KERALA MEDICAL SERVICES CORPORATION LTD

(A Government of Kerala Undertaking) Thycaud P.O, Thiruvananthapuram - 14, Kerala. Tel: 0471 - 2945600, 2337353, Fax: 0471 - 2945647

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CIN: U24233KL200TSGC021616, PAN: AADCK4029M, GSTIN: 32AADCK4029M1ZK

Running Contract Details					
Equipment Name MULTIPARAMETER MONITOR VARIOUS TYPES WITH CENTRAL MONITOR SYSTEM					
Running Contract Valid Till	14-03-2026				
Tender Ref No	KMSCL/EP/T523(R)/1087B/2024				
Tendered Quantity	Item wise mentioned in below				
Supplier Name	M/s Instromedix India Pvt. Ltd				
GST No	07AAACI1478H1ZM				
Installation & Delivery Period	8 Week(s)				
Up-time / PM vist	95% & 4 Visits per year				
Warranty period	3 Years				

Supplier`s Details						
Address	Contact Details					
A5-A6	Contact Person	A.S. CHADHA				
PRAGATI CHAMBERS RANJIT NAGAR COMMERCIAL COMPLEX	Phone	011-25704965				
NEW DELHI-110008	Mobile No	9711203605				
	Email	info@instromedixindia.com				

		Item-wise Pric	ce Details		
#	Item Details	Tendered Qty	Unit Rate (Incl.all taxes & charges)	Service Charges (Through KMSCL)	Grand Total
1	Multiparameter monitor Basic with Stand Model & Make : X12/Edan Instruments Inc	500	112000 Incl.GST :12%	8260	120260
2	Multiparameter monitor with capnogram and monitor Stand Model & Make: X12+EtCO2/Edan Instruments Inc	500	207200 Incl.GST :12%	15281	222481
3	Multiparameter monitor with capnogram, IPM and monitor Stand Model & Make: iM80/ Edan Instruments Inc	500	320320 Incl.GST :12%	23623.6	343943.6
4	Multiparameter monitor Modular type with ECG, SPO2, NIBP, Dual Temperature and monitor Stand Model & Make: eliteV6/Edan Instruments Inc	500	478576 Incl.GST :12%	35294.98	513870.98
5	ETCO2 module (Side Stream) with accessories for modular MPM	500	88760 Incl.GST :12%	6546.05	95306.05

ETCO2 module (Main Stream) with accessories for modular MPM	500	346080	25523.4	371603.4
		Incl.GST :12%		5/1005.4
IBP module with accessories for modular MPM	500	67200 Incl.GST :12%	4956	72156
AGM module with accessories for modular MPM	500	495040 Incl.GST :12%	36509.2	531549.2
Non Invasive Continuous Cardiac output monitor with accessories for modular MPM	500	509600 Incl.GST :12%	37583	547183
Accessories for Continuous Cardiac output monitor disposable for modular MPM	500	2800 Incl.GST :12%	206.5	3006.5
4 Channel IBP module with accessories for modular MPM	500	58240 Incl.GST :12%	4295.2	62535.2
NMT module with accessories for modular MPM	500	145600 Incl.GST :12%	10738	156338
BIS module with accessories for modular MPM	500	291200 Incl.GST :12%	21476	312676
EEG 4 channel module with acessories for modular MPM	500	96880 Incl.GST :12%	7144.9	104024.9
Central Monitoring System with all hardwares except cabling charges which includes necessary network switches, Patch panel, 4U wall rack, etc Model & Make: MFM-CMS/ Edan Instruments Inc	500	123200 Incl.GST :12%	9086	132286
Supply, laying and terminating 4 pair CAT6 UTP cable (data) in PVC trunking including numbering tags, Cable ties, Ferrules and all accessories required. (reputed brand) (rate for per meter)	500	207.2 Incl.GST :12%	15.28	222.48
RJ 45 Jack with Shutter in 3X3 surface mount box for information out let (IO) for data. (reputed brand)	500	952 Incl.GST :12%	70.21	1022.21
Supply and fixing of CAT 6 two mtr patch cord for IO to system {BRANDED}	500	952 Incl.GST :12%	70.21	1022.21
	Non Invasive Continuous Cardiac output monitor with accessories for modular MPM Accessories for Continuous Cardiac output monitor disposable for modular MPM 4 Channel IBP module with accessories for modular MPM NMT module with accessories for modular MPM BIS module with accessories for modular MPM EEG 4 channel module with acessories for modular MPM Central Monitoring System with all hardwares except cabling charges which includes necessary network switches, Patch panel, 4U wall rack, etc Model & Make: MFM-CMS/ Edan Instruments Inc Supply, laying and terminating 4 pair CAT6 UTP cable (data) in PVC trunking including numbering tags, Cable ties, Ferrules and all accessories required. (reputed brand) (rate for per meter) RJ 45 Jack with Shutter in 3X3 surface mount box for information out let (IO) for data. (reputed brand)	Non Invasive Continuous Cardiac output monitor with accessories for modular MPM Accessories for Continuous Cardiac output monitor disposable for modular MPM 4 Channel IBP module with accessories for modular MPM NMT module with accessories for modular MPM BIS module with accessories for modular MPM EEG 4 channel module with acessories for modular MPM Central Monitoring System with all hardwares except cabling charges which includes necessary network switches, Patch panel, 4U wall rack, etc Model & Make: MFM-CMS/ Edan Instruments Inc Supply, laying and terminating 4 pair CAT6 UTP cable (data) in PVC trunking including numbering tags, Cable ties, Ferrules and all accessories required. (reputed brand) (rate for per meter) RJ 45 Jack with Shutter in 3X3 surface mount box for information out let (IO) for data. (reputed brand) Supply and fixing of CAT 6 two mtr patch	NOR Invasive Continuous Cardiac output monitor with accessories for modular MPM Accessories for Continuous Cardiac output monitor disposable for modular MPM 4 Channel IBP module with accessories for modular MPM 4 Channel IBP module with accessories for modular MPM NMT module with accessories for modular MPM Soo DiscLGST:12% NMT module with accessories for modular MPM BIS module with accessories for modular MPM BIS module with accessories for modular MPM EEG 4 channel module with accessories for modular MPM EEG 4 channel module with accessories for modular MPM Central Monitoring System with all hardwares except cabling charges which includes necessary network switches, Patch panel, 4U wall rack, etc Model & Make: MFM-CMS/ Edan Instruments Inc Supply, laying and terminating 4 pair CAT6 UTP cable (data) in PVC trunking including numbering tags, Cable ties, Ferrules and all accessories required. (reputed brand) (rate for per meter) RJ 45 Jack with Shutter in 3X3 surface mount box for information out let (IO) for data. (reputed brand) Supply and fixing of CAT 6 two mtr patch 500 500 500 500 500 500 500 5	Non Invasive Continuous Cardiac output monitor with accessories for modular MPM Accessories for Continuous Cardiac output monitor disposable for modular MPM 4 Channel IBP module with accessories for modular MPM NMT module with accessories for modular MPM 500 S8240 Incl.GST :12% NMT module with accessories for modular MPM BIS module with accessories for modular MPM BIS module with accessories for modular MPM EEG 4 channel module with accessories for modular MPM EEG 4 channel module with accessories for modular MPM Central Monitoring System with all hardwares except cabling charges which includes necessary network switches, Patch panel, 4U wall rack, etc Model & Make : MFM-CMS/Edan Instruments Inc Supply, laying and terminating 4 pair CAT6 UTP cable (data) in PVC trunking including numbering tags, Cable ties, Ferrules and all accessories required. (reputed brand) (rate for per meter) Supply and fixing of CAT 6 two mtr patch 500 952 70.21 Supply and fixing of CAT 6 two mtr patch 500 952 70.21

					Item-wise	Pri	ce Details					
19	25/20mm PVC Casing and Capping/conduits/flexible etc (ISI Mark) (rate for per meter)		500		56 Incl.GST :12%			4.13		60.13		
20	0 Reusable adult SPO2 probe for future purchase			500		2520 Incl.GST :12%			185.85		2705.85	
21	Reusable paediatric SPO2 probe for future purchase			500		2520 Incl.GST :12%			185.85		2705.85	
22	Reusable neonatal SPO2 probe for future purchase			500	500 252 Incl.GST :12		2520 .GST :12%	185.85			2705.85	
23	Monitor stand as per specifications - for future purchase		500		3920 Incl.GST :12%		289.1		4209.1			
					l		335	6343.2		247530.31		3603873.51
			Annual / C	ompi	rehensive M	Iaint	tenance Cha	rges (Ex	l.Tax)			
Rate		4 th Year	5 th Year	6 th	Year	7 th	Year	8 th Yea	r	9 th Year		10 th Year
			Mu	ltipa	rameter mo	nito	r Basic with	Stand				
Labour	•	5,000.00	5,000.00		5,000.00		5,000.00	5,000.00		5,000.00		5,000.00
Compre ve	prehensi 9,000.00 9,000.00		9,000.00			9,000.00		9,000.00				
			Multiparamo	<mark>eter</mark> n		<mark>h ca</mark> j						
Labour		9,250.00	9,250.00		9,250.00		9,250.00		,250.00	9,250.00		9,250.00
ve	nprehensi 16,650.00 16,650.00		16,650.00		16,650.00	16	,650.00	16,650.	00	16,650.00		
			Multiparameter	r mor	nitor with ca	apno	gram, IPM	and mon	itor Sta	nd		
Labour		14,300.00	14,300.00		14,300.00		14,300.00	14	14,300.00 14,300.00		14,300.00	
Compre ve	ehensi	25,740.00	25,740.00		25,740.00		25,740.00	25	25,740.00 25,740.00		00	25,740.00
	I	Multiparameter	monitor Modula	r type	e with ECG	, SP	O2, NIBP, D	ual Tem	peratur	e and monito	r St	and
Labour	abour 21,190.00 21,190.00			21,190.00		21,190.00 21,190.00		21,190.00		21,190.00		
Compre ve	ehensi	38,142.00	38,142.00		38,142.00		38,142.00	38	38,142.00 38,142.00		00	38,142.00
			ETCO2 modul	e (Sid	le Stream) v	with	accessories f	for modu	ılar MP	М		
Labour		3,950.00	3,950.00		3,950.00		3,950.00	3,950.00		3,950.00		3,950.00
Comprove	ehensi	7,110.00	7,110.00 7,110.00			7,110.00 7,110.00		7,110.	00	7,110.00		
			ETCO2 module	(Ma	in Stream)	with	accessories	for mod	ular MP	M		
Labour	•	15,450.00	15,450.00		15,450.00		15,450.00	15	,450.00	15,450.	00	15,450.00
Compre	ehensi	27,810.00	27,810.00		27,810.00		27,810.00	27	,810.00	27,810.	00	27,810.00
			IBP n	<mark>iodul</mark>	e with acces	ssori	es for modu	lar MPM	I			
						. – –						

		Annual / C	omprehensive M	Iaintenance Cha	rges (Exl.Tax)		
Labour	3,000.00	3,000.00	3,000.00	3,000.00	3,000.00	3,000.00	3,000.00
Comprehensi ve	5,400.00	5,400.00	5,400.00	5,400.00	5,400.00	5,400.00	5,400.00
		AGM 1	module with acco	essories for modu	ılar MPM		
Labour	22,100.00	22,100.00	22,100.00	22,100.00	22,100.00	22,100.00	22,100.00
Comprehensi ve	39,780.00	39,780.00	39,780.00	39,780.00	39,780.00	39,780.00	39,780.00
	Non Inv	asive Continuous	s Cardiac output	monitor with ac	cessories for mo	dular MPM	
Labour	22,750.00	22,750.00	22,750.00	22,750.00	22,750.00	22,750.00	22,750.00
Comprehensi ve	40,950.00	40,950.00	40,950.00	40,950.00	40,950.00	40,950.00	40,950.00

Other terms & conditions

- 1. The supplier shall execute an agreement with the purchaser as per tender conditions (agreement format is given in the tender document).
- 2. The supplier shall submit performance security amounting to 5.00% of the value of the supply order.
- 3. The labour & comprehensive charges of equipment after the completion of warranty period is finalized by KMSCL as mentioned above.
- 4. Since discount rate is not applicable for equipment under Running Contract of KMSCL, purchase/supply order can be issued directly to supplier at the given rate with tax & other charges (exclusive of KMSCL service charges).
- 5. If purchase/supply order is issued directly to the supplier, KMSCL service charge need not be paid. But the copy of the said order may be forwarded to KMSCL for information.

Technical Specification

Equipment: Multiparameter monitor with capnogram, IPM and monitor Stand

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I. Multiparameter Monitor – Basic parameters

- 1. Should be able to monitor 6 channel ECG from 5 lead ECG, SPO2, NIBP, Respiration Rate and temperature.
- 2. Should be portable with carrying handle.
- 3. Should have touch screen TFT display with at least 12 inches or higher with at least 6 waveforms and numeric display simultaneously.
- 4. Should have Lithium ion/Ni-Mh battery with 1.5 hours battery back-up.
- 5. Should have keys for quick access to main functions.
- 6. Should have adult, pediatric and neonatal modes.
- 7. Should provide prominent prioritized audio, visual alarms for high, low heart rate, SpO2, RR,low battery and lethal arrhythmia

- 8. Recognition with detailed list (more than 15 parameters) in the monitor to set priority and ST Analysis.
- 9. Should have full panel of lethal and non lethal arrhythmias (20 nos)
- 10. Should have event recall minimum up to 24 hours trend, graphical and tabular trends, including short trends & drug dose calculations, alarm logs, Hemodynamics calculations.
- 11. The monitor should have facility for enlarge numeric display for distance viewing with multiple layout of screen.
- 12. Monitors should have ST segment calculations with all latest arrhythmia detection.
- 13. NIBP can be taken on manual/auto/stat modes.
- 14. Should provide following accessories:
- i. Reusable adult 5 lead ECG cable set (clip type) 2 nos.
- ii. Reusable adult and pediatric SPO2 finger probes 2 each. Extension cable 2 nos
- iii. NIBP cuffs for standard Adult- 5 Nos, Obese Adult 2 Nos, Child and infant 2 each
- iv. Temperature Probe 2 Nos (Easophal/Rectal/Surface)
- v. Disposable SPO2 probes for neonatal use 2 Nos & Y sensors 2 nos
- vi. Should provide a facility/ net box to keep the accessories
- 15. Monitor should be able to connect with Central monitoring station & inter bed facility as standard feature with bidirectional communication.
- 16. Monitor should have audio/visible alarm in different colours& should be visible from distance.
- 17. Should have display perfusion index
- 18. Monitors must have ESU & Defibrillation protection
- 19. Should work on 200-240V AC/50Hz with inbuilt rechargeable battery.
- 20. Should be compatible with HIS and should be HL7 compliant
- 21. Should have safety certificate from a competent authority CE issued by a notified body registered in European Commission / FDA (US) / STQC CB certificate / STQC S certificate or valid detailed electrical and functional safety test report from ERTL. Copy of the certificate / test report shall be produced along with the technical bid.
- 22. The monitor stand as per the following specification (Taken for evaluation).
- i. Monitor stand -extruded Aluminum, powder coated.
- ii. Load bearing capacity 20 kgs approximately.
- iii. Should supply, install with necessary anchor fastners at the site.
- iv. Monitor shall be fixed with stand securely.
- v. Should have facility to adjust height, tilt and turn
- 23. Equipment performance should not be affected by electromagnetic interferences radiated or conducted through power lines from another device

II. Multiparameter monitor with Capnogram

- 1. Should have TFT/LCD display with at least 12 inches with 6 wave forms and numeric display simultaneously. Should be capable of customized display
- 2. Should be compact & portable with carrying handle
- 3. Monitor should have in built Lithium-ion type/ NI-Mh battery for 1.5 Hrs continuous operations in case of mains failure.
- 4. Should have keys for quick access to main functions.
- 5. Should be able to monitor ECG, SpO2, NIBP, Respiration Rate, ETCO2 & Temperature for adult, paediatric and neonatal patients with adult, paediatric & Neonatal modes by default.
- 6. 5 Lead ECG monitoring with full range of lethal and non-lethal arrhythmia recognition capability with detailed list (more than 20 parameters) in the monitor to set priority and ST analysis
- 7. Respiration & Apnea alarm
- 8. Manual, Auto and STAT mode for NIBP monitoring and ranges should be 30 to 230 mmHg.
- 9. Pulse Oximeter (SPO2) with Plethysmogragh &Pulse strength indicator with variable pitch with change in SpO2. Should have low perfusion compensation and motion tolerance technology. Documentary proof shall be submitted
- 10. Micro stream / Side-stream/ Mainstream Capnography with display of CO2 wave form & digital values (ETCO2, FiCO2, RR).
- 11. Should have separate volume control for beep sound for QRS and alarm sound.
- 12. The display setting should have at least 3 user defined setups variable as per applications for flexible use of the monitor in various clinical environments.
- 13. Monitor should have networking options
- 14. Should provide following accessories
- A. Micro Stream / Side Stream/ Main stream ETCO2 disposable kit for adult 25 Nos, pediatric/ Neonatal 25 Nos
- B. Reusable adult 5 lead ECG cable set (clip type) -2 nos.
- C. Reusable adult and pediatric SpO2 finger probes 2 nos each, Extension cables -2 Nos
- D. Disposable SpO2 probes for neonatal use- 2 nos and Y sensors 2 Nos
- E. NIBP reusable cuffs for standard Adult(5 numbers), Obese Adult(2 numbers), Child and infant(2 numbers each)
- F. Temperature Probe 2 Nos (Easophal/Rectal/Surface)
- G. Should provide a facility/ net box to keep the accessories
- 15. Facility for last 24 hours full disclosure with wave forms trend review & facility for patient data entry.
- 16. Monitor should be able to connect with Central monitoring station & inter bed facility as standard feature with bidirectional communication.
- 17. Equipment performance should not be affected by electromagnetic radiated or conducted through power lines from another device (Cautery protection).

- 18. Should work on 200-240V AC/50Hz with inbuilt rechargeable battery.
- 19. Should be compatible with HIS and should be HL7 compliant
- 20. Should have safety certificate from a competent authority CE issued by a notified body registered in the European commission / FDA (US)/ STQC CB Certificate/ STQC S Certificate or valid detailed electrical and functional safety test report from ERTL. Copy of the certificate/ test report shall be produced along with the technical bid.
- 21. Monitor stand as per the following specification should be available (Taken for evaluation).
- a. Monitor stand extruded Aluminum, powder coated.
- b. Load bearing capacity 20 kgs approximately.
- c. Should supply, install with necessary anchor fastners at the site
- d. Monitor shall be fixed with stand securely
- e. Should have facility to adjust height, tilt and turn

III. Multiparameter Monitor with Capnogram and IPM

- 1. Should have TFT/ LCD/ Touchscreen display with at least 15 inches and at least 8 wave forms touch screen and numeric display simultaneously
- 2. The waveform should be user selectable with preset user defined settings for varying care locations.
- 3. Should be portable with carrying handle.
- 4. Monitor should have in built Lithium-ion type / NI-Mh battery for 1 Hrs continuous operation in case of mains failure
- 5. Should have keys for quick access to main functions.
- 6. Should be able to monitor ECG, SPO2, NIBP, 2 IBP, Respiration Rate, 2 temp & ETCO2, for adult, pediatric and neonatal patients as standard with adult, pediatric & Neonatal modes by default. IBP should incorporate SVV/SPV/PPV monitoring.
- 7. 5 Lead ECG monitoring with full range of lethal and non lethal arrhythmia recognition capability with detailed list (more than 20 parameters) in the monitor to set priority and ST analysis
- 8. Respiration & Apnea alarm
- 9. Manual, Auto and STAT mode for NIBP monitoring and ranges should be 30 to 230 mmHg.
- 10. Pulse Oxymeter (SPO2) with Plethysmogragh &Pulse strength indicator With Variable pitch with change in SpO2. Should have low perfusion compensation and motion tolerance technology. Documentary proof shall be submitted
- 11. Mainstream / Side-stream / Microstream Capnography with display of CO2 wave form & digital values (ETCO2, FiCO2,RR.
- 12. Should have separate volume control for beep sound for QRS and alarm sound.
- 13. The display setting should have at least 4 user defined setups variable as per applications for flexible use of the monitor in various clinical environments
- 14. Monitor should be able to connect with Central monitoring station & inter bed facility as standard feature with bidirectional communication
- 15. Should provide following accessories

- a. Mainstream / Micro stream / Side stream ETCO2 disposable kit for Adult 25 nos, Paediatric/ Neonatal 25 nos
- b. 25 Nos of Disposable IBP transducers with all standard accessories & 6 nos of reusable adapter cable (type as requested by the end user).
- c. Reusable adult 5 lead ECG cable set (Clip type) 2 nos.
- d. Reusable adult and pediatric SPO2 finger probes 2 each, Extension cable -2 Nos
- e. Disposable SPO2 probes for neonatal use 2 Nos & Y sensors 2 nos
- f. NIBP cuffs for standard Adult- 5 Nos, Obese Adult 2 Nos, Child and infant 2 each
- g. Temperature Probe -2Nos (esophageal / rectal/ surface)
- h. Should provide a facility/ net box to keep the accessories
- 16. Equipment performance should not be affected by electromagnetic radiation or conducted through power lines from another device.
- 17. Should work on 200-240V AC/ 50Hz with inbuilt rechargeable battery.
- 18. Should be compatible with HIS and should be HL7 compliant
- 19. Should have safety certificate from a competent authority CE issued by a notified body registered in European Commission/ FDA (US)/ STQC CB certificate/ STQC S certificate or valid detailed electrical and functional safety test report from ERTL. Copy of the certificate / test report shall be produced along with the technical bid.
- 20. Facility for last 24 hours full disclosure with wave forms trend review & facility for patient data entry
- 21. Monitor stand as per the following specification should be available (Taken for evaluation).
- a. Monitor stand extruded Aluminum, powder coated.
- b. Load bearing capacity 20 kgs approximately.
- c. Should supply, install with necessary anchor fastners at the site
- d. Monitor shall be fixed with stand securely
- e. Should have facility to adjust height, tilt and turn

IV. Multiparameter Monitor with Anesthesia Gas Monitor - Modular Type

- 1. Should be modular Multiparameter monitor with TFT/LED/LCD/touch screen display with at least 15 inches or more with at least 8 wave forms and upgradable up to 12 waveforms & 22 parameter numeric on single display.
- 2. The waveforms should be user selectable.
- 3. Monitor should have in built Lithium-ion type battery for 2 Hour continuous operation
- 4. Should have keys for quick access to main functions.
- 5. Should be able to monitor ECG (3,5,12 leads), SPO2, NIBP, 2 IBP, Respiration Rate, 2 temp, ETCO2, for adult, pediatric and neonatal patients as standard and Anaesthesia gas monitoring
- 6. Monitor must have facility for at least 2 IBP measurements simultaneously. Also should have SPV/PPV monitoring facility

- 7. 5 Lead ECG monitoring with full range of lethal arrhythmia recognition capability and ST analysis upto 12 leads and 72hour trend facility.
- 8. Respiration, Apnea alarm, Prioritized audio visual alarms and snap shot facility.
- 9. Pulse Oxymeter (SPO2) with Plethysmogragh &Pulse strength indicator with Variable pitch with change in SpO2 (low perfusion motion tolerance technology).
- 10. Mainstream/ Side-stream / microstream Capnography with display of CO2 wave form & digital values (ETCO2, FiCO2, RR).
- 11. Monitor should have provisions for automatic identification and measurement of anesthesia agents, CO2, O2, N2O and facility to measure at least 5 volatile agents with automatic detection.
- 12. It should have provision for automatic identification and measurement and anesthetic agents, CO2, O2, N2O and facility to measure MAC.
- 13. The display setting should have at least 10 user defined setups variable as per applications for flexible use of the monitor in various clinical environments as in OT, PACU, ICU, ER, NICU.
- 14. Monitor should be able to connect with Central monitoring station & inter bed facility as standard feature with bidirectional communication.
- 15. Should provide following accessories
- a) Should provide a facility/ net box to keep the accessories
- b) Reusable adult 5 lead ECG cable set clip type 2 nos.
- c) NIBP cuffs for standard Adult- 5 Nos, Obese Adult 2 Nos, Child and infant 2 each
- d) Temperature Probe 2 Nos (Easophal/Rectal/Surface)
- e) Should provide a facility/ net box to keep the accessories
- f) SPO2 Accessories:
- a. Spo2 probe adult (Reusable) 2 Nos
- b. Spo2 probe pediatric (Reusable) 2 Nos
- c. Extension cable 2 nos
- $d.\ Neonatal\ Reusable\ Fore\ Head\ Spo2\ Sensor\ /\ Reusable\ Ear\ lobe\ sensor\ /\ Reusable\ Wrap\ around\ sensor\ -\ 2\ Nos$
- 16. Equipment performance should not be affected by electromagnetic radiated or conducted through power lines from another device.
- 17. Should work on 200-240V AC/50Hz with inbuilt rechargeable battery.
- 18. Should be compatible with HIS and should be HL7 compliant
- 19. Should have safety certificate from a competent authority CE issued by a notified body registered in European commission / FDA (US) / STQC CB certificate / STQC S certificate or valid detailed electrical and functional safety test report from ERTL. Copy of the certificate / test report shall be produced along with the technical bid.
- 20. Basic parameters shall be in a single module and separate modules shall be provided for ETCO2, IBP and AGM.
- 21. The cost of monitor shall include the cost of accessories and one module for all basic parameters mentioned in specification. The rate for other modules with respective accessories shall be offered separately.
- 22. Separate rate shall be offered for ETCO2 module with Mainstream/ Micro stream / Side stream ETCO2 disposable kit for Adult -

- 25 nos, Paediatric/ Neonatal 25 nos (Taken for evaluation)
- 23. Separate rate shall be offered for IBP module with 25 Nos of Disposable IBP transducers with all standard accessories & 6 nos of reusable adapter cable (type as requested by the end user)(Taken for evaluation)
- 24. Separate rate shall be offered for Multi gas AGM module as per specification in previous type of monitor and accessories for Anesthesia Gas/Co2 monitoring -25 Nos (disposable). (Taken for evaluation)
- 25. Monitor stand should be provided along with the machine as per the following specification (Taken for evaluation).
- a. Monitor stand -extruded Aluminum, powder coated.
- b. Load bearing capacity 20 kgs approximately.
- c. Should supply, install with necessary anchor fastners at the site.
- d. Monitor shall be fixed with stand securely
- e. Should have facility to adjust height, tilt and turn

V. Multiparameter Monitor with EtCO2, dual IBP and Non Invasive Continuous Cardiac Output - Modular type

- 1. Patient monitor system modular type should be high end with screen size of 15" or more TFT/LCD display and capable of monitoring adult, pediatric & Neonatal patients.
- 2. Monitor should be full touch screen user interface and should be capable of display 12 or more waveforms.
- 3. Monitor must be capable of simultaneously monitoring the following parameters ECG, NIBP, SpO2,Respiration, Dual IBP, EtCO2 (Mainstream / Sidestream / Microstream) and Dual temperature.
- 4. Monitor must be capable to display parameters such as Continuous Cardiac Output, Cardiac Index, Stroke Volume, Stroke Volume Index, Systemic Vascular Resistance and Systemic Vascular Resistance Index by adding a module or software.
- 5. ECG should have capability for 3, 5 and / or 10 lead monitoring and should have built in advance arrhythmia monitoring of 20 or more.
- 6. Inbuilt ST segment analysis and arrhythmia detection for all the leads should be possible.
- 7. Arrhythmia should be grouped based on classifications and should show no of arrhythmias occurred with ECG waveform.
- 8. Should have SpO2 technology that works well in low perfusion.
- 9. Should display perfusion index (PI %) from SpO2 as an indication of pulse strength at the sensor site.
- 10. Monitor should have facility to measure dynamic preload parameter such as Pulse pressure variation, or Systolic pressure variation.
- 11. Machine must have facility for alarm escalation in case nursing staff miss the alarm.
- 12. Must have minimum 72 hours review data including graphical & tabular trends.
- 13. Must be able to store & display the 48 hours beat by beat waveforms for 4 or more selected parameter by the user.
- 14. The mainstream EtCO2 sensor should be lightweight and small in size and can be use on both intubated and non-intubated patients.
- 15. Monitor shall provide the capability to receive and display real-time waveforms, alarm status from other bedside monitors on the patient monitoring network.
- 16. Alarm status ON/OFFF must be indicated on-screen for each parameter and actual parameter alarm settings must be displayed on-

screen when alarms are on.

- 17. Waveform color changing should be user configurable.
- 18. Should work on 200-240V AC/50Hz with inbuilt rechargeable battery with minimum backup of 60minutes or more.
- 19. Monitor should be able to connect with Central monitoring station & inter bed facility as standard feature with bidirectional communication
- 20. Should be compatible with HIS and should be HL7 compliant.
- 21. Should have safety certificate from a competent authority CE issued by a notified body registered inEuropean commission / FDA (US) / STQC CB certificate / STQC S certificate or. valid detailed electrical and functional safety test report from ERTL. Copy of the certificate / test report shall be produced along with the technical bid.
- 22. Should provide following accessories
- i. Should provide a facility/ net box to keep the accessories
- ii. Reusable adult 5 lead ECG cable set clip type 2 nos.
- iii. NIBP cuffs for standard Adult- 5 Nos, Obese Adult 2 Nos, Child and infant 2 each
- iv. Temperature Probe 2 Nos (Easophal/Rectal/Surface)
- v. Should provide a facility/ net box to keep the accessories
- vi. SPO2 Accessories:
- a. Spo2 probe adult (Reusable) 2 Nos
- b. Spo2 probe pediatric (Reusable) 2 Nos
- c. Extension cable 2 nos
- d. Neonatal -Reusable Fore Head Spo2 Sensor / Reusable Ear lobe sensor / Reusable Wrap around sensor 2 Nos
- 23. Monitor stand should be provided along with the machine as per the following specification (Taken for evaluation).
- f. Monitor stand -extruded Aluminum, powder coated.
- g. Load bearing capacity 20 kgs approximately.
- h. Should supply, install with necessary anchor fastners at the site.
- i. Monitor shall be fixed with stand securely
- j. Should have facility to adjust height, tilt and turn
- 24. Basic parameters shall be in a single module and separate modules shall be provided for IBP and other parameters
- 25. The cost of monitor shall include the cost of accessories and one module for basic parameters mentioned in specification. The cost of other modules with accessories shall be quoted separately.
- 26. Separate rate shall be offered for main stream ETCO2 module with Main stream ETCO2 disposable kit for Adult 25 nos, Paediatric/ Neonatal 25 nos(Taken for evaluation)

- 27. Separate rate shall be offered for IBP module with 25 Nos of Disposable IBP transducers with all standard accessories & 6 nos of reusable adapter cable (type as requested by the end user)(Taken for evaluation)
- 28. Separate rate shall be offered for Multi gas AGM module as per specification in previous type of monitor and accessories for Anesthesia Gas/Co2 monitoring -25 Nos (disposable). (Taken for evaluation)
- 29. Separate rate shall be offered for 10 Numbers Sensors/ catheters/disposables with Non Invasive Continuous Cardiac Output Module/ Software as per the specification detailed above(Taken for evaluation)
- 30. Rate for 100 nos. of such items should be quoted separately which will be taken for evaluation.
- 31. Rate shall be offered for 4 Ch IBP, NMT, BIS, SvO2, Cerebral pulse oximetry, EEG 4 channel modules and the rate shall include one number of reusable / disposable accessories as on case may be. (Price to be quoted separately if available and not taken for evaluation). The rate for Massimo pulse oximeter module with probes shall also be offered

VI. Central Monitoring System

- 1. The central station monitor should be able to connect all the different types of monitors mentioned in the specification either same type or combination of all types depending upon requirement.
- 2. Central monitor should display waveform and numeric data of up to 40 bedside patient monitors.
- 3. All bedside monitor should be connected to central monitor through LAN- Wired connection. It should have option for Wireless or mixed (Wired and Wireless) network system.
- 4. Should have 32" LCD display.
- 5. Should be able to connect 40 monitors or more
- 6. Setting of alarms should be more efficient & should be able to set all parameter limits in one window.
- 7. Should be able to assign frequently used operations to function keys for easy operation
- 8. Should have time linked 72 hours review of numeric and graphical trend data, along with 72 hours review of arrhythmia recalls, alarm history.
- 9. Should have 72 hours full disclosure of upto six selectable waveforms.
- 10. Safe shutdown of the system, preserving data in case of sudden power loss should be possible.
- 11. Bidirectional communication including NIBP monitoring
- 12. Facility to retain the data in case of a change of a Monitor at the Bedside.
- 13. Alarm Events should be in graphical form
- 14. Should be compatible with HIS and should be HL7 compliant
- 15. Includes PC, installation, cabling and networking
- 16. The rate offered should include all hardware required for connecting monitors except cabling which includes necessary network switches, Patch panel, 4U wall rack, etc.
- 17. The cost of cabling to be quoted separately in the BOQ.

Note:

1. If CDSCO (Central Drugs Standard Control Organization) certification is required for the import and marketing of the equipment, then the same shall be submitted along with the technical bid
2. Warranty exclusions if any shall be discussed at the time of prebid meeting else the tender condition as per clause 6.31.20 shall prevail