



**Indira Gandhi Memorial Hospital
Male', Republic of Maldives
Biomedical Engineering Department**

Technical Specification for Equipment

Equipment: Portable Infant Ventilator

Portable ventilators are compact devices designed to provide mechanical ventilation.

Our main purpose of the portable ventilator is to use to transport infants and neonates that are incubated and transport for medical and surgical care abroad by Air.

1. It can be used for pre term neonatal, Infant and Pediatric.
2. Should have possibility for using external low-pressure oxygen as source
3. User friendly and at least 7inch color display.
4. Automatic compliance & leakage compensation for circuit and ET tube
5. Easy to use, total weight of the ventilator should be less than 7KG.
6. It can operate on dual power supply, AC power inlet (220-240AC) and DC power inlet
7. **Battery capacity** should be able to operate the ventilator for **Minimum 8 hours** in full battery capacity.
8. Manufacture should provide the **aviation certificate** for carry the ventilator in aircraft.

Display Parameters

9. 3 Waves: Pressure & Time, Volume & Time and Flow & Time.
10. 3 Loops: P-V, F-V, P-F with facility of saving of 3 loops for reference.
11. FiO₂.
12. Airway pressures (peak, plateau mean and PEEP)
13. Tidal volume

14. Minute volume
15. I:E ratio
16. RR (spontaneous and mechanical)
17. Status indicator for ventilator mode, battery life, patient data, alarm settings, clock etc
18. Display easily readable in low ambient light and sunlight.
19. Tidal Volume at least 2 to 300 ml.

Should have following modes of ventilation

Volume control ventilation (VCV)

Pressure control ventilation (PCV)

Pressure support ventilation (PSV)

Non-Invasive ventilation (CPAP and BIPAP)

Pressure regulated volume control (PRVC) or equivalent

Synchronized intermittent mandatory ventilation (SIMV)

20. Shall have apnea /backup ventilation
21. Shall have automatic patient detection facility.
22. Event log for errors traceability
23. Trending facility for 72 hours with minimum 5 minutes' resolution for recent 24 hours
24. RS 232C interface or equivalent for communications with networked devices.
25. All necessary accessories for the start and functioning of the equipment needs to be supplied

Additional accessories required: Extra breathing circuit for neonatal, pediatric.

Standards/Certification, Safety

Should be a CE / FDA Approved product and should have ISO standards, IEC Standards, RTCA DO-160 standards.

Warranty

Minimum 24 months from the date of handing over/installation and commissioning

After sales service and technical support will be expected at least minimum of 5 years.

Training of hospital engineers & staff

User/Technical/Maintenance manuals to be supplied in English and certificate of calibration and inspection.