

# Specifications: EV5/5A



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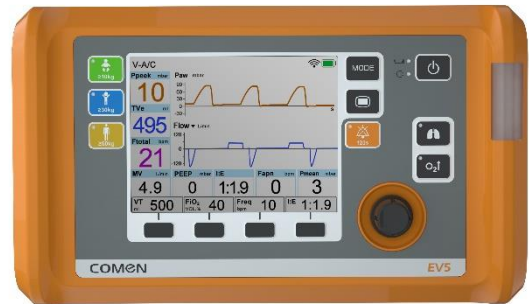
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# Transport Ventilator

## EV5/5A



### Physical Characteristics

#### Main Unit

Dimensions	280mm*167mm*151mm (±5mm)
Weight	3.1kg (±0.5kg)
Machine noise	≤60dB
Ingress Protection	IP34

#### First-aid Backpack

Dimensions	555mm*330mm*220mm (±10mm)
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#### Backpack holder

Dimensions	370mm*300mm*44mm (±10mm)
Weight	1.9kg (±0.5kg)

#### Oxygen Cylinder

Capacity	Standard: 2.5L Optional: 3L
Feature	With pressure relief valve and oxygen bridge

### Display Screen

Size	5.6" TFT screen
Resolution	640*480 pixels

### LED Indicator

External power supply indicator	1
Battery status indicator	1
Alarm light	1
Alarm sound pause indicator	1
Manual ventilation / inspiratory hold indicator	1
Indicator of patient type	3

### Audio Indicator

Speaker	Emits voice prompts and alarm sounds. Supports multi-level volume function. Alarm sounds meet the requirements of the YY 0709/IEC60601-1-8 standard.
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### Buzzer

### Error alarm

### Gas Circuit System

#### High-pressure Oxygen Source (dry and clean)

Pressure range	270~600kPa
Rated flow rate requirement	120L/min
Input connector	DISS

#### Inspiratory Module

Safety pressure of respiration	≤10kPa
Inspiratory-side external connector	Coaxial 22mm/15mm conical connector

#### Breathing Valve Module

External connector of the breathing valve	Coaxial 22mm/15mm conical connector
Removability	It can be removed quickly as a whole
Sterilizability	It can be cleaned, soaked and sterilized at high temperature.

### System Compliance and Resistance

Compliance	Adult gas circuit: ≤2ml/cmH <sub>2</sub> O Child gas circuit: ≤1.5ml/cmH <sub>2</sub> O In ADU mode (at the flow rate of 60L/min): ≤6cmH <sub>2</sub> O
Resistance	In PED mode (at the flow rate of 30L/min): ≤6cmH <sub>2</sub> O

### Ventilation Mode

	P-A/C V-A/C PRVC P-SIMV V-SIMV PRVC-SIMV CPAP/PSV DuoVent CPR function
Invasive Mode	P-A/C P-SIMV CPAP/PSV
Non-invasive Mode	

	DuoVent
<b>Setting Parameter Ranges</b>	
O2 concentration (FiO2)	40~100vol.%
Tidal volume (TV)	Adult: 100~2000ml Pediatric/Infant: 50~300ml
Inspiratory pause (%)	5~50%, OFF
RR (Freq)	1~60bpm
Inspiratory time: Expiratory time (I:E)	4:1~1:10
Inspiratory time (Tinsp)	0.2 S~12.0s
High pressure time (THigh)	0.2~30.0s
Low pressure time (Tlow)	0.2~30.0s
Inspiratory pressure (Pinsp)	5~60cmH <sub>2</sub> O
Support pressure (Psupp)	0~30cmH <sub>2</sub> O
High pressure level (Phigh)	0~60cmH <sub>2</sub> O
Low pressure level (Plow)	0~30cmH <sub>2</sub> O
Positive end-expiratory pressure (PEEP)	0~30cmH <sub>2</sub> O
Flow trigger/pressure trigger (F-Trig/P-Trig)	Flow trigger: 1.0~20.0L/min, OFF Pressure trigger: -20.0~-0.5cmH <sub>2</sub> O, OFF
Expiratory trigger (Exp)	5%~60%

### Monitoring Parameter Ranges

O2 concentration	15vol.%~100vol.%
Inhaled tidal volume	0~3000ml
Expiratory tidal volume	0~3000ml
Minute expiratory ventilation	0~45.0L/min
Minute spontaneous expiratory ventilation	0~45.0L/min
Sum Rate	0~120bpm
Spontaneous Rate	0~120bpm
I:E	59:1~1:59
Peak Pressure	-30~95cmH <sub>2</sub> O
Mean Pressure	-30~95cmH <sub>2</sub> O
PEEP	-30~95cmH <sub>2</sub> O
Waveforms	Airway pressure - time, Flow - time, Volume - time, CO2-time, pleth

### Setting Parameter Accuracy

O2 concentration (FiO2)	±10vol.%
Tidal volume (TV)	±20ml or ±15% of the set value, whichever is larger
Inspiratory pause (%)	±5%(Absolute error, not applicable when inspiratory pause time is less than 0.1s)
RR (Freq)	±1/min or ±10% of the set value, whichever is larger
Inspiratory time: Expiratory time (I:E)	2:1~1:4: ±10% of the set value other ranges: ±15% of the set value
Inspiratory time (Tinsp)	±0.1s or ± 10% of the set value, whichever is larger
High pressure time (THigh)	±0.2s or ± 10% of the set value, whichever is larger
Low pressure time (Tlow)	±0.2s or ± 10% of the set value, whichever is larger
Inspiratory pressure (Pinsp)	±2cmH <sub>2</sub> O or ±10% of the set value, whichever is larger
Support pressure (Psupp)	±2cmH <sub>2</sub> O or ±10% of the set value, whichever is larger
High pressure level (Phigh)	±2cmH <sub>2</sub> O or ±10% of the set value, whichever is larger
Low pressure level (Plow)	±2cmH <sub>2</sub> O or ±10% of the set value, whichever is larger
Positive end-expiratory pressure (PEEP)	±2cmH <sub>2</sub> O or ±10% of the set value, whichever is larger
Flow trigger/pressure trigger (F-Trig/P-Trig)	<b>Flow trigger:</b> 0.5~5.0L/min: ±1L/min other ranges: ±18% of the set value <b>Pressure trigger:</b> ±1cmH <sub>2</sub> O or ±10% of the set value, whichever is larger
Expiratory trigger (Exp)	±10% (absolute error)

### Monitoring Parameter Accuracy

O2 concentration	± (2.5vol.%+2.5% of the actual reading)
Tidal volume	±20mL or ±13% of the actual value, whichever is larger
Minute ventilation	±1L/min or ±13% of the actual reading, whichever is larger
RR	±1/min or ±5% of the actual value, whichever is larger
I:E	±15% of the reading
Paw	±2cmH <sub>2</sub> O or ±9% of the actual value, whichever is larger
PEEP	±2cmH <sub>2</sub> O or ±9% of the actual value, whichever is larger

### Alarm Parameter

Tidal volume	<b>Upper limit:</b>
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Minute ventilation	ADU: 110~3000ml, off		
	PED: 60~600ml, off		
	<b>Lower limit:</b>		
	ADU: 50~2900ml, off		
	PED: 50~590 ml, off		
Paw	Upper limit: 1.0~45.0L/min		
	Lower limit: 0~44.0L/min		
RR	Upper limit: 10~70cmH <sub>2</sub> O		
Apnea alarm	Lower limit: 1~65cmH <sub>2</sub> O, OFF	Measurement accuracy	(at 760mmHg) <b>Comen sidestream:</b> 0~150mmHg, 0%~19.7%, 0~20kPa (at 760 mmHg) <b>Masimo ISACapno sidestream:</b> ±(1.52mmHg+2% of the reading) (0~114mmHg); not defined (114~190mmHg) <b>Respironics CapnoTrak sidestream:</b> ±2mmHg (0~38mmHg); ±10% (38.01~99mmHg) <b>Comen sidestream:</b> ±2mmHg (0~40mmHg); ±5% (41~70mmHg); ±8% (71~100mmHg); ±10% (101~150mmHg)
FiO <sub>2</sub>	Upper limit: 1~150bpm, OFF		
	5~60 s		
	Upper limit: 45vol.%~100vol.%		
	Lower limit: 35vol.%~98vol.%		
<b>SpO<sub>2</sub> Module</b>			
Displayed parameters	Pulse waveform, SpO <sub>2</sub> , pulse rate	Sampling rate	50ml/min (±10ml/min)
	<b>Masimo SpO<sub>2</sub>:</b>	Total system response time	Masimo ISACapno sidestream: <3s Respironics CapnoTrak sidestream: <4s Comen sidestream: <4s
	SpO <sub>2</sub> : 1%~100%		
	PR: 25~240bpm	Preheat time	<10s
	PI: 0.02%~20.0%	<b>Mainstream CO<sub>2</sub> Module</b>	
Measurement range	<b>Nellcor SpO<sub>2</sub>:</b>		
	SpO <sub>2</sub> : 0%~100%		<b>Masimo IRMATMmainstream:</b> 0mmHg~190mmHg, 0%~ 25% (at 760mmHg)
	PR: 20~300bpm	Measurement range	<b>Respironics CAPNOSTAT 5 mainstream:</b> 0~150mmHg, 0%~19.7%, 0~20kPa (at 760 mmHg) <b>Comen mainstream:</b> 0~150mmHg, 0%~19.7%, 0~20kPa (at 760 mmHg)
	<b>Comen SpO<sub>2</sub>:</b>		
	SpO <sub>2</sub> : 0%~100%		<b>Masimo IRMATMmainstream:</b> ±(1.52mmHg+2% of the reading) (0~114mmHg); not defined (114~190mmHg) <b>Respironics CAPNOSTAT 5 mainstream:</b> ±2mmHg (0~40mmHg); ±5% (41~70mmHg); ±8% (71~100mmHg); ±10% (101~150mmHg)
	PR: 20~300bpm		
	PI: 0.05%~20.0%		
	<b>Masimo SpO<sub>2</sub>:</b>		
	SpO <sub>2</sub> : ±2% or ±3% (70%~100%); not defined (1%~69%)	Measurement accuracy	<b>Comen mainstream:</b> ±2mmHg (0~40mmHg); ±5% (41~70mmHg); ±8% (71~100mmHg); ±10% (101~150mmHg)
	PR: ±3bpm (not during movement); ±5bpm (during movement)		
	PI: 0.01% (0.02%~9.99%); 0.1% (10.0%~20.0%)		
	<b>Nellcor SpO<sub>2</sub>:</b>		
Measurement accuracy	SpO <sub>2</sub> : ±2% (70%~100%); not defined (0%~69%)	Total system response time	<1s
	PR: ±3bpm (20~250bpm); not defined (251~300bpm)	Preheat time	Comen/Respironics mainstream: <15s Masimo IRMATM mainstream: <10s
	<b>Comen SpO<sub>2</sub>:</b>		
	SpO <sub>2</sub> : ±2% (70%~100%); not defined (0%~69%)		
	PR: ±3bpm (20~250bpm); not defined (251~300bpm)		
	PI: 0.01% (0.05%~9.99%); 0.1% (10.0%~20.0%)		
<b>CO<sub>2</sub> Module</b>			
<b>Sidestream CO<sub>2</sub> Module</b>			
	<b>Masimo ISACapno sidestream:</b>		
Measurement range	0~190mmHg, 0%~25% (at 760mmHg)	Temperature range	-18~50°C
	<b>Respironics CapnoTrak sidestream:</b>	Relative humidity (non-condensing)	5%~93%
	0~99mmHg, 0%~13.03%, 0~13.20kPa	Atmospheric pressure	62~110kPa
		<b>Working Environment</b>	

## Power Supply

### External AC (power adapter input)

Input voltage	100~240 VAC
Input frequency	50/60Hz
Input current	1.2~0.5A
Output voltage	15VDC
Output current	2.0A

### External DC (vehicle-mounted power supply)

Input voltage	12~30.3V
Input current	2.5~1.0A

### Internal battery

Battery type	Lithium-ion battery
Battery capacity	Lithium-ion battery
Rated battery voltage	10.8VDC
Battery capacity	Standard: 3300mAh Optional: 6600mAh

Minimum voltage supply time	Standard: ≥5h Optional: ≥10h
Charging time	Standard: ≤2h Optional: ≤4h

## Interface

RS232 port	1
USB	1

## WLAN

Standard	IEEE 802.11 a/b/g/n
Working frequency	IEEE 802.11 b/g/n (2.4G/5G)
Data security	Standard: WPA-PSK, WPA2-PSK, WPA-Enterprise WPA2-Enterprise EAP method: EAP-TLS, EAP-TTLS, PEAP-GTC, PEAP-MSCHAPv2
Encryption mode	AES, TKIP

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