

31.05.2023

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:-

Sl. No.	Tender document reference	Instead of	Read as
1	Section VI: Schedule of Requirements and (3) Technical Specifications Adult Ventilators-Turbine type <u>Amendment dt. 27.04.2023</u>	Non- invasive ventilation should be possible in volume and pressure modes.	2)c) Non- invasive ventilation should be possible in pressure modes.
2	<u>Section VI: Schedule of Requirements</u> <u>3. Technical Specifications</u> Adult Ventilators-Turbine type <u>Amendment dt. 27.04.2023</u>	The curve should be filled curves for easy viewing at a distance. It should differentiate Spontaneous & Mandatory breaths with different color in the flow curve (standard supply).	4)b) The curve should be clear for easy viewing at a distance. It should differentiate the Spontaneous & Mandatory breaths with different color in the Flow curve.
3	<u>Section VI: Schedule of Requirements</u> <u>3. Technical Specifications</u> Adult Ventilators-Turbine type <u>Amendment dt. 27.04.2023</u>	Standard: Any loops from PV, FV, PF should be displayed in any combination such as: i. 2 Waveforms + 2 loops simultaneously ii. 1 waveform + 1 large loop simultaneously iii. 1 Waveform + 2 loops + 2 graphical trends simultaneously	4) c) Any loops from PV, FV, PF should be displayed 3 waveforms and 2 loops simultaneously.

Sl. No.	Tender document reference	Instead of	Read as
4	<u>Section VI: Schedule of Requirements</u> <u>3. Technical Specifications</u> Adult Ventilators-Turbine type <u>Amendment dt. 05.04.2023</u>	8. Integrated Tabular trend also should be available.	8. Integrated Tabular / graphical trend also should be available.
5	<u>Section VI: Schedule of Requirements</u> <u>3. Technical Specifications</u> Adult Ventilators-Turbine type <u>Amendment dt. 05.04.2023</u>	9. There should be a day / night mode or bright display for easy viewing at night.	9. There should be a day / night/ bright screen mode for easy viewing at night.
6	<u>Section VI: Schedule of Requirements</u> <u>3. Technical Specifications</u> Adult Ventilators-Turbine type <u>Amendment dt. 27.04.2023</u>	11) c) Oxygen cell -The ventilator should have low operating costs with a permanent / non-consumable O2 sensor for FiO2 monitoring. Same should be offered as standard. The O2 sensor should be covered under warranty / CAMC.	11) c) Oxygen cell -The ventilator should have low operating costs with a permanent / non consumable O2 sensor/Galvanic O2 sensor for FiO2 monitoring. Same should be offered as standard. The O2 sensor should be covered under warranty / CAMC without any extra cost.
7	<u>Section VI: Schedule of Requirements</u> <u>3. Technical Specifications</u> Adult Ventilators-Turbine type <u>Amendment dt. 27.04.2023</u>	11)d) Point deleted.	11) d) For models offered with non-permanent O2 cell the periodic replacement shall be covered under warranty and CAMC without any extra cost.
8	<u>Section VI: Schedule of Requirements</u>	15. Modes of Ventilation - The ventilator should	15. Modes of Ventilation - The ventilator should have

Sl. No.	Tender document reference	Instead of	Read as
	<u>3. Technical Specifications</u> Adult Ventilators-Turbine type <u>Amendment dt. 27.04.2023</u>	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:	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:
9	<u>Section VI: Schedule of Requirements</u> <u>3. Technical Specifications</u> Adult Ventilators-Turbine type <u>Amendment dt. 27.04.2023</u>	26)c) The ventilator should have permanent/ non-consumable O2 sensor.	26)c) O2 cell - should be non-consumable and should lifelong. For models offered with non-permanent O2 cell the periodic replacement shall be covered under warranty and CAMC without any extra cost.
10	<u>Section VI: Schedule of Requirements</u> <u>3. Technical Specifications</u> Adult Ventilators-Turbine type <u>Amendment dt. 27.04.2023</u>	35. All disposable & consumables should be supplied from the same manufacturers.	35. All disposable & consumables used should be compatible with the product available in the open market and also available with the manufacturer.
11	<u>Section VI: Schedule of Requirements</u> <u>3. Technical Specifications</u> Adult Ventilators-Turbine type <u>Amendment dt. 27.04.2023</u>	36. Automatic tube resistance compensation should be available for both endotracheal and tracheostomy patients with adjustable tube size (3.5-12 mm) in 0.5 mm increments in all ventilation modes	36. Automatic Tube Resistance Compensation should be available. Specify the sizes offered.
12	<u>Section VI: Schedule of Requirements</u> <u>3. Technical Specifications</u> Neonatal Ventilators with high frequency	2. Screen 14" to 17" TFT LCD touch screen.	2. Screen 10" or more TFT LCD touch screen.

Sl. No.	Tender document reference	Instead of	Read as
	oscillatory ventilation Corrigendum dt. 05.04.2023		
13	<u>Section VI: Schedule of Requirements</u> <u>3. Technical Specifications</u> Neonatal Ventilators with high frequency oscillatory ventilation Corrigendum dt. 05.04.2023	3. Size of ventilator only: Width: 300-600 mm Height: 350-1500 mm Depth: 400-700 mm	3. Specify the size of width, height and depth of the ventilator offered.
14	<u>Section VI: Schedule of Requirements</u> <u>3. Technical Specifications</u> Neonatal Ventilators with high frequency oscillatory ventilation Corrigendum dt. 05.04.2023	10. Should have a combination of 3 waveforms, 2 loops, controlled values and patient values all presented together clearly for diagnostic purposes.	10. Should be able to display 3 waveforms, 2 loops, controlled values and patient values.
15	<u>Section VI: Schedule of Requirements</u> <u>3. Technical Specifications</u> Neonatal Ventilators with high frequency oscillatory ventilation Corrigendum dt. 05.04.2023	2. Ventilator modes: III. HFOV + CMV	2) III) Deleted.
16	<u>Section VI: Schedule of Requirements</u> <u>3. Technical Specifications</u> Neonatal Ventilators with high frequency oscillatory ventilation Corrigendum dt. 05.04.2023	PC- Volume guarantee (volume limited/Volume targeted)	TCPL - Volume Guarantee Limited / Volume Targeted).

Sl. No.	Tender document reference	Instead of	Read as
17	<u>Section VI: Schedule of Requirements</u> <u>3. Technical Specifications</u> Neonatal Ventilators with high frequency oscillatory ventilation Corrigendum dt. 05.04.2023	✓PRVC (Pressure regulated volume control) ✓MMV – Mandatory minute ventilation	Deleted.
18	<u>Section VI: Schedule of Requirements</u> <u>3. Technical Specifications</u> Neonatal Ventilators with high frequency oscillatory ventilation Corrigendum dt. 05.04.2023	b) VC (Volume Controlled) (heading)	Deleted.
19	<u>Section VI: Schedule of Requirements</u> <u>3. Technical Specifications</u> Neonatal Ventilators with high frequency oscillatory ventilation Corrigendum dt. 05.04.2023	b) VC (Volume Controlled) ✓ SIMV ✓ SIMV + PS	✓ SIMV+VG ✓ SIMV + PS+VG
20	<u>Section VI: Schedule of Requirements</u> <u>3. Technical Specifications</u> Neonatal Ventilators with high frequency oscillatory ventilation Corrigendum dt. 05.04.2023	c) Non-invasive ventilation ✓ Proportion pressure support (PPS)	Deleted.
21	<u>Section VI: Schedule of Requirements</u> <u>3. Technical Specifications</u>	II. PC – HFOV III. HFOV + CMV	Deleted.

Sl. No.	Tender document reference	Instead of	Read as
	<u>Specifications</u> Neonatal Ventilators with high frequency oscillatory ventilation Corrigendum dt. 05.04.2023		
22	<u>Section VI: Schedule of Requirements</u> <u>3. Technical Specifications</u> Neonatal Ventilators with high frequency oscillatory ventilation Corrigendum dt. 05.04.2023	-Maneuver functions Inspiration hold/manual -Pre Oxygenation	Inspiration hold or manual inspiration. -Pre-oxygenation/ O2 flush.
23	<u>Section VI: Schedule of Requirements</u> <u>3. Technical Specifications</u> Neonatal Ventilators with high frequency oscillatory ventilation Corrigendum dt. 05.04.2023	4. Ventilator settings Conventional settings a) Tidal Volume (ml) : 1-200 b) Resp. rate: 5-150 c) Minute Volume (L/min): 0.1-20 d) PEEP (CmH2O): 1-50 e) PIP (CmH2O) 0-65 cm H2O f) I:E Ratio: 1:5 – 3:1 g) Inspiratory time 0.1 – 3.0 seconds	a) Tidal Volume (ml) : 0.8-300 b) Resp. rate: 2-200 c) Minute Volume (L/min): 0.0-9.9 d) PEEP (CmH2O): 1-30 e) PIP (CmH2O) 0-80 cm H2O f) I:E Ratio: 1:3 – 10:1 g) Inspiratory time 0.1 – 2.0 seconds
24	<u>Section VI: Schedule of Requirements</u> <u>3. Technical Specifications</u> Neonatal Ventilators with high frequency oscillatory ventilation Corrigendum dt.	a) Frequency range: 3-20 Hz c) P mean: 5-40 cm H2O e) Tidal Volume (ml): 0.2-40	a) Frequency range: 5-20 Hz c) P mean: 5-50 cm H2O e) Tidal Volume (ml): 0.3-100

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	05.04.2023		
25	<p><u>Section VI: Schedule of Requirements</u></p> <p><u>3. Technical Specifications</u></p> <p>Neonatal Ventilators with high frequency oscillatory ventilation Corrigendum dt. 05.04.2023</p>	<p>6. Special Functions</p> <p>a) Manual breath</p> <p>b) Static measurements (Optional feature)</p> <p>c) Nebulization</p> <p>d) O2 Boost level</p> <p>e) Leakage compensation</p> <p>f) Circuit Compensation</p> <p>g) Edi Monitoring (Optional feature)</p> <p>h) Previous mode</p> <p>i) Backup ventilation</p> <p>j) Apnea Management.</p> <p>k) Pause Oscillation. (Optional feature)</p>	<p>6. Special Functions</p> <p>a) Manual breath</p> <p>b) Leakage compensation</p> <p>c) Circuit Compensation</p> <p>d) Previous mode</p> <p>e) Backup ventilation</p> <p>f) Apnea Management.</p> <p><u>Optional features:</u></p> <p>g) Static measurements</p> <p>h) Nebulization</p> <p>d) O2 Boost level</p> <p>i) Edi Monitoring</p> <p>j) Pause Oscillation.</p>
26	<p><u>Section VI: Schedule of Requirements</u></p> <p><u>3. Technical Specifications</u></p> <p>Neonatal Ventilators with high frequency oscillatory ventilation Corrigendum dt. 05.04.2023</p>	<p>a) Pre-Oxygenation Time: Max. 2 min</p> <p>b) Post- Oxygenation Time: Max. 1 min</p>	<p>a) & b)</p> <p>O2 flush with variable user settings.</p>
27	<p><u>Section VI: Schedule of Requirements</u></p> <p><u>3. Technical Specifications</u></p> <p>Neonatal Ventilators with high frequency oscillatory ventilation Corrigendum dt. 05.04.2023</p>	<p>e) Help function should be available.</p>	<p>e) Help function should be available. (Optional)</p>

Sl. No.	Tender document reference	Instead of	Read as
28	<p><u>Section VI: Schedule of Requirements</u></p> <p><u>3. Technical Specifications</u></p> <p>Neonatal Ventilators with high frequency oscillatory ventilation</p> <p>Corrigendum dt. 05.04.2023</p>	<p>9. Maintenance</p> <p>The cost of flow sensor and the O2 sensors should be mentioned if not included in the CAMC</p>	<p>Deleted, since the model offered requires periodic replacement, it should be covered under warranty and CAMC without any extra cost.</p>

b) The following clarifications are issued:-

Sl. No.	Tender document reference	Points raised	Clarification Furnished
1.	<p>Corrigendum dt. 27.04.2023</p> <p><u>Section VI: Schedule of Requirements</u></p> <p><u>3. Technical Specifications</u></p> <p>Adult Ventilators- Turbine type</p> <p>2) b) Battery - Internal Battery with 45 minutes or more battery backup with onscreen battery power indication.</p>	<p>Requested to amend as:</p> <p>a) Battery - Internal Battery with minimum one to two hour battery backup with onscreen battery power indication</p> <p>b) Battery - Internal Battery with 1 to 2 hours or more battery backup with onscreen battery power indication.</p>	<p>No Change. Hence, published technical specifications prevail.</p>
2.	<p>Corrigendum dt. 27.04.2023</p> <p><u>Section VI: Schedule of Requirements</u></p> <p><u>3. Technical Specifications</u></p> <p>Adult Ventilators- Turbine type</p> <p>4. Graphical Interface - All commands and settings should be through an integrated 12-inch colour touchscreen as below:</p>	<p>Requested to amend as:</p> <p>Graphical Interface - All commands and settings should be through an integrated minimum 10 inch or more colour touchscreen as below:</p>	<p>No Change. Hence, published technical specifications prevail.</p>
3.	<p>Corrigendum dt. 27.04.2023</p> <p><u>Section VI: Schedule of</u></p>	<p>Requested to amend as:</p>	<p>No Change. Hence, published technical</p>

Sl. No.	Tender document reference	Points raised	Clarification Furnished
	<u>Requirements</u> <u>3. Technical Specifications</u> Adult Ventilators- Turbine type 24. Basic Unit (220- 240 V) with integrated 12-inch or more touch screen and integrated internal battery to power internal turbine / air source.	Basic Unit (220- 240 V) with integrated 10-inch or more touch screen and integrated internal battery to power internal turbine / air source.	specifications prevail.
4.	Corrigendum dt. 05.04.2023 <u>Section VI: Schedule of Requirements</u> <u>3. Technical Specifications</u> Adult Ventilators- Turbine type 8. Integrated Graphical trend for 24 hours should be available for monitored parameters.	Requested to amend as: 8. Integrated Graphical trend for 72 hours should be available for monitored parameters.	No Change. Hence, published technical specifications prevail.
5.	Corrigendum dt. 05.04.2023 <u>Section VI: Schedule of Requirements</u> 3. Technical Specifications Technical Specification for Neonatal Ventilators with high frequency oscillatory ventilation 8. Distal flow sensor should be permanent.	Requested to delete this point.	No Change. Hence, published technical specifications prevail.
6.	Corrigendum dt. 05.04.2023 <u>Section VI: Schedule of Requirements</u> 3. Technical Specifications Technical Specification for Neonatal Ventilators with high frequency oscillatory ventilation NIPPV	Requested to amend as: Change this as Ncpap * Duopap, nippv	No Change. Hence, published technical specifications prevail.

Sl. No.	Tender document reference	Points raised	Clarification Furnished
7.	<p>Corrigendum dt. 05.04.2023</p> <p><u>Section VI: Schedule of Requirements</u></p> <p>3. Technical Specifications Technical Specification for Neonatal Ventilators with high frequency oscillatory ventilation</p> <p>3. Enhancements</p> <p>-Smart Pulmonary view (Optional feature)</p> <p>-HFO – Sigh</p>	Requested to delete these points.	No Change. Hence, published technical specifications prevail.
8.	<p>Corrigendum dt. 05.04.2023</p> <p><u>Section VI: Schedule of Requirements</u></p> <p>3. Technical Specifications Technical Specification for Neonatal Ventilators with high frequency oscillatory ventilation</p> <p>6. Special functions</p> <p>Suction support</p>	Requested to delete this point.	No Change. Hence, published technical specifications prevail.
9.	<p>Corrigendum dt. 05.04.2023</p> <p><u>Section VI: Schedule of Requirements</u></p> <p>3. Technical Specifications Technical Specification for Neonatal Ventilators with high frequency oscillatory ventilation</p> <p>9. Maintenance Warranty (3 years from date of installation) and CAMC for 7 years after warranty should include Flow sensor, O2 sensor and Battery.</p>	Requested to amend as: Warranty (3 years from date of installation) and CAMC for 7 years after warranty.	No Change. Hence, published technical specifications prevail.

The due date of the tender is extended as below:

Sl. No.	Description	Tender Ref.	Sale period	Last date and time for submission of bid	Date and time of opening of bid
1.	Ventilator (Adult) & Neonatal Ventilators with high frequency oscillatory ventilation	PKG6/C1/ICB/ TNUHP/ JICA/TNMSC/ENG G/ 2022, Dt. 29.07.2022	upto 07.06.2023	upto 11.00 AM on 08.06.2023	08.06.2023 at 12:00 Noon

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/-
Managing Director**