmill, Protocol Name, Protocol stage, Patient info
	In Built / external thermal printer with compatible additional laser black and white printer to print report on A4 Size thermal and A4 size ordinary bond papers respectively	Yes
	Minimum Printing Speed of laser printer	20 pages / minute
	Minimum Paper tray capacity of laser printer	250 Sheets
	Print Resolution	1200 x 600 dpi
	Duplex Printing	No

Specification	Specification Name	Bid Requirement (Allowed Values)
	Connectivity / interface of Laser printer	USB
	Supported paper sizes	A4
Transmission of Data	Transmission of data available through	USB
Protocols	Test Protocols include Bruce, Modified Bruce, Balke, Ellestad, Naughton protocols	Yes
	Facility to add user defined protocols	Yes
System Software Features	Licensed copy of windows operating system	Yes
	Provision to record resting ECG & Exercise ECG	Yes
	Resting ECG software with detailed automatic interpretation statement for all 12 or 16 lead resting ECG should be present	Yes
	ECG data management software for storage and review	Yes
	Facility to review, edit and add ECG from full discloser storage post exam	Yes
	50mm sweep speed selection for ECG display in the system	Yes
	Enlarged QRS complexes with superimposition technique	Yes
	Automatic BP Measurement System integrated with the stress test system	Yes/No
	Provision of real time average complexes	Yes
	Provision of real time ST Analysis in bar/ graphs	Yes
	Provision of Re analysis of final summary report	Yes
	System should be able to present ST levels for 12 average complexes, slope for 12 average complexes and ST Profile	Yes
	Provision of online ST measurement adjustment	Yes
	Provision of reanalyzing the possibility of complete exercise test with ST/HR and NIBP trend graphically	Yes
	SCD predictive tools like Twave alternans/QT dispersion, ST /HR analysis	Yes
Full disclosure review/playback/scroll back and addition of past ECG events	Yes	
ST level and slope data for lead and worst case average beat update should be available continuously during the test	Yes	

Specification	Specification Name	Bid Requirement (Allowed Values)
	Beat by beat review mode to allow full disclosure review during and post exam	Yes
	Facility to do reanalysis of scored ECG by changing line measurement point title ST and J	Yes
	The system should present comprehensive final report on minute by minute record of ST segment trend	Yes
	Facility of automatic arrhythmia detection	Yes
	Auto calibration with digital micro process control in the system and should also be manually operable	Yes/No
	System should be able to view comprehensive ST segment and morphology analysis	Yes
	ST profile, ST elevation, ST depression, heart rate, Mets, NIBP, ST index should be able to be clearly analyzed	Yes
	The unit should be able to quickly identify anomalies with the dynamic zoom ST display	Yes
	The system should be able to view ST maps, patented visual anatomical representations of ST deviations in-frontal planes	Yes/no
	Monitoring of ST changes with auto comparison of current and reference beats	Yes
	The system should be able to display the traces incrementally	Yes
	Provision of updating ECG and ST segment changes and compare them on a preexercise and during exercise basis on a high resolution display	Yes
	Compact digital acquisition module that virtually eliminates non-cardiac electrical noises	Yes
	Provision of alarm on HR, BP & ST level	Yes
	Facility to mark the ECG strip to enter comments at any stage	Yes
	Input impedance should be more than 90M Ohms	Yes
	CMRR Should be more than 100 dB	Yes
	Frequency response	0.05Hz to 100Hz
	Patient leakage Should be less then 100?A	Yes
	The system should have baseline correction	Yes
	Digital filters	50Hz, 20Hz, 35Hz

Specification	Specification Name	Bid Requirement (Allowed Values)
Reporting	Facility to get system generated auto report	Yes
	Analysis should work on total of at least 5 protocols	Yes
	No startup delay in the system ie instant ECG Reports at the push of a button should be available	Yes
	Final report with configurable lead groups	Yes
	Patient report include protocol, Indications, medications, target heart rate reasons for end, symptoms, diagnosis, notes and conclusions with space for personnel and physician electronic signature	Yes
Storage of Records	Events/12 lead ECGs/Full disclosure	Yes

Additional Specification Parameters - Cardiac TMT Machine

Specification Parameter Name	Bid Requirement (Allowed Values)
Certificate	The bidder should submit valid CDSCO Certificate / Registration /License for both the manufacturer(s) and importer(s) as applicable
Warranty	2 Years