TAMILNADU MEDICAL SERVICES CORPORATION LTD.,

ICB TENDER FOR SUPPLY AND INSTALLATION OF VENTILATORS FOR TERTIARY CARE HOSPITALS AT GOVT. RAJAJI HOSPITAL -MADURAI, GOVT. KILPAUK MEDICAL COLLEGE HOSPITAL -CHENNAI AND GOVT. COIMBATORE MEDICAL COLLEGE HOSPITAL - COIMBATORE IN TAMILNADU

PKG6/C1/ICB/TNUHP/ JICA/TNMSC/ENGG/ 2022, dt. 29.07.2022

a) The following corrigendum are issued:-

SI. No.	Tender document reference	Instead of	Read as
1.	Page No.52SectionIII:EvaluationandQualificationCriteria:2. Qualification2.3FinancialSituationCapabilities2.3.2AverageAnnual Turnover	Minimum average annual turnover of INR/ INR equivalent of 88.30 crore for Manufacturer/ Manufacturer Bidder within the last 5 years (2017-2018 to 2021-2022), as total certified payments received for contracts in progress and/or completed divided by 5 years and INR/INR equivalent of 66.20 crore Non-Manufacturer Bidder in the last 3 years (2019-2020 to 2021-22), as total certified payments received for contracts in progress and/ or completed divided by 3 years.	equivalent of 88.30 crore for Manufacturer/ Manufacturer Bidder within the last 5 years (2017-2018 to 2021-2022), as total certified payments received for contracts in progress and/or completed divided by 5 years and INR/INR equivalent of 30 crore
2.	Page No.53SectionIII:EvaluationandQualificationCriteria:2. Qualification2.3FinancialSituationandCapabilities2.3.3Financial	(i) The Bidder shall demonstrate that it has access to, or has available, liquid assets, unencumbered real assets, lines of credit, and other financial means (independent of any	demonstrate that it has access to, or has available, liquid assets, unencumbered real assets,

SI. No.	Tender document reference	Instead of	Read as	
	Resources	payment) sufficient to meet the cash flow requirements	the cash flow requirements estimated as INR/INF equivalent of 5 crores for 120 days for Manufacturer/ Manufacturer Bidder and Non-Manufacturer Bidder for the subject	
3.	Page No.54 <u>Section III:</u> <u>Evaluation and</u> <u>Qualification</u> <u>Criteria:</u> <u>2. Qualification</u> <u>2.4 Experience</u> 2.4.2 Specific Experience	2019-2020 to 2021-2022 - 55 Nos. with satisfactory	2022 - 30 Nos. with satisfactory performance of atleast one year on the dateof bid opening supported by end user	
4.	Page No.55 Section III: Evaluation and Qualification Criteria: 2. Qualification 2.4 Experience	ForManufacturer/ Manufacturer Bidder, Goods offered should have been in production for at least 5 years (2017-2018 to 2021-2022) and has the production capacity of 920 Nos. per year from the date mentioned and the Bid submission deadline.ForNon-Manufacturer Bidder, should have sold the similar model of same make quoted at least 55	Manufacturer Bidder, Goods offered should have been in production for at least 5 years (2017-18 to 2021-22) and has the production capacity of 500 Nos. per year from the date mentioned and the Bid submission deadline.	

SI. No.	Tender document reference	Instead of	Read as
		nos. in last 3 years (2017– 18 to 2021-22).	same make quoted at least 30 nos. in last 3 years
5.	Page No.94 Section VI: Schedule of Requirements 3. Technical Specifications Technical Specification for Ventilators	c. Non- invasive ventilation should be possible in pressure modes.	(2019–20 to 2021-22). c. Deleted
6.	Ventilators2.Use andapplication:Page No.100SectionVI:ScheduleofRequirements3.TechnicalSpecificationsTechnicalSpecification forVentilators34.Optionalequipment/featurestoquotedindicatingseparateprice	The following items should be part of standard supply: a. Low Pressure Oxygen (LPO) should be standard with in the ventilator for intra hospital transport and to connect to the oxygen cylinders directly in case of emergencies.	shouldbepartofoptionalsupply:a. Low Pressure Oxygen(LPO)shouldbestandardwithinventilatorforintra
7.	Page No.95 and Corrigendum dt. 22.11.2022 Section VI: Schedule of Requirements 3. Technical Specifications Specification for Ventilators 11. The waveforms and numerical readings should be freely configurable	b) Nebulizer - The ventilator should have a simple pneumatic nebulizer which should be inspiration synchronized and volume compensated. This should be supplied as standard scope of supply.	should have a simple pneumatic nebulizer/

SI. No.	Tender document reference	Instead of	Read as
	as per user wish in ANY order:		
8.	PageNo.96andCorrigendumdt.22.11.2022SectionVI:ScheduleofRequirements3.TechnicalSpecifications	b. Pressure control -PC - BIPAP/APRV as one mode from intubation to extubation, PC- AC.	- BIPAP/APRV/
	TechnicalSpecification forVentilators15.Modes ofVentilation - Theventilator shouldhave the followingventilation modes asstandard with quicktouchscreen-basedoperation / changefrom one mode toanother:		
9.	Page No.98SectionVI:ScheduleofRequirementsandCorrigendumdt.22.11.20223.TechnicalSpecificationsTechnicalSpecification forVentilators23.23.Should haveBTPS compensatedsettings for:	(j) Capnography: mainstream sensor based with display of ETCO2 curve and values. ETCO2 monitoring (mainstream) as optional.	(optional): mainstream sensor based with display of

SI. No.	Tender document reference	Instead of	Read as
10.	Page No.100SectionVI:ScheduleofRequirements3.TechnicalSpecifications	28)d) v) Disposable expiratory valves for use with the machine - 20 Nos.	28) d) v. Deleted.
	<u>Technical</u> <u>Specification for</u> <u>Ventilators</u>		

b) The following clarifications are issued:-

SI. No.	Tender document reference	Points raised	Clarification Furnished
1.	Page No.94 Section VI: Schedule of Requirements 3. Technical Specifications Technical Specification for Ventilators 2. Use and application: b) The ventilator should have both invasive and non - invasive ventilation modes with possibility of upgrade to high Flow Oxygen therapy (if required).	Requested to amend as: The ventilator should have both invasive and non - invasive ventilation modes with high Flow Oxygen therapy (if required).	No Change. Hence, published technical specifications prevail.
2.	Page No.94 and Corrigendum dt. 22.11.2022Section VI: Schedule of Requirements3. Technical SpecificationsTechnical Specification for Ventilatorsb. Battery - Internal Battery with minimum 45 minutes to two-hour battery backup with onscreen battery power indication.	Requested to amend as: Minimum 2 to 3 hour battery back-up.	No Change. Hence, published technical specifications prevail.
3.	Page No.94 and Corrigendum dt. 22.11.2022Section VI: Schedule of Requirements3. Technical Specifications Technical Specification for	a) Requested to delete this point.b) Requested to remove "Should be	No Change. Hence, published technical specifications prevail.

SI. No.	Tender document reference	Points raised	Clarification Furnished
	Ventilators3. Power -The ventilator should run on both mains and battery as below:c. External/ Additional battery backup - atleast 1 hour (may be offered separately) and should be flush mounted on the trolley.	flush mounted on the trolley" c) External/ Additional battery backup for 1 hour, if the internal battery backup in less than 3 hours including battery backup for internal turbine / blower / piston.	
4.	Page No.94 and Corrigendum dt. 22.11.2022 Section VI: Schedule of <u>Requirements</u> 3. Technical Specifications <u>Technical Specification for</u> <u>Ventilators</u> 3. Power -The ventilator should run on both mains and battery as below: d) The internal battery with minimum 45 minutes to two hours. The external / additional battery backup for atleast one hour.	 a) Requested to delete this point. b) Requested to amend as: The internal battery with minimum 45 minutes to two hours. The external / additional battery backup for atleast one hour to be provided if the internal battery backup is less than 3 hours. c) Requested to clarify this point. 	No Change. Hence, published technical specifications prevail.
5.	Page No.94 and Corrigendum dt. 22.11.2022 Section VI: Schedule of Requirements 3. Technical Specifications Technical Specification for Ventilators 4. Air Source- Integrated internal air source such as turbine / blower/compressor as the ventilator will be used in areas with limited / no central air compressor a) For delivering continuous flow upto 180 lpm or more. For achieving better leak compensation in NIV and flow demand of the patient.	Requested to amend as: Continuous flow >=200 lpm in spontaneous breathing mode with pressure support.	No Change. Hence, published technical specifications prevail.

SI. No.	Tender document reference	Points raised	Clarification Furnished
6.	 Page No.94 Section VI: Schedule of Requirements 3. Technical Specifications Technical Specification for Ventilators 4. Air Source- Integrated internal air source such as turbine / blower/compressor as the ventilator will be used in areas with limited / no central air compressor b) The internal air source should be powered by the internal battery for at least 45 minutes. c) The air source should have integrated dust filters which should be easily removable and washable.	 Requested to amend as: b)Internal air source should be powered by the internal battery for atleast 2-3 hours. c) The air source should have integrated dust filters and HEPA filters which should be easily removable and washable. Requested to amend as: b) Inbuilt battery backup for atleast 2 hours or more. 	No Change. Hence, published technical specifications prevail.
7.	Page No.94 and Corrigendum dt. 22.11.2022 Section VI: Schedule of <u>Requirements</u> 3. Technical Specifications <u>Technical Specification for</u> <u>Ventilators</u> 4. Air Source- Integrated internal air source such as turbine / blower/compressor as the ventilator will be used in areas with limited / no central air compressor a. For delivering continuous flow upto 180 lpm or more. For achieving better leak compensation in NIV and flow demand of the patient.	Requested to amend as: 240lpm or more.	No Change. Hence, published technical specifications prevail.
8.	Page No.95 and Corrigendum dt. 22.11.2022 Section VI: Schedule of Requirements 3. Technical Specifications Technical Specification for Ventilators	Requested to amend as: Integrated 12" or more color touchscreen display along with encoder/ mouse facility to be provided for dual	No Change. Hence, published technical specifications prevail.

SI. No.	Tender document reference	Points raised	Clarification Furnished
	Integrated 10" or more color touchscreen display along with encoder knob facility to be provided for dual safety incase of touch screen failure.	safety incase of touch screen failure.	
9.	Page No.95 and Corrigendum dt. 22.11.2022 Section VI: Schedule of <u>Requirements</u> <u>3. Technical Specifications</u>	Requested to amend as: Waveforms + loops+ trends/ monitored values	No Change. Hence, published technical specifications prevail.
	Technical Specification for Ventilators5. Graphical Interface - All commands and settings should be through an integrated 12- inch colour touchscreen as below:c. Any loops from PV, FV, PF should be displayed in any combination such as:		
10.	iii. Waveforms + loops+ trends Page No.95 and Corrigendum dt. 22.11.2022 Section VI: Schedule of Requirements	a) Requested to delete freezing of loops and calculate inflection points with a cursor.	No Change. Hence, published technical specifications prevail.
	 3. Technical Specifications Technical Specification for Ventilators 6. It should be possible to freeze the loops and calculate inflection points with a cursor. 	 b) It should be possible to have low flow quasi static loops and freeze the loops to calculate inflection points with a cursor. 	
11.	Page No.95 and Corrigendum dt. 22.11.2022 Section VI: Schedule of Requirements 3. Technical Specifications	Requested to amend as auto brightness control that automatically adapt to room light.	No Change. Hence, published technical specifications prevail.
	Technical Specification for Ventilators 10. There should be a day / night mode or bright display for easy viewing at night.		
12.	Page No.95 and Corrigendum dt. 22.11.2022	Requested to amend as:	No Change. Hence, published technical

SI. No.	Tender document reference	Points raised	Clarification Furnished
	SectionVI:ScheduleofRequirements3. Technical SpecificationsTechnical Specification forVentilators11.The waveforms andnumerical readings should befreely configurable as per userwish in ANY order:a.Valve response time-Theventilatorshould have anextremely sensitive valve withresponse time≤5msuringquickdelivery ofgasesduringspontaneousbreathing.	The ventilator should have extremely sensitive valve with response time ≤ 25 msec for ensuring quick delivery of gases during spontaneous breathing (to be shown in operating manual or technical data sheet).	specifications prevail.
13.	Page No.96 and Corrigendum dt. 22.11.2022 Section VI: Schedule of Requirements 3. Technical Specifications Technical Specification for Ventilators 15. Modes of Ventilation - The ventilator should have the following ventilation modes as standard with quick touchscreen-based operation / change from one mode to another:	Requested to delete sigh function.	No Change. Hence, published technical specifications prevail.
	d. Sigh -pressure limited sigh/ volume oriented sigh to avoid volutrauma/ barotraumas.		
14.	Page No.96 and Corrigendum dt. 22.11.2022 Section VI: Schedule of <u>Requirements</u> 3. Technical Specifications <u>Technical Specification for</u> <u>Ventilators</u>	as:	No Change. Hence, published technical specifications prevail.

SI. No.	Tender document reference	Points raised	Clarification Furnished
	15. Modes of Ventilation - The ventilator should have the following ventilation modes as standard with quick touchscreen-based operation and through an encoder knob for dual patient safety in case of touch screen failure / change from one mode to another:	in case of touch screen failure / change from	
15.	Page No.96 and Corrigendum dt. 22.11.2022 Section VI: Schedule of <u>Requirements</u> 3. Technical Specifications <u>Technical Specification for</u> <u>Ventilators</u> 17. PRVC/ Autoflow or equivalent Dual Control Mode for: b. Should be possible to combine in all volume control modes and should allow spontaneous breathing in all volume-controlled modes.	Requested to amend as: Should be possible to combine in all volume control modes and should allow spontaneous breathing in SIMV and spontaneous modes of volume control.	No Change. Hence, published technical specifications prevail.
16.	Page No.97 and Corrigendum dt. 22.11.2022Section VI: Schedule of Requirements 3. Technical SpecificationsTechnical Specification for Ventilators19. MMV/ASV/ AVM/Auto Mode/PRVC-SIMV or equivalent single mode for ventilating from control mode to spontaneous.	Requested to amend as: AVM/ASM/Auto flow/auto mode/ PAV/NAVA single mode for ventilating from control mode to spontaneous.	No Change. Hence, published technical specifications prevail.
17.	Page No.97 Section VI: Schedule of Requirements 3. Technical Specifications	Requested to amend as: The unit should be supplied with non- vented Face / Nasal	No Change. Hence, published technical specifications prevail.

SI. No.	Tender document reference	Points raised	Clarification Furnished
	Technical Specification for <u>Ventilators</u> 20. Automatic Tube Compensation - should be available for both intubated and tracheostomy patients with adjustable tube size (3.5 - 12 mm) in 0.4 mm increments in all ventilation modes. Non - Invasive Ventilation: c. The unit should be supplied with non- vented Face / Nasal Masks with gel cushion for face, adjustable cushion pad for nasal bridge and magnetic connectors for quick fastening - reusable or disposable should be specified in 3 sizes (S, M, L) and preferably from same vendor.	Masks in 3 sizes (S,M,L).	
18.	Page No.97 and Corrigendum dt. 22.11.2022 Section VI: Schedule of Requirements 3. Technical Specifications	Requested to increase the range of tidal volume from 20ml onwards to ventilate small babies too and add alternating flow patterns.	No Change. Hence, published technical specifications prevail.
	Technical Specification for Ventilators23.ShouldhaveBTPS compensated settings for:b)InspiratoryPressure:1-50 cmH2O.		
19.	Page No.97Section VI: Schedule of Requirements3. Technical SpecificationsTechnical Specification for Ventilators23. Should have BTPS compensated settings for:	Requested to amend as: Should offer both flow and pressure trigger. Flow trigger required flow upto 2 L/min.	No Change. Hence, published technical specifications prevail.

SI. No.	Tender document reference	Points raised	Clarification Furnished
	 g) Flow Trigger (preferred for higher sensitivity) : 1-5 lpm h) Pressure support : 0 - 50cmH2O above PEEP 		
20.	Page No.97 <u>Section VI: Schedule of</u> <u>Requirements</u> <u>3. Technical Specifications</u>	Requested to remove this point.	No Change. Hence, published technical specifications prevail.
	Technical Specification for Ventilators23. Should have BTPS compensated settings for: k) Sigh (Pressure oriented) 0 - 35 cmH2O, every 3 minutes for2 cycles		
21.	Page No.98 <u>Section VI: Schedule of</u> <u>Requirements</u> <u>3. Technical Specifications</u>	Requested to amend as: High Flow Oxygen Therapy:2-60 lpm.	No Change. Hence, published technical specifications prevail.
	Technical Specification forVentilators23.Should have BTPScompensated settings for:p) High Flow Oxygen Therapy: 2		
22.	 - 80 lpm or more Page No.97 and Corrigendum dt. 22.11.2022 Section VI: Schedule of Requirements 3. Technical Specifications 	as: b) Inspiratory	No Change. Hence, published technical specifications prevail.
	Technical Specification forVentilators23.23.ShouldhaveBTPScompensated settings for:	20 cm H2O.k) Sigh breaths should be user configurable.	
	 b) Inspiratory pressure: 1-99 cm H2O. g) Flow Trigger (preferred for higher sensitivity) : 1-5 lpm k) Sigh (Pressure oriented) 0 - 35 cmH2O, every 3 minutes for 2 cycles. 		

SI. No.	Tender document reference	Points raised	Clarification Furnished
23.	Page No.98 <u>Section VI: Schedule of</u> <u>Requirements</u> <u>3. Technical Specifications</u> <u>Technical Specification for</u> <u>Ventilators</u> 24. Should have BTPS compensated real time monitoring of: b) Intrinsic PEEP with trapped Volume.	Requested to delete trapped volume.	No Change. Hence, published technical specifications prevail.
24.	Page No.98 and Corrigendum dt. 22.11.2022 Section VI: Schedule of <u>Requirements</u> 3. Technical Specifications <u>Technical Specification for</u> <u>Ventilators</u> 25. Should have three level (Advice - Caution - Warning) ISO alarm management with different audio visual color coded alarms, including corrective help messages on the screen for:-	Requested to amend as: Should have three level (Advice - Caution - Warning) ISO alarm management with different audio and visual color coded alarms.	No Change. Hence, published technical specifications prevail.
25.	Page No.99SectionVI:ScheduleofRequirements3. Technical SpecificationsTechnical Specification for Ventilators26. Basic Unit (220- 240 V) with integrated 10-inch or more touch screen and integrated internal battery to power internal turbine / air source.	Requested to amend as: Basic Unit (220- 240 V) with integrated 12- inch or more touch screen and integrated internal battery to power internal turbine / air source.	No Change. Hence, published technical specifications prevail.

SI. No.	Tender document reference	Points raised	Clarification Furnished
26.	Page No.99Section VI: Schedule ofRequirements3. Technical SpecificationsTechnical Specification forVentilators28)a) Reusable heated /differential flow sensor - 2 Nos,should be covered underwarranty and CAMC.	reusable flow sensor must be autoclavable.	No Change. Hence, published technical specifications prevail.
27.	Page No.100 Section VI: Schedule of Requirements 3. Technical Specifications Technical Specification for Ventilators 35. Extended/ additional battery backup: a. atleast 1 hour of operation	 a) Requested to amend as: Battery backup upto 2 hours as standard scope. Should have extended backup upto 4 hours. b) Requested to amend as: 2 to 3 hour battery backup. 	No Change. Hence, published technical specifications prevail.
28.	Page No.100 <u>Section VI: Schedule of</u> <u>Requirements</u> <u>3. Technical Specifications</u> <u>Technical Specification for</u> <u>Ventilators</u> 35. Extended battery backup: b. Suitable for conformal fit on trolley	Requested to delete this point.	No Change. Hence, published technical specifications prevail.
29.	Page No.100 and Corrigendum dt. 22.11.2022 Section VI: Schedule of Requirements 3. Technical Specifications Technical Specification for Ventilators 39. Neonatal modes: Tidal volume - 5 ml, TCPL, SIMV	Requested to delete this point.	No Change. Hence, published technical specifications prevail.

SI. No.	Tender document reference	Points raised	Clarification Furnished
	+TCPL + PSV, N-CPAP (with continuous flow).		
30.	Section VI: Schedule of Requirements 3. Technical Specifications	Requested to include additional points: Should have inbuilt	published technical
	<u>Technical Specification for</u> <u>Ventilators</u>	animaled lung display to visualize the mechanical state of the patient lung.	prevail.

All other terms and conditions of the tender remain unaltered.

The above forms part of the bidding documents. The bidder shall upload the copy of this corrigendum duly signed by their authorized signatory, along with their bid.

Sd/-

General Manager (E)