



## Notice Inviting e-Tender

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Supply and Commissioning of different medical equipment for Critical Care Block(CCB)  
project(Item category-Type A)

(Submission of Bid through *online*)

2<sup>nd</sup> call of Bid Reference No.: WBMSCL/NIT-175/2022(schedule-VII,VIII,X&XI); dated-18.04.2023

Bid Reference No.: WBMSCL/NIT-427/2023
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Dated-26.07.2023
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### Schedule-III

#### Amendment-I

## REVISED TECHNICAL SPECIFICATION PORTABLE VENTILATOR

1. Should be small and portable
2. Should operate on built in piston or turbine assembly or pneumatic technology
3. Ventilator should be useful for adult & pediatric patients with in-built colour touch screen of preferably 4" or more. Display facility of loops and curves should be available.
4. **Modes of Ventilation**
  - 4.1. Volume Controlled Ventilation
    - 4.1.1. Assist / Controlled / SIMV
  - 4.2. Pressure Controlled
    - 4.2.1. Assist / Controlled / SIMV
  - 4.3. CPAP/PSV
  - 4.4. Non invasive

5. Should have back-up ventilation in all modes of ventilation with the facility to link the backup ventilation to Apnea alarm or Low Minute Ventilation Alarm or to both.
6. Should have PEEP compensated Inspiratory trigger in pressure (sensitivity).
7. The unit should be able to provide the following parameters: Tidal volume: 50 ml to 2000ml (and beyond both limits) / Respiratory rate: Up to 80 bpm or more / PEEP / CPAP: 0 to 30 Cm H<sub>2</sub>O / Pressure support: Up to 40 cm H<sub>2</sub>O or more, / Pressure Control: Up to 60 cm H<sub>2</sub>O or more/I:E ratio: 1:9.9 to 3:1/FiO<sub>2</sub>: 21 % to 100% with FiO<sub>2</sub> monitoring and control.
8. It should have the following alarms with audio, visual and with message display: P max, P min, High & Low Baseline pressure, High & Low Minute Volume, Apnea, Back up ventilation alert, Device alert, Power switch over alert, Low battery, low & high FiO<sub>2</sub>.
9. Should have monitored data of: Inspired tidal volume, Inspired Minute Volume, Total Total respiratory rate Peak / Maximum airway pressure. Mean airway pressure, PEEP and FiO<sub>2</sub>
10. Patient disconnection, power failure alarms
11. Manual Inflation upto 2-3 seconds
12. Should have 100 L / min or more peak flow
13. Battery back up: 5 hrs or more
14. Battery should be rechargeable, hot swappable and life at least 8 hrs of operation or more at, normal adult ventilation settings.
15. Should have European CE (4 digit Notified body) / US FDA / BIS approved.
16. Should also operate in Air ambulances & helicopter and should have Airworthy certificate.
17. Should have facility to change the battery (hot swappable battery)
18. Should have user selectable monitored data.
19. European CE (4 digit Notified body) / US FDA / BIS approved Inbuilt / integrated / compatible nebulizer.