(12) (23)

ritical Care ICU Ventilator for Central Hospital/ WCR, JBP

Technical Specifications of Critical Care ICU Ventilator.

Major Parameters	**No Deviation in Major parameters accepted. (Zero Tolerance).**	
	International Standard	Critical Care ICU Ventilator must be CE marked & as per International standards IEC 60601-1-2 & IEC 60601-2-41. Proof of certificates should be attached.
	Critical Care ICU Ventilator must have Invasive &Non invasive ventilation for ventilation of adult, pediatric & neonate patients in all critical care therapy needs. Operable on mains and battery & integrated rechargeable Battery should provide approx. 60 minutes backup and online UPS should provide backup to ventilator up to 3 hours . All component of ICU ventilator must be manufactured by single company only.	
	Technical Data	Inbuilt Screen – LED,09" inch to 12" inch colored screen based Operation with digital & graphic screen display. Software controlled pressure limit function. Sub-ambient valve for emergency air intake.
	Ventilation modes.	IPPV(CMV), IPPV Assist (CMV Assist), SIMV, SIMV/ASB (SIMV/PS), CPAP, CPAP/ ASB, (CPAP/PS), BIPAP (PCV +) (PCV+/PS) Non Invasive ventilation with automatic leakage compensation available in all modes from control to spontaneous. - Autoflow or equivalent for delivering tidal volume within a set PIP should be possible to combined in all volume control modes and should allow spontaneous breathing in all volume control modes.
	Apnea backup	Apnea backup ventilation mode with adjustable tidal volume and rate.
	Ventilation frequency	2 to 80 bpm.
	Inspiration time	0.2 to 10 seconds.
	Tidal Volume	0.05 to 2.0 litres.
	Inspiratory pressure	0 to 99 cm H2O
	Inspiratory flow	0 to 180 L/minute.
	PEEP	0 to 35 cm H2O
	ASB/Pressure support	0 to 35 cm H2O
	Oxygen concentration	21 to 100 volume %
	Flow acceleration	5 to 200 cm H2O/second.
	Trigger sensitivity	1to 15 L/minute
	Measured value 1)Air way pressure Measurements. 2)Minute volume 3)Tidal volume VT	**Display** 1) Peak pressure, plateau pressure, mean airway pressure. PEEP- 0 to 100 mbar (cm H2O). 2) Total MV, Spontaneous MV, 0 to 99 L/minute, 3)Inspiratory VT, expiratory VT 0 to 4000 ml, BTPS.

K Damade.
05/11/14

Major parameters	4)Breathing frequency 5)Inspiratory Oxygen Concentration 6)Breathing gas Temperature 7)Ventilation ratio (I:E) 8)Curve display	4)Total & spontaneous breathing frequency 0 to 150 bpm. 5) 21 to 100 volume % 6)18 degree to 48 degree centigrade. 7)150:1 to 1:150 8)Airway pressure/time, flow/time.
	Performance data 1)Maximum flow for pressure assist / ----- Spontaneous breathing. 2) Valve response time T0. 90 3) Control principle- 4) Safety valve opening pressure. 5) Emergency valve 6) Automatic gas switch over function if oxygen supply fails. 7) Output for pneumatic Medicament nebuliser. 8) Oxygen Sensor	1)180 liters /minute 2) <_5 millisecond. 3) Time cycled, volume- Constant, pressure- controlled, 4) 100 mbar (cm H2O) 5) Automatically enables spontaneous breathing with filtered ambient air if air & Oxygen supply should fail. 6) Mandatory incorporated & required. 7) synchronized with inspiration. 8) Should have permanent oxygen sensor
	Alarms. 1)Airway pressure 2)Expiratory minute Volume 3)Tidal volume 4) Apnea alarm time. 5)Inspiratory oxygen concentration. 6)Spontaneous breathing frequency. 7) Inspiratory Breathing Gas temperature.	1)High / low. 2) High / low. 3) High / low. 4) 15 to 60 seconds. 5) High / low. 6) High. 7) High.
	Gas supply- Air – Turbine technology. **Oxygen gas** supply – 3 bar (39 psi) to 10 % up to 6 bar (87 psi).	

K Damade.
05/11/14

(10) (37)

Minor parameters	**Main Power Supply** – 100 to 240 V, AC 50/60 Hz. 10 to 36 V, DC Power consumption – 80 to 100 Watts. Charging time-10 hrs.	
	1.History record- 2.Battery charge status. 3.Humidity (operating) 4.Dimensions -L x H x B 5.Weight (basic device) 6.Trolly to carry or transport Ventilator in hospital.	1. 2000 events. 2. Indication. 3. 30 to 75% non condensing. 4. 65cm x 140 cm x 53 cm. 5. Approximately 22Kg to 24 Kg. 6.Trolly is essential part of equipment.
Conditions	Any fault must be repaired within 24 hours by company. Warranty period	Install at Intensive Care Unit of Central Hospital, WCR, Jabalpur (M.P.) Twenty four months after installation.
	Annual maintenance contract / --------- Comprehensive maintenance contract	Five years after warranty period. Rates must be quoted.

K. Damade.

Dr.K.K.Damade. 05/11/14
ACHD/Anesth/CH/ JBP

Annexure-II

To be submitted by the firm along with offer-

Tender specification	Specification quoted by the firm	Deviation if any with clarification