

OXIVENT-OXI4Plus

Technical Specifications

OXIVENT OXI4 Plus

Ensures the optimal ventilation therapy in transport situations for all patient groups from neonatal to adult

- High performance portable ventilator supporting intensive care features
- Capability to use at hard conditions for ambulances, hospitals, aircrafts and hospital ships
- 4 hours of battery operating time
- Invasive/Noninvasive ventilation and optional high flow oxygen therapy
- Adult, pediatric and optional neonatal kit software

For more information, visit our website: www.labcore.com.tr



Technical Specifications

Usage area

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

Ventilation Modes

Type	Mode	Description	Adult	Pediatric
Invasive Modes	PCV+	Pressure-controlled ventilation.	✓	✓
	P-SIMV	Pressure-controlled synchronized intermittent mandatory ventilation	✓	✓
Pressure	PSV+ Apnea Backup	Pressure supported apnea ventilation	✓	✓
	CPAP/PSV	Continuous Positive airway pressure	✓	✓
	SBT	Spontaneous Breath Trial	Optional	Optional
	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	✓	✓
	nCPAP	Nasal Continuous Positive Airway Pressure	✓	✓
	HiFlowO ₂	High flow oxygen therapy	Optional	Optional


Controls

Type	Adult / Pediatric
Special functions	Manual breath, O ₂ enrichment, standby, screen lock, apnea backup ventilation, inspiratory hold, dimmable screen, configurable quick-start settings, startup settings based on patient's gender, O ₂ consumption display
Ventilation Modes	Placed in the table above
Patient groups	Adult / Pediatric / Optional Neonatal
Respiratory frequency	1 to 120 b/min (optional neonatal 1 to 150 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	1 to 150 b/min
Bilevel	1 to 80 b/min
APRV	1 to 120 b/min
Tidal volume	30 to 2500 ml (1 to 2500 ml with optional neonatal kit)
PEEP	0 to 25 cmH ₂ O
Oxygen	21% to 100%
I:E ratio	1:10 to 4:1
Inspiratory time (TI) (Adjustable)	0.10 to 12 s
Inspiratory Flow (Adult / pediatric)	Adult – Pediatric: 0-200 l/min Neonatal: 0 – 40 l/min.
Flow trigger	Closed, 0.5 to 20 l/min
Pressure trigger	-0.5 to -20 CmH ₂ O
Tslope	50 ms to 1100 ms
Pressure control (Adjustable)	4 to 60 cmH ₂ O, added to PEEP/CPAP
Pressure support (Adjustable)	0 to 60 cmH ₂ O, added to PEEP/CPAP

Controls

Type	Adult / Pediatric
Control method	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
O2 Flush	Yes
Pressure Control Flow Termination	Yes
P high (APRV / Bilevel)	4 to 60 cmH ₂ O
P low (APRV)	0 to 25 cmH ₂ O
T high (APRV)	0.1 to 12s
T low (APRV)	0.2 to 12s
Expiration trigger sensitivity (ETS)	5% to 85% inspiratory peak flow
Flow (HiFlowO ₂)	1 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 NIV	l/min	Expiratory minute volume	✓			
	MVSpont/MVSpont 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	✓			
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, CO ₂ 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 50 monitoring parameters, alarms
Real-time automatic waveforms	Airway pressure, inspiratory flow, Plethysmogram and Capnograph
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 FIO ₂ , low/high SpO ₂ , 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	O ₂ connection faulty, exhalation obstructed, loss of PEEP, pressure not released, flow sensor, expiratory valve, pressure limitation, performance limited, CO ₂ and SpO ₂ , battery, power supply, gas supply, oxygen concentration, check patient interface (HiFlowO ₂ , SpeakValve)
Loudness	Adjustable (1 – 6), configurable minimum loudness, silence reset button (for 2 min)

Maintenance

Product Life	10 years
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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
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Configurations

Trolley accessories	Trolley stand with tube holder, O ₂ cylinder holder, patient circuit support arm
Optional software and hardware	SpO ₂ , etCO ₂ , Neonatal Kit, HiFlow therapy, O ₂ sensor
Accessories	Transport unit for bed or stretcher with ambulance mounting kit (Optional), O ₂ cylinder (optional), protection kit and handle with carrying bag (optional), Disposable patient circuit (standard), reusable patient circuit pediatric/adult (optional), Reusable (optional) or disposable (standard) adult and pediatric flow sensor, neonatal flow sensor (optional), disposable patient valve (standard), bacteria filter (standard), pediatric or adult masks (optional), O ₂ regulator with two manometers (optional), 1.5 m. oxygen hose (standard) with quick coupling with O ₂ probe (optional).

Electrical and pneumatic specifications

Input voltage	12 V DC 5 A
Power consumption	100-240 V 50-60 Hz - 60 Watt
Battery	Standard 4 hours, optional 12 hours operating time with amplified battery (Battery Using Time Can Be Change By Patient Type, Using Modes and Parameters Also)
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: -18°C to 50°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	IP44
Interface Connectors	Optional USB or COM1 (RS-232), Optional nurse call, Optional CO ₂ , Optional SpO ₂ 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	3,5 kg
Display	7.1 inch, LCD color touch screen
Main Patient Output	ISO 5356-1; 22OD/15ID
Oxygen Input	NF, DIN or BS, With O2 Tube or hospital central system usage option
Low Pressure Oxygen Input	CPC quick coupling



Ventilator Cart with tube holder



Carrying Bag



Flow Sensor



Oxygen Sensor



Neonatal Flow Sensor



Mounting Bracket with Protection kit and Bag