



**PORTABLE ICU
VENTILATOR**
OPTIMA



RADIOLOGY



MONITORING



ANAESTHESIA



VENTILATION



SURGERY



VETERINARY



MEDICAL
GASES



MOBILE
HEALTHCARE

PORTABLE ICU VENTILATOR

OPTIMA

OPTIMA - TECHNICAL SPECIFICATIONS

PARAMETER	SPECIFICATION		
Equipment Classification	Class II, Type B		
Power Supply	External Source	100-240 VAC; 50/60 Hz ; 2A	
	Internal Source	11.1 VDC, 10400 mAh Li-ion Battery	
Gas Supply	Medical Oxygen	280 to 600 kPa	
Ventilator Type	Electronically controlled and electronically driven ventilator		
Display Screen	8.4 inch touch screen color TFT display		
Functional Keys & Rotary Encoder Knob	Alarm Silence, Mode Setting, System Setting, Standby, Freeze, Insp Hold, Exp Hold, Manual Insp, 100% O2 120sec, Nebulizer. Encoder Knob to adjust and confirm parameters like ventilation setting, alarm settings.		
Application	Adult, Pediatric & Infant (≥ 5 Kg)		
Real Time Graphics	Waveform	Pressure vs. Time, Flow vs. Time, Volume vs. Time	
	Loop	Pressure vs. Volume, Flow vs. Volume, Flow vs. Pressure	
Ventilation Modes	Invasive Modes	VCV (can be assisted), PCV (can be assisted), PRVC (can be assisted), V-SIMV + PS, P-SIMV + PS, CPAP + PS + Backup (VCV/PCV).	
	Non Invasive Modes	CPAP, Bi-PAP (Optional)	
Ventilation Setting Parameters	Range	Ventilation Monitoring Parameters	Range
Tidal Volume	20~2000 mL	Inspiratory Tidal Volume	0~2500 mL
Respiratory Rate	1~100 bpm	Expiratory Tidal Volume	0~2500 mL
Inspiratory Time	0.2~10 sec	Minute Volume	0~50 L/min
Inspiratory Pause	0~4 sec	Spontaneous Minute Volume	0~50 L/min
Pressure Control	5~70 cmH2O	Respiratory Rate	0~100 bpm
Pressure Support	5~70 cmH2O	Spontaneous Respiratory Rate	0~99 bpm
Positive End Expiratory Pressure	0~40 cmH2O	Inpiration to Expiration Ratio	4:1~1:9
Pressure Limit	5 ~80 cmH2O	Positive End Expiratory Pressure	0~40 cmH2O
Oxygen Concentration	21~100 %	Peak Airway Pressure	0~80 cmH2O
Flow Trigger	0.5~20 L/min	Mean Airway Pressure	0~60 cmH2O
Pressure Trigger	(-20)~(-1) cmH2O	Inspiratory Plateau Pressure	0~60 cmH2O
Pressure Rise	1~5	Minimum Airway Pressure	0~40 cmH2O
Expiratory Sensitivity	10~60 %	Oxygen Concentration	21~100 %
Nebulizer	10~30 min	Airway Resistance	0~150 cmH2O/L/sec
Safety Airway Pressure	≤ 125 cmH2O	Compliance	0~200 mL/cmH2O
Alarm Setting Parameters	Range	Alarm Setting Parameters	Range
Tidal Volume Lower Limit	OFF, 10~1500 mL	Airway Pressure Upper Limit	1~80 cmH2O
Minute Volume Upper Limit	1~40 L/min & OFF	Airway Pressure Lower Limit	0~40 cmH2O
Minute Volume Lower Limit	OFF, 0~39 L/min	O2 Concentration Upper Limit	21~100 %
Respiratory Rate Upper Limit	1~100 bpm	O2 Concentration Lower Limit	OFF, 21~99 %
Respiratory Rate Lower Limit	0~99 bpm	O2 Supply Pressure Upper Limit	290~750 kPa
Apnea Alarm Time	10~60 sec	O2 Supply Pressure Lower Limit	OFF, 280~740 kPa
PRVC Airway Pressure Upper Limit	Plimit ≤ Ppeak + 5 cmH2O	O2 Supply Pressure Low	When O2 supply pressure < 2.8 bar
Continuous Airway Pressure High	When Paw > (PEEP+15) cmH2O for 15 sec	AC Failure Alarm Time	> 120 sec (when AC supply is disconnected)
Alarm Silence Time	≤ 100 sec	Alarm Type	Pulse
Alarms (audio-visual)	All alarms are categorized into 3 levels of priority.		
High Priority	Apnea, Airway Pressure High, Airway Pressure Low, Continuous Airway Pressure High, O2 Supply Low, Circuit Disconnect, Battery Discharged, O2 Concentration Low, O2 Sensor Failure, Inspiratory P_Sensor Failure, Expiratory P_Sensor Failure, 5V Supply Error, 12V Supply Error, 22V Supply Error, Battery Failure, Power Failure.		
Medium Priority	Minute Volume High, Minute Volume Low, Low Battery Capacity, O2 Concentration High, Tidal Volume Low.		
Low Priority	Frequency High, Frequency Low, Power Board Error		
Weight & Dimensions (LXDXH)	9.6 Kg & 312 x 286 x 305 in mm		
Data Communication Interface	USB (Type-B), Ethernet, RS232		
Environmental Conditions	Operating	Temperature: 10°C to 50°C, Humidity: ≤ 95%, non-condensation, Atmospheric Pressure: 50 to 106 kPa	
	Storage	Temperature: -20°C to 55°C, Humidity: ≤ 95%, non-condensation, Atmospheric Pressure: 50 to 106 kPa	
Standard Accessories	AC power cord, High pressure oxygen hose with DISS connector, Reusable dual limb patient circuit with dual water traps for adult, NIV Mask for adult, Compliance test lung for adult, Proximal flow sensor with dual silicon tubes, Oxygen sensor Mox-4 type (inbuilt), Battery (inbuilt).		
Optional Accessories	Metal trolley with four castor wheels and circuit holder arm, Humidifier with adult/pediatric chamber, Reusable dual limb patient circuit with dual water traps for pediatric, Disposable dual limb patient circuit for adult/pediatric, NIV Mask for pediatric, Compliance test lung for pediatric, Extra flow/oxygen sensors.		

*Specifications, design and /or accessories listed in the catalogue subject to change without prior notice

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