

Technical Specifications of ICU Ventilator:-

1	Should be touch screen
2	Screen size should be 10" inch or more
3	Compressed air / oxygen driven
4	Should have the following modes
a	Volume and Pressure Controlled modes
b	SIMV (Pressure controlled and volume controlled) with pressure support
c	Spontaneous modes like CPAP / PEEP
d	Inverse Ratio ventilation
e	Advanced mode like Pressure Regulated volume control mode
f	Airway Pressure Release ventilation
g	Non-invasive ventilation in all modes
5	Should have the facility for following settings
a	Tidal Volume: Minimum 20 ml and maximum of 1500 ml or more in Volume control
b	PEEP up to 30 cmH2O or more
c	Pressure support up to 35 cmH2O
d	Flow Pattern: Square, Decelerating, Sinusoidal
e	Respiratory Rate up to 80 bpm or more
f	Inspiratory Plateau up to 60% of Inspiratory time
g	SIMV Rate up to 60 cycles/min
h	Pressure Support Slope: up to 150 cm H2O / Sec
i	FIO2: 21% - 100%
j	Should be provided with inspiratory and expiratory flow sensor. Should be flow triggered with or without facility for pressure.
k	Manual Cycle, Inspiratory Pause, Expiratory Pause and Prolonged Expiration
6	Should be able to monitor and measure the following parameters
a	Tidal Volume
b	Plateau
c	Mean Airway Pressure
d	Peak Airway Pressure
e	Intrinsic PEEP
f	RSBI (Rapid Shallow Breathing Index) - It should be a standard parameter
G	Resistance and Compliance
7	Should have ultrasonic/ pneumatic nebulizer, which should be synchronized with inspiration

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Tidal vol. Minimum = 20ml or less  
 Maximum = 1500 ml or more

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8	Should have the facility to find (Lower inflection point) and UIP (Upper Inflection Point)
9	Compiled trend analysis at least for 24 hours for all measured parameters
10	Should have facility to compare 2 or more loops/graphs of similar type
11	Should have facility to measure:
a	Pressure / Volume loops
b	Flow/ volume loops
c	Pressure/flow loops
12	Should display minimum 4 curves/graphs simultaneously on the screen
13	Should have audio-visual alarms for the following parameters
a	FiO2 peak aspiratory pressure - High & Low
b	FiO2 - high & low
c	Respiratory rate - high & low
d	Tidal volume - high & low
e	Minute volume - high & low
14	The ventilator should be US FDA & CE certified & approved
15	Should have integrated compressor from the same manufacturer
16	Should have battery backup of minimum 60 minutes for compressor and ventilator
17	Should have Ultrasonic / Paramagnetic / Galvanic O2 sensor. All sensor should be covered in warranty-guarantee and CMC
18	Accessories with each unit - Humidifier - 1
a	Reusable Circuits:                      Pediatric - 5 Adult - 5
b	Disposable Circuit -                      Pediatric - 5 Adult - 5
19	Filters - HME x 100
a	Expiratory valve/cassettes - 2 sets (Reusable )
b	Flow Sensors -10
c	Support arm for the breathing circuit from the same manufacturer
d	Ventilator trolley from the same manufacturer
e	O2 hose - 2 nos.
f	Air hose - 2 nos.
g	Humidifier - 810
h	Reusable chambers)                      Adult - 3 Pediatric - 2
i	(Disposable Chambers & Circuits                      Adult - 10 Pediatric - 10
j	Test Lung                      Adult - 1 Pediatric - 1
k	Nebulization kit                      Adult - 10 Pediatric - 10

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