

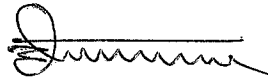
SPECIFICATIONS OF VENTILATOR (ADULT, PAEDIATRIC AND NEONATAL)

1. Operational Requirements
2. It should be microprocessor Controlled ventilator with integrated facility for Ventilation monitoring suitable for Neonatal to adult ventilation.
3. The unit should be external compressor based for precise gas delivery (not a turbine / piston/ blower based). It should have proximal flow sensor for neonatal patient category only.
4. Demonstration of the equipment is a must.

Technical Specifications:

5. Hinged arm holder for holding the circuit
6. Should have Colored Touch screen, 12 Inch or more
7. It should have inbuilt facility to measure and display for all patient category (Adult to neonatal)
8. a) Should have Mainstream End tidal CO₂ detection Capnography
b) 3 waves- Pressure and Time, Volume and Time and Flow and Time.
c) 3 loops- P-V, F-V, P-F with facility of saving of Loops for reference. Display of volumetric capnography loops should be there.
d) Status indicator for Ventilator mode, Battery life, patient data, alarm settings, clock etc. Simultaneous display of set and exhaled parameter, 3 waveform and 2 loops and Alarm
9. should have Trending facility for 24 hours
10. should have Automatic compliance & Leakage compensation for circuit and ET tube with ET Tube size and % of compensation
11. Should have Following settings for all age groups.
12. a) Tidal Volume 5 ml to 1500 ml
b) Pressure (insp) 2- 80 cmH₂O
c) Pressure Ramp / Flow patterns
d) Respiratory Rate 1 to 150 bpm, Insp. Time 0.1 to 3 sec, I : E Ratio 5:1 to 1:5
e) CPAP/PEEP 0-40 cmH₂O
f) Pressure support 2-80 cmh₂O
g) FIO₂ 21 to 100%
h) Pause Time 0 to 2 sec
i) Flow Trigger 0.2 to 15 lpm
13. Should have monitoring of the following parameters
a) Airway Pressure (Peak & Mean)
b) Tidal volume (Inspired & Expired)
c) Minute volume (Expired)
d) Spontaneous Minute Volume
e) Total Frequency
f) FIO₂
g) Intrinsic PEEP
h) Plateau Pressure
~~i) Resistance (R_{insp} & R_{exp}) & Compliance (C_{dyn} & C_{stat})~~
~~j) Use selector Alarms for all measured & monitored parameters~~
14. Should have following modes or equilant modes of ventilation
a) Volume controlled
b) Pressure Controlled (C). Pressure support *Im*
d) SIMV (Pressure Control and volume control) with pressure support
e) CPAP/PEEP, PSV + assured tidal volume / guarantee
g) Advanced mode like pressure controlled volume guaranteed / PRVC / AUTOFLOW.
h) Non Invasive ventilation
i) MMV+PSV
j) APRV
15. should have Apnea /backup ventilation
16. Expiratory block should be autoclaveable and no routine calibration required

17. should have monitoring of the following parameters
18. a. Occlusion Pressure(P0.1) , Max Inspiratory pressure (Pi max)
b. RSBI , Imposed work of Breathing (WOBi)
19. should have integrated (in-built) nebuliser or synchronized ultrasonic nebuliser with capability to deliver fine particle On line"
20. should integrated Battery backup for minimum 2 hour for main unit
21. System Configuration Accessories, spares and consumables
22. ICU Ventilator mounted on trolley
23. Adult , Paediatric , Neonatal autoclavable silicone patient breathing circuits -02 each
24. Reusable and autoclavable Flow sensor and exhalation valve/ expiratory cassette - 4 nos . nos each. The expiratory flow sensor and valve should have 5 years complete replacement (free of cost)
25. Proximal Flow sensor for neonatal use - 10 nos
26. Hinged Support Arm - 1no
27. Air and Oxygen Hose - each 1 no
28. Medical Air Compressor , with CE mark (Taurus Make)
29. Reusable Masks (Small, Medium, Large) with each machine.- 01 set each
30. Humidifier -Servo controlled fisher and paykel MR 850 with digital monitoring of inspired gas temperature -01 . All accessories required like temp. probe , heating wire , draw, chamber etc - each 2 nos.
31. Mainstream EtCo2 Sensor - 1no reusable Adult /ped, neonatal adaptor - each 1
32. Standards, Safety and Training
33. Should be USFDA/European CE approved product. The supplier must be ISO certified company.
34. Demonstration of quoted equipment model is a must.
35. Should have local service facility .The service provider should have the necessary equipments recommended by the manufacturer to carry out preventive maintenance test as per guidelines provided in the service/maintenance manual.
36. Should have Three year guarantee and provision for next five year Comprehensive Annual Maintenance Charges.



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