



OXIVENT Oxi4Plus

Technical Specification

Usage Area

The OXIVENT™Oxi4Plus transportable lung ventilator is designed to be used in intensive care, ambulances, aircrafts, mobile hospitals, emergency services at the hospitals, ship hospitals and during ground transportation.

Ventilation Modes

Type	Mode	Description	Adult	Pediatric
Pressure	PCV+	Pressure-controlled ventilation.	✓	✓
	P-SIMV	Pressure-controlled synchronized intermittent mandatory ventilation	✓	✓
	PSV+ Apnea Backup	Pressure supported apnea ventilation	✓	✓
	CPAP/PSV	Continuous Positive airway pressure	✓	✓
	APRV	Airway pressure release ventilation	✓	✓
	Bilevel	Duo positive airway pressure	✓	✓
Pressure Regulated	PRVC	Pressure Regulated Volume Control	✓	✓
	PRVC-SIMV	Pressure Regulated Volume Control with Synchronized intermittent mandatory ventilation	✓	✓
Volume	(S)CMV	(Synchronized) controlled mandatory ventilation	✓	✓
	V-A/C	Volume - Assist Control	✓	✓
	V-SIMV	Synchronized intermittent mandatory ventilation	✓	✓
Noninvasive	P-A/C	Pressure - Assist Control	✓	✓
	PSV-S/T	Pressure supported ventilation	✓	✓
	HiFlowO2	High flow oxygen therapy	Optional	Optional

Controls


Type	Adult / Pediatric
Special functions	Manual breath, O2 enrichment, standby, sigh, screen lock, apnea backup ventilation, inspiratory hold, print screen, suctioning tool, dimmable screen, configurable quick-start settings, startup settings based on patient height and gender, integrated pneumatic nebulizer, O2 consumption display
Patient groups	Adult / Pediatric / Infant / Optional Neonatal
Respiratory frequency	1 to 120 b/min
V-A/C	1 to 80 b/min
(S)CMV	1 to 80 b/min
V-SIMV	1 to 80 b/min
PCV+	1 to 150 b/min
Bilevel-ST	5 to 80 b/min
P-SIMV	5 to 150 b/min
Bilevel	1 to 80 b/min
APRV	1 to 120 b/min
Tidal volume	50 to 2500 ml (1 to 2500 ml with optional neonatal kit)
PEEP	0 to 25 cmH2O
Oxygen	21% to 100%
I:E ratio	1:10 to 4:1
Inspiratory time (TI) (Adjustable)	0.10 to 12 s
Flow trigger	Closed, 1 to 20 l/min

Pressure trigger	-0.5 to -20 CmH ₂ O
Tslope	50 ms to 1100 ms
Pressure control (Adjustable)	5 to 60 cmH ₂ O, added to PEEP/CPAP
Pressure support (Adjustable)	0 to 35 cmH ₂ O, added to PEEP/CPAP

Controls

Type	Adult / Pediatric
Control method	Touch screen front panel with rotary knob and digital button
Manual ventilation	Yes
Inspiration hold	Yes
Expiration hold	Yes
Adjustable Flow Rate	Yes
Adjustable Current Termination	Yes
Adjustable Time Termination	Yes
O ₂ Flush	Yes
Pressure Control Flow Termination	Yes
P high (APRV / Bilevel)	0 to 60 cmH ₂ O
P low (APRV)	0 to 35 cmH ₂ O
T high (APRV)	0.1 to 12s
T low (APRV)	0.2 to 12s
Expiration trigger sensitivity (ETS)	5% to 80% inspiratory peak flow
Flow (HiFlowO ₂)	2 to 80 l/min (optional)

Monitoring Parameters

Type	Parameter	Unit	Description	Numeric Monitoring	Wave-forms	Vent Status	Dynamic Lung
Pressure	Paw	cmH ₂ O;mbar;hPa	Real-time airway pressure	✓	✓		
	Ppeak	cmH ₂ O;mbar;hPa	Peak airway pressure	✓			
	Pmean	cmH ₂ O;mbar;hPa	Mean airway pressure	✓			
	Pinsp	cmH ₂ O;mbar;hPa	Inspiratory pressure	✓		✓	
	PEEP/CPAP	cmH ₂ O;mbar;hPa	Positive end expiratory pressure/ continuous positive airway pressure	✓		✓	
	Pplateau	cmH ₂ O;mbar;hPa	Plateau or end inspiratory pressure	✓			
Flow	Flow	l/min	Real-time inspiratory flow	✓	✓		
	Insp Flow	l/min	Peak inspiratory flow	✓			
	Exp Flow	l/min	Peak expiratory flow	✓			
Volume	Volume	ml	Real-time tidal volume	✓			
	VTE/VTE NIV	ml	Expiratory tidal volume	✓			
	VTI/VTI NIV	ml	Inspiratory tidal volume	✓			
	ExpMinVol/MinVol	l/min	Expiratory minute volume	✓			
	NIV <small>MVSpont/MVSpont</small> NIV	l/min	Spontaneous expiratory minute volume	✓			
	Leak/MV Leak	%;l/min	Leakage minute volume Leakage percentage at the airway	✓			
Time	I:E		Inspiratory-expiratory ratio	✓			
	fTotal	b/min	Total breathing frequency	✓			
	fSpont	b/min	Spontaneous breathing frequency	✓			
	TI	s	Inspiratory time	✓			
	TE	s	Expiratory time	✓			
Lung mechanics	Cstat	ml/cmH ₂ O	Static compliance	✓			
	AutoPEEP	cmH ₂ O;mbar;hPa	AutoPEEP or intrinsic PEEP	✓			
	P0.1	cmH ₂ O;mbar;hPa	Expiratory time constant	✓			
Oxygen	FiO ₂	%	Delivered oxygen concentration	✓			
Battery		%	Battery level percentage	✓			
etCO ₂		mmHg	Carbon dioxide level indicator	✓			
spO ₂		bpm	O ₂ level indicator				

Main View	
Dynamic Lung	Real-time visualization of lungs with tidal volume, lung compliance, resistance and representations of patient activity
Vent Status	Visual representation of ventilator dependence, grouped into oxygenation, CO2 elimination, patient activity
Graphics	Graphic image of target and valid parameters for tidal volume, pressure, patient activity and minute ventilation, square wave form at pressure modes, decreasing wave form at volume controlled forms.
Monitoring	Display of more than 40 monitoring parameters, alarms
Real-time automatic waveforms	Airway pressure, inspiratory flow
Others	P-V, V-Flow, P-Flow, Trends: 1, 6, 12, 24, and 72 hours

Alarms	
Monitoring operator adjustable	Visual and audible device alarm, Low/high minute volume, low/high pressure, low/high tidal volume, low/high rate/frequency, apnea/back-up ventilation, low/high oxygen, low/high FIO2, low/high SpO2, low/high pulse, low/high perfusion index, flow, low/high PVI, low/high SpCO, low/high SpMet, low/high SpHb, low battery, Alarm Reset
Alarm Limits	Alarm limits can be set at intervals determined by the operator
Special alarms	O2 cell, disconnection, exhalation obstructed, loss of PEEP, pressure not released, flow sensor, expiratory valve, pressure limitation, performance limited, CO2 and SpO2, battery, power supply, gas supply, oxygen concentration, check patient interface (HiFlowO2, SpeakValve)
Loudness	Adjustable (1 – 6), configurable minimum loudness, silence reset button (for 2 min)

Compliance with Standards	
Standards	ISO 9001, ISO 13485, ISO 14001, OHSAS 18001, IEC 60601-1, IEC 60601-1-2, EN 794-3, EN ISO 15223-1, TS EN 1041, TS EN 14155, EN 62304, EN 1789 for ambulances

Accessories	
Trolley accessories	Trolley stand with tube holder, cylinder holder
Optional software and hardware	SpO2, etCO2, Neonatal Kit, HiFlow therapy, O2 sensor
Accessories	Transport unit for bed or stretcher with ambulance mounting kit, O2 cylinder, protection kit and handle with carrying bag, Disposable patient circuit, reusable patient circuit pediatric/adult, Reusable or disposable adult and pediatric flow sensor, neonatal flow sensor, disposable patient valve, bacteria filter, pediatric or adult masks, O2 regulator with two manometers, 1.5 m. oxygen hose with quick coupling with O2 probe

Electrical and Pneumatic Specification	
Input voltage	12VDC5A
Power consumption	100-240 V 50-60 Hz - 60 Watt
Battery	Standard 5 hours, optional 12 hours operating time with amplified battery
Oxygen supply	2.7 to 6 bar (internal/external cylinder, hospital central system, compatible manufacturer's approved equipment), optional operating with 0.5 bar low pressure source
Air supply	Built-in turbine (ambient air)
Peak flow	240 l/min (adult / pediatric)

Environment	
Temperature	Operating: -15°C to 40°C (adult / pediatric) Storage: -18°C to 50°C
Humidity	5% to 95% noncondensing (operating), 10% to 95% noncondensing (storage)
Altitude	Up to approx. 70 to 200 Kpa
Degree of protection	IP24
Interface Connectors	USB, COM1 (RS-232), nurse call, CO2, SpO2 or optional bluetooth
Event log	Storage and display up to 2,000 events with date and time stamp

Physical Parameters	
Size	241(W) x 160(H) x 116(D)
Weight	4 kg
Display	7.1 inch, LCD color touch screen
Main patient outlet	ISO 5356-1; 22OD/15ID
Oxygen inlet	DISS or NIST
Low pressure oxygen inlet	CPC quick coupling



Ventilator Cart with tube holder



Carrying Bag



Flow Sensor



Oxygen Sensor



Neonatal Flow Sensor

Patient Bed or Stretcher Hidden Bracket



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ISO 13485



ISO 9001



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